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Comparison of rock density determination methods used in South African platinum mines for resource planning purposes

By

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Title of Treatise:	Comparison of rock density determination methods used in South African platinum mines for resource planning purposes
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SUMMARY

Rock density is critical for determining the tonnage of an orebody and therefore impacts on the total resource of a deposit. Density is defined as the concentration of matter, and is expressed as mass per unit volume (g/cc; g/cm^3 or t/m^3). The density that is calculated will depend on the nature of the rock, and whether the volume calculated includes the open and/or closed pore volume of the rock. The pore volume will depend on the rock's internal and external characteristics.

This study looks at two methods commonly used to determine the rock density of samples taken from boreholes drilled for platinum mines on the North Eastern limb of the Bushveld Complex, South Africa. The first method is a gas pycnometer, which is almost exclusively used by laboratories. A Grabner Minidens air gas pycnometer was used. The second method is a hydrostatic immersion method, using water as the Archimedean fluid. An adapted Snowrex NH – 3 scale that can weigh a rock sample in air and in water was used.

The first part of the study investigates the possible differences between conducting rock density measurements on finely milled core in the Grabner Minidens air gas pycnometer or on solid halved core samples using a hydrostatic immersion method, and the implications thereof. The second part of the study, not only investigates the differences between conducting density measurements on solid core samples or on milled core samples, but also looks at how the type of method used and how location affects the density measurement obtained.

The location is important because changes in temperature and atmospheric pressure have been shown to produce small, but measurable changes in density. The density of pure water at 4 ℃ is approximately 1 g/cm^3, increases or decreases in temperature will marginally decrease the density of water. The density of pure water at room temperature (21 ℃) is 0.998 g/cm ^{3}. Changes in atmospheric pressure have been shown to have a negligible effect on the density of most solids.

The diamond drill core samples were taken from boreholes targeting the platinum group element (PGE) rich Merensky reef (MR) and Upper Group 2 (UG2) chromitite layer of the Upper Critical Zone. Samples were taken from the hangingwall (HW), reef and footwall (FW) of the MR and UG2. These rocks are made up of closely interlocking minerals, typical of cumulates. There are generally no visible pore spaces apart from highly fractured and altered samples.

In part one of the study, 18,430 samples were used. The halved core samples were first measured using the hydrostatic immersion method at the exploration offices close to where the boreholes were drilled, referred to as the "Driekop" method. The samples were then sent to a laboratory in Johannesburg. Each sample was first milled to a fine powder (40 µm), and then a small portion of the milled sample (4 cm^3) measured using the Grabner Minidens air gas pycnometer, referred to as the "Grabner Milled" method. For quality control, 811 of the remaining halved core samples were re-measured using the hydrostatic immersion method.The Grabner Milled results were found to be consistently higher than the Driekop results, with a mean average relative difference (AVRD) of approximately 5 % for all

stratigraphic units. The difference observed can be accounted for, from the way in which the sample is prepared and the type of density that is measured. The Driekop method calculates the bulk density of the solid halved core sample, which includes all the open and closed pores of the rock. The Grabner Milled method calculates the true density of the finely milled sample, which through comminution, has excluded all open and closed pores that were in the rock. The quality control repeat measurements on the remaining halved core samples showed a good correlation with the original measurements, with a mean AVRD of only 0.33 %.

In part two of the study, 82 randomly selected samples were used. The density of each solid sample was first determined using the hydrostatic immersion method. The same hydrostatic immersion method used in part one was applied at the same location; therefore it is also referred to as the “Driekop” method. The same hydrostatic method was then conducted on the samples at the laboratory in Johannesburg, referred to as “Lab water solid”. The gas pycnometer method was only conducted at the laboratory. The samples were first measured as a solid, referred to as “Grabner solid”. The samples were then milled to 40 µm and re-measured in the Grabner Minidens, referred to as “Grabner Milled”. The three solid methods results showed good correlation, with an average AVRD of only 0.01 % for the two hydrostatic immersion methods. On the other hand, there was a marked difference in results between the solid methods and the Grabner Milled method, the most significant difference being between the Grabner Milled and Grabner solid method (AVRD = 3.42 %).

The resource model parameters for a project within the study area were used to illustrate the effect of density on resource planning. The average density used in the resource calculation will depend on what density method is used. The AVRD between the two methods for the mining cut density was approximately 5 %. The resource calculation showed that the difference in tonnage and 4E ounces between the two methods was also approximately 5 %. Changes in density result in equal changes in tonnage and metal content (4E ounces).

Increases in dilution or overbreak from 10 to 30 cm above the optimal mining cut showed increases in tonnage and decreases in metal content. Due to similarities in rock composition between the HW, reef and FW of the MR, further dilution caused only a marginal decrease in density. The UG2 was found to be much more sensitive to dilution because of the distinct differences in rock composition between the reef, which is a chromitite layer and the HW and FW, which are both made up of plagioclase pyroxenite. Emphasis is commonly placed on the effect of dilution on grade; however this shows that the effect of density can be as important.

The hydrostatic method of density determination is a very practical way of determining rock density at a remote exploration site. The whole sample can be measured and it is not restricted by the size or shape of the sample. Modern gas pycnometers have a higher degree of accuracy and precision, but need to be operated in a laboratory controlled environment, and are only capable of measuring a small amount of sample. With the correct application of quality control, both are suitable methods of density determination. The selection will depend on what type of density is required, the nature of the rock and whether the method must include or exclude pore spaces in the rock.

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LIST OF ABBREVIATIONS

4E grade	Weighted average grade of Pt, Pd, Rh and Au in g/t
Au	Gold
AVRD	Average relative difference (refer to equation 8)
BQ	Diamond drill core size diameter equal to 36.10 mm
°C	Degrees Celsius
cm	Centimeters
Driekop	Water hydrostatic method of rock density determination, conducted on solid core samples at the exploration site
Driekop check	Water hydrostatic method of rock density determination, conducted on the remaining solid halved core samples at the exploration site in order to check the original results
g	Grams
g/cc or g/cm^3	Grams per cubic centimetre
g/t	Grams per ton
Ga	One billion years
GPM	Gapasha Project
Grabner Milled	Grabner Minidens air gas pycnometer method of rock density determination, conducted on milled/powdered core samples at the laboratory in Johannesburg
Grabner Solid	Grabner Minidens air gas pycnometer method of rock density determination, conducted on solid core samples at the laboratory in Johannesburg
KPa	Kilopascals
km	Kilometers
Lab water solid	Water hydrostatic method of rock density determination, conducted on solid core samples at the laboratory in Johannesburg
LPM	Lebowa Project
m	Meters
Ma	One million years
ml	Milliliters
mm	Millimeters
MR	Merensky reef
MRFW	Merensky reef footwall
MRHW	Merensky reef hangingwall
Oz	Ounce (31.1034831 grams)
Pd	Palladium
PGE	Platinum group elements
Pt	Platinum
Rh	Rhodium
t/m^3	Tons per cubic meter
THP	Twickenham Project
Tons	One thousand kilograms
UG2	Upper Group 2 chromitite layer
UG2FW	Upper Group 2 chromitite footwall
UG2HW	Upper Group 2 chromitite hangingwall
°	Degrees

LIST OF DEFINITIONS

Accuracy	Measure of closeness to the true value
Apparent or skeletal density	Mass divided by apparent volume
Apparent or skeletal volume	Solid volume plus closed pore volume, all open pore volume is excluded
Bulk density	Mass divided by bulk volume
Bulk volume	Solid volume plus all pore volume, open, closed and inter-particle, as with powders
Comminution	The process whereby rocks are reduced in size by crushing, grinding and milling
Density	The concentration of matter, that is mass per unit volume
Envelope volume	The volume of a particle around a tight fitting envelope
Grade	Metal or element content in g/t
Mining cut	The reef, together with the optimal thickness of hangingwall and footwall
Precision	Measure reproducibility or repeatability
Sampling cut	The sampled components of the hangingwall, reef and footwall
True or absolute density	Mass divided by true volume
True or absolute volume	The volume of only the solid; all open and closed pore volume is excluded

1. INTRODUCTION

The density of a rock sample or any material is the ratio of the mass of the rock/material to a given volume of the sample. It can be defined as the concentration of matter. Dense materials will have a high mass to volume ratio.

Density is calculated by taking the mass of the sample and dividing it by the sample's volume. Density is expressed as grams per cubic centimetre (g/cc or g/cm^3) or tons per cubic meter (t/m^3), which are numerically equivalent (Britt and Consolmagno, 1998; Britt et al., 2002; Capano, 2000; Geddis et al., 1996; Goldman and Buskirk, 1959; Weindorf and Wittie, 2003).

The mass of a rock sample can easily be determined using an analytical balance. Calculating the volume is more complicated. The volume of regular solid objects such as cubes or cylinders can be readily determined from physical measurements of the object. Irregular objects such as rock samples require indirect methods of volume determination, the results of which will depend on whether the method accounts for the pore volume within the rock (Geddis et al., 1996; Weindorf and Wittie, 2003).

A typical rock sample is made up of a collection of minerals. The rock may have cracks or pores that either connects to the surface exterior of the rock (open pores) or those that are isolated within it (closed pores). Closed pores may be in the form of cracks/structures within the rock, and/or within mineral grains, and/or along grain boundaries depending on the mineral assemblage or arrangement. Milled or ground rock samples will also have inter-particle spaces that will depend on the size and shape of the individual particles and how they are packed (Webb, 2001).

Mining and exploration companies routinely send rock samples to laboratories that determine the metal/mineral grade and density of the samples. These samples may be taken from underground and surface boreholes that intersect the target horizon or from underground excavations or surface exposures of the target horizon. The density of the sample is of utmost importance as it is used in resource planning to ultimately determine the tonnage of the orebody. The relative proportions of hangingwall, reef and footwall are used to determine the average density for the optimal mining cut of the deposit. The proportions of hangingwall, reef and footwall

may be constrained to geological zones or structural blocks, related to geotechnical constraints or orebody characteristics (grade, internal waste, etc). The dip area and density are used to calculate the expected tonnage of the resource, and then the average grade and tonnage are used to determine the expected metal/mineral content. Incorrect density determinations could potentially have a detrimental effect on the accuracy of resource calculation.

Within the guidelines of the SAMREC code (2007), concerning the reporting of tonnages and density data, it states that the density measurements must be representative of the material being reported and that the method used must adequately account for void spaces, moisture and differences between rock and alteration zones within the deposit.

Rock density is most often determined using hydrostatic immersion or by means of a gas pycnometer. Gas pycnometers are almost exclusively used by laboratories specializing in mineral analysis, whereas the hydrostatic immersion method may be applied anywhere.

With the hydrostatic method, the volume of the sample is calculated by comparing the weight of the sample in air to the weight of the sample immersed in a liquid of known density. The method makes use of Archimedes' principle i.e. a body immersed in a fluid is buoyed up by a force equal to the weight of the displaced fluid (Brit et al., 1987; Goldman and Buskirk, 1959; Turner et al., 1978; Weindorf and Wittie, 2003).

Gas pycnometers are commonly used to measure the volume of milled samples, powders and small solids. The volume is determined by calculating the pressure change resulting from the displacement of gas by a solid object (Archimedean principle) and solving for the ideal gas law. Modern devices are automated with built in analytical balances for determining the mass, then the volume and finally the density (Agnew et al., 2003; Chang, 1988; Geddis et al., 1996; Orr et al., 1991; Turner et al., 1978; Webb, 2001).

The largest supply of platinum in the world comes from the Merensky reef (MR) and Upper Group 2 (UG2) chromitite layer of the Bushveld Complex, South Africa. The MR and UG2 are located within the Upper Critical Zone of the Rustenburg Layered Suite. Comparative studies of the density method that should be

used for the MR and UG2, and the considerations that need to be taken before deciding which method to use, are limited.

This study will compare results obtained using the hydrostatic immersion and gas pycnometer methods to determine the density of the rocks that make up the MR and UG2 and their immediate hangingwall and footwall lithologies. The implications of using one method over the other and the considerations that need to taken will be investigated. The samples used in the study are taken from BQ sized diamond drill boreholes, drilled in the North Eastern limb of the Bushveld Complex, South Africa.

1.1. THE RESEARCH PROBLEM

1.1.1. Statement of the research problem

- Is there a significant difference in results obtained when using a hydrostatic immersion or gas pycnometer method to determine rock density?
  - What are the differences between the two methods?
  - Are these differences significant and what are the implications thereof?

1.1.2. Delimitations

- The comparison is limited to samples taken from split diamond drill core samples.
- The samples were taken from boreholes drilled in the North Eastern limb of the Bushveld Complex, South Africa.
- Only rocks of the MR and UG2 chromitite layer and their immediate hangingwall and footwall lithologies will be considered.
- Only the density of the in situ rock required for resource planning will be analysed. It will not address the density of the rock during mining, metallurgical processing and recovery.
- Resource planning in the context of this study will be limited to the influence of the rock density on the resource calculation.

1.2. RELEVANCE OF THE STUDY

The study was initiated from the need to have some form of in house density measurement that could be used to compare the results determined by the laboratory, as a quality control measure.

In the case of the gas pycnometer method that is currently in use, the core sample is milled to a fine powder (± 40 µm) and then only a small portion (± 4 cm^3) of the powder is used for the density measurement. Concerns had arisen as to whether the results determined using the gas pycnometer method were true representations of the density of the rock in its natural state. A hydrostatic immersion method was used for the comparison, as the density of the sample is determined using the entire core sample and it is a practical way of determining density at a field exploration site.

This study will show whether the hydrostatic immersion method and gas pycnometer method are comparable. It will also show whether the hydrostatic immersion method can be used as an in house quality control measure to compare density results received from the laboratory.

In terms of resource planning, the study will show what factors need to be considered before selecting the method of density determination. It will show how these factors may affect the density of the MR and UG2, and the possible impact on the resource calculation.

2. METHODS OF ROCK DENSITY DETERMINATION

Different methods of rock density determination depend on the type of volume to be measured. In this chapter, the different types of volume will be discussed, followed by descriptions of commonly used density determination methods.

2.1. DENSITY TERMINOLOGY

The introduction (chapter 1), highlighted the complexity of determining the volume of irregularly shaped rock samples. The volume calculated will depend on the structure and composition of the rock, and whether the volume determination method accounts for any open or closed pores within the rock.

There are a number of different terms for the type of volume measured (Geddis et al., 1996). Webb (2001) provides an excellent summary of the different types of volume, density and porosity definitions from the British Standards Institute (BSI, 1991) and American Society for Testing and Materials (ASTM, 1991). The volume defined is often dependant on the measurement method, operating conditions and whether the substance is one piece (solid monolith) or made up of a fine powder (collection of particles). The density is defined according to the type of volume that is measured (Webb, 2001).

Bulk volume is a measure of the solid volume plus all pore volume made up of open, closed and inter-particle as with powders. Envelope volume, which as the name implies, is the volume of a particle around a tight fitting envelope, taking into account any surface irregularities but including all open and closed pores (figure 1A). Bulk and envelope density are often used interchangeably, depending on whether the sample is powder or a solid monolith. Generally, bulk density is used to define the density of a collection of particles and envelope density is used to define a singular particle or solid monolith (figure 1A). Apparent or skeletal volume is a measure of the solid volume plus closed pore volume, all open pore volume is excluded (figure 1B). True or absolute volume is a measure of only the solid volume (figure 1C); all open and closed pore volume is excluded (ASTM D 2638, 1997; Britt and Consolmagno, 1998; Britt et al., 2002; Geddis, et al., 1996; Webb, 2001).

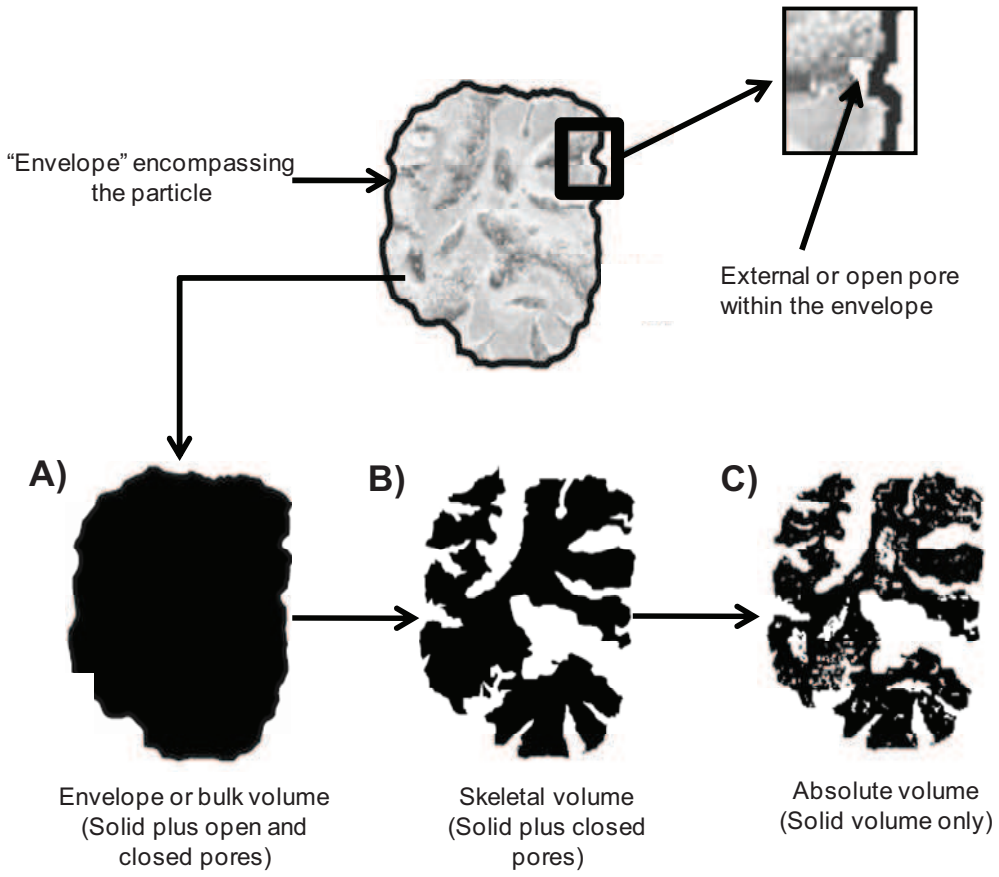


Figure 1. Schematic showing the different types of volume (After Webb, 2001).

The pore volume can be readily calculated by subtracting the true volume from the bulk volume of the rock. Similarly, the pore density is determined by subtracting the bulk density from the true density. The pore volume or pore density is often expressed as a percentage, by either dividing the pore volume with the bulk volume and multiplying the result by 100 or by dividing the pore density with the true density and multiplying by 100 (Britt and Consolmagno, 1998; Britt et al., 2002; Chang, 1988).

The composition, internal and external properties of the rock, together with the measurement method and conditions under which the measurement is conducted, will determine the volume obtained. The density is defined according to the type of volume measured, from figure 1: bulk density includes open and closed pores; envelope density includes open pores, closed pores and surface irregularities; skeletal density excludes open pores and includes closed pores; and true or absolute

density excludes all pores (ASTM D 2638; 1997; Britt and Consolmagno, 1998; Britt et al., 2002; Geddis, et al., 1996, Webb, 2001).

2.2. HYDROSTATIC IMMERSION

In this method the volume of the sample is calculated by comparing the weight of the sample in air to the weight of the sample immersed in a liquid of known density. Water is the most common reference liquid used; however, different reference liquid/material may be used depending on the application. For soils and compost with a density less than that of water, hexane (0.6 g/cc) may be used (Weindorf and Wittie, 2003). In order to determine the bulk density of asteroids without contaminating the sample using water, Britt and Consolmagno (1998) used 40 µm glass spheres as the Archimedean fluid.

Relative density can be defined as the ratio of the density (mass of a unit volume) of a substance to the density of a given reference material, usually water (Chunnett et al., 2006). The formula for relative density is as follows:

$$\text{Relative Density} = \frac{\text{Density}_{\text{sample}}}{\text{Density}_{\text{water}}} = \frac{\frac{\text{Weight}_{\text{sample}}}{\text{Volume}_{\text{sample}}}}{\frac{\text{Weight}_{\text{water}}}{\text{Volume}_{\text{water}}}} = \frac{\text{Weight}_{\text{sample}}}{\text{Weight}_{\text{water}}} \quad (1)$$

Therefore using Archimedes' principle (weight of water is equal to the buoyancy force), the equation becomes (Chunnett et al., 2006):

$$\text{Relative Density} = \frac{\text{Weight}_{\text{sample}}}{\text{Buoyancy force}} \quad (2)$$

Buoyancy force is equal to the difference of the weight of the sample in air and the weight of the sample in water. Therefore in order to obtain the relative density of the sample, the sample needs to be weighed in air and then in water (Chunnett et al., 2006):

$$\text{Relative Density} = \frac{\text{Weight}_{\text{sample (air)}}}{\text{Weight}_{\text{sample (air)}} - \text{Weight}_{\text{sample (water)}}} \quad (3)$$

The actual density of the sample is then determined by multiplying the relative density by the density of water (Chunnett et al., 2006). The density of pure water at approximately 4 ℃ is 1 g/cm ^{3}. The density of water decreases with higher and lower temperatures (table 1).

Table 1. The effect of temperature on the density of pure water (After Snelling, 2010).

Temperature °C	Density (g/cc)	Temperature °C	Density (g/cc)
0 (Solid)	0.915	15	0.999099
0 (Liquid)	0.999841	16	0.998943
1	0.9999	17	0.998774
2	0.999941	18	0.998595
3	0.999965	19	0.998405
4	0.999973	20	0.998203
5	0.999965	21	0.997992
6	0.999941	22	0.99777
7	0.999902	23	0.997538
8	0.999849	24	0.997296
9	0.999781	25	0.997044
10	0.9997	26	0.996783
11	0.999605	27	0.996512
12	0.999498	28	0.996232
13	0.999377	29	0.995944
14	0.999244	30	0.995646

It is evident from table 1 that the effect of temperature on the density of water is very small. However, changes in temperature can produce measurable changes in density, which will depend on the application. The effect of changes in atmospheric pressure has a negligible effect (Capano, 2000). Changes in pressure and temperature have a much larger effect on gases than on solids and liquids. Contamination or alteration of the sample by immersing it in the reference fluid must also be considered when using this method.

The type of density measured using this method will depend on the ability of the water to infiltrate through any open pores/fractures within the samples structure (Geddis et al., 1996). This will obviously depend on the permeability of the sample,

mineral arrangement, composition and structure. Apart from highly permeable, porous or fractured samples, infiltration will be limited given the close interlocking nature of the mineral grains. In most cases the bulk or envelope density is measured.

It is possible to coat the sample in wax or resin of known density to ensure that the open and closed pore volume is included in the volume measurement. The sample is weighed and then dipped in molten wax, and once dried, weighed again. Care must be taken to ensure any bubbles within the wax are pressed out before it dries. The difference between the weight of the sample in wax and the weight of the sample before coating gives the weight of the wax. The volume of the wax coating is determined by dividing the volume of the sample by the density of the wax (Chang, 1988; Regimand, 2001; Webb, 2001). Regimand (2001) describes using preformed resilient bags and vacuum sealing the bag around the sample, as an alternative to wax coating. One of the issues with using wax in highly porous samples is that wax may penetrate into the pore spaces, and it is also often difficult to remove (Regimand, 2001).

Following the hydrostatic immersion method described above, the volume of the coated sample is determined by the difference of the weight of coated sample in air and the weight of the coated sample in water. The volume of the uncoated sample is determined by subtracting the volume of the coated sample and the volume of the wax coating. The bulk or envelope density of the sample can now be readily calculated by dividing the mass of the uncoated sample by the volume of the uncoated sample (Chang, 1988; Regimand, 2001; Webb, 2001).

2.3. GRADUATED FLASK

Using this method, the volume of the sample is determined by placing the sample in a water filled graduated flask and reading off how much water is displaced. The flask is usually calibrated in millilitres, where 1 ml = 1 cm^3. The mass of the sample is measured using a balance and density can be readily calculated.

As with the hydrostatic method, the density determined will depend on the ability of the water to infiltrate through any open pores/fractures within the core samples structure (Geddis et al., 1996). This will obviously depend on the permeability of the sample, mineral arrangement, composition and structure.

2.4. PYCNOMETER BOTTLES

Pycnometer is derived from the Greek word meaning dense. A pycnometer is a bottle with a known volume. The bottle is commonly made up of glass, with a tight sealing stopper that has a capillary tube through it in order for bubbles to escape (figure 2). This device is used to determine the density of milled or powdered samples, or small solids, and is also widely used for determining the density of soils or compost. As with the previous two methods where the reference liquid is water, the same constraints apply. These constraints are the permeability, mineral arrangement, composition and structure of the sample. The ability of the water to enter small pores may also be restricted by surface tension (Geddis et al., 1996).

In this case, the weight of the pycnometer filled only with water is established. The dry, pre-weighed sample is then added to the pycnometer and the rest is filled with water. The density of the sample can be calculated from the known density of the water; the weight of the pycnometer filled only with the water; the weight of the pycnometer containing both sample and water; and the weight of the sample (Geddis et al., 1996).

Figure 2. Pycnometer bottle.

2.5. GAS PYCNOMETERS

Gas pycnometers determine the volume by calculating the pressure change resulting from the displacement of gas by a solid object (Archimedean principle) and solving for the ideal gas law (equation 4). There are a number of different designs, and these machines are used in a wide variety of applications.

Dry air or helium are the gases most commonly used. The gas used will depend on the size of the gas molecules, size of the pores within the sample or how the gas reacts with the surface of the sample. Helium is often preferred over air as it can readily diffuse into smaller pores given its smaller molecular size (Agnew et al., 2003; Chang, 1988; Geddis et al., 1996; Orr et al., 1991; Turner et al., 1978; Webb, 2001). Figure 3 shows two examples of modern gas pycnometers available on the market.

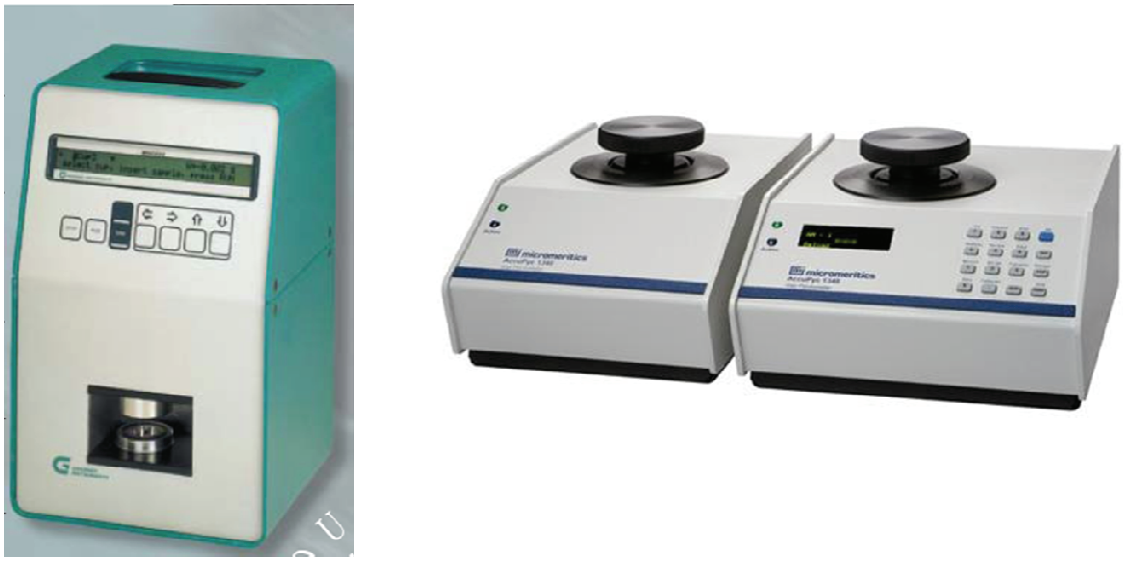


Figure 3. Example of modern gas pycnometers.

Note: On the left is the Grabner Minidens air gas pycnometer and on the right is the Micromeritics Acupyc II helium gas pycnometer.

The measurement process is explained using figure 4 and the equations below (equation 4 to 7). The unknown sample volume (V_x) is placed into the chamber of known volume (V_s). The chamber is sealed and the pressure recorded (P_s). The reference chamber of known volume V_R is then charged to pressure (P_R), at a pressure higher than that of the sample chamber (figure 4). By applying the ideal gas law, the sample volume can be determined. The calculation for this initial state is given in equation 4 (Agnew et al., 2003; Chang, 1988; Geddis et al., 1996; Turner et al., 1978; Webb, 2001).

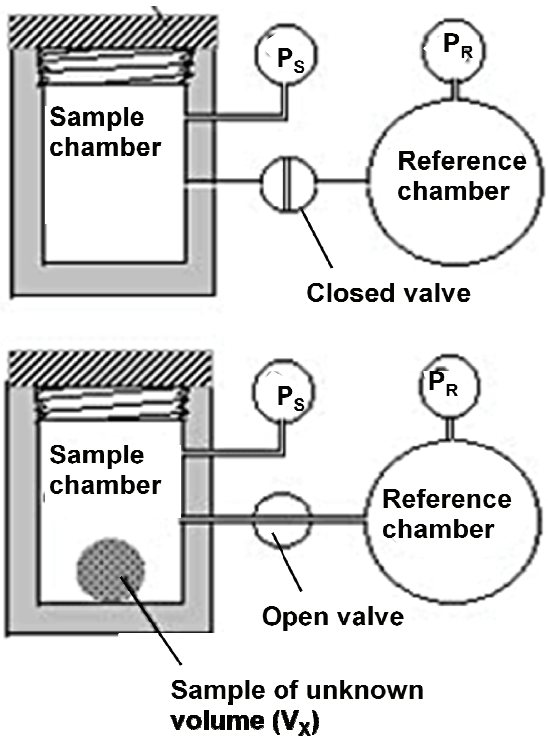


Figure 4. Illustration showing how a gas pycnometer functions (After Webb, 2001).

The valve separating the sample chamber from the reference chamber is then opened, allowing the pressure in the system (P_{SYS}) to equilibrate (equation 5). By substitution the unknown sample volume can be determined (equation 6 to 7); (Agnew et al., 2003; Chang, 1988; Geddis et al., 1996; Turner et al., 1978; Webb, 2001).

$$P_S(V_S - V_X) + P_R V_R = nRT \quad (4)$$

Where **T** is temperature and **n** the number of gas molecules which remains constant throughout the experiment; **R** is the gas constant

$$P_{Sys}(V_S + V_R - V_X) = nRT \quad (5)$$

$$P_s((V_S - V_X) + P_R V_R = P_{Sys}(V_S + V_R - V_X) \quad (6)$$

$$V_X = \frac{(P_{SYS}V_S + P_{SYS}V_R - P_S V_S - P_R V_R)}{(P_{SYS} - P_S)} \quad (7)$$

Modern gas pycnometers are capable of determining the skeletal or very close to the true density of a sample with a high degree of accuracy and precision. These automated devices also have built in analytical balances for determining the mass and are able to compute the density of each, which can then be downloaded to a computer.

In order to achieve a high degree of accuracy and precision, the sample and gas used must be free of moisture. Volatiles that may contribute their partial pressure and thus cause error must also be removed (Agnew et al., 2003; Chang, 1988; Geddis et al., 1996; Turner et al., 1978; Webb, 2001). Gas pycnometers are also relatively expensive, and are sensitive to external variables such as changes in ambient temperature, and therefore need to be operated in a controlled environment.

Gas pycnometers can be used to determine the density of larger monolithic substances, but there is limited information on the use of gas pycnometers to determine the bulk or envelope density of larger solid rock/core samples. Modern automated gas pycnometers can only take a very small amount of sample. However, in principle, the method described above can be applied to determine the bulk or envelope density of a solid core or rock sample.

3. REGIONAL GEOLOGICAL SETTING

The Bushveld Complex is situated in the northern part of South Africa, within the provinces of the North-West, Limpopo and Mpumalanga. Figure 5 is a simplified geological map of the Bushveld Complex, showing the location of the study area in the North Eastern limb, highlighted by the red polygon.

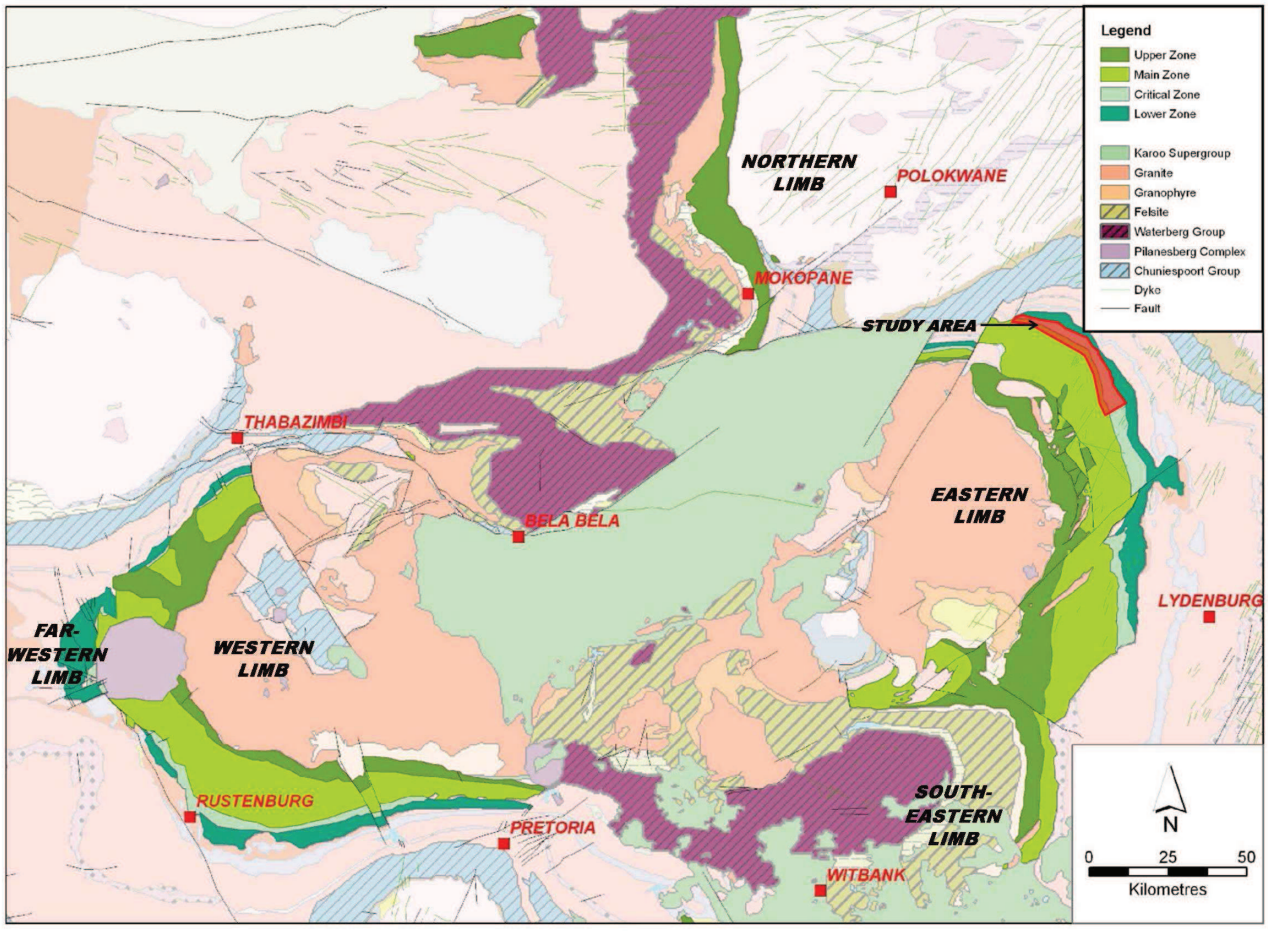


Figure 5. Simplified geological map of the Bushveld Complex, showing the study area in red (After Brown, 2005a).

The Rustenburg Layered Suite is the worlds largest layered mafic to ultramafic intrusion, at its extremities stretching approximately 450 km from east to west and 350 km north to south (Naldrett et al., 2009). It outcrops over an area of approximately 65 000 km^2, with thicknesses of about 7 to 8 km (Eales, 2001; Cawthorn and Webb, 2001; SACS, 1980; Seabrook, 2004).

The Rustenburg Layered Suite was emplaced into the Transvaal sequence of the Kaapvaal craton, beneath the acid volcanics of the Rooiberg Group (Cawthorn and Walraven, 1998). The Rustenburg Layered Suite has been dated to have intruded into the Transvaal basin at 2.054 Ga (Von Gruenewaldt et al., 1985; Scoates and Friedman, 2008).

The Rustenburg Layered Suite may be divided into five compartments or limbs. The five limbs are the Western Bushveld, Eastern Bushveld, South-Eastern Bushveld, Northern Bushveld and Far-Western Bushveld, as shown in figure 5 (Cawthorn and Walraven, 1998; Eales, 2001; Naldrett et al., 2009; Seabrook, 2004). The Western and Eastern limbs dip inwards beneath the central granite and granophyres suites, averaging 10° - 20°. The Northe rn limb dips independently in a westerly direction (Eales, 2001).

The Rustenburg Layered Suite of the Bushveld Complex is divided into five zones based on the main rock types and geochemistry (Barnes and Maier, 2002; Cawthorn and Walraven, 1998; SACS, 1980). They are from the bottom, the Marginal Zone which is only locally developed above the underlying Transvaal Supergroup; Lower Zone; Critical Zone; Main Zone; and Upper Zone.

A generalized lithostratigraphic column of the Rustenburg Layered Suite in the Eastern Bushveld is given in figure 6. Figure 6 shows the average thickness of each zone and subzone in the Rustenburg Layered Suite of the Eastern Bushveld, together with the major rock types that make up each zone.

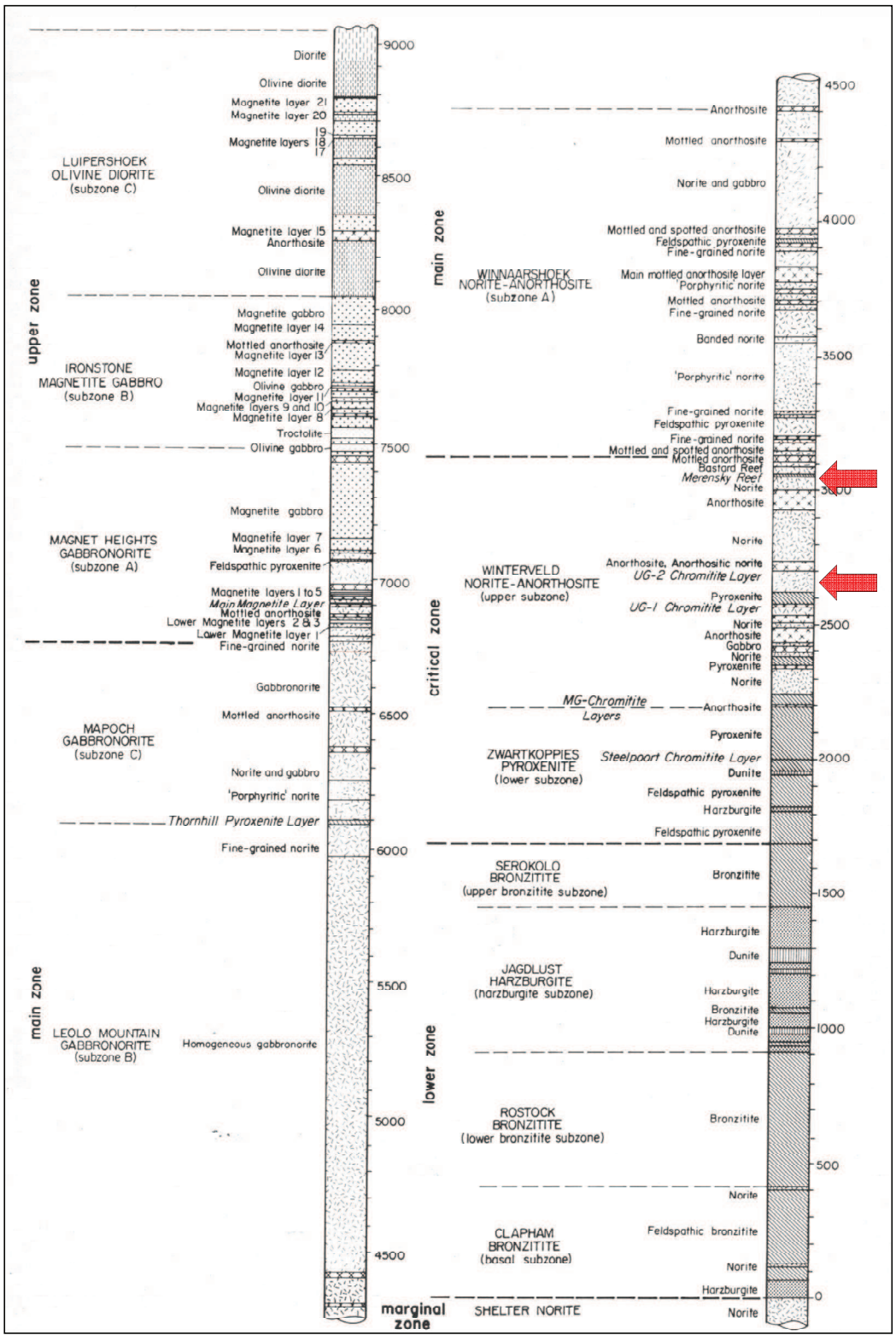


Figure 6. Lithostratigraphic column of the Rustenburg Layered Suite of the Eastern Bushveld (Von Gruenewaldt et al., 1985).

Note: The positions of the MR and UG2 is indicated by the red arrows.

Economic concentrations of PGE are found in three very different layers: the MR and UG2 of the Upper Critical Zone (red arrows in figure 6, and figure 7), which are found in both the Eastern and Western limbs, and the third layer, the Platreef, which is located in the Northern limb. The Platreef is considerably thicker than the MR (figure 7); (Cawthorn et al., 2002).

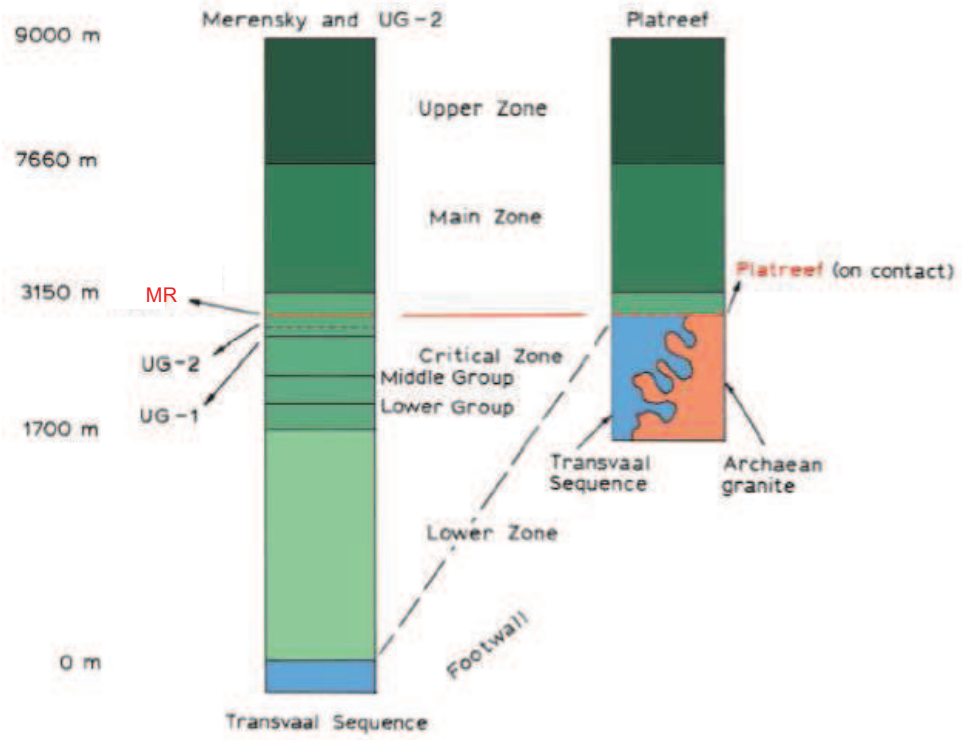


Figure 7. Simplified stratigraphic column of the Rustenburg Layered Suite (After Kinloch and Schouwstra, 2000).

Note: The column on the left shows the positions of the Merensky Reef and Upper Group 2 chromitite layer found in the Western and Eastern limbs, in relation to the column on the right showing the Platreef of the Northern limb.

These zones show remarkable stratigraphic and petrological similarities between the Western and Eastern limbs. The average thickness and correlations between the Western and Eastern limb are given in figure 8 (Cawthorn and Walraven, 1998).

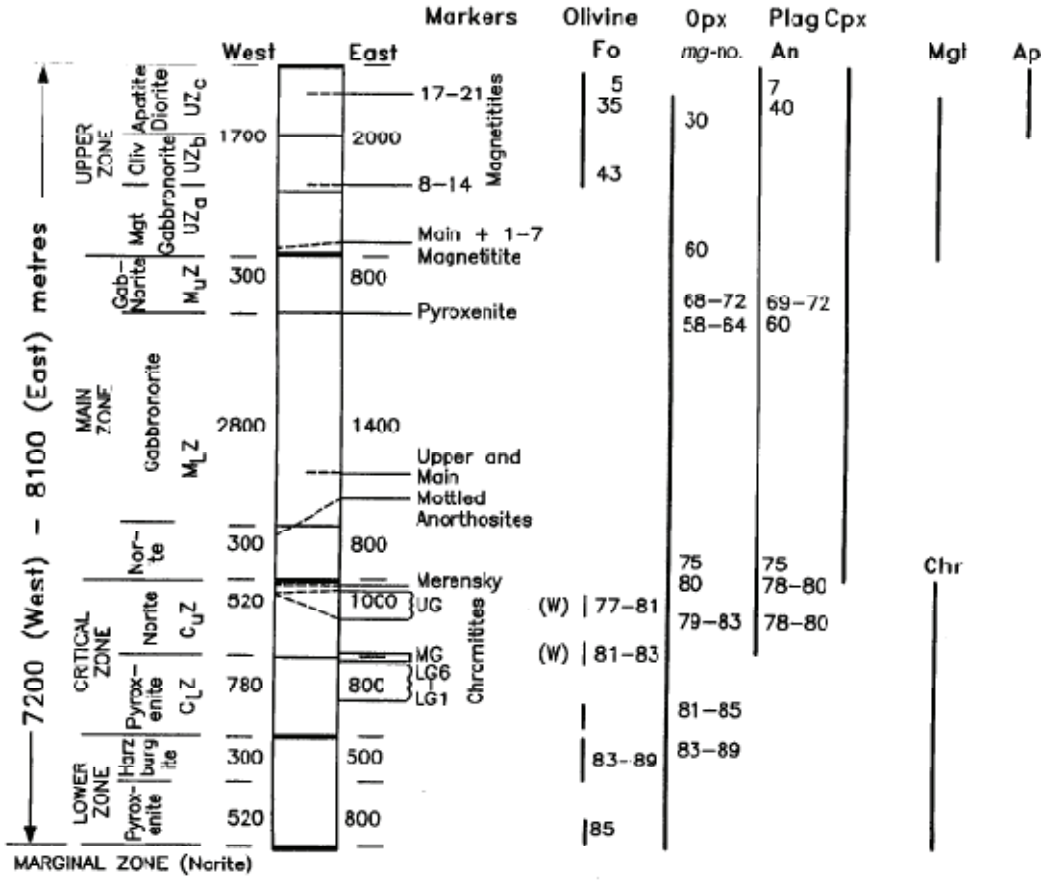


Figure 8. Simplified stratigraphic column of the Western and Eastern limbs of the Rustenburg Layered Suite (Cawthorn and Walraven, 1998).

Note: Correlations between the two limbs are shown. Solid lines indicate marker horizons found in both limbs. Dashed lines indicate that they occur on only one limb. The major changes in mineral composition that define the zones are also shown.

Using these similarities, together with the analysis of gravity, seismics and resistivity data, Cawthorn and Webb (2001) and Webb et al. (2004) have put forward a model that supports the connectivity between the Western and Eastern limbs.

The floor rocks of the Bushveld Complex are generally made up of the clastic and chemical sedimentary rocks, consisting mainly of quartzite, argillite, dolomite and banded iron formation, with only the Northern limb showing transgression though the Transvaal sequence into the Archean granites (figure 7); (Cawthorn and Walraven, 1998; Clarke et al., 2005; Naldrett et al., 2009; Von Gruenewaldt et al., 1985).

4. GEOLOGY OF THE STUDY AREA

4.1. MR AND UG2

The samples related to this study were taken from the MR, UG2 and their immediate hangingwall and footwall lithologies. Samples are taken to represent a typical mining cut and cover the extent of the visible mineralization within the reef. Samples seldom extend more than 60 cm into the hangingwall and footwall. A basic stratigraphic column of the MR, UG2 and the rocks that make up the hangingwall and footwall lithologies is given in figure 9. Figures 10 and 11 are underground pictures of the MR and UG2 mining cuts.

From the south to the north of the study area, the average middling between the MR and UG2 decreases from ± 400 m to 350 m, and the dip increases from 12° to 24° respectively (Langwieder, 2005).

Normal Merensky reef is defined as the mineralized medium crystalline (± 1 - 2 mm) poikilitic plagioclase orthopyroxenite layer at or near the base of the Merensky differentiated unit. It is made up of cumulate orthopyroxene (80 - 90 %) and intercumulus plagioclase. It shows both poikilitic and porphyritic textures, and commonly contains large (10 - 20 mm) clinopyroxene oikocrysts. It is usually more than 0.5 m wide and not more than 2 m wide. It is usually bound at the top and bottom by a thin chromitite layer, 2 mm to 30 mm thick. In certain areas the MR may have up to four thin chromitite layers that are locally discontinuous. In some cases the top and bottom chromitite layers are completely absent (Brown, 2004a, 2005a, 2005b; Lee and Butcher, 1990; Mathez et al., 1997; Mitchell and Scoon, 2007; Schwellnus et al., 1976).

The MR is overlain by a medium crystalline plagioclase orthopyroxenite layer, similar to the MR, between 0.4 m to 0.7 m thick which then grades into norite. The MR is underlain by a pegmatoidal (up to 20 mm) plagioclase orthopyroxenite that varies in thickness but is typically between 0.2 m to 1.5 m wide, which is then followed by a medium crystalline plagioclase orthopyroxenite which may extend up to 10 m below the MR, which then typically grades into a medium crystalline gabbronorite (Brown, 2004a, 2005a, 2005b). Gabbronorite layers may directly underlie the pegmatoidal plagioclase orthopyroxenite or be inter-layered within the

medium crystalline plagioclase orthopyroxenite (Brown, 2004a, 2005a, 2005b; Brown and Lee, 1987; Lee and Butcher, 1990; Mathez et al., 1997; Schwellnus et al., 1976).

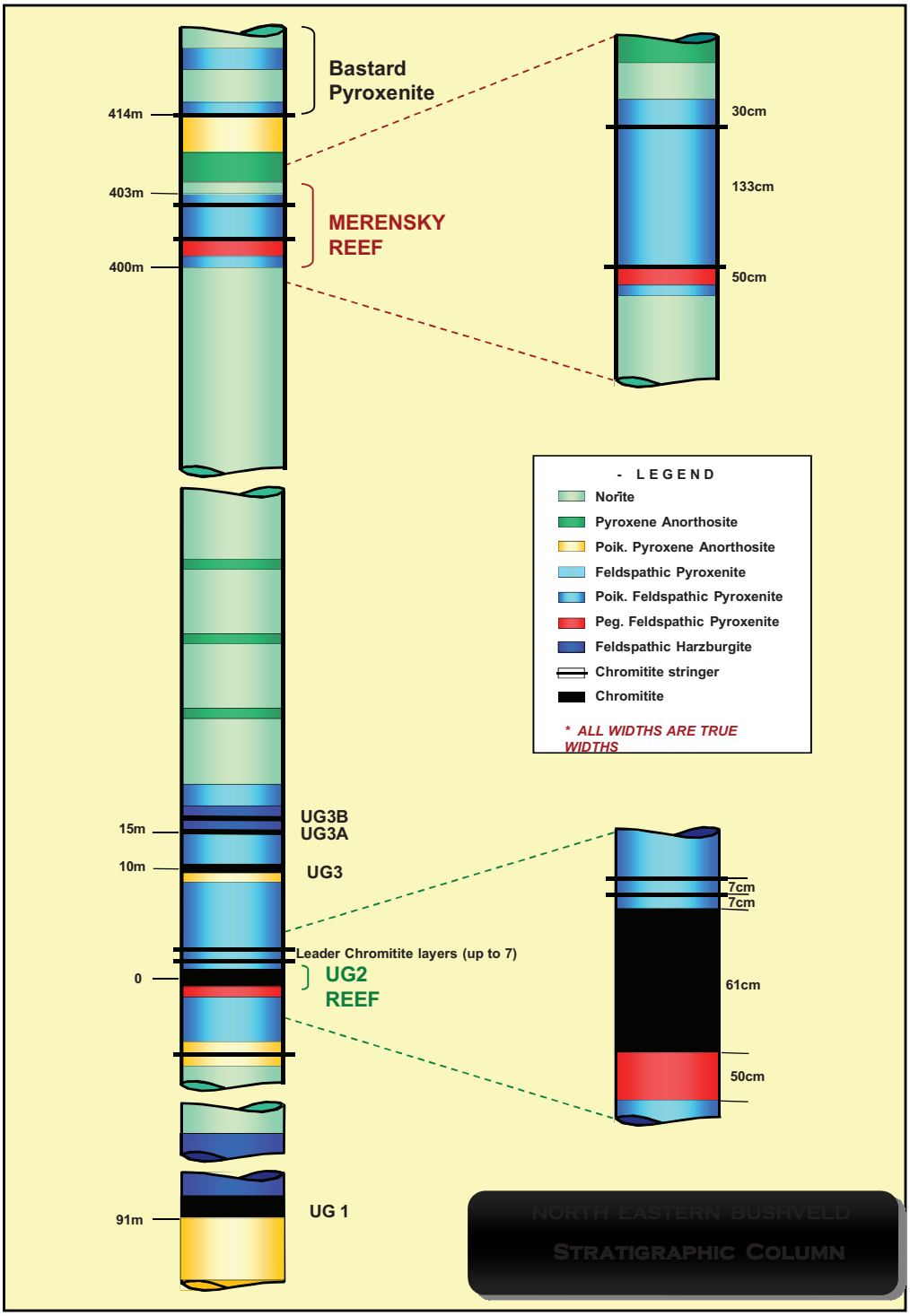


Figure 9. Stratigraphic column of the MR and UG2 reefs in the North Eastern limb of the Bushveld Complex.

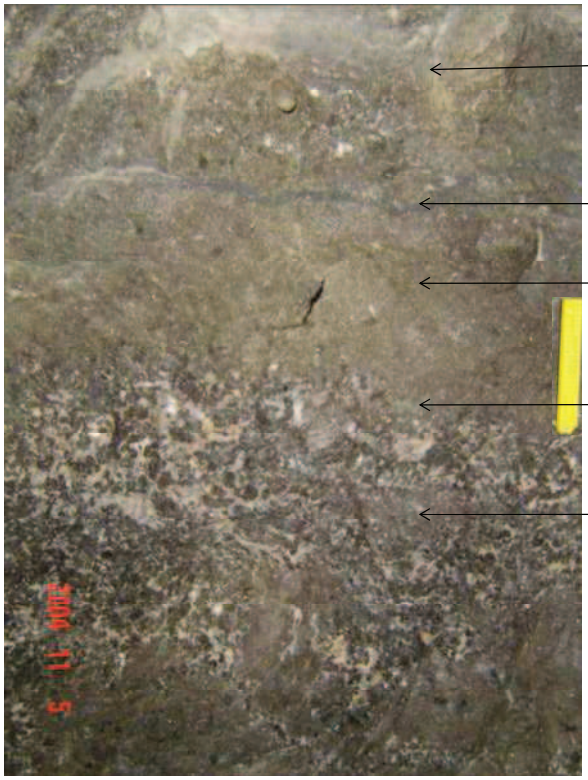


Figure 10. Underground picture of the MR mining cut (after Brown, 2005a).

Figure 11. Underground picture of the UG2 mining cut (after Brown, 2005a).

The plagioclase pyroxenite of the MR hosts variable accumulations of chromite, base and precious metal sulphides. This mineralization may extend to the immediate hangingwall and footwall lithologies. Base metal sulphides, chalcopyrite, pentlandite, pyrrhotite and pyrite occur as anhedral crystals sharing interstitial space with plagioclase, within a silicate cumulus framework of orthopyroxene and minor clinopyroxene. Base metal sulphides are also found associated with the chromitite layers, and commonly exhibit high grades or value zones over these layers, especially the top chromitite layer of the MR. PGE mineralization is found contained within the base metal sulphides in solid solution and as distinct platinum group metals that are often spatially associated with base metal sulphides and chromitite. The platinum group metals are mainly made up of PGE sulphides, arsenides, sulpharsenides, bismuthides, tellurides, antimonides, bismuthotellurides and alloys. Solid solution PGE base metal sulphides and platinum group metals may also be found as totally enclosed crystals within the cumulus orthopyroxene or within the cleavage planes of cumulus orthopyroxene crystals due to remobilization (Brown, 2004a, 2005a, 2005b; Brown and Lee, 1987; Lee and Butcher, 1990; Mathez et al., 1997; Schwellnus et al., 1976).

The UG2 is a chromitite layer developed close to the base of the differentiated UG2 unit. The UG2 occurs as a chromite cumulate (75 – 90 %) that is either made up of pure chromite or as a dense cumulate framework of chromite together with fine crystalline interstitial plagioclase and/or orthopyroxene. Interstitial silicates are rarely visible to the naked eye. Interstitial sulphides are also sometimes found within the cumulate chromite and are often visible to the naked eye in the UG2 of the Eastern limb. The UG2 has a fairly consistent average width of 0.6 m, but can range from about 0.2 m to 1.5 m (Brown, 2004a, 2005a, 2005b; Cameron, 1982; Gain, 1985; Mabuza, 2006; Mondal and Mathez, 2007).

The UG2 is overlain by a medium crystalline plagioclase orthopyroxenite. A number of chromitite layers are found within this hangingwall unit. They are variable in width averaging only 5 mm to 10 mm. They are found at varying distances and distributions above the UG2, ranging from a 10 mm to 700 mm. They are generally poorly mineralized. The UG2 is underlain by a pegmatoidal plagioclase pyroxenite which is in turn underlain by a medium crystalline plagioclase pyroxenite marking the base of the UG2 unit. In some instances the UG2 is underlain by norite or anorthosite (Brown, 2004a, 2005a, 2005b; Cameron, 1982; Gain, 1985; Mabuza, 2006; Mondal and Mathez, 2007).

Economic PGE and base metal sulphide concentrations are usually found exclusively within the UG2 chromitite layer. The pegmatoidal plagioclase pyroxenite may contain chromitite as blebs, thin irregular discontinuous layers and/or disseminations. This is often associated with lower concentrations of PGE mineralization. No PGE mineralization extends into the immediate hangingwall unit of the UG2. As with the MR, the PGE mineralization is found as solid solution PGE within the base metal sulphides, as discrete platinum group metals, associated with base metal sulphides. Base metal sulphides and platinum group metals are also found totally or partly encompassed within the individual chromite crystals (Brown, 2004a, 2005a, 2005b).

The most common rock density determination methods have been discussed in Chapter 2. The chapter highlighted the importance of understanding the internal and external structure of the rock being measured. The rock types that make up the MR, UG2 and their immediate hangingwall and footwall are made up of interlocking tightly fitting mineral grains typical of cumulates. There are typically no visible pore spaces on the core samples. However, there may be a small percentage of closed pores or fractures within the internal structure of the rock, for example along the individual mineral grain boundaries. Alteration zones within the orebody as well as zones with intense jointing/fracturing may also affect the density of the rock sample. The method used together with the nature of the rock sample will determine the type of density that is measured.

4.2. STRUCTURE

The study area is characterized by three major fault/lineament/joint directions. They are North-northeast – South-southwest, which is the most prominent; East – West, and North-northwest – South-southeast. They are generally steeply dipping, ranging from 70° to 90°. The aeromagnetic survey of the project area in figure 12 clearly highlights the prominent dyke/structural features and their trend direction.

The study area is fairly uncomplicated in terms of faulting. Displacement is generally small, averaging ≤ 1 m. Where faulting does occur, they consist of dextral and sinistral strike-slip faults, normal and reverse dip-slip faults, as well as faults of both components. There are only two major faults within the study area, one near the southern border of the project area with a displacement of 20 m and one near the northern border of the project area with a displacement of 100 m.

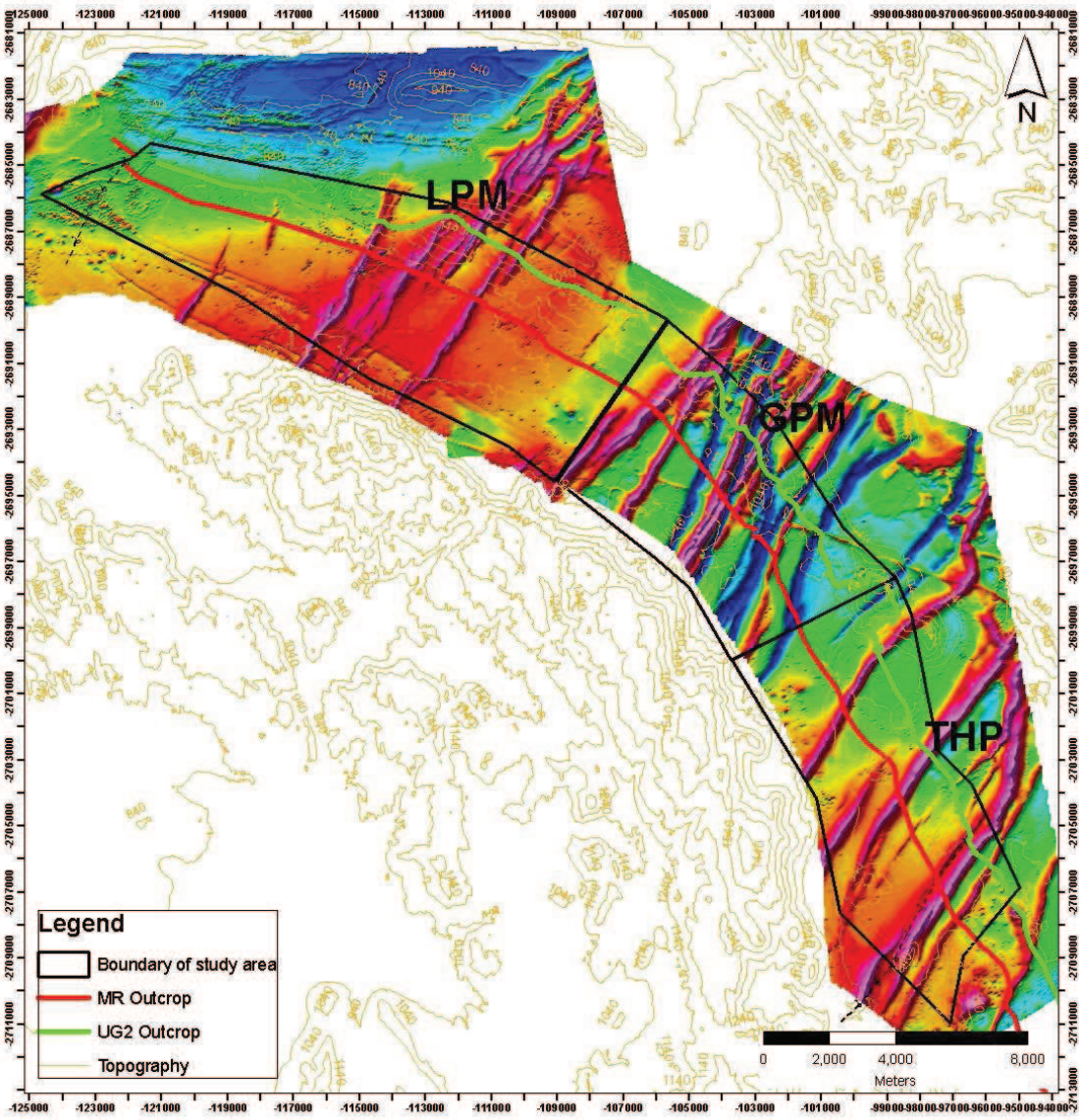


Figure 12. Aeromagnetic survey of the study area, highlighting structural features and directional trend.

A number of dykes occur over the study area. They trend North-northeast – South-southwest, with dips that range from 62° to 8 9° (figure 13). They are comprised of fine crystalline dolerite and are post Karoo in age, younger than 300 ma (Brown, 2004a). They vary greatly in width from a couple of centimetres to over 30 m, occurring as a single entity or as a dyke swarm. Jointing, alteration and minor faulting is commonly associated with the dykes, but field observations have indicated that this is not excessive. It is generally accepted that an area of 10 m on either side of the dyke will be affected.

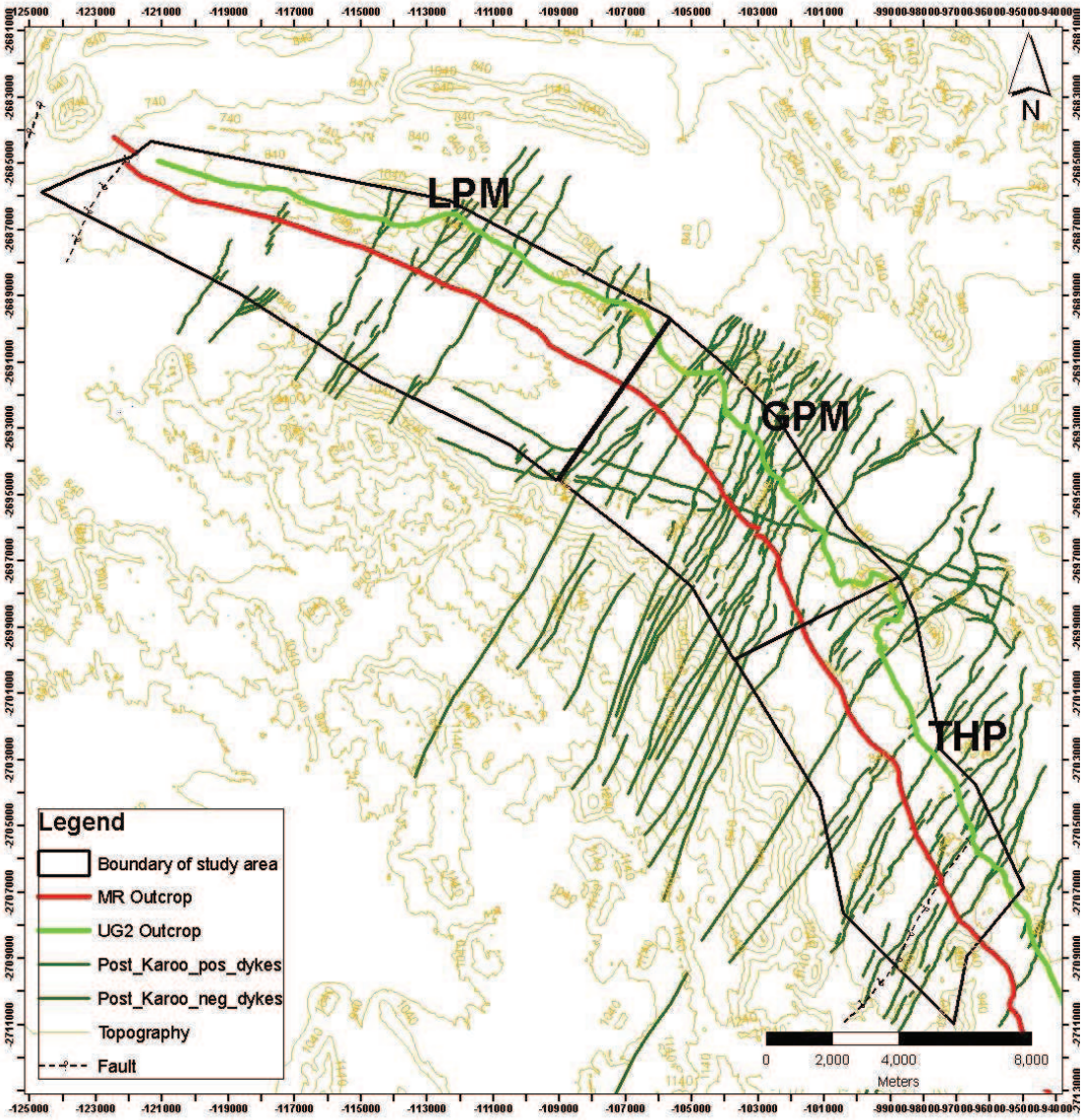


Figure 13. Distribution of dykes across the study area.

The “Footwall 3 shear”, is a prominent shear associated with a low-angle thrust fault that occurs 7 – 15 m below the UG2. Apart from this, there is limited evidence of shearing. Several strike parallel lineaments have been indicated from the geophysical survey that may be interpreted as shear zones. It is more likely that they are strike parallel fault/fracture zones which are layer parallel.

Randomly occurring late stage discordant pegmatites are present within the study area. They can be felsic, intermediate, mafic or ultramafic. White sub-vertical felsic veins are common and they seldom exceed 100 mm. Occasionally, irregular

shaped, pegmatitic masses occur, but they are seldom more than 2 m across (Brown, 2004b; Brown and Lee, 1987).

The MR and UG2 are occasionally disrupted by potholes, where the reef discordantly plunges from its normal stratigraphic elevation into a magmatically created depression. The potholes are usually circular to ovoid in shape. They vary greatly in size from a few metres to hundreds of metres across. They are the result of post-crystallisation thermochemical erosion and defluidisation of the cooling footwall stratigraphy caused by the injection of superheated, convecting magma above. These processes created depressions in the transient magma chamber floor into which the MR and UG2 reefs have respectively crystallised. The depth of the potholes are highly variable and depend on a number of factors, in particular, the efficiency of thermochemical erosion and the composition of the footwall lithologies, Potholes may be disruptive, where the degree of reef disruption makes it un-minable, often being highly irregular or completely absent. Potholes may also be non disruptive, in which case normal reef may be developed along a flat base, making it mineable (Brown, 2004a, 2004b, 2005a, 2005b; Brown and Lee, 1987; Mathez et al., 1997). Figure 14 shows the distribution of MR and UG2 potholes within the study area.

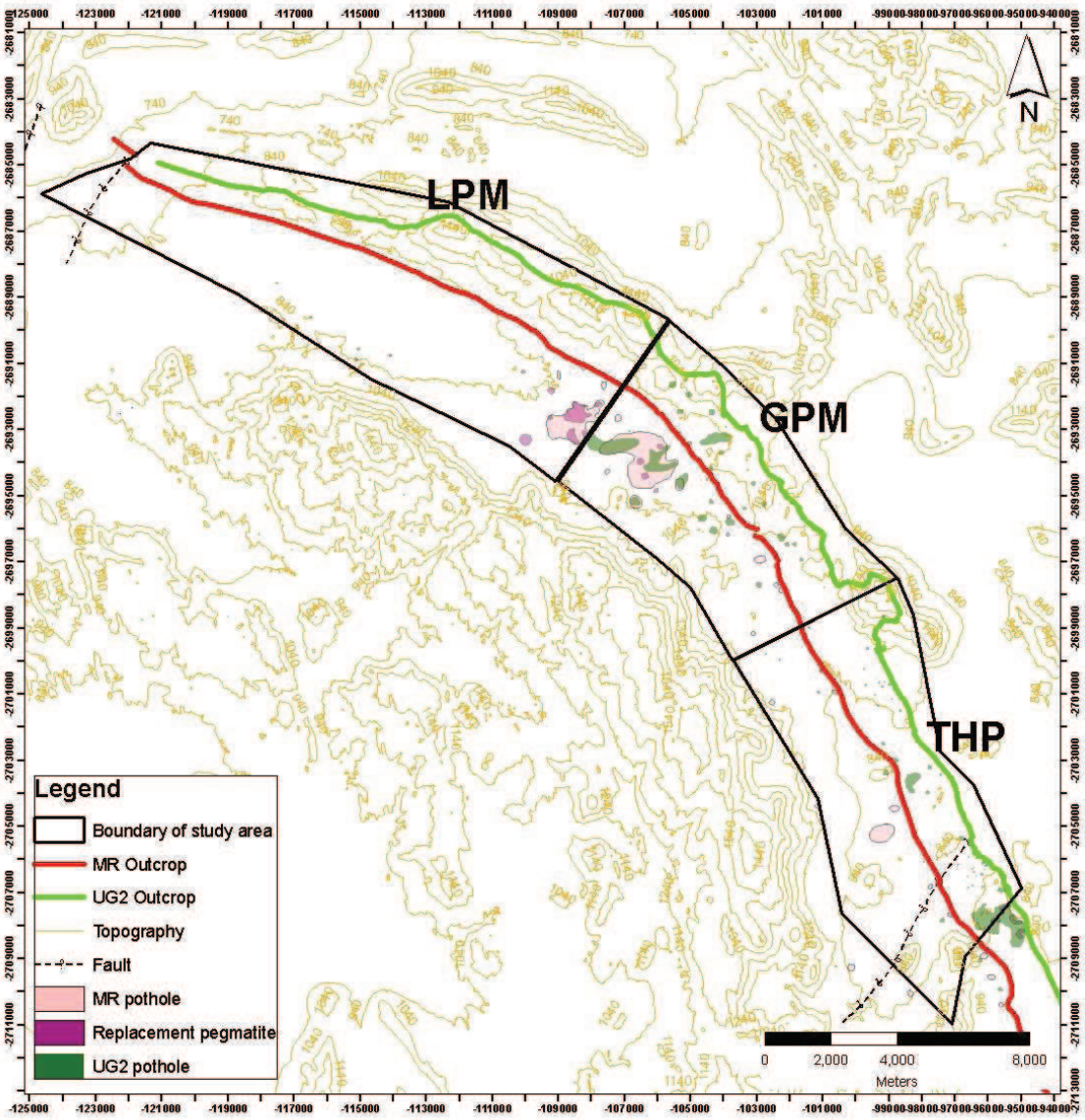


Figure 14. Distribution of potholes and replacement pegmatites across the study area.

Replacement pegmatites are often found spatially associated with potholes (figure 14). They are however formed much later than the potholes. They are the result of upward and lateral fluid driven late hydromagmatic post cumulus events like infiltration metasomatic replacement that may occur along old defluidisation channels, crystal pile weaknesses and newly evolving structural discontinuities (Brown, 2004b, 2005a, 2005b; Brown and Lee, 1987).

5. PART ONE: COMPARISON OF THE HYDROSTATIC AND GAS PYCNOMETER METHODS

5.1. PART ONE: RESEARCH METHODOLOGY

Over a period of three years the density of all exploration core samples were first measured on site using a hydrostatic method and then sent to a laboratory in Johannesburg where the density was determined from the milled core using a gas pycnometer. The first part of the study will compare these results.

5.1.1. Water hydrostatic method

The measurements were conducted at the North Eastern limb projects exploration coreyard, known as Driekop. It is situated near to where the boreholes were drilled, approximately 30 km North of Burgersfort, South Africa.

A Snowrex Clover NHV – 3 scale was used for the site measurements (figure 15). It is an electronic digital scale with a capacity of 3 kg and readability of 0.1 g intervals. Results of the hydrostatic method conducted at the exploration offices based near Burgersfort will be referred to as “Driekop”.

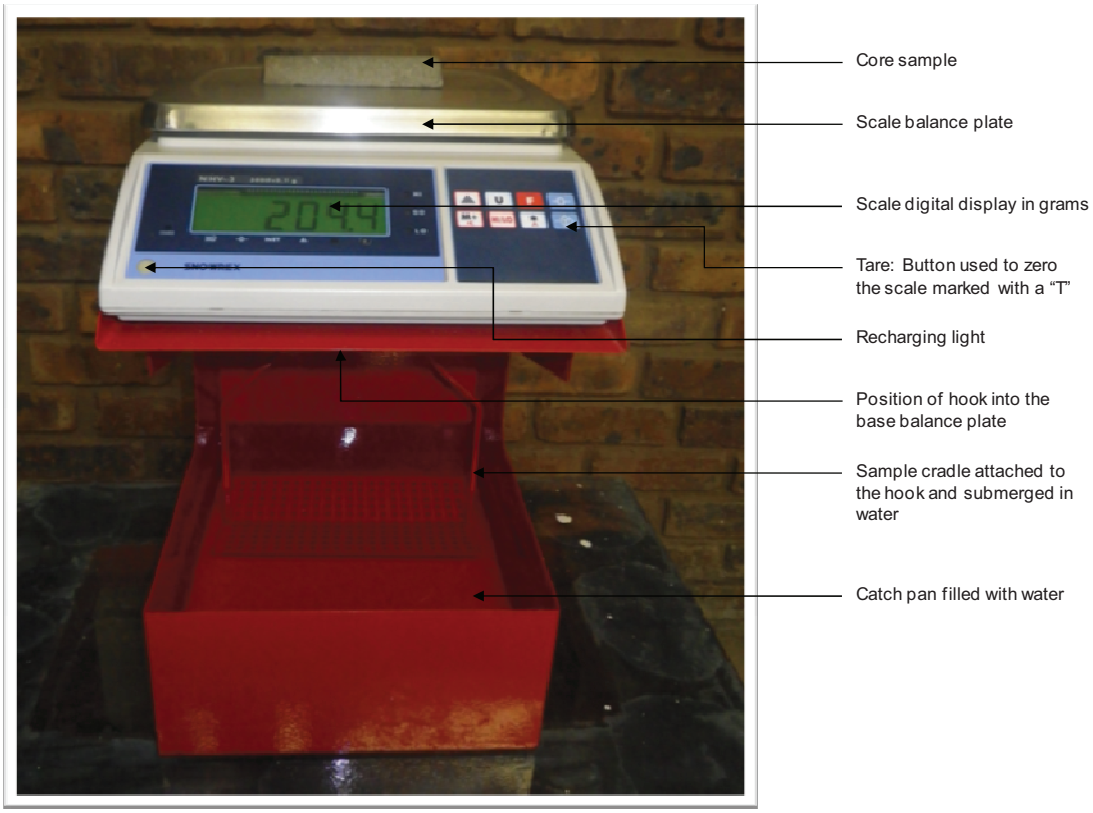


Figure 15. Snowrex Clover NHV – 3 Scale.

The measurements were not conducted in a laboratory environment; however care was taken to ensure that procedure was consistent and conducted in a controlled manner, devoid of any external influences. The guidelines from the Snowrex operation manual were strictly followed to ensure that the scale was set up properly and correctly calibrated (Snowrex precision instruments, 2008).

The full standard measurement procedure that was followed is included in Appendix A.

In order to determine the density of the sample, it must be weighed in air and then in water, as described in Chapter 2.2. By using equation 3 in Chapter 2.2, the density is then easily calculated. These results were tabulated in an Excel spreadsheet.

5.1.2. Gas pycnometer

These measurements were taken at a laboratory based in Johannesburg. They were conducted on milled or powdered core samples using a Grabner Minidens air gas pycnometer (figure 3). For reference purposes, these measurements will be referred to as “Grabner Milled” in the results section.

An annotated cross-section of the Grabner Minidens is given in figure 16. The Minidens has a mass measurement range up to 35 g. It is capable of measuring densities in the range of 0.500 to 8.000 g/cm^3 with an accuracy of approximately 0.003 g/cm^3. The principle of how a gas pycnometer calculates the volume of a sample is explained in Chapter 2.5.

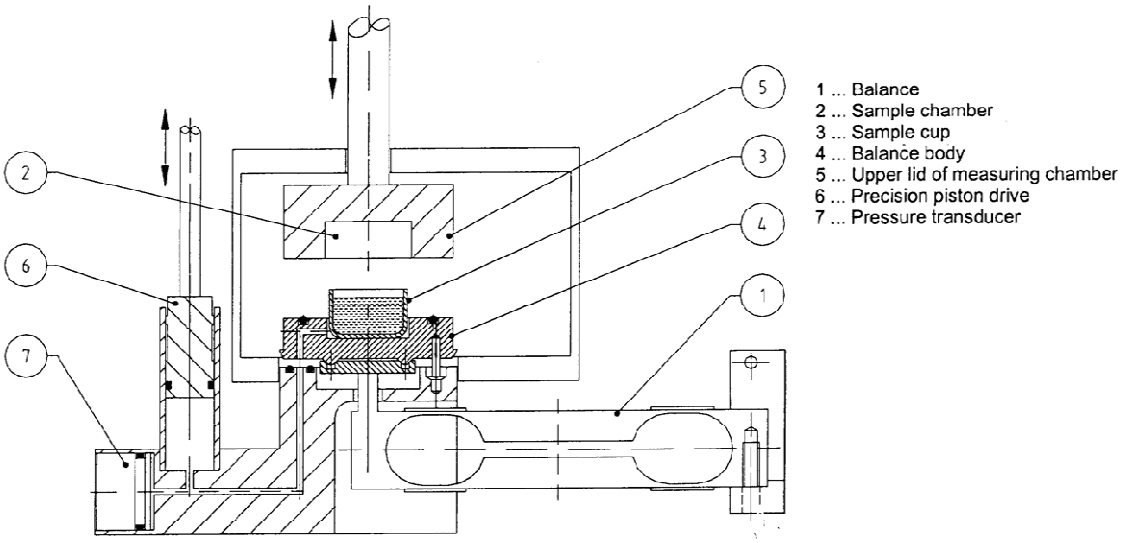


Figure 16. Cross-section of the Grabner Minidens air pycnometer (Grabner, 2008).

The samples are first milled to a particle size of approximately 40 µm. About 4 cm^3 of the milled sample is used for the density measurement. After filling the small aluminium sample cup with the milled sample, the cup is placed on to the balance top plate inside the tester, the lid is closed and the measurement is started. From here the process is fully automated. The mass of the sample is determined with the built in analytical balance. Volume is calculated as follows: Air pressure inside the measuring chamber is increased or decreased with the precision piston drive for approximately 20 kPa and then decreased or increased again until the original

barometric pressure is reached. From the expansion and compression curve the volume of the sample is determined. The measurement procedure is repeated twice and the results compared. If the two values correlate the average is taken. A third value is determined if the two values do not correlate. An error message will be displayed if they still do not correlate. The temperature of the laboratory in which the Grabner Minidens is operated is regulated to 21 ℃. The density of a sample can be automatically corrected to a preset temperature using the measured temperature and the programmed expansion coefficient (Grabner, 2008).

For quality control purposes, two materials of known density, crushed quartz and an aluminium block, were measured at the beginning and end of each batch of samples, usually every forty to fifty samples. Ten percent of the samples were sent to another laboratory for comparison, and another ten percent of the milled samples were split and measured again as duplicates. The ten percent check was also conducted using a gas pycnometer. The average percentage difference in 2008 was found to be less than one percent (Van Der Neut, 2008).

5.1.3. Comparison of results

18,430 samples were available for the comparison. Each sample was measured using the two methods described in section 2.2 and 2.5, namely Driekop for the hydrostatic method on solid core and Grabner Milled for the gas pycnometer method on milled/powdered core.

The boreholes were drilled over three exploration projects on the North Eastern limb, namely Lebowa (LPM), Gapasha (GPM) and Twickenham (THP). In order to check for variation of results between the three projects, the results were split into the three projects, referred to as LPM, GPM and THP in the results section. Figure 17 shows the distribution of boreholes over the three projects. A total of 285 boreholes were used, 121 for LPM, 66 for GPM, and 98 for THP. The total does not include deflections.

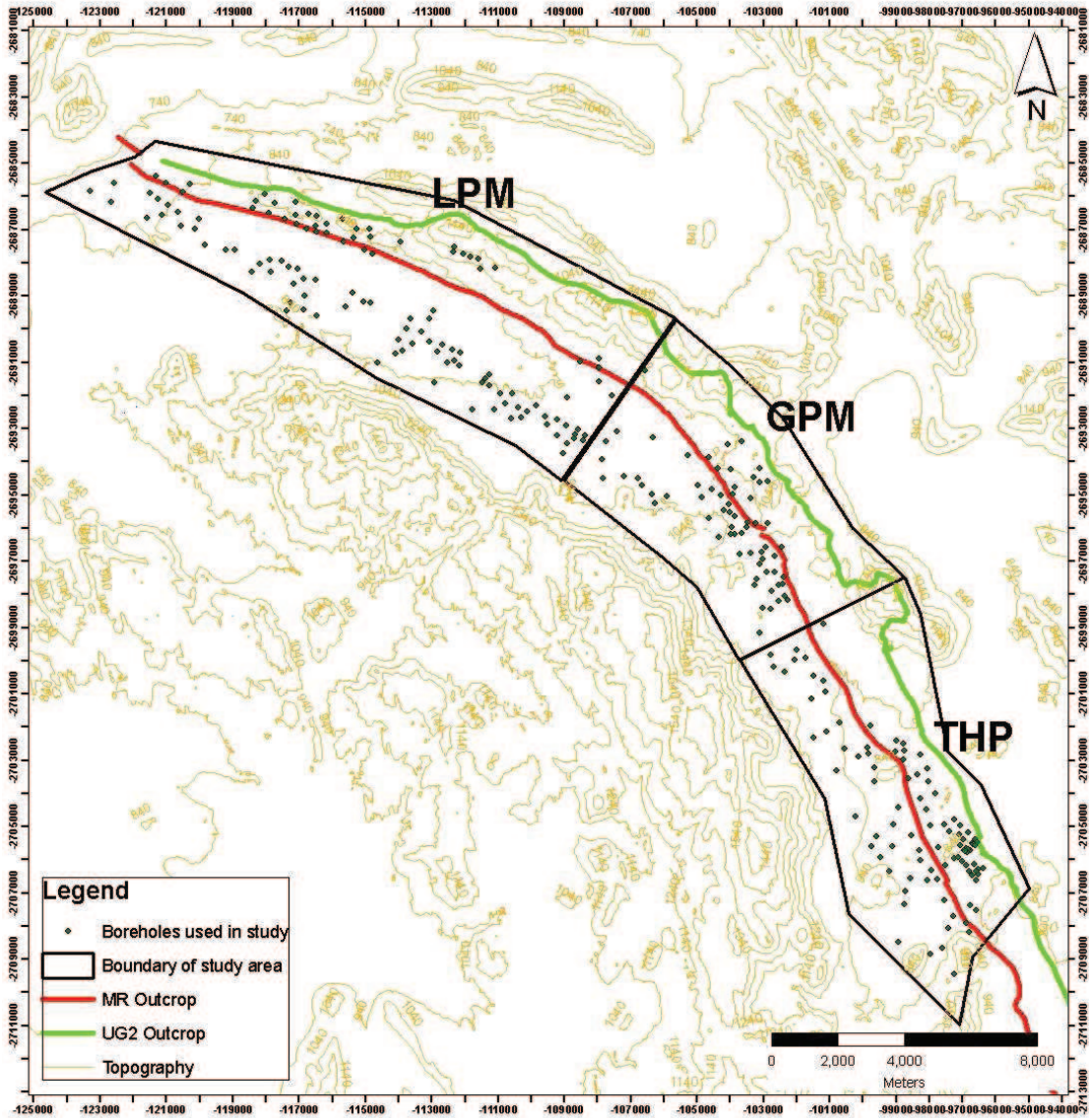


Figure 17. Distribution of boreholes across the three projects on the North Eastern limb of the Bushveld Complex, LPM, GPM and THP.

The average relative difference (AVRD) between the two results for each sample was calculated. The formula for the AVRD between two samples is given in equation eight below.

Result 1 (Grabner Milled)	Result 2 (Driekop)
X	Y

$$AVRD = ((X - Y)/((X + Y)/2)) * 100 \quad (8)$$

The AVRD is written as a percentage. An AVRD of zero will indicate the densities of the two methods are equal. A positive value indicates the Grabner Milled density is higher, whereas a negative value indicates the Driekop density is higher. The descriptive statistics of the Grabner Milled and Driekop datasets, together their AVRD results were then calculated. Samples with an AVRD that was greater than or less than three standard deviations away from the mean AVRD for all the samples were considered outliers and removed from the database. In total 328 samples (1.8 %) were removed. The total number of samples for each project, together with the number of outliers and number of samples available for the comparison from each project are given in table 2.

Table 2. Breakdown of the number of samples from each project.

Project	Original dataset (no. samples)	Outliers (no. samples)	Dataset available for comparison (no. samples)
LPM	8,924	148	8,776
GPM	3,626	74	3,552
THP	5,880	106	5,774
Total	18,430	328	18,102

The descriptive statistics of the original dataset; the outlier parameters; the list of outliers removed; the list of the data without outliers used in the comparison; and the descriptive statistics of data without outliers used in the comparison, for each project are tabulated in Appendix B. Tables B1 to B7 for LPM; tables B8 to B14 for GPM; and tables B15 to B21 for THP.

For the descriptive statistics of the original dataset refer to tables B1 (LPM), B8 (GPM); and B15 (THP). For the outlier parameters refer to tables B2 (LPM), B9 (GPM); and B16 (THP). For the list of outliers removed refer to tables B3 (LPM), B10 (GPM); and B17 (THP). For the list of the data without outliers used in the comparison refer to tables B4 (LPM), B11 (GPM); and B18 (THP). For descriptive statistics of the data without outliers used in the comparison refer to tables B5 (LPM), B12 (GPM); and B19 (THP).

A scatter graph of the original data showing the outliers was produced for each project.

The samples were then split into the stratigraphic units that make up the Merensky and Upper Group 2 chromitite sampling cut: Merensky hangingwall (MRHW); Merensky reef (MR); Merensky footwall (MRFW) and Upper Group 2 chromitite hangingwall (UG2HW); Upper Group 2 chromitite layer (UG2) and Upper Group 2 chromitite footwall (UG2FW). Figure 9 shows the localized stratigraphy and the rocks that comprise the MR and UG2 reefs.

The density results of the Grabner Milled and Driekop methods for each stratigraphic unit were displayed as histograms in order to show the distribution of results for each method and how they compare. The AVRD of each sample were also displayed as frequency histograms within their respective stratigraphic units, showing the percentage difference between the Grabner Milled and Driekop results. The data used in the percentage difference frequency histograms is tabulated in Appendix B. Tables B6 (MR) and B7 (UG2) for LPM; tables B13 (MR) and B14 (UG2) for GPM; and tables B20 (MR) and B21 (UG2) for THP.

5.1.4. Quality control

When sampling the diamond drill core, the core is split into two halves. One half of the sample was retained at the exploration site; the other half was sent to the laboratory for analysis. 811 of these sampled halves that remained on site were randomly selected and measured again using the hydrostatic method described in Chapter 2.2, referred to as “Driekop Check” in the results. These results were compared to the original Driekop and Grabner Milled results. Certified weights (50 g; 100 g; 500 g; and 1000 g) were used at the beginning of each sample batch to be measured to ensure that the scale was correctly calibrated.

The average relative difference (AVRD) between the results for each sample was calculated.

The descriptive statistics of the three datasets and the AVRD of each were then calculated. Samples with an AVRD that was greater than or less than three standard deviations away from the mean AVRD of each dataset were considered outliers and removed from the database. In total 27 samples (3.4 %) were removed.

The descriptive statistics of the original dataset (table B22); the outlier parameters (table B23); the list of outliers removed (table B24); the list of the data without outliers used in the comparison (table B25); and the descriptive statistics of data without outliers used in the comparison (table B26) are tabulated in Appendix B.

Scatter graphs comparing the results of each dataset were produced. The AVRD between each sample was displayed as frequency histograms. The data used in the percentage difference frequency histograms is tabulated in Appendix B, table B27.

5.2. PART ONE: RESULTS

5.2.1. Comparison of the hydrostatic and gas pycnometer methods

The scatter plots for the three projects (LPM, GPM and THP) are displayed in figures 18, 19, and 20 respectively. The Grabner Milled results are shown on the y axis and the Driekop results on the x axis for each sample. The sample points in blue indicate the points used in the comparison, while the outliers are highlighted in pink. These outliers fall more than three standard deviations above or below the mean AVRD for the dataset.

The red diagonal line in each graph indicates the one-to-one line. Sample points plotting along this line have equal values for the Grabner Milled and Driekop methods. Points plotting above the red line will have higher Grabner Milled values and lower Driekop values. On the other hand, points plotting below the red line will have higher Driekop values and lower Grabner Milled values.

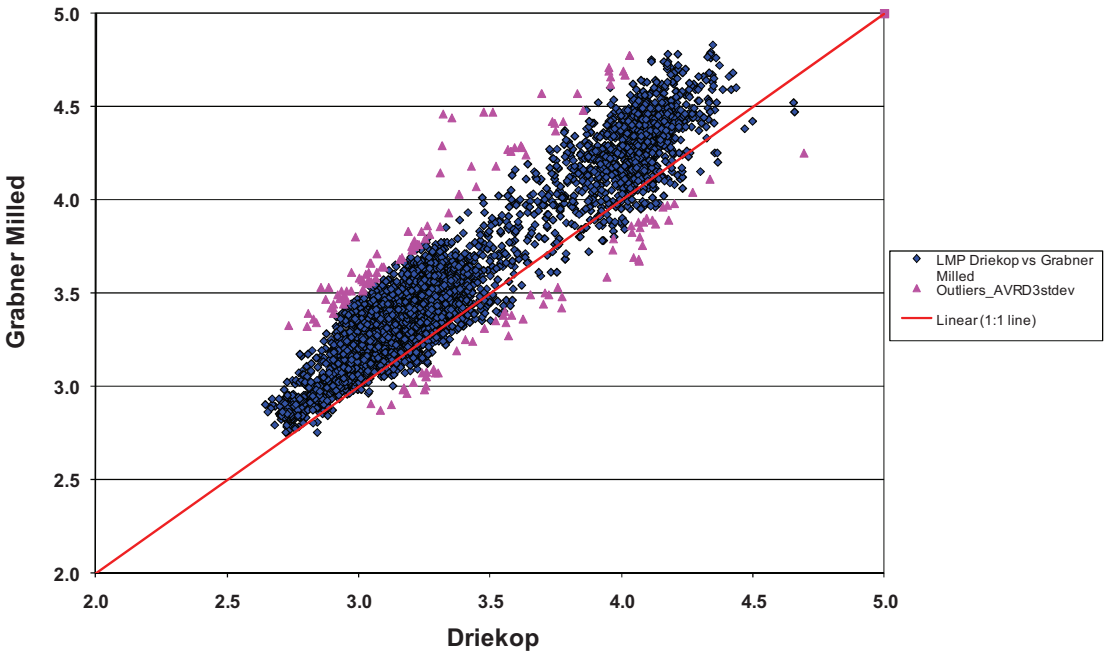


Figure 18. LPM project scatter plot of the Grabner Milled values over the Driekop values.

Notes The mean AVRD indicates that the Grabner Milled results are 5.28 % higher than the Driekop results.

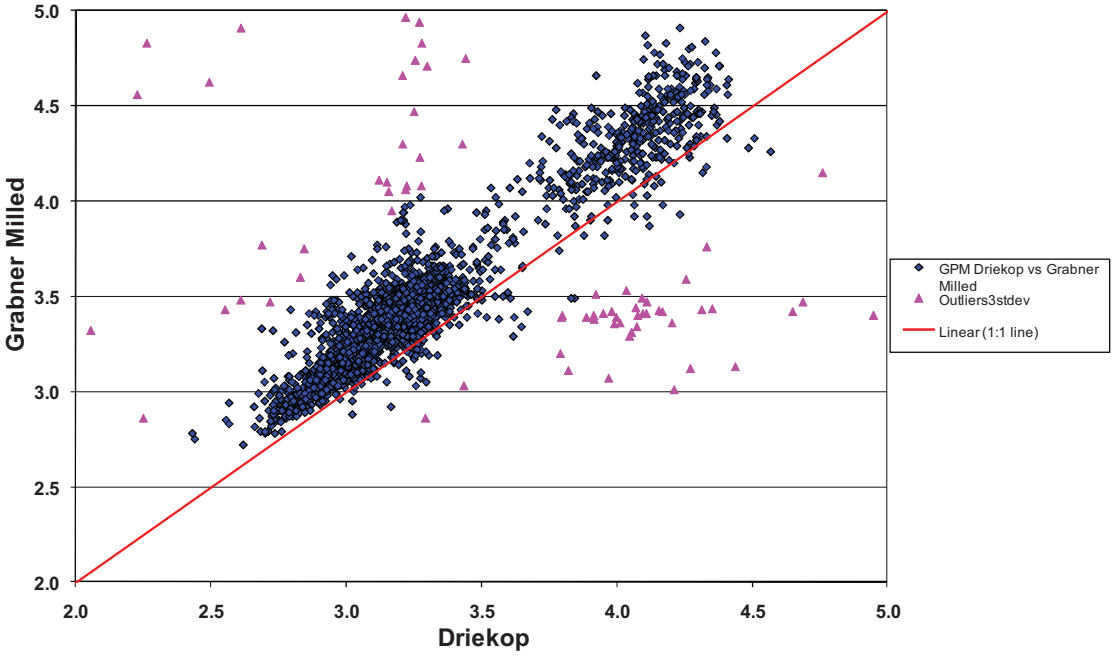


Figure 19. GPM project scatter plot of the Grabner Milled values over the Driekop values.

Notes The mean AVRD indicates that the Grabner Milled results are 5.55 % higher than the Driekop results.

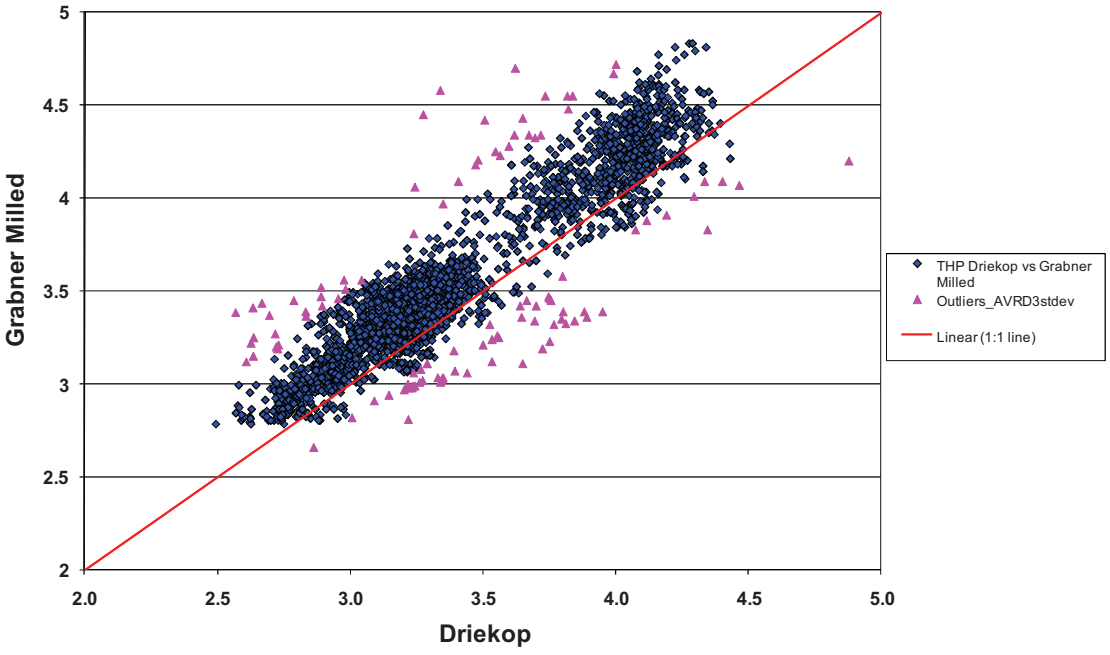


Figure 20. THP project scatter plot of the Grabner Milled values over the Driekop values.

Notes The mean AVRD indicates that the Grabner Milled results are 4.92 % higher than the Driekop results.

For all three projects, the majority of the sample points plot above the red line, indicating that the Grabner Milled values are higher than the Driekop values. It is also evident that the outliers for the GPM project have a much wider spread in comparison to the LPM and THP projects. The spread of outliers may be attributed to mixed or mislabelled samples or errors in recording the results. The remaining halves of all the samples are available at the exploration core yard. In order to check the outlier values, the remaining sample halves would have to be re-measured. However, the percentage of outliers in comparison to the size of the entire dataset for each project is relatively small, only 1.8 % (table 2). This is not envisaged to have any effect on the integrity of the data.

The descriptive statistics for the three projects with outliers removed are tabulated in Appendix B (table B5 for LPM; table B12 for GPM; and table B19 for THP). The mean AVRD for the LPM, GPM and THP project is 5.28 %, 5.55 %, and 4.92 % respectively, a positive AVRD indicating that on average the Grabner Milled results are higher. The wide range of densities is attributed to the variations in the lithologies that make up the MR and UG2 sampling cut (figure 9). The scatter plots in all three projects show two distinct populations that are the result of these variations in rock composition, as shown in figure 21, for LPM below.

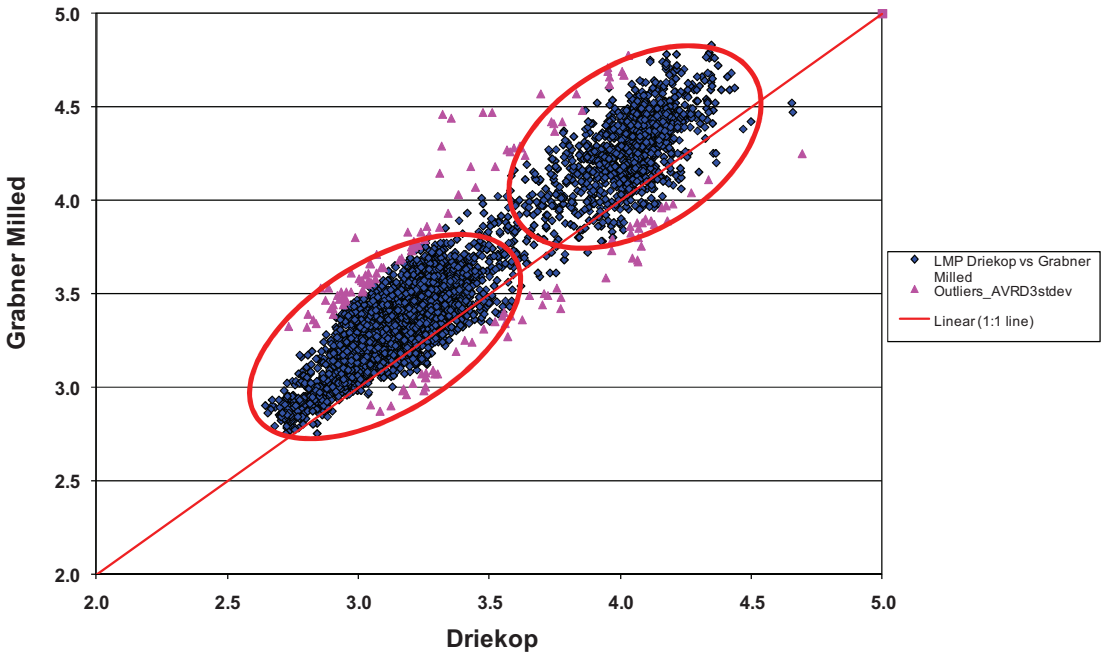
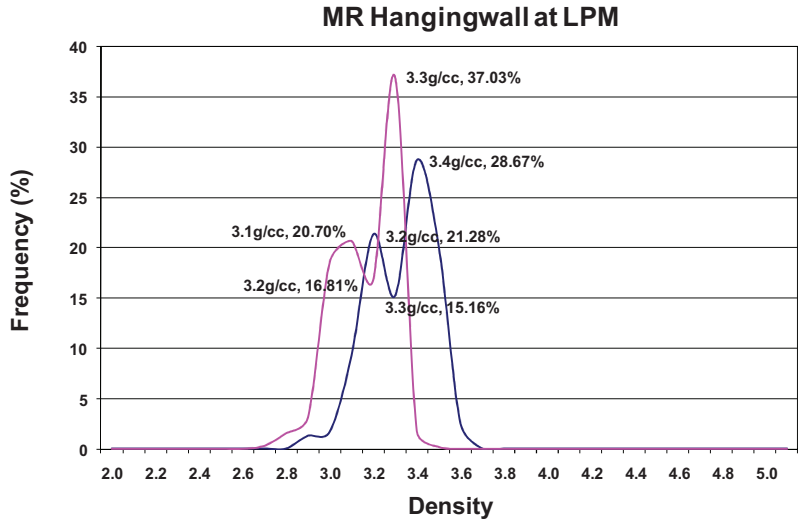
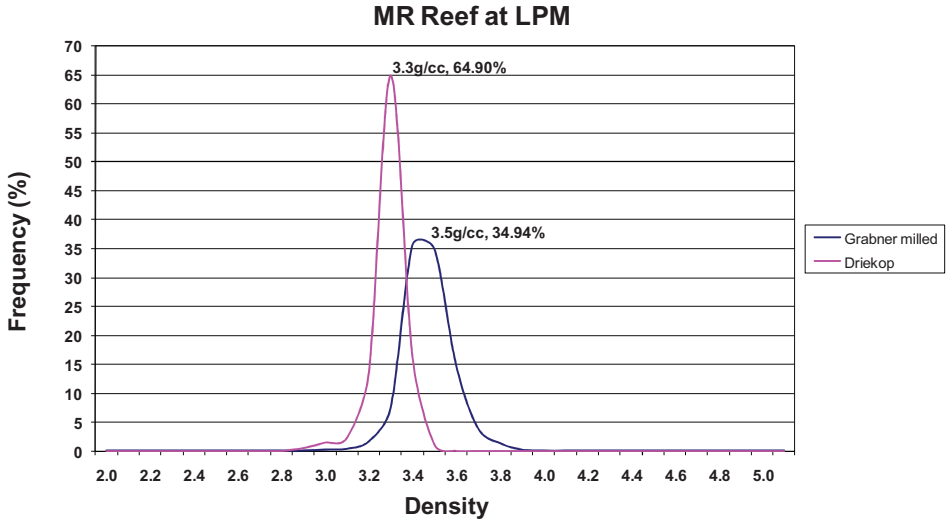


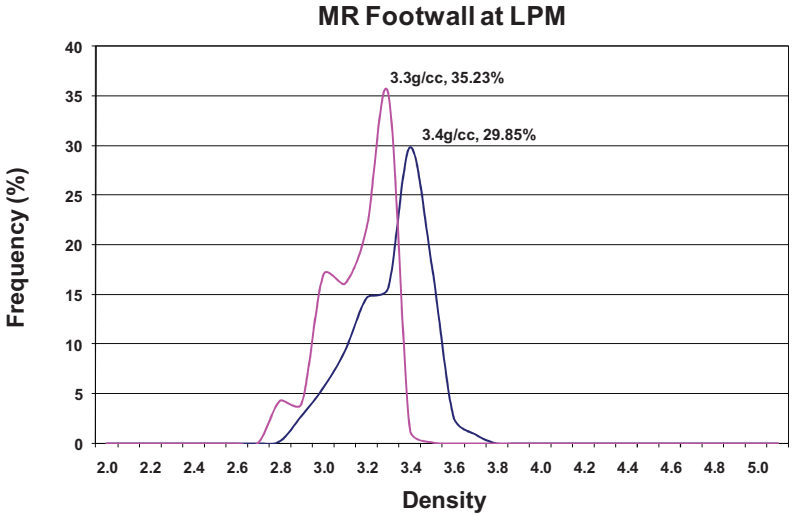
Figure 21. LPM project scatter plot of the Grabner Milled values over the Driekop values.

Notes The scatter plot shows two distinct populations, indicated by the red circles.

Histograms of the density values and summary statistics that make up the MR sampling cut for each project are given in figures 22, 23 and 24. There are three graphs in each figure, comprising of the hangingwall, reef and footwall. In the graphs the pink line represents the Driekop data and the blue line the Grabner Milled data. The density with the highest frequency is shown in each graph for both sets of data. The summary statistics table shows the mean density for the Grabner Milled and Driekop methods; the AVRD between the two methods; the standard deviation; range; and the number of samples for each stratigraphic unit.



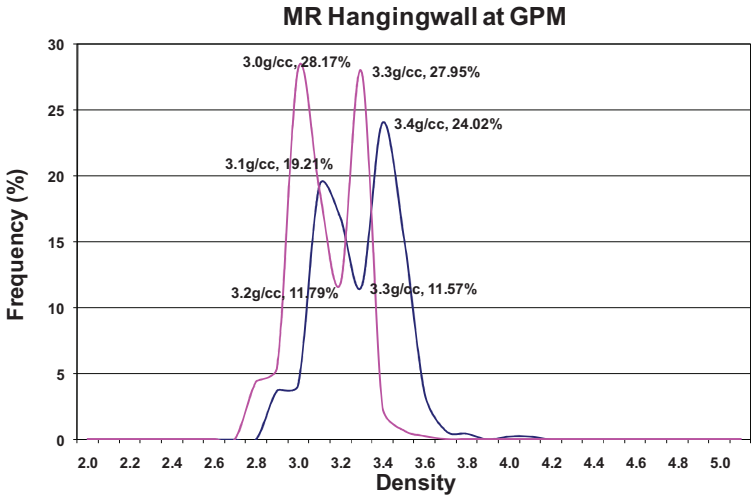


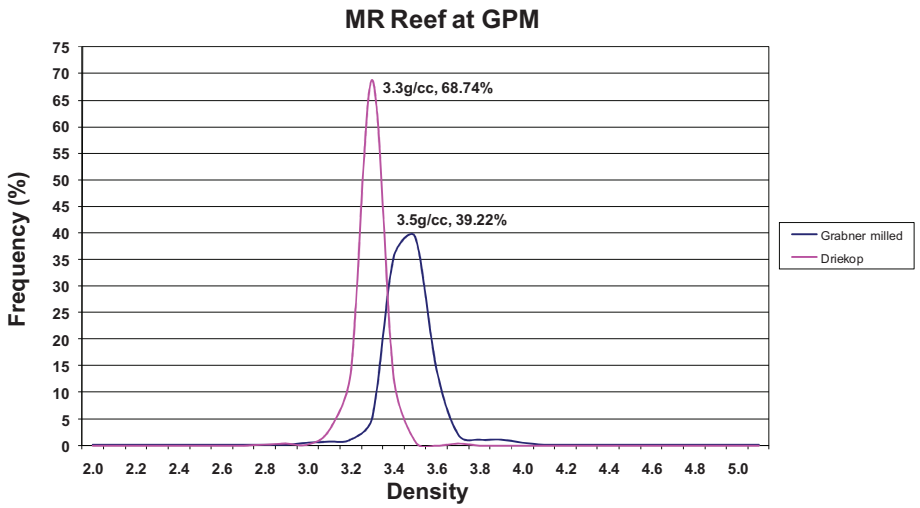


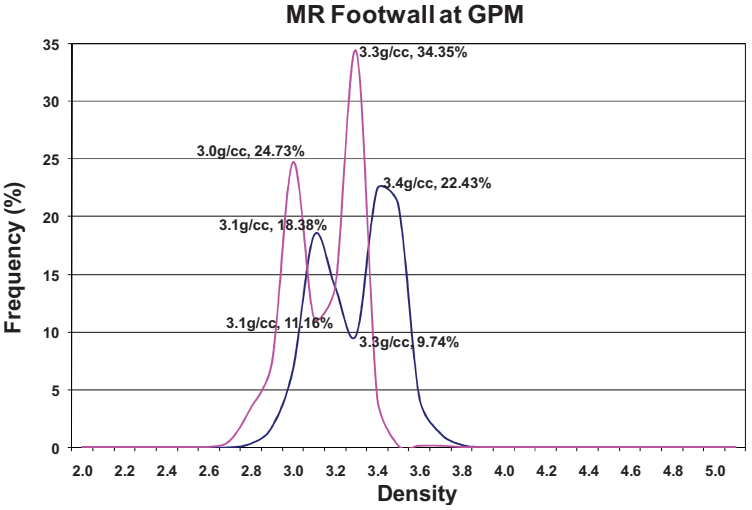
	Grabner Milled MRHW	*Driekop MRHW*	*AVRD MRHW*
Mean	3.28	3.12	5.18
Standard Deviation	0.15	0.13	2.39
Minimum	2.83	2.67	-3.38
Maximum	3.60	3.49	14.78
Count	1029	1029	1029
	Grabner Milled MR	*Driekop MR*	*AVRD MR*
Mean	3.42	3.24	5.44
Standard Deviation	0.11	0.08	2.85
Minimum	3.00	2.81	-4.45
Maximum	3.85	3.46	15.03
Count	624	624	624
	Grabner Milled MRFW	*Driekop MRFW*	*AVRD MRFW*
Mean	3.27	3.11	5.16
Standard Deviation	0.17	0.14	2.71
Minimum	2.75	2.68	-4.23
Maximum	3.66	3.48	14.92
Count	2248	2248	2248

Figure 22. LPM project – MR sampling cut density histograms and summary statistics.

Note: The Driekop histograms are in pink and the Grabner Milled histograms are in blue.



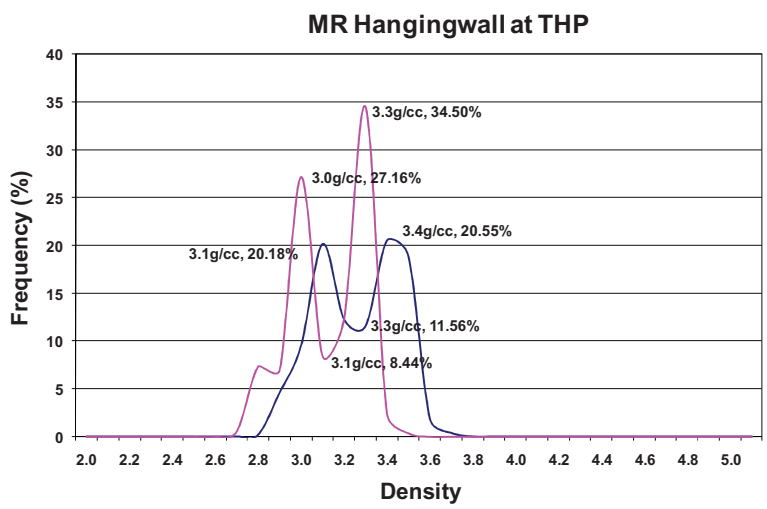


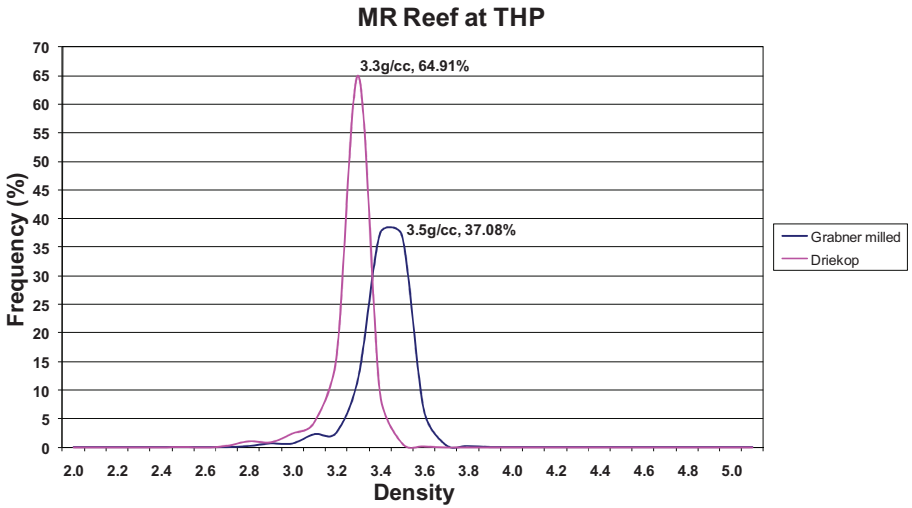


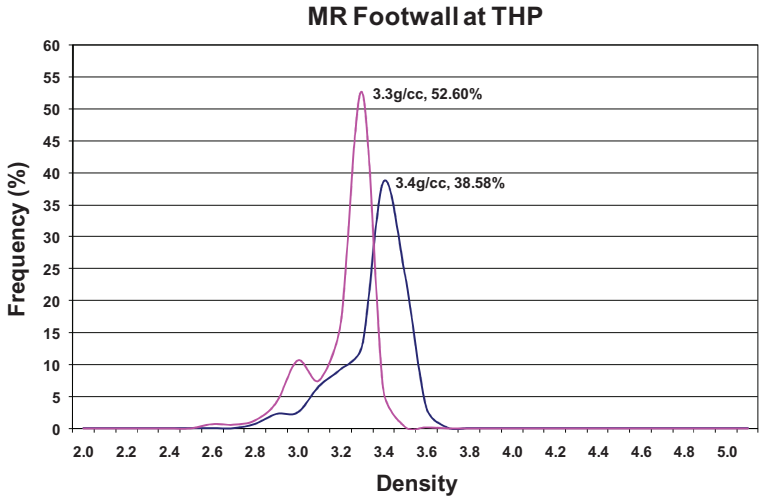
	Grabner Milled MRHW	*Driekop MRHW*	*AVRD MRHW*
Mean	3.25	3.08	5.23
Standard Deviation	0.19	0.15	3.18
Minimum	2.82	2.72	-4.51
Maximum	4.02	3.53	20.54
Count	458	458	458
	Grabner Milled MR	*Driekop MR*	*AVRD MR*
Mean	3.43	3.24	5.54
Standard Deviation	0.11	0.07	3.09
Minimum	2.97	2.80	-7.08
Maximum	3.98	3.67	20.95
Count	515	515	515
	Grabner Milled MRFW	*Driekop MRFW*	*AVRD MRFW*
Mean	3.26	3.10	5.04
Standard Deviation	0.18	0.16	3.05
Minimum	2.78	2.68	-9.49
Maximum	3.74	3.62	20.41
Count	914	914	914

Figure 23. GPM project – MR sampling cut density histograms and summary statistics.

Note: The Driekop histograms are in pink and the Grabner Milled histograms are in blue.







	Grabner Milled MRHW	*Driekop MRHW*	*AVRD MRHW*
Mean	3.22	3.07	4.65
Standard Deviation	0.19	0.17	2.47
Minimum	2.80	2.63	-4.92
Maximum	3.63	3.43	13.59
Count	545	545	545
	Grabner Milled MR	*Driekop MR*	*AVRD MR*
Mean	3.38	3.22	4.87
Standard Deviation	0.11	0.10	2.68
Minimum	2.78	2.49	-4.76
Maximum	3.73	3.53	14.72
Count	1103	1103	1103
	Grabner Milled MRFW	*Driekop MRFW*	*AVRD MRFW*
Mean	3.31	3.16	4.67
Standard Deviation	0.15	0.14	2.69
Minimum	2.78	2.57	-4.79
Maximum	3.64	3.51	15.32
Count	1213	1213	1213

Figure 24. THP project – MR sampling cut density histograms and summary statistics.

Note: The Driekop histograms are in pink and the Grabner Milled histograms are in blue.

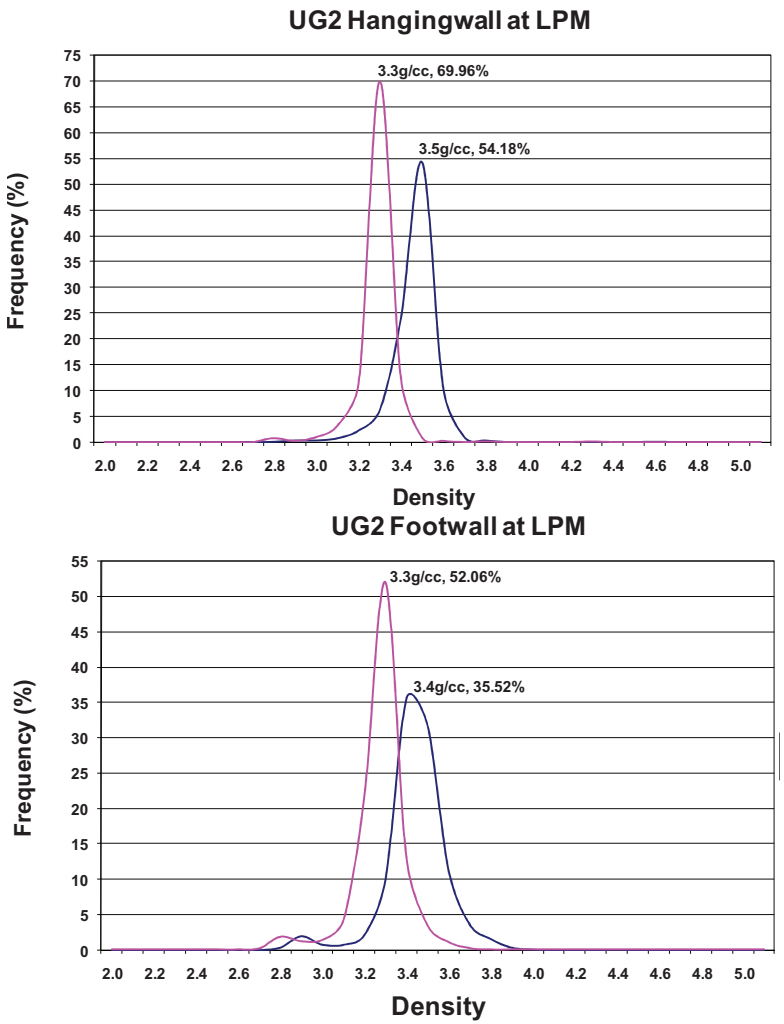
The histogram profile of the Grabner Milled and Driekop values are similar, but the Grabner Milled values show higher densities (figures 22, 23 and 24). The density with the highest frequency for both methods is shown adjacent to the corresponding peak in the histograms. Both methods show similar peak profiles, but the Grabner Milled values peak at a higher density.

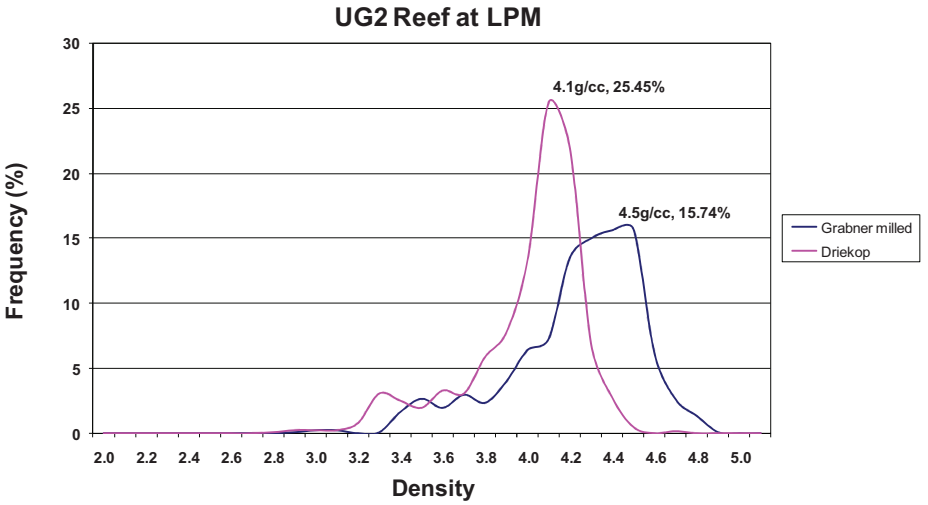
Generally, the MR sampling cut histograms look comparable between the stratigraphic units (figures 22, 23 and 24). All the MR histograms look similar. The MRHW histograms show a distinct double peak. The double peak is also present in the GPM MRFW. The LPM and THP MRFW display a much weaker, less pronounced double peak. The two peaks found in these histograms indicate two distinct variations in rock composition. The lower peak may be indicative of non mineralized pyroxenite, and the upper peak mineralized pyroxenite. For each project, this higher peak looks very similar to the MR histogram.

For each project, the mean density and mean AVRD for each stratigraphic unit is shown in the statistics tables in figures 22, 23 and 24. If one looks at each project and compares the mean densities for each stratigraphic unit, it is apparent that there is only a small difference or range in density between the respective stratigraphic units for each project. The THP project shows a consistently lower mean AVRD for each stratigraphic unit in comparison to the LPM and GPM projects. Between the three projects the mean density and mean AVRD range for each stratigraphic unit is:

- MRHW: Grabner Milled = 3.22 to 3.28 g/cc; Driekop = 3.07 to 3.12 g/cc; AVRD 4.65 to 5.23 % higher Grabner Milled results.
- MR: Grabner Milled = 3.38 to 3.43 g/cc; Driekop = 3.22 to 3.24 g/cc; AVRD 4.87 to 5.54 % higher Grabner Milled results.
- MRFW: Grabner Milled = 3.26 to 3.31 g/cc; Driekop = 3.10 to 3.16 g/cc; AVRD 4.67 to 5.16 % higher Grabner Milled results.

The histograms of the density values and summary statistics that make up the UG2 sampling cut for each project are given in figures 25, 26 and 27 below.

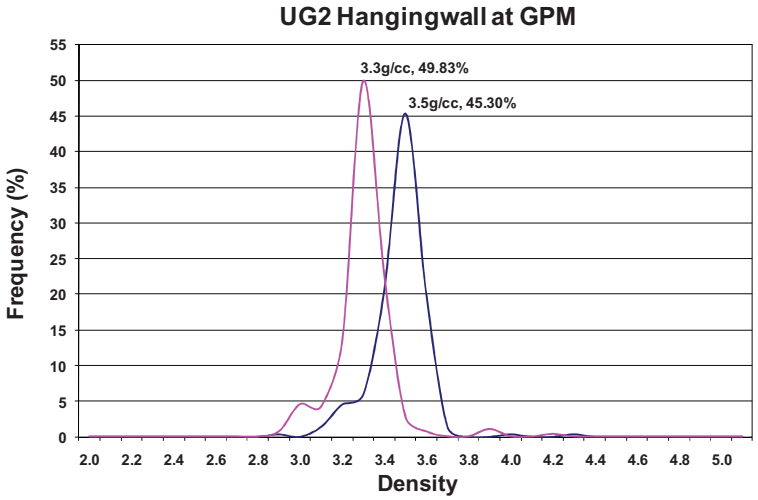


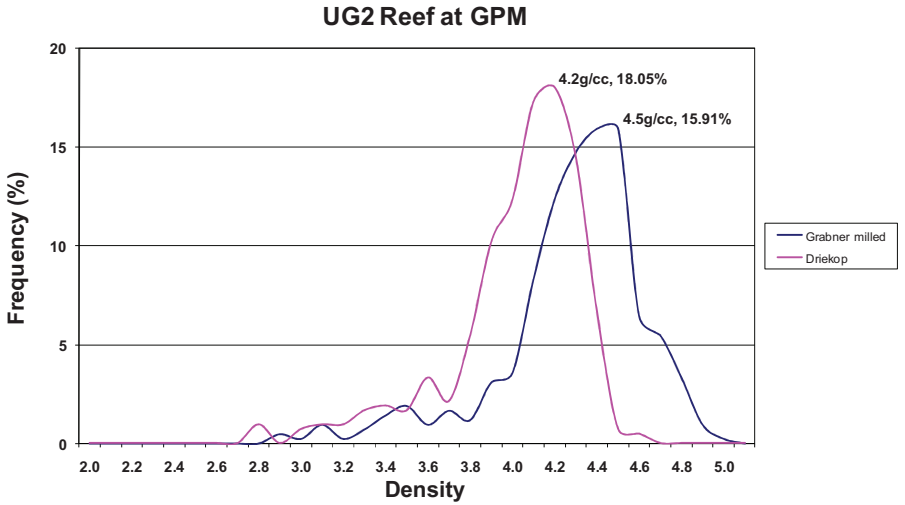


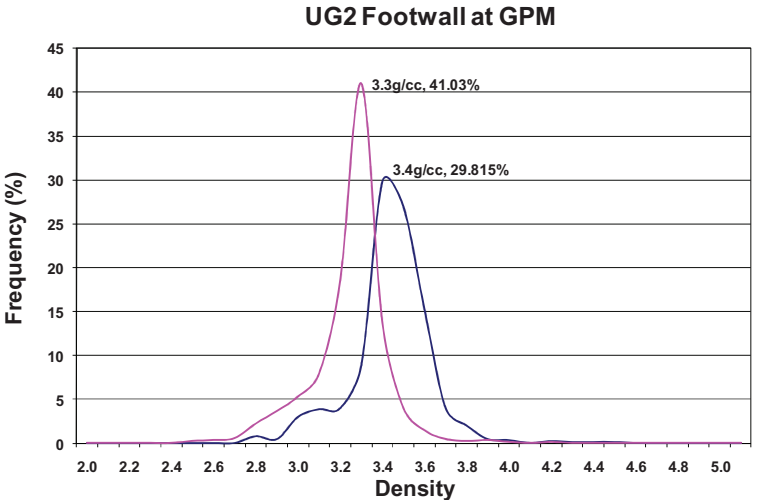
	Grabner Milled UG2HW	*Driekop UG2HW*	*UG2HW AVRD*
Mean	3.42	3.25	5.09
Standard Deviation	0.11	0.09	2.49
Minimum	2.75	2.71	-4.08
Maximum	4.55	4.26	14.67
Count	932	932	932
	Grabner Milled UG2	*Driekop UG2*	*UG2 AVRD*
Mean	4.19	3.95	5.70
Standard Deviation	0.31	0.28	3.73
Minimum	2.85	2.74	-4.41
Maximum	4.83	4.66	15.03
Count	1277	1277	1277
	Grabner Milled UG2FW	*Driekop UG2FW*	*UG2FW AVRD*
Mean	3.40	3.22	5.24
Standard Deviation	0.15	0.12	2.76
Minimum	2.75	2.65	-4.43
Maximum	4.35	4.13	14.99
Count	2666	2666	2666

Figure 25. LPM project – UG2 sampling cut density histograms and summary statistics.

Note: The Driekop histograms are in pink and the Grabner Milled histograms are in blue.



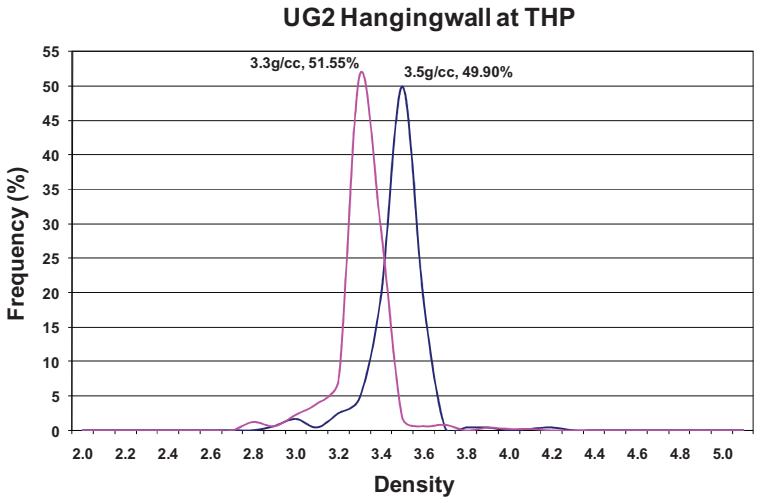


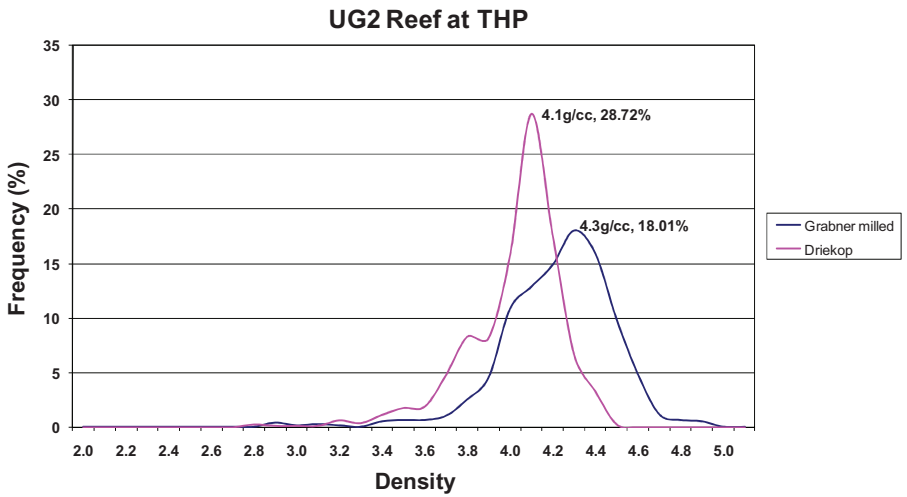


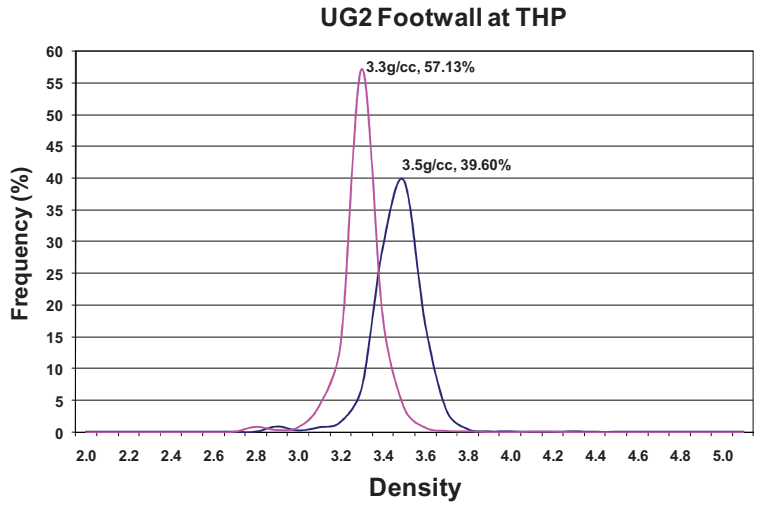
	Grabner Milled UG2HW	*Driekop UG2HW*	*AVRD UG2HW*
Mean	3.43	3.25	5.16
Standard Deviation	0.13	0.13	3.23
Minimum	2.87	2.80	-9.67
Maximum	4.23	4.13	14.98
Count	287	287	287
	Grabner Milled UG2	*Driekop UG2*	*AVRD UG2*
Mean	4.23	3.97	6.30
Standard Deviation	0.35	0.32	4.16
Minimum	2.84	2.73	-7.44
Maximum	4.91	4.57	17.89
Count	421	421	421
	Grabner Milled UG2FW	*Driekop UG2FW*	*AVRD UG2FW*
Mean	3.39	3.20	5.94
Standard Deviation	0.19	0.17	3.21
Minimum	2.72	2.43	-8.82
Maximum	4.48	4.12	21.33
Count	909	909	909

Figure 26. GPM project – UG2 sampling cut density histograms and summary statistics,

Note: The Driekop histograms are in pink and the Grabner Milled histograms are in blue.







	Grabner Milled UG2HW	*Driekop UG2HW*	*AVRD UG2HW*
Mean	3.43	3.26	4.99
Standard Deviation	0.13	0.13	2.95
Minimum	2.82	2.74	-5.47
Maximum	4.20	4.09	15.26
Count	485	485	485
	Grabner Milled UG2	*Driekop UG2*	*AVRD UG2*
Mean	4.18	3.97	5.05
Standard Deviation	0.26	0.23	4.11
Minimum	2.82	2.71	-5.50
Maximum	4.83	4.43	15.09
Count	794	794	794
	Grabner Milled UG2FW	*Driekop UG2FW*	*AVRD UG2FW*
Mean	3.42	3.25	5.22
Standard Deviation	0.12	0.11	2.69
Minimum	2.82	2.64	-5.22
Maximum	4.21	4.13	15.01
Count	1409	1409	1409

Figure 27. THP project – UG2 sampling cut density histograms and summary statistics.

Note: The Driekop histograms are in pink and the Grabner Milled histograms are in blue.

The UG2 sampling cuts show the same trends as found for the MR. The density histograms for each method show similar profiles, but the Grabner Milled density values are higher. The Grabner Milled data peaks at a higher density than the Driekop data (figures 26, 27 and 28).

The UG2HW and UG2FW histograms for all the projects look comparable. Despite the UG2HW being made up of a medium grained plagioclase pyroxenite and the UG2FW of a pegmatoidal plagioclase pyroxenite they show similar densities. The UG2HW and UG2FW have tight histograms indicating a narrow range above and below the density with the highest frequency (figures 26, 27 and 28).

In comparison the UG2 histograms show a much wider distribution with much broader histograms. The UG2 may often be locally bifurcated with anorthosite or pyroxenite waste bands in between the chromitite, evident from the low minimum density range value. For the LPM and THP projects, the UG2 Grabner Milled histograms have a broader peak in comparison to the UG2 Driekop histograms which are narrower. For the GPM project the UG2 Grabner Milled and Driekop histograms show similar shaped profiles (figures 26, 27 and 28).

Between the three projects the mean density and mean AVRD range for each stratigraphic unit is:

- UG2HW: Grabner Milled = 3.42 to 3.43 g/cc; Driekop = 3.25 to 3.26 g/cc; AVRD 4.99 to 5.16 % higher Grabner Milled results.
- UG2: Grabner Milled = 4.18 to 4.23 g/cc; Driekop = 3.95 to 3.97 g/cc; AVRD 5.05 to 6.30 % higher Grabner Milled results.
- UG2FW: Grabner Milled = 3.39 to 3.42 g/cc; Driekop = 3.20 to 3.25 g/cc; AVRD 5.22 to 5.94 % higher Grabner Milled results.

There is only a small mean density difference between the respective stratigraphic units for each project. The three projects show some variation in the AVRD for each stratigraphic unit. The LPM and GPM projects show a higher mean AVRD for the UG2 (statistics table in figures 25 and 26). The GPM also shows a higher mean AVRD for the UG2FW.

The AVRD histograms of the MR sampling cuts for each project are given in figures 28, 29, and 30 below. The MR histogram is in red, MRHW in pink and MRFW

in blue. Adjacent to each high peak is the density and frequency at that point. The values are coloured according to the histogram the values represent.

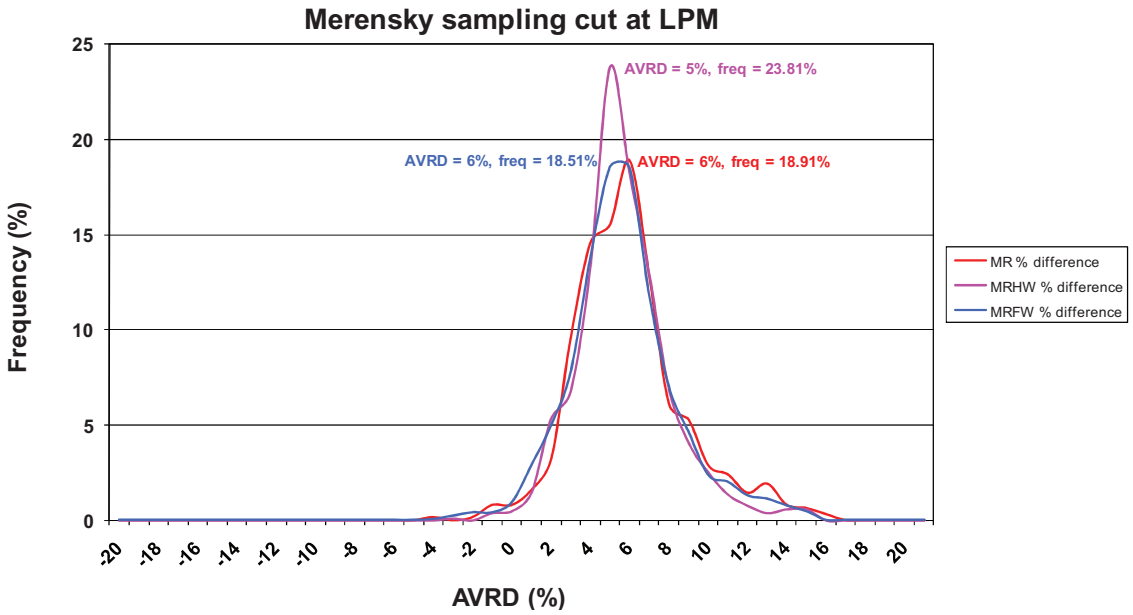


Figure 28. LPM project – MR sampling cut AVRD histograms.

Notes MRHW histogram is in pink; MR histogram is in red and MRFW histogram is in blue.

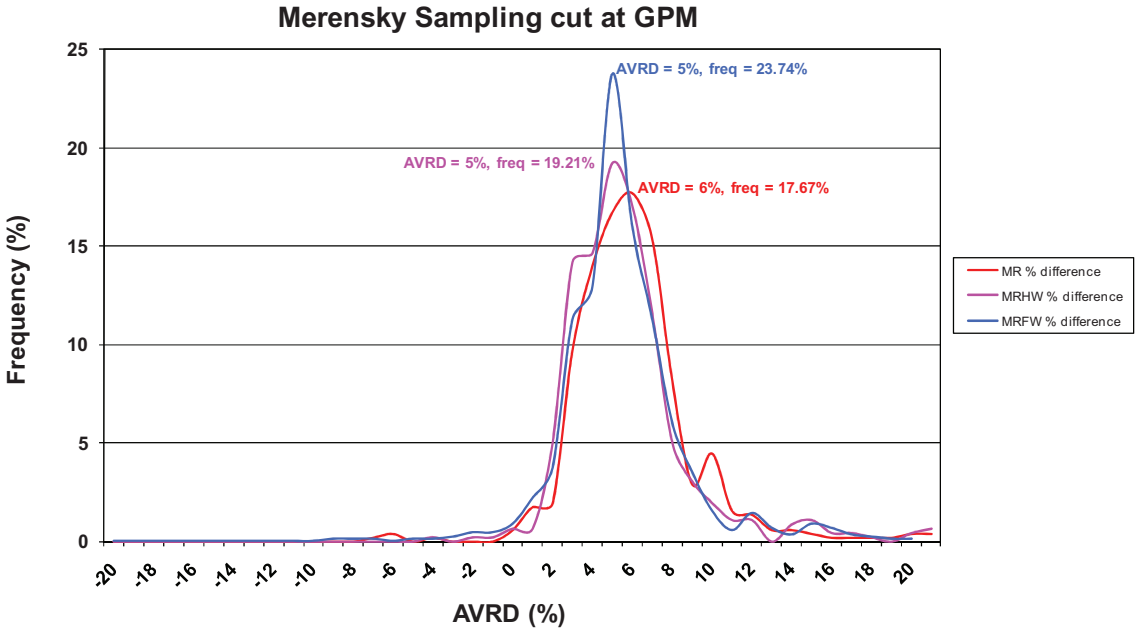


Figure 29. GPM project – MR sampling cut AVRD histograms.

Notes MRHW histogram is in pink; MR histogram is in red and MRFW histogram is in blue.

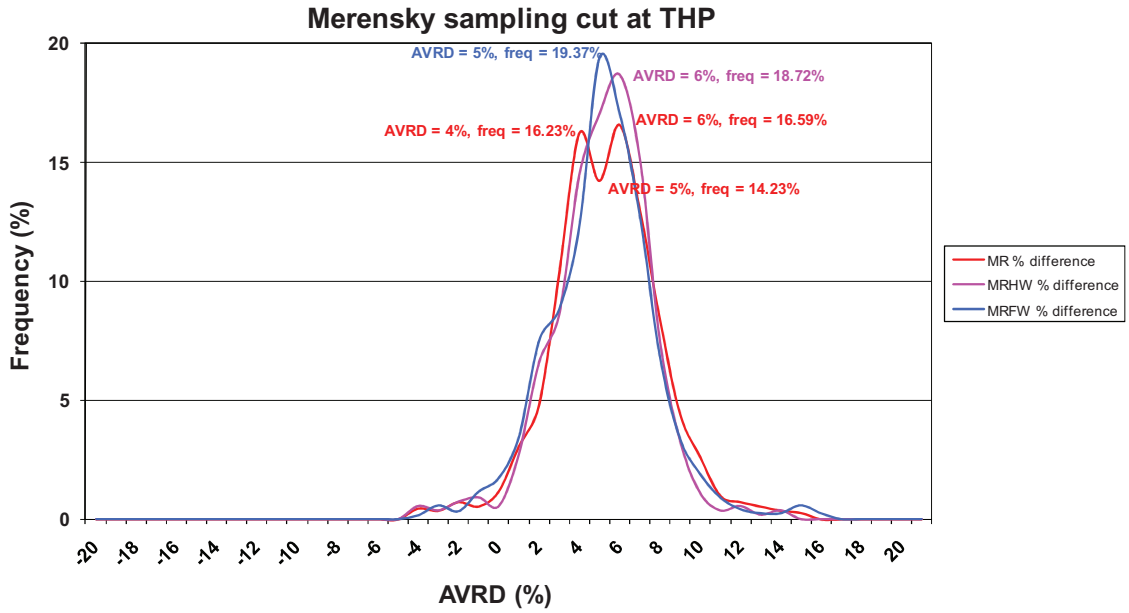


Figure 30. THP project – MR sampling cut AVRD histograms.

Notes MRHW histogram is in pink; MR histogram is in red and MRFW histogram is in blue.

The MR AVRD histograms also clearly show that Grabner Milled density values are consistently higher. The majority of the samples have a positive AVRD of between 4 to 6 %. There is some variation in the AVRD out of this range, however the frequency associated with these points is very low (<5 %). The profiles of the hangingwall, reef and footwall AVRD histograms for each project look similar.

The AVRD histograms of the UG2 sampling cuts for each project are given in figures 31, 32, and 33 below. The UG2 histogram is in red, UG2HW in pink and UG2FW in blue.

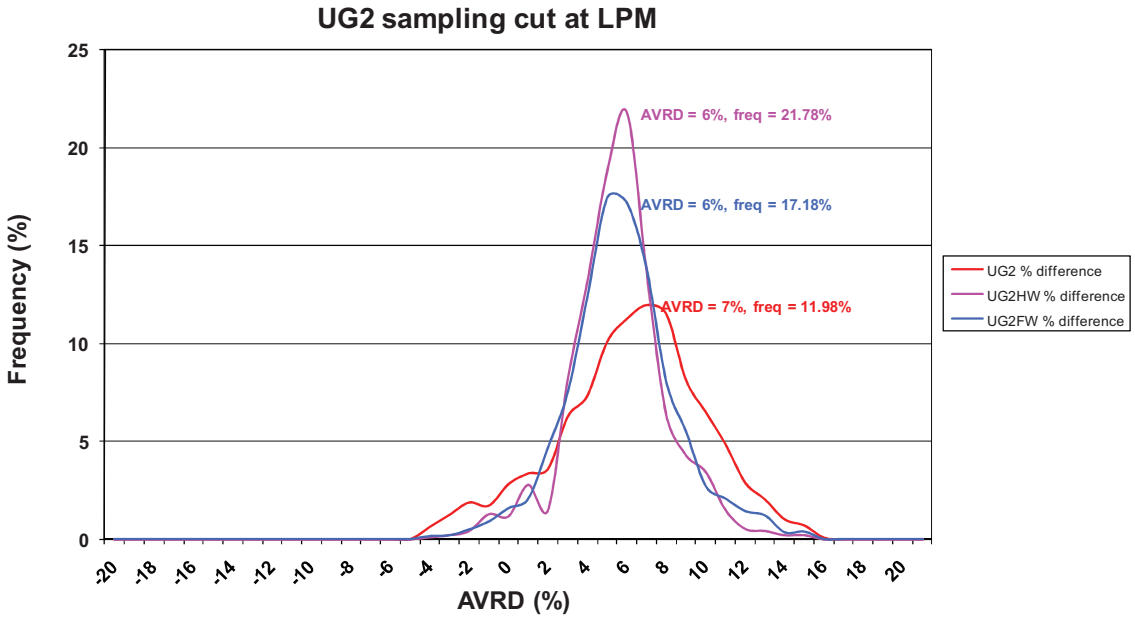


Figure 31. LPM project – UG2 sampling cut AVRD histograms.

Note: UG2HW histogram is in pink; UG2 histogram is in red and UG2FW histogram is in blue.

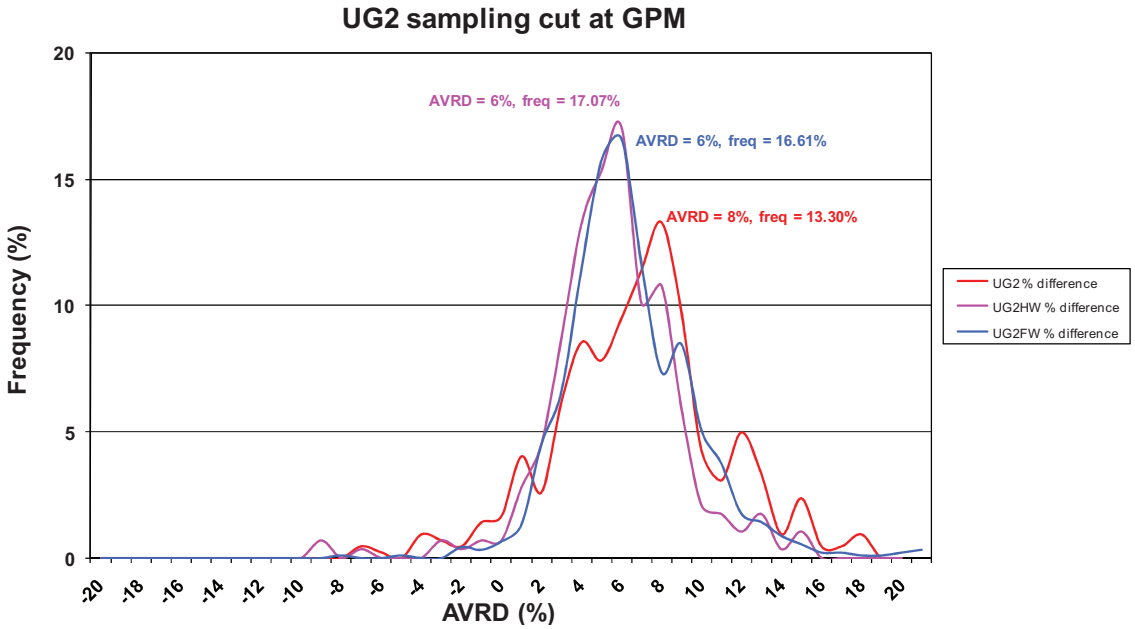


Figure 32. GPM project – UG2 sampling cut AVRD histograms.

Note: UG2HW histogram is in pink; UG2 histogram is in red and UG2FW histogram is in blue.

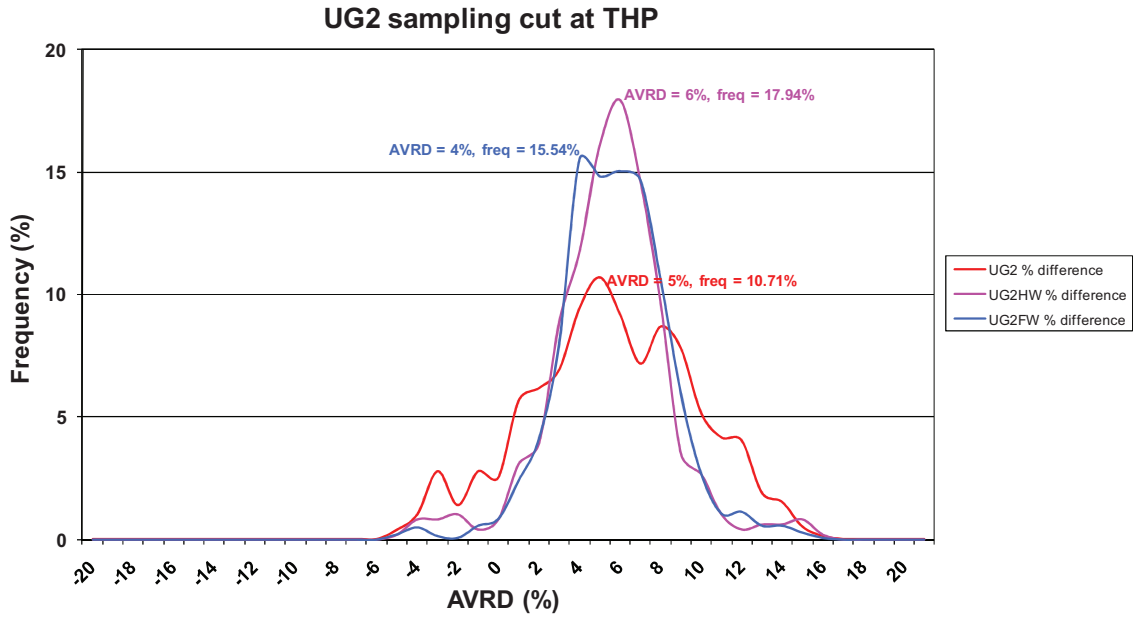


Figure 33. THP project – UG2 sampling cut AVRD histograms.

Note: UG2HW histogram is in pink; UG2 histogram is in red and UG2FW histogram is in blue.

The UG2 AVRD sampling cut histograms also shows that the Grabner Milled values are higher, with the highest frequency of samples having an AVRD of between 4 to 8 %.

In general the UG2HW and UG2FW profiles for the three projects look similar. The GPM UG2HW and UG2FW do also show another peak at about eight percent. The THP UGFW has a flatter peak, with similar frequencies of about 15 %, between AVRDs of 4 to 8 %.

All three UG2 AVRD histograms have a broad distribution. The LPM UG2 AVRD histogram is smooth and normal; whereas the GPM and THP UG2 AVRD histograms show much more variation.

5.2.2. Quality control

The Driekop check samples that were re-measured were found to have densities very close to the Driekop original values.

Scatter plots of the Driekop original values over the Driekop check values, the Grabner Milled values over the Driekop check values, and the Grabner Milled values over Driekop original values are given in figures 34, 35 and 36 below.

In each scatter plot there is a red and black diagonal line. The black line represents the one-to-one linear trend line. Data points falling along this line have exactly the same value for two results being plotted and compared. The red line represents the linear trend line of the dataset.

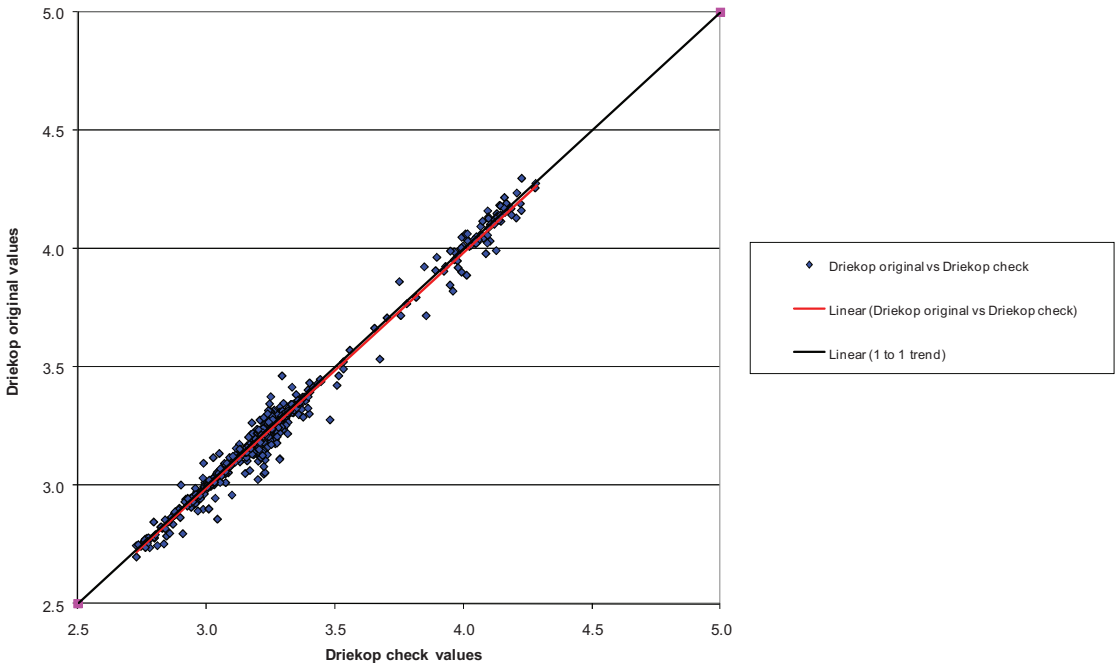


Figure 34. Scatter plot of the Driekop original values over the Driekop check values.

Notes The mean AVRD indicates that the Driekop check values are 0.33 % higher than the Driekop original values.

The Driekop original values plot very closely to the Driekop check values (figure 34). The red dataset trend line sits on top of the black one-to-one trend line. This indicates a strong correlation between the original values and the Driekop check values. The mean AVRD is only 0.33 % (figure 34).

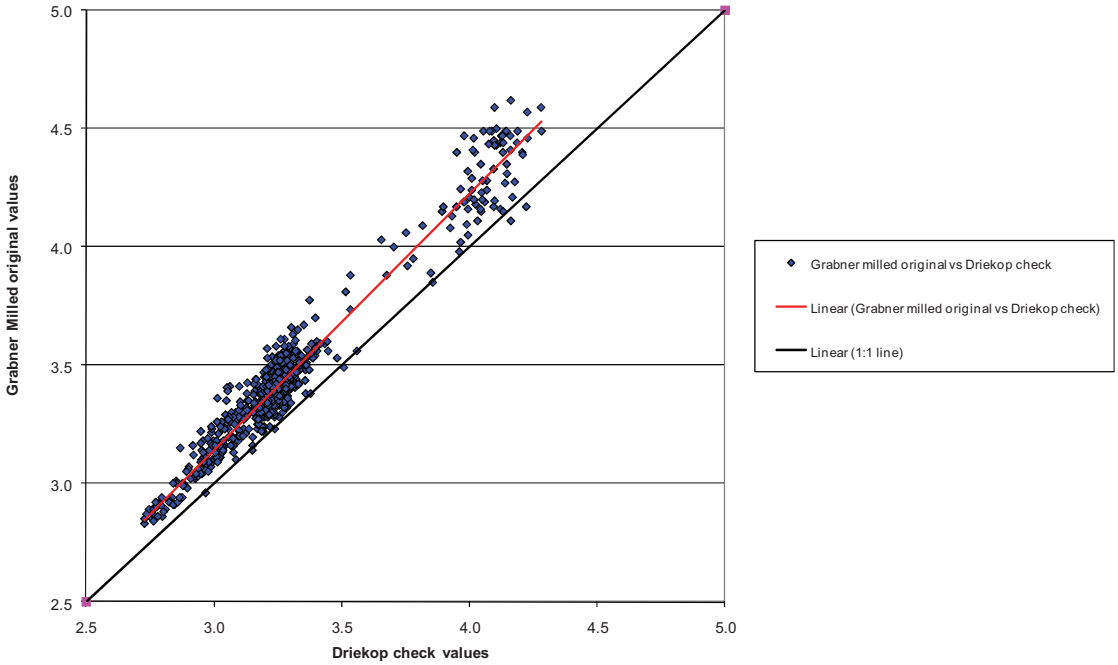


Figure 35. Scatter plot of the Grabner Milled original values over the Driekop check values.

Notes The mean AVRD indicates that the Grabner Milled original values are 4.85 % higher than the Driekop check values.

The scatter plot of the Grabner Milled original values over the Driekop check values shows that the Grabner Milled values are generally higher (figure 35). The majority of the data points are above the black one-to-one trend line. This is further emphasized by the dataset red trend line, which sits approximately parallel to, but well above, the one-to-one trend line. The mean AVRD is 4.85 %, indicating that the Grabner Milled original values are higher (figure 35).

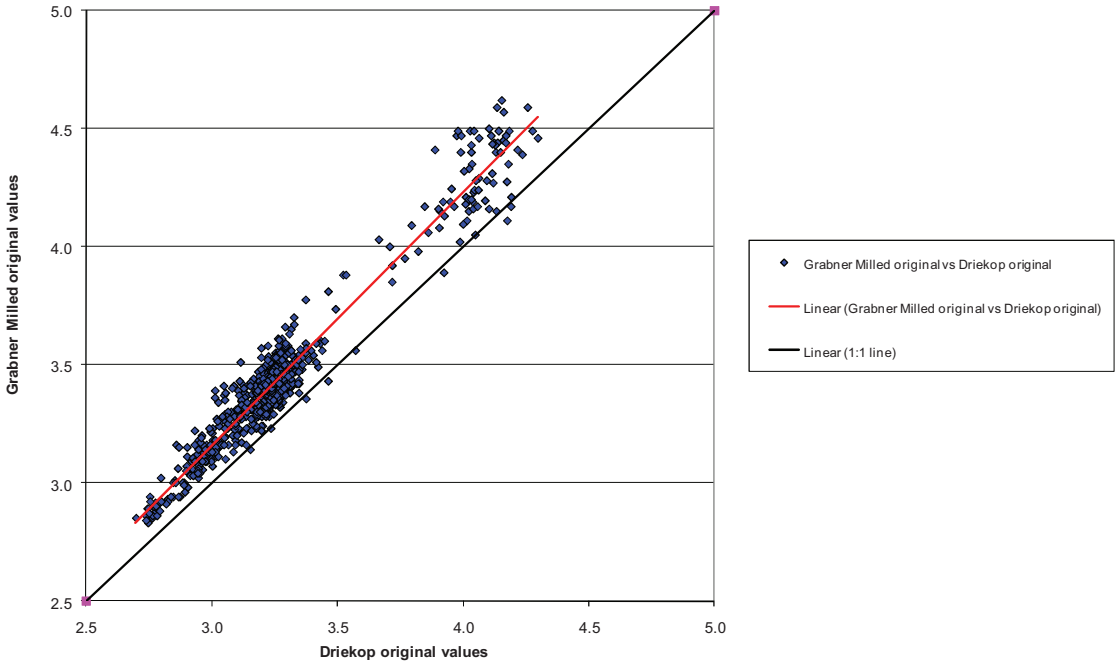


Figure 36. Scatter plot of the Grabner Milled original values over the Driekop original values.

Notes The mean AVRD indicates that the Grabner Milled original values are 5.18 % higher than the Driekop original values.

The scatter plot of the Grabner Milled original values over the Driekop original values (figure 36) show similar results to the scatter plot of the Grabner Milled original values over the Driekop check values (figure 35).

The majority of the data points lie above the one-to-one trend line, as does the linear dataset trend line. The mean AVRD is 5.18%, indicating that the Grabner Milled values are higher. This mean AVRD is marginally higher than the mean AVRD of the Grabner Milled original values over the Driekop check values.

The AVRD between samples of the three datasets are shown in the frequency histogram below (figure 37). The AVRD between the Driekop check values and the Driekop original values are shown in dark blue; the AVRD between the Grabner Milled values and Driekop check values are shown in pink; and the AVRD between the Grabner Milled values and the Driekop original values are shown in light blue.

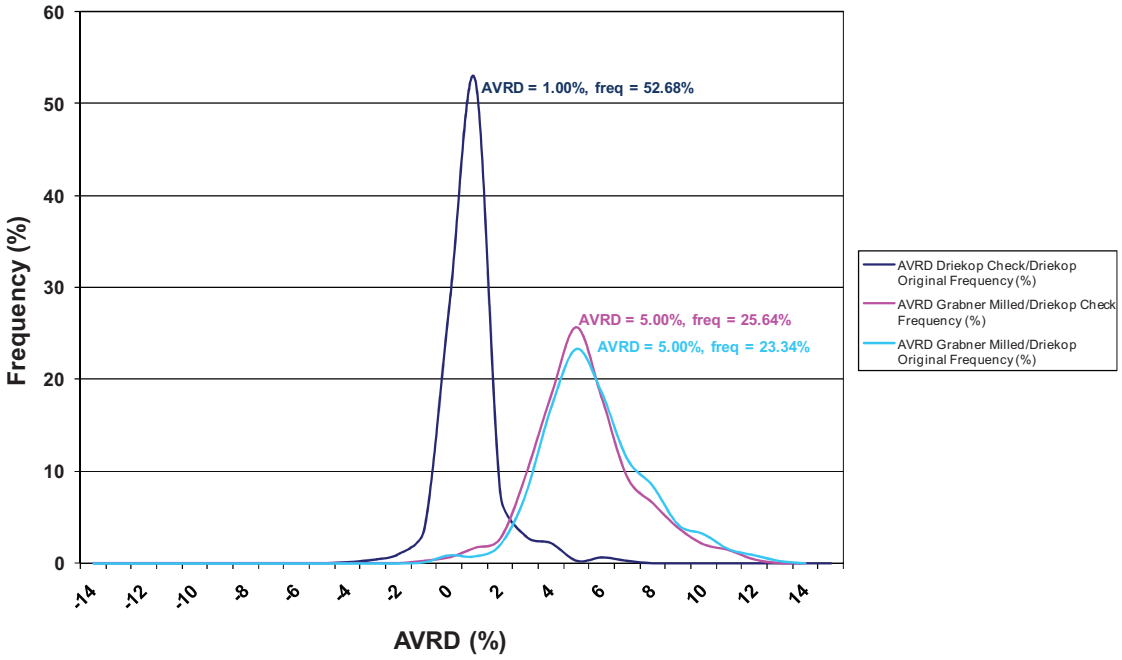


Figure 37. Quality control AVRD histograms.

Notes: The AVRD histogram between the Driekop check values and the Driekop original values is in dark blue; the AVRD between the Grabner Milled values and Driekop check values is in pink; and the AVRD between the Grabner Milled values and the Driekop original values is in light blue.

The AVRD frequency histogram in figure 37 shows that there is a strong correlation between the Driekop original values and the Driekop check values. Approximately 53 % of the data has an AVRD of 1 %, with about 28 % showing an AVRD of zero.

Both the Driekop original and Driekop check values show a similar relationship to the Grabner Milled results (figure 37). Both AVRD histograms show a peak AVRD of 5 % at the highest frequency, indicating that the Grabner Milled results are generally higher than the Driekop original values and the Driekop check values.

5.3. PART ONE: DISCUSSION

5.3.1. Comparison of the hydrostatic and gas pycnometer methods

The results of part one showed that the Grabner Milled density method produces a higher average density than the Driekop method.

The scatter plot of the two methods, for all three projects (figures 18 − 20), clearly showed that per sample, the Grabner Milled value is generally higher than the Driekop value. Outliers in the scatter plots were easily identified, highlighting the need for repeating sample measurements for quality control.

The density distribution histograms of the various stratigraphic units for all three projects also showed that the Grabner Milled method produces higher density results (figures 22 − 27). Both methods produced similar, relatively normal shaped histograms for each stratigraphic unit; however the main difference was that the Grabner Milled method produced a higher range of densities and a higher peak density value.

The mean density of both methods and the AVRD between them for each project is summarized in table 3 below.

Table 3. The mean density and AVRD of the Grabner Milled and Driekop methods for each stratigraphic unit.

	LPM			GPM			THP		
Stratigraphic unit	Grabner Milled (g/cc)	Driekop (g/cc)	AVRD (%)	Grabner Milled (g/cc)	Driekop (g/cc)	AVRD (%)	Grabner Milled (g/cc)	Driekop (g/cc)	AVRD (%)
MRHW	3.28	3.12	5.18	3.25	3.08	5.23	3.22	3.07	4.65
MR	3.42	3.24	5.44	3.43	3.24	5.54	3.38	3.22	4.87
MRFW	3.27	3.11	5.16	3.26	3.10	5.04	3.31	3.16	4.67
UG2HW	3.42	3.25	5.09	3.43	3.25	5.16	3.43	3.26	4.99
UG2	4.19	3.95	5.70	4.23	3.97	6.30	4.18	3.97	5.05
UG2FW	3.40	3.22	5.24	3.39	3.20	5.94	3.42	3.25	5.22

The peaks in the density distribution histograms correspond to the major rock type being measured. The MR is a mineralized medium crystalline plagioclase pyroxenite and therefore has a higher mean density than the MRHW and MRFW, which are a medium crystalline plagioclase pyroxenite and a pegmatoidal plagioclase pyroxenite, respectively. Mineralization does however sometimes extend into the immediate hangingwall and footwall of the MR. Evidence for this is supported by the double peak found in the MRHW and MRFW histograms. There is a lower peak which may correspond to un-mineralized pyroxenite and a higher peak that may correspond to mineralized pyroxenite. The lower peak is not as pronounced in the LPM and THP MRFW.

As expected, the UG2 chromitite layer shows a much higher mean density than the UG2HW and UG2FW, which are also made up of a medium crystalline plagioclase pyroxenite and a pegmatoidal plagioclase pyroxenite, respectively. The UG2HW and UG2FW have higher mean densities than the MRHW and MRFW even though they have similar rock types. With the UG2, the PGE mineralization is almost exclusively contained within the UG2 chromitite layer. No PGE mineralization extends into the immediate hangingwall of the UG2. Mineralization may extend into the immediate footwall of the UG2 at lower PGE grades, where it is associated with chromitite blebs, disseminations, and laterally discontinuous thin chromitite layers. Thin chromitite layers are also found in the UG2HW pyroxenite. The chromitite in the UG2HW and UG2FW may attribute to the higher mean densities in the UG2HW and UG2FW, as compared to the MRHW and MRFW.

The mean density of each corresponding stratigraphic unit does vary slightly between the three projects (table 3). This variation or range was apparent in both methods (table 4).

Table 4. The mean density range of the Grabner Milled and Driekop methods for each stratigraphic unit.

Stratigraphic unit	Range Grabner Milled (g/cc)	Range Driekop (g/cc)
MRHW	0.06	0.05
MR	0.05	0.02
MRFW	0.05	0.06
UG2HW	0.01	0.01
UG2	0.05	0.02
UG2FW	0.03	0.05

The range in the MRHW, MRFW, and UG2HW does correlate well between the two methods (table 4). The Driekop method shows a slightly narrower range for the MR and UG2. The Grabner Method has a lower average MR density for the THP project in comparison to the LPM and GPM projects which obtained similar mean densities. For the UG2, the Grabner Milled method obtained a higher mean density for the GPM project compared to the other two projects which obtained similar mean densities. The Grabner Milled method showed less variation for the UG2FW. The Driekop method showed a higher mean UG2FW density for the THP project in comparison to the other two projects which showed similar mean densities.

The slight variation between the corresponding stratigraphic units may be due to subtle differences in rock composition and structure. To truly see if the variation corresponds with any geological features or zones, hangingwall, reef and footwall density composites will have to be made for each borehole and projected onto the geological map.

The mean AVRD between the two methods for each corresponding stratigraphic unit also shows slight differences between the three projects (table 3). The difference may be attributed to slight variations in the structure of the rocks between the three projects.

The mean AVRD for each stratigraphic unit, in all three projects, shows that the Grabner Milled method produces a consistently higher density than the Driekop method (table 3). The rocks that make up the MR and UG2, including their hangingwall and footwall rocks are made up of closely interlocking minerals typical of

cumulates. There are generally no visible pores on the core samples. It is unlikely that any water would have penetrated into the core sample during the immersion step in the Driekop method, unless the sample was highly altered or fractured. Therefore, pores (open and closed) within the core sample are included in the volume calculation. The comminution of the core sample, in the Grabner method, into a fine milled powder breaks up the rock and minerals within it. This comminution step is the initial step in the metallurgical process conducted at the laboratory to determine grade of the sample. The sample is now made up of a collection of very fine particles. All previously existing pores and mineral relationships within the rock are broken down and eliminated. In the Grabner Milled method, a very small quantity of this powder or pulp is placed into the sample cup and measured. The powder is allowed to settle naturally within the sample cup. There may be minute inter-particle pores within the powder, but considering the particle size, this will have little influence on the volume calculation.

The Driekop method measures a density that is close to or equal to the bulk or envelope density of the solid core sample inclusive of open and closed pores. The Grabner method measures a density close to or equal to the skeletal or true density of the powdered sample excluding all pore spaces. One may argue that through the comminution process, variables such as pores, structure, mineral assemblage and mineral relationships that make up the composition of the sample are changed, and therefore the density measured is not representative of the rock in its natural state.

The AVRD histograms for the MR sampling cuts all show similar, relatively normal histogram profiles for all three projects (figures 28 – 30). The projects show a peak AVRD for each stratigraphic unit that ranges between 4 to 6 % (figures 28 – 30). The similarities of each histogram may be attributed to similarities in rock composition between the MRHW, MR and MRFW, the main constituent of which is plagioclase pyroxenite.

The AVRD histograms of the UG2HW and UG2FW (figures 31 – 33) are similar to those of the MR sampling cut. This may be because the main constituent of the UG2HW and UG2FW is also plagioclase pyroxenite. The projects show a peak AVRD for UG2HW and UG2FW of between 4 to 6 % (figures 31 – 33). The UG2 AVRD histograms have a much broader distribution and show more variation then those of the other stratigraphic units (figures 31 – 33). The AVRD variation observed

in the UG2 chromitite layer may indicate variations in pore volume within the assemblage of chromite cumulate grains that make up the main constituent of the UG2. The peak AVRD range for the UG2 is higher than the other stratigraphic units, between 5 to 8 % (figures 31 – 33).

5.3.2. Quality control

The quality control checks on the remaining halved cores, confirmed that the results comparing the Grabner Milled method and the Driekop method were repeatable. The Driekop original values corresponded very well with the Driekop check values (mean AVRD = 0.33 %), despite slight variations in composition, which is expected between the two halved core samples (figure 34). The mean AVRD between the Grabner Milled and Driekop original results were slightly higher than the mean AVRD between the Grabner Milled and Driekop check results, 5.18 %, and 4.85 %, respectively (figure 35 and 36). The AVRD histogram of the Driekop original and Driekop check values show a peak AVRD at only 1 % (figure 37). Both the Grabner Milled/Driekop check and Grabner Milled/Driekop original AVRD histograms have peak AVRDs at 5 %, and their histogram profiles are almost identical (figure 37).

The fact that the Driekop measurements were repeatable is very important for this fairly robust method of determining density. With the correct setup, the use of calibration weights, which ensures the scale is measuring correctly, and the use of standard reference material, which ensures accuracy and precision of the density results obtained over time, this method is a good means of density determination. The Grabner Milled method uses a modern gas pycnometer that has a high degree of accuracy and precision. Being conducted in a laboratory environment, the Grabner Milled method has much more control over external variables such as temperature. The Driekop method is conducted at a field exploration camp, where a control over external variables such as temperature is more limited.

6. PART TWO: DENSITY EXPERIMENT - HOW LOCALITY, SAMPLE PREPARATION AND METHOD USED, INFLUENCES THE DENSITY RESULT OBTAINED.

6.1. PART TWO: RESEARCH METHODOLOGY

The second part of the study was set up to compare the density results obtained when measuring the same sample as a solid, using the hydrostatic immersion and gas pycnometer methods, and as a milled powder, using a gas pycnometer.

A total of 82 randomly selected core samples were used for the experiment. Each sample was first measured as a solid and then as a milled powder. The hydrostatic method and gas pycnometer method described in Part one (Chapter 5.1.1 and 5.1.2) was used for this experiment. The experiment was set up to see how locality, sample preparation and method influences the density result obtained.

Each sample was first cut to fit the sample cup of the Grabner Minidens.

The density of each solid sample was then firstly determined using the hydrostatic method and then the Grabner Minidens air gas pycnometer.

The hydrostatic method was conducted at Driekop, 30 km North of Burgersfort, referred to as “Driekop” in the results section. The same hydrostatic method was then conducted on the samples at the laboratory based in Germiston, Johannesburg, referred to as “Lab water solid” in the results section. This was to test whether external factors such as temperature and altitude have any influence on the results.

The gas pycnometer method was only conducted at the laboratory. The samples were first measured as a solid, referred to as “Grabner Solid” in the results section. The samples were then milled to 40 µm and re-measured in the Grabner Minidens, referred to as “Grabner Milled” in the results section.

Scatter plots comparing the results of each method were produced and discussed. Due to the small number of samples available no outliers were removed and the samples were not split up into their sampling cut or stratigraphic units. The mean AVRD between each method was determined and compared. The descriptive statistics of the original dataset (table C1); the list of the data used in the comparison (table C2); and the AVRD frequency data (table C3) are tabulated in Appendix C.

6.2. PART TWO: RESULTS

Scatter plots comparing the four different methods used in the experiment are given in figures 38 to 43 below. The methods used in this experiment are the two water immersion methods, the Lab water solid and the Driekop methods, as well as the Grabner solid and Grabner Milled methods. In each scatter plot there is a black and a red diagonal line. The black line represents the one-to-one linear trend line. Data points falling along this line have exactly the same value for the two results being plotted and compared. The red line represents the linear trend line of the dataset.

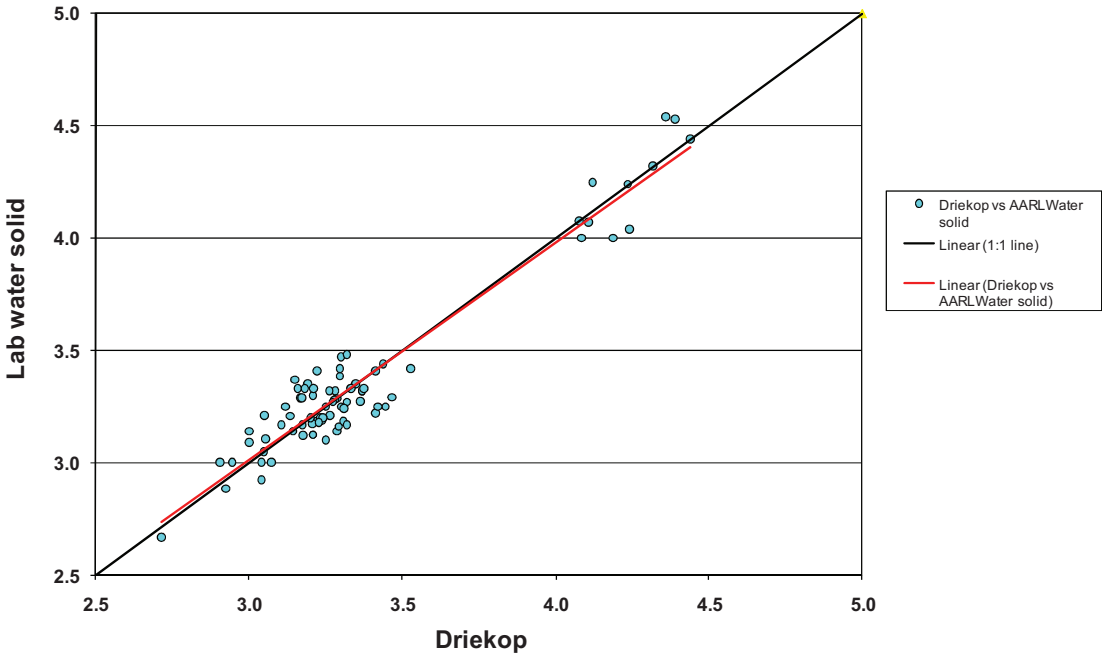


Figure 38. Scatter plot of the Lab water values over the Driekop values.

Notes The mean AVRD indicates that the Driekop results are only 0.01 % higher than the Lab water solid results.

The scatter plot of the Lab water solid values and the Driekop values show good correlation (figure 38). A number of the data points fall along the one-to-one line. Approximately 24 % of the data points have an AVRD of between one and minus one percent (Appendix C). The red linear dataset trend line is very close to the

black linear one-to-one trend line. The mean AVRD is only 0.01 %. This indicates that the results of the two water immersion methods conducted at different localities are generally comparable.

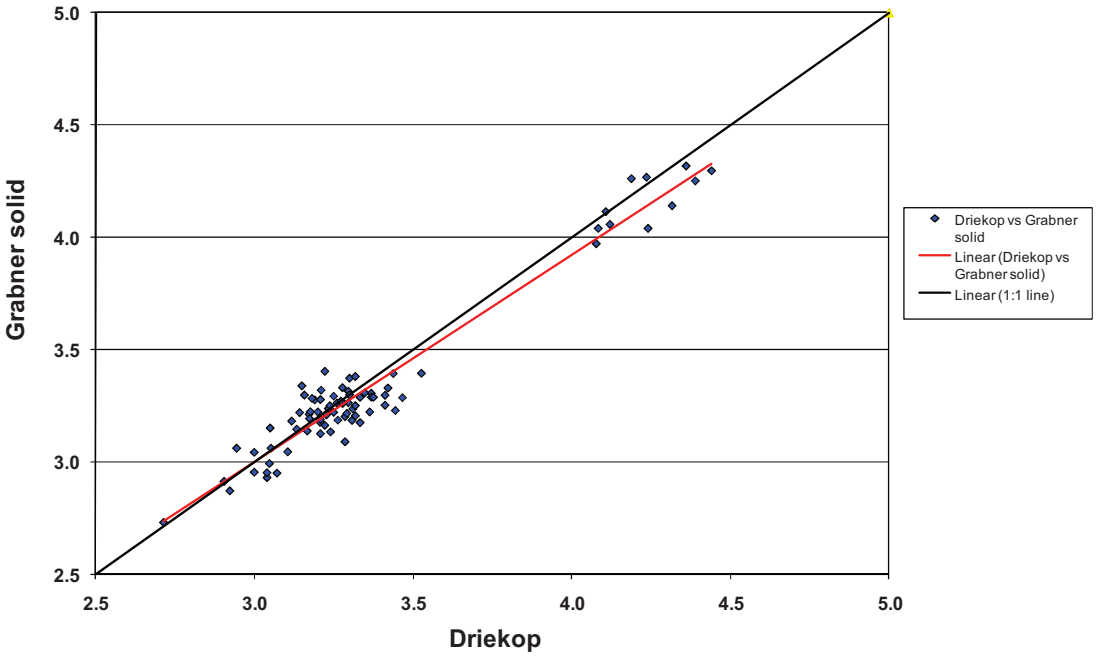


Figure 39. Scatter plot of the Grabner solid values over the Driekop values.

Notes The mean AVRD indicates that the Driekop results are 0.86 % higher than the Grabner solid results.

The scatter plot of the Grabner solid values and the Driekop values also shows relatively good correlation (figure 39). Approximately 28 % of the data points have an AVRD of between one and minus one percent (Appendix C). The red linear dataset trend line is similar to the black linear one-to-one trend line at values between 2.8 to 3.5 g/cc. However, points falling between 4.0 to 4.5 g/cc have a higher density value for the Driekop method, indicated by the skewed dataset trend line at these values. The mean AVRD is only 0.86 %. This indicates that there is a good comparison between the results from the Grabner solid method and the Driekop method.

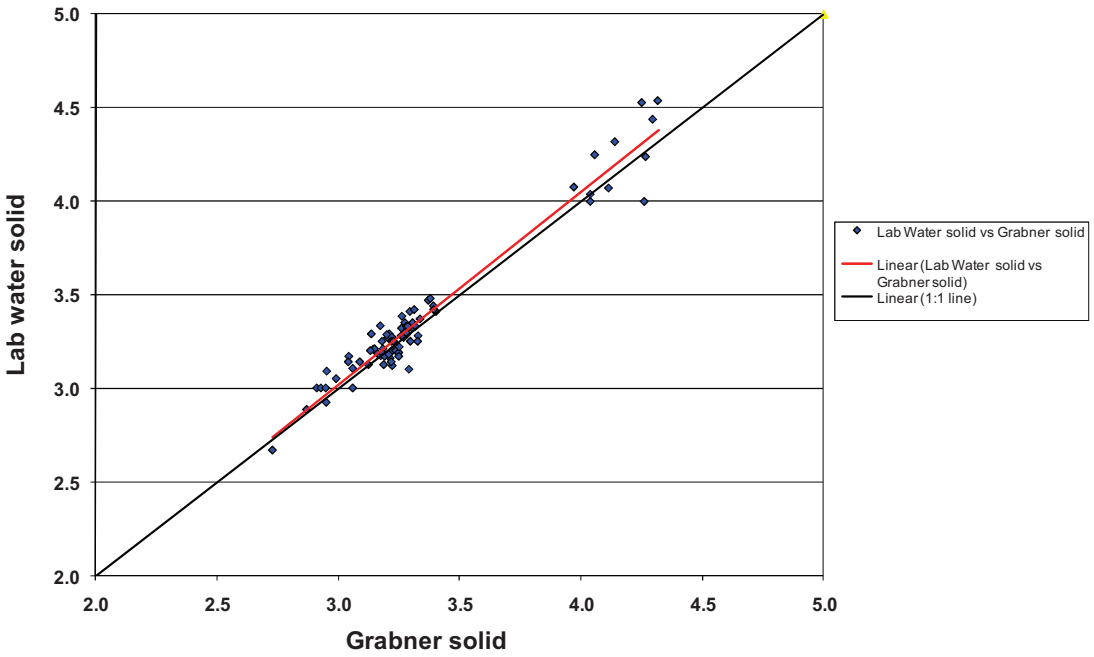


Figure 40. Scatter plot of the Lab water solid values over the Grabner solid values.

Notes The mean AVRD indicates that the Lab water solid results are 0.85 % higher than the Grabner Solid results.

The scatter plot of the Lab water solid values and the Grabner solid values also shows relatively good correlation (figure 40). The red linear trend line lies just above the black linear one-to-one trend line; with slightly higher values for the Lab water solid values at densities of between 4.0 to 4.5 g/cc. Approximately 33 % of the data points have an AVRD of between one and minus one percent (Appendix C). The mean AVRD is only 0.85 %, indicating a generally good correlation. This mean AVRD is almost the same as the mean AVRD between the Grabner Solid values and Driekop values (0.86 %). This indicates that the results of all three solid methods conducted in the experiment are relatively analogous.

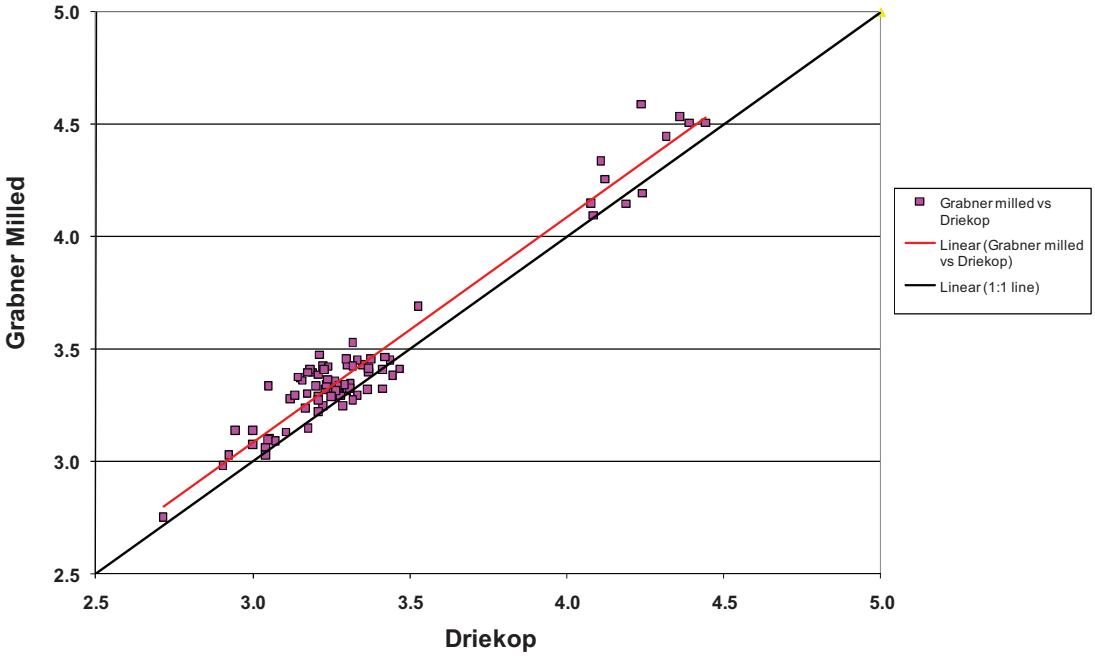


Figure 41. Scatter plot of the Grabner Milled values over the Driekop values.

Notes The mean AVRD indicates that the Grabner Milled results are 2.56 % higher than the Driekop results.

In contrast the scatter plot of the Grabner Milled values and the Driekop values show that Grabner Milled values are generally higher (figure 41). The majority of the data points lie above the black one-to-one trend line, as does the red dataset trend line. The mean AVRD of the dataset is 2.56 %, indicating that the Grabner Milled values are generally higher than the Driekop values.

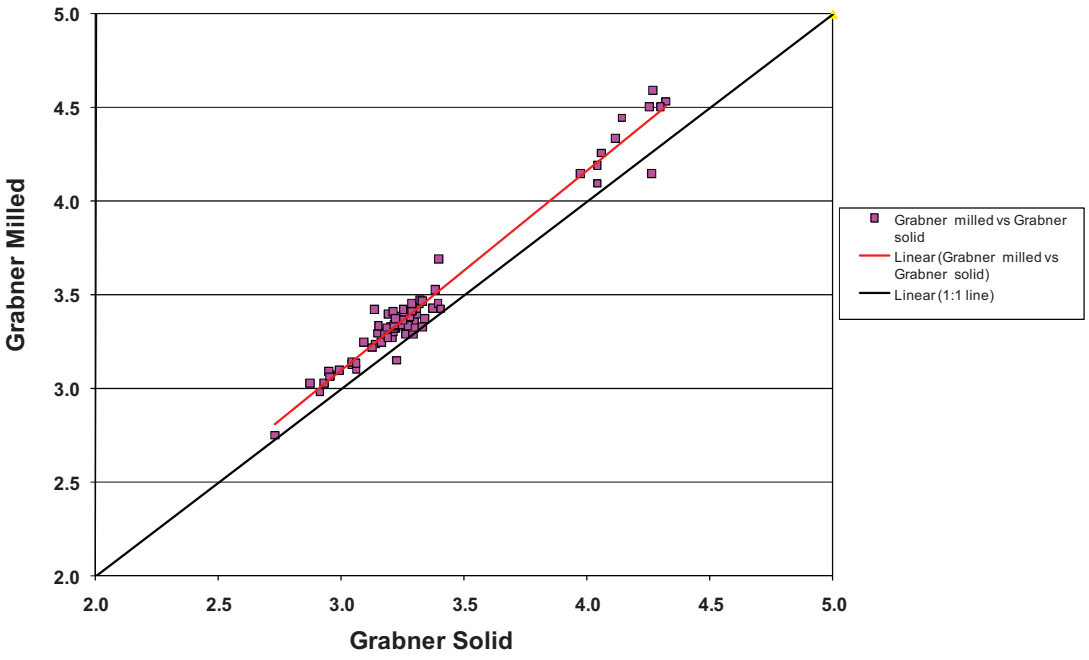


Figure 42. Scatter plot of the Grabner Milled values over the Grabner solid values.

Notes The mean AVRD indicates that the Grabner Milled results are 3.42 % higher than the Grabner Solid results.

The scatter plot of the Grabner Milled values and the Grabner solid values show similar results (figure 42). The Grabner Milled values are higher than the Grabner solid values. The majority of the data points, together with the red dataset trend line, lie above the black one-to-one trend line. The mean AVRD of the dataset is 3.42 %, indicating that the Grabner Milled values are generally higher than the Grabner solid values.

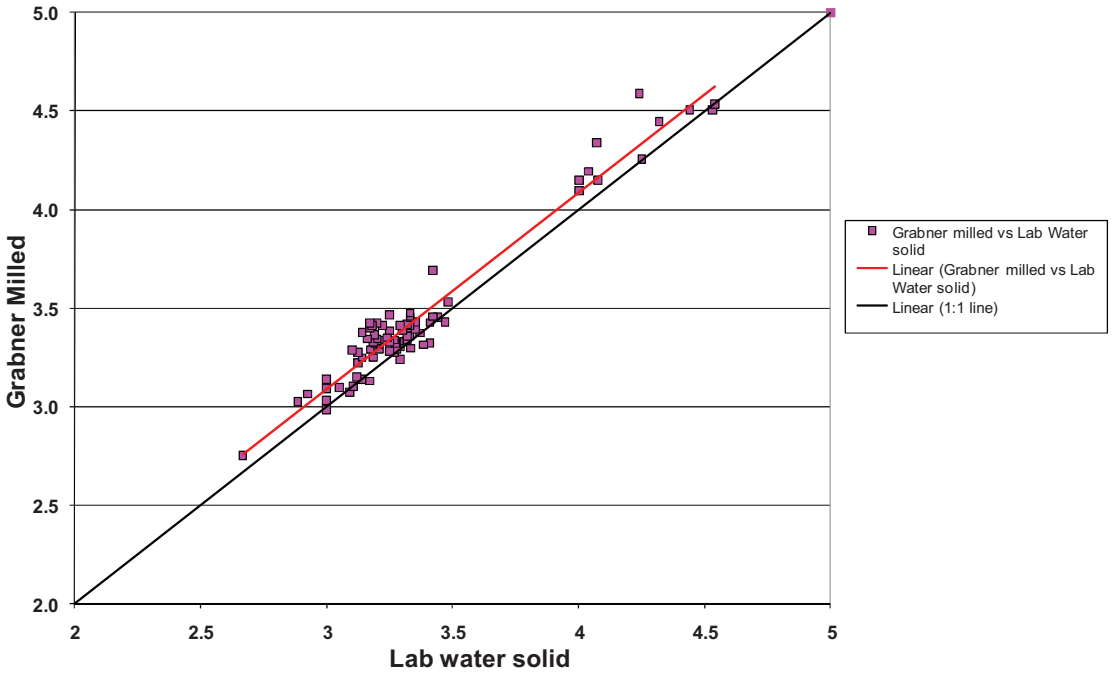


Figure 43. Scatter plot of the Grabner Milled values over the Lab water solid values.

Notes The mean AVRD indicates that the Grabner Milled results are 2.57 % higher than the Lab water solid results.

Similarly the scatter plot of the Grabner Milled values over the Lab water solid values shows that the Grabner Milled values are generally higher (figure 43). The majority of the data points, together with the red dataset trend line, lie above the black one-to-one trend line. The mean AVRD indicates that the Grabner Milled results are 2.57 % higher than the Lab water solid results.

6.3. PART TWO: DISCUSSION

The density experiment on the four methods shows that the milled core samples have a higher average density than those of the solid samples. The AVRDs between the four methods are summarized in table 5 below.

Table 5. Mean AVRD between the four methods conducted in the density experiment.

	Mean AVRD (%)
AVRD of Driekop & Grabner Solid	0.86
AVRD of Lab water solid & Grabner Solid	0.85
AVRD of Driekop & Lab water solid	0.01
AVRD of Grabner Milled & Lab water solid	2.57
AVRD of Grabner Milled & Driekop	2.56
AVRD of Grabner Milled & Grabner Solid	3.42

The lowest mean AVRD was found between the two water immersion methods. Even though these methods were conducted in very different locations with different temperatures and atmospheric pressures, they showed very little difference in results. This shows that small changes in temperature and atmospheric pressure will have minimal impact on the density result determined using hydrostatic water immersion. Webb (2001), indicates that if the temperature of the water is assumed to be at room temperature an error margin of about 0.33 % is introduced. For more accurate results the temperature of the water can be monitored and measured. Using a table of water density at different temperatures (table 1), the true density of the water can be used in the density equation. Note that the density of water is approximately 1 g/cc at a temperature of 4 ℃. Both increases and decreases in temperature will reduce the density of water. Multiplying the relative density of the sample with the true density of the water will therefore reduce the density of the sample slightly.

The mean AVRD between the two hydrostatic water immersion methods and the Grabner Solid method are similar, with a mean AVRD of only 0.85 − 0.86 %. The Driekop and Lab water solid density results are marginally higher than the Grabner Solid results. This may be partially indicative of the error margin introduced in the hydrostatic water immersion method by not using the true density of water. Another reason that the Grabner Minidens produced lower results may be because the air

was able to penetrate microscopic pores within the solid cores' structure, giving slightly lower volumes.

The largest AVRD was found between the Grabner Milled and the Grabner Solid results. This proves that, by milling the sample, any pores within the sample are eliminated and only the volume of the solid particles are calculated, therefore the higher density results. The AVRD between the Grabner Milled and both solid hydrostatic water immersion methods showed similar results, although the mean AVRD was slightly less. The AVRD histogram of the Grabner Solid and the Grabner Milled results is shown in figure 44 below; 30 % of the data has an AVRD of 4 %.

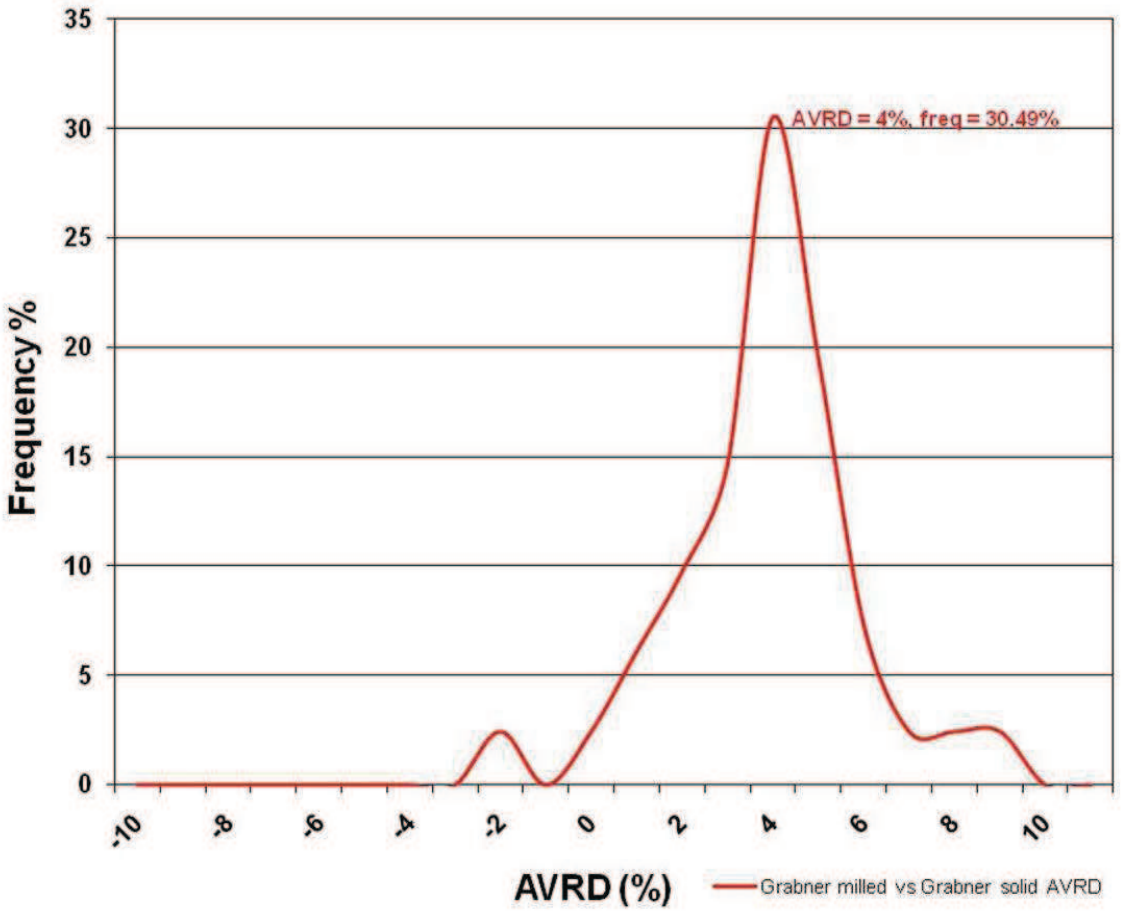


Figure 44. AVRD frequency histogram of the Grabner Milled and Grabner solid values.

7. DISCUSSION

7.1. EFFECT OF DENSITY ON RESOURCE PLANNING

The 2009 LPM resource model parameters were used to determine the effect of density on resource planning (Anglo Platinum annual report (AP), 2009 and Stevenson, 2009a and 2009b).

The weighted average density and AVRD of the MR and UG2 mining cut for each method was determined using the relative proportions of hangingwall, reef and footwall to the thickness of the optimal mining cut (table 6). For the Grabner Milled method, the density of the MR mining cut is 3.37 g/cc; and the density of the UG2 mining cut is 3.92 g/cc (table 7). For the Driekop method, the density of the MR mining cut is 3.20 g/cc; and the density of the UG2 mining cut is 3.70 g/cc (table 7). The weighted AVRD between the two methods for the MR is 5.34 % and the weighted AVRD for the UG2 is 5.52 % (table 7). The resource for the MR and UG2 was determined using the densities calculated for each method (table 8). The percentage difference in tonnage and ounces between the two methods was then determined (table 8).

The dip area was calculated using the “measured resource” area of the LPM project (Stevenson, 2009a and 2009b), and an average dip over the project of 19.5° (Langwieder, 2005). The thickness of the MR and UG2 mining cut is 1m. The percentage geological loss for the area is 20 % (Stevenson, 2009a and 2009b). The average 4E grade, which is comprised of the four elements Pt; Pd, Rh and Au was used. For the MR a grade of 5.92 g/t was used and for the UG2 a grade of 6.75 g/t was used (table 8); (AP, 2009).

The percentage difference in tonnage and 4E ounces between the two methods is shown in the last two columns of table 8. The percentage difference is 5.14 % for the MR and 5.55 % for the UG2. The percentage difference in tonnage and 4E ounces between the two methods for the MR and UG2 is very similar to the weighted AVRD between the two methods for the respective reefs, which is 5.34 % for the MR and 5.52 % for the UG2. This shows that a percentage change in density will result in the same percentage change in tonnage and 4E ounces. To further

illustrate the point, table 9 shows the resource calculation for the Grabner Method, relative to a 1 % decrease in density from the Grabner method. The last two columns in table 9 show that the percentage decrease in tonnage and 4E ounces is the same as the percentage decrease in density (1 %).

Table 6. Weighted average density and AVRD of each stratigraphic unit that make up the optimal mining cut.

LPM								
Stratigraphic unit	**Grabner Milled (g/cc)**	**Driekop (g/cc)**	**Thickness (m)**	**AVRD (%)**	**Percentage thickness**	**Weighted average Grabner Milled (g/cc)**	**Weighted average Driekop (g/cc)**	**Weighted average AVRD (%)**
MRHW	3.28	3.12	0.10	5.18	10	0.33	0.31	0.52
MR	3.42	3.24	0.65	5.44	65	2.22	2.11	3.54
MRFW	3.27	3.11	0.25	5.16	25	0.82	0.78	1.29
UG2HW	3.42	3.25	0.15	5.09	15	0.51	0.49	0.76
UG2	4.19	3.95	0.65	5.70	65	2.72	2.57	3.71
UG2FW	3.40	3.22	0.20	5.24	20	0.68	0.64	1.05

Note: Both the Grabner Milled and Driekop methods are shown for comparison. Weighted average density and AVRD is based on the relative thickness of hangingwall, reef and footwall that make up the mining cut.

Table 7. The weighted average grade, density, AVRD and thickness for the optimal mining cut.

LPM					
Mining Cut	**Grade (g/t)**	**Grabner Milled (g/cc)**	**Driekop (g/cc)**	**AVRD (%)**	**Thickness (m)**
MR	5.92	3.37	3.20	5.34	1
UG2	6.75	3.92	3.70	5.52	1

Note: Both the Grabner Milled and Driekop methods are shown for comparison.

Table 8. Resource calculation for the LPM area, based on the optimal mining cut.

LPM										
Method	**Mining cut**	**Dip (°)**	**Dip area (m2)**	**Thickness (m)**	**Density (g/cc)**	**Tonnage after geo loss (tons)**	**Grade (g/t)**	**Content 4E (Oz)**	**% difference Content 4E (Oz)**	**% difference Tonnage after geo loss (tons)**
Grabner Milled	MR	19.5	17,879,544	1	3.37	48,181,795	5.92	9,170,557	5.14	5.14
Driekop	MR	19.5	17,879,544	1	3.20	45,707,266	5.92	8,699,574		
Grabner Milled	UG2	19.5	40,997,559	1	3.92	136,481,898	6.75	29,618,963	5.55	5.55
Driekop	UG2	19.5	40,997,559	1	3.70	128,902,475	6.75	27,974,095		

Note: Both the Grabner Milled and Driekop methods are shown for comparison.

Table 9. Resource calculation for the LPM area, showing the affect of a 1 % drop in density relative to the Grabner Milled mining cut density.

LPM Grabner Milled minus 1% comparison											
Method	**Mining cut**	**Dip (°)**	**Dip area (m2)**	**Thickness (m)**	**Density (g/cc)**	**Geological loss (%)**	**Tonnage after geo loss (tons)**	**Grade (g/t)**	**Content 4E (Oz)**	**% difference Content 4E (Oz)**	**% difference Tonnage after geo loss (tons)**
Grabner Milled	MR	19.5	17,879,544	1	3.37	20	48,181,795	5.92	9,170,557	1.00	1.00
1% reduction	MR	19.5	17,879,544	1	3.33	20	47,699,977	5.92	9,078,851		
Grabner Milled	UG2	19.5	40,997,559	1	3.92	15	136,481,898	6.75	29,618,963	1.00	1.00
1% reduction	UG2	19.5	40,997,559	1	3.88	15	135,117,079	6.75	29,322,773		

Note: The Grabner Milled density is 3.37 g/cc; a 1 % reduction of the Grabner Milled density is 3.33 g/cc.

Dilution or overbreak is another factor that needs to be considered as it will influence the density and grade of the mining cut, and therefore the tonnage and 4E ounces. Three scenarios were considered: the hangingwall and footwall thicknesses were increased equally by 5 cm; then by 10 cm; and then by 15 cm. The effect on the original resource calculation density, grade, tonnage and 4E ounces was then compared.

The weighted average density and grade of the MR and UG2 mining cut plus additional dilution for each method, was determined using the relative proportions of hangingwall (5 cm ; 10 cm; and 15 cm), reef (original mining cut) and footwall (5 cm; 10 cm; and 15 cm) thicknesses. Grade in the hangingwall and footwall was considered to be zero. The weighted average grade, density and thickness of the mining cut plus dilution (10 cm; 20 cm; and 30 cm) is given in tables 10 to 12. The difference in density, grade, tonnage and 4E ounces from the original resource calculation is given in tables 13 to 15.

The weighted average density, grade and thickness of the hangingwall, reef and footwall stratigraphic units that make up the mining cut plus dilution are given in Appendix D, tables D1 to D3. The resource calculations for the mining cut plus dilution are also given in Appendix D, tables D4 to D6.

Table 10. The weighted average grade, density and thickness for the optimal mining cut plus 10 cm dilution.

LPM 10cm dilution				
Mining Cut	**Grade (g/t)**	**Grabner Milled (g/cc)**	**Driekop (g/cc)**	**Thickness (m)**
MR	5.38	3.36	3.19	1.1
UG2	6.14	3.87	3.66	1.1

Table 11. The weighted average grade, density and thickness for the optimal mining cut plus 20 cm dilution.

LPM 20cm dilution				
Mining Cut	**Grade (g/t)**	**Grabner Milled (g/cc)**	**Driekop (g/cc)**	**Thickness (m)**
MR	4.93	3.35	3.18	1.2
UG2	5.63	3.83	3.62	1.2

Table 12. The weighted average grade, density and thickness for the optimal mining cut plus 30 cm dilution.

LPM 30cm dilution				
Mining Cut	**Grade (g/t)**	**Grabner Milled (g/cc)**	**Driekop (g/cc)**	**Thickness (m)**
MR	4.55	3.35	3.18	1.3
UG2	5.19	3.80	3.59	1.3

Table 13. Change in density, grade, tonnage and metal content for the optimal mining cut plus 10 cm.

LPM 10cm dilution									
Method	**Mining cut**	**Decrease in density (g/cc)**	**Decrease in grade (g/t)**	**% decrease in density**	**% decrease in grade**	**Increase in tonnage**	**Decrease in Ounces**	**% increase in tonnage**	**% decrease in Ounces**
Grabner Milled	MR	0.01	0.54	0.25	9	4,684,441	23,141	9.72	0.25
Driekop	MR	0.01	0.54	0.23	9	4,455,582	19,923	9.75	0.23
Grabner Milled	UG2	0.05	0.61	1.18	9	11,883,142	348,224	8.71	1.18
Driekop	UG2	0.04	0.61	1.14	9	11,273,304	319,005	8.75	1.14

Table 14. Change in density, grade, tonnage and metal content for the optimal mining cut plus 20 cm.

LPM 20cm dilution									
Method	**Mining cut**	**Decrease in density (g/cc)**	**Decrease in grade (g/t)**	**% decrease in density**	**% decrease in grade**	**Increase in tonnage**	**Decrease in Ounces**	**% increase in tonnage**	**% decrease in Ounces**
Grabner Milled	MR	0.02	0.99	0.46	17	9,368,881	42,425	19.44	0.46
Driekop	MR	0.01	0.99	0.42	17	8,911,165	36,526	19.50	0.42
Grabner Milled	UG2	0.08	1.13	2.16	17	23,766,285	638,410	17.41	2.16
Driekop	UG2	0.08	1.13	2.09	17	22,546,607	584,842	17.49	2.09

Table 15. Change in density, grade, tonnage and metal content for the optimal mining cut plus 30 cm.

LPM 30cm dilution									
Method	**Mining cut**	**Decrease in density (g/cc)**	**Decrease in grade (g/t)**	**% decrease in density**	**% decrease in grade**	**Increase in tonnage**	**Decrease in Ounces**	**% increase in tonnage**	**% decrease in Ounces**
Grabner Milled	MR	0.02	1.37	0.64	23	14,053,322	58,742	29.17	0.64
Driekop	MR	0.02	1.37	0.58	23	13,366,747	50,575	29.24	0.58
Grabner Milled	UG2	0.12	1.56	2.98	23	35,649,427	883,953	26.12	2.98
Driekop	UG2	0.11	1.56	2.89	23	33,819,911	809,781	26.24	2.89

An increase in hangingwall and footwall thickness above the optimal mining cut has a much greater effect on the UG2 density than on the MR density. A 10 to 20 cm increase in overbreak causes the MR mining cut density to decrease by only 0.25 to 0.64 % for the Grabner Milled method and 0.23 to 0.58 % for the Driekop method, whereas the UG2 density decreases by 1.18 to 2.98 % for the Grabner Milled method and 1.14 to 2.89 % for the Driekop method (tables 13 to 15). The UG2 mining cut density is much more sensitive to overbreak because of the huge difference in composition and density between the reef and the hangingwall and footwall rocks. The UG2 is a chromitite layer, whereas the UG2HW and UG2FW are both made up of plagioclase pyroxenite. On the other hand, the MR mining cut density is less sensitive to overbreak because the MRHW, MR and MRFW are all made up of plagioclase pyroxenite. There are only slight differences in density between mineralized pyroxenite and un-mineralized pyroxenite.

The percentage decrease in grade associated with increases in hangingwall and footwall thickness, above the optimal mining cut, will obviously depend on the actual grade of the hangingwall and footwall at those thicknesses. Because the additional overbreak in the hangingwall and footwall was taken at a grade of 0 g/t, the grade of the mining cut will decrease in proportion with the increase in overbreak, i.e. the percentage dilution equals the percentage decrease in grade.

Because tonnage is associated with density, and grade is associated with 4E ounces, increases in overbreak will cause the tonnage to increase and the 4E ounces to decrease.

Although the UG2 mining cut density is more sensitive to dilution than the MR mining cut, the percentage change in tonnage is similar (tables 13 to 15). For every 10 cm of dilution, the MR tonnage increases by 9.72 % for the Grabner Milled method and 9.75 % for the Driekop method. For every 10cm of dilution, the UG2 tonnage increases by 8.71 % for the Grabner Milled method and 8.75 % for the Driekop method.

Grade in the hangingwall and footwall is taken as 0 g/t, therefore increases in dilution causes the total ounces to drop. The relationship between the tonnage and ounces is obviously more complicated, as it has huge cost and logistical implications. If there were sufficient grade in the hangingwall and footwall, the total available ounces may actually increase because of the increase in tonnage, but the additional

cost of extraction may render the project unfeasible. The optimal mining cut already takes all these interlinked elements into consideration. This example does however, show that for the same amount of dilution, the UG2 shows a greater drop in ounces compared to MR. From 10 to 30 cm dilution, the MR shows a drop in ounces from 0.25 to 0.64 % for the Grabner Milled method and from 0.23 to 0.58 % for the Driekop method. From 10 to 30 cm dilution, the UG2 shows a drop in ounces from 1.18 to 2.98 % for the Grabner Milled method and from 1.14 to 2.89 % for the Driekop method.

The effect of dilution on density, as well as grade has been highlighted. Compositional differences between the UG2 and the UG2HW and UG2FW means that the overall density of the UG2 mining cut is much more sensitive to dilution then the MR mining cut, which is made up of similar lithologies. Weighted average densities based on the proportions of hangingwall, reef and footwall must be taken into consideration during mining as well. Emphasis is commonly placed on the effect of dilution on grade; however the effect on density is as important.

7.2. SUMMARY OF FINDINGS BASED ON QUESTIONS POSED IN THE RESEARCH PROBLEM

Question: Is there a significant difference in results obtained when using a hydrostatic immersion or gas pycnometer method to determine rock density?

Answer: Yes there is. Part one: the comparison between the Driekop method and Grabner Milled method showed a mean AVRD of approximately 5 % for all stratigraphic units. Part two: the comparison between the four methods also showed that there was a significant difference between the solid methods and the Grabner Milled method. The most significant being between the Grabner Milled and Grabner solid method (AVRD = 3.42 %).

Question: What are the differences between the two methods?

Answer: The Driekop method calculates the bulk density for the solid core samples and the Grabner Milled method calculates the true density for the milled/powdered core samples. Applied correctly with the proper quality controls, they are both reliable methods of density determination. However, care must taken to decide what type of density is required.

Question: Are these differences significant and what are the implications thereof?

Answer: Not only is there a significant difference in results between the two methods, the type of density measured is completely different. However, the method does work as a quality control measure to check the laboratory results. Results falling outside an expected density range or AVRD for particular rock type and stratigraphic unit can be picked up. The method used will have a significant impact on resource planning, depending on which method is used in the resource calculation. A percentage change in the density of the mining cut will result in an equal percentage change in tonnage and metal content.

8. CONCLUSION

The study shows that density measurements conducted on milled core and solid core produces different results. The milled core produces a density result 3 to 5 % higher than the solid core. Milling the core sample into a fine powder changes the natural state of the rock, altering its mineral assemblage and structure, and in the process eliminating any pore spaces.

Subtle differences in the composition and structure of the rock affects the mass, and the solid volume versus the pore volume of the sample. For example, the slight difference in density between mineralized pyroxenite and un-mineralized pyroxenite.

The study highlights the need for the correct application of quality control in taking density measurements. Apart from the correct setup, calibration and use of standard reference material to ensure accuracy and precision, particular attention needs to be paid to the type of rock measured and the type of density required. Does the rock contain open and/or closed pores? Is a bulk density or a true density of the rock required? In this case, the Driekop method, using a hydrostatic immersion method on the halved core sample, calculated a bulk density for the solid core samples. The Grabner Milled method, using a gas pycnometer method, on only a portion of the milled core sample, calculated a true density for the milled core samples. Although the Grabner milled method produces different density results to the Driekop method, by comparing the results of the two methods, samples falling outside an expected density range or AVRD, for that particular type of rock and stratigraphic unit, are easily picked up. Therefore the two methods can be used for quality control.

The effect of temperature and atmospheric pressure on the hydrostatic immersion method was shown to be minimal. However, for more accurate results the temperature of the water should be monitored. The hydrostatic method of density determination is a very practical way of determining rock density at a remote exploration site. A range of different rock sizes and shapes can be used with this method. On the other hand, modern gas pycnometers need to be operated in a

laboratory controlled environment, and are only capable of measuring a small amount of sample.

For platinum deposits on the North Eastern limb, the type of method used will have a significant impact on resource planning. Furthermore, changes in density results in equal changes in tonnage and metal content. The AVRD between the two methods, for the mining cut density, was approximately 5 %, and the difference in tonnage and 4E ounces between the two methods was also approximately 5 %. The total resources are dependent on which method is used in the resource calculation.

Increases in dilution or overbreak above the optimal mining cut showed increases in tonnage and decreases in metal content (4E ounces). In terms of density, due to the similarity in rock composition between the MRHW, MR and MRFW, the MR mining cut was found to be less sensitive to dilution. On the other hand, because of the marked difference in composition between the UG2, and the UG2HW and UG2FW, dilution caused a greater change in density for the UG2 mining cut.

9. REFERENCES

Agnew, J.M., Leonard, J.J., Feddes, J. and Feng, Y. (2003). A modified air pycnometer for compost air volume and density determination. *Canadian Biosystems Engineering*, **45**, 6.27-6.35.

Anglo Platinum Limited. (2009). *2009 Annual Report, Platinum: A precious metal for a precious planet.* Anglo Platinum Ltd, 276 pp.

[ASTM] American Society for Testing and Materials. (1991). 8th edition. Compilation of ASTM Standard Definitions. Available from American Society for Testing and Materials US. Philadelphia.

[ASTM] American Society for Testing and Materials. (1997). D 2638 – 06 Standard Test Method for Real Density of Calcined Petroleum Coke by Helium Pycnometer. Available from http://www.astm.org

Barnes, S. and Maier, W.D. (2002). Platinum-group Elements and Microstructures of Normal Merensky Reef from Impala Platinum Mines, Bushveld Complex. *Journal of Petrology*, **43(1)**, 103-128.

Britt, D.T., Yeomans, D., Housen, K. and Consolmagno, G. (2002). Asteroid Density, Porosity, and Structure. *In Asteroids III* (Eds. W.F. Bottke, A. Cellino. P. Paolicchi, and R.P. Binzel), University of Arizona Press, Tuscon, 485-500.

Britt, D.T. and Consolmagno, G.T. (1998). The density and porosity of meteorites from the Vatican collection. *Meteoritics and Planetary Science*, **33**, 1231-1241.

Brown, R. (2004a). *Mafic and Ultramafic rocks of the Bushveld Complex: A note on their classification and nomenclature* (Unpublished), 2nd Edition, Anglo Platinum Exploration Geology Internal Report, 77 pp.

Brown, R. (2004b). *Some aspects of potholes and replacement pegmatites* (Unpublished), Anglo Platinum Exploration Geology Internal Report, 13 pp.

Brown, R. (2005a). *The Eastern Bushveld Complex* (Unpublished), Anglo Platinum Exploration Geology Internal Report, 25 pp.

Brown, R. (2005b). *The PGE reefs of the Bushveld Complex and Great Dyke* (Unpublished), Anglo Platinum Exploration Geology Internal Report, 52 pp.

Brown, R.T. and Lee, C.A. (1987). *The nature and characteristics of Merensky reef potholes at Atok Platinum Mine*. (Unpublished), Internal JCI Report No. 221, 53 pp.

[BSI] British Standards Institute. (1991). Glossary of Terms Relating to Particle Technology. Available from British Standards Institute, London; British Standard BS 2955.

Cameron, E.N. (1982). The Upper Critical Zone of the Eastern Bushveld Complex-Precursor of the Merensky reef. *Economic Geology*, **77**, 1307-1327.

Capano, D. (2000). *The ways and means of density* (Internet). InTech Online, The Instrumentation, Systems, and Automation Society (ISA), 4 pp.
Available from http://www.isa.org/journals/intech/feature/1,1162,467,00.html

Cawthorn, R.G., Lee, C.A., Schouwstra, R.P. and Mellowship, P. (2002). Relationship between PGE and PGM in the Bushveld Complex. *The Canadian Mineralogist*, **40**, 311-328.

Cawthorn, R.G. and Walraven, F. (1998). Emplacement and Crystallization Time for the Bushveld Complex. *Journal of Petrology*, **39(9)**, 1669-1687.

Cawthorn, R.G. and Webb, S.J. (2001). Connectivity between the western and eastern limbs of the Bushveld Complex. *Tectonophysics*, **330**, 195-209.

Chang, C.S. (1988). Measuring Density and Porosity of Grain Kernels Using a Gas Pycnometer. *American Association of Cereal Chemists*, **65(1)**, 13-15.

Chunnett, G., Rutherford, T. and Jones, B. (2006). *Anglo Platinum Group procedure for the determination of density for QA/QC purposes* (Unpublished), *Version* 3.0. Anglo Platinum Exploration Geology Internal Report, 14 pp.

Clarke, B.M., Uken, R., Watkeys, K. and Reinhardt, J. (2005). Folding of the Rustenburg layered suite adjacent to the Steelpoort pericline: implications for syn-Bushveld tectonism in the eastern Bushveld Complex. *South African Journal of Geology*, **108**, 397-412.

Eales, H.V. (2001). A first introduction to the Bushveld Complex and those aspects of South African Geology that relate to it. Popular Geoscience Series 2, The Council for Geoscience. 84 pp.

Gain, S.B. (1985). The geological setting of the platiniferous UG-2 chromitite layer on the farm Maandagshoek, eastern Bushveld Complex. *Economic Geology*, **80**, 925-943.

Geddis, A.M., Guzman, A.G. and Bassett, R.L. (1996). *Rapid Estimate of Solid Volume in Large Tuff Cores Using a Gas Pycnometer*. United States Nuclear Regulatory Commission, NUREG/CR-6457. 85 pp.

Goldman, R.F. and Buskirk, E.R. (1959). *Body volume measurement by underwater weighing: Description of a method*. National Academy of Sciences – National Research Council, Washington, D.C. Proceedings of a Conference Quartermaster Research and Engineering Centre, Natrick, Massachusetts, January 22-23, 1959, 78-79.

Grabner Instruments. (2008). *Minidens operating manual*. Grabner Instruments, Messtechnik, 31pp. Available from http://Grabner-instruments.com

Kinloch, E.D and Schouwstra, R.P. (2000). A short review of the Bushveld Complex, *Platinum Metals Review*, **44**, 33-39.

Langwieder, G. (2005*). Middling relationships between the UG2 and Merensky Reef in the Northeastern limb of the Bushveld Complex.* (Unpublished), Internal Anglo Platinum Report. 3 pp.

Lee, C.A. and Butcher, A.R. (1990). Cyclicity in the Sr isotope stratigraphy through the Merensky and Bastard units, Atok Section, Eastern Bushveld Complex. *Economic Geology*, **85**, 877-883.

Mabuza, M. (2006). *Two Rivers Platinum Mine: the orebody, the mining method; a perfect match*. The South African Institute of Mining and Metallurgy. International Platinum Conference 'Platinum surges ahead', 2006, 151-158.

Mathez, E.A., Hunter, R.H. and Kinzler, R. (1997). Petrological evolution of partially molten cumulate: the Atok section of the Bushveld Complex. *Contributions to Mineralogy and Petrology*, **129**, 20-24.

Mitchell, A. A. and Scoon, R. N. (2007). The Merensky Reef at Winnaarshoek, Eastern Bushveld Complex: A Primary Magmatic Hypothesis Based on a Wide Reef Facies. *Economic Geology*, **102(5)**, 971-1009.

Mondal, S.K. and Mathez, E.A. (2007). Origin of the UG2 chromitite layer, Bushveld Complex. *Journal of Petrology*, **48(3)**, 495-510.

Naldrett, A.J., Wilson, A., Kinnaird, J. and Chunnett, G. (2009). PGE tenor and metal ratios within and below the Merensky Reef, Bushveld Complex: Implications for its genesis. *Journal of Petrology*, first published online April 20, 2009. Available from http://www.petrology.oxfordjournals.org/content/early/2009/04/20/petrology.egp015.full

Orr, C., Camp, R.W. and Gibson, K.H. (1991). *Gas Comparison Pycnometer*. United States Patent 5,074,146. 24 pp.

Regimand, A. (2001). *Methods and apparatus for sealing a porous material sample for density determination using water displacement methods and associated surface conformal resilient compressible bags*. United States Patent US 6,321,589 B1. 36 pp.

SACS (South African Committee for Stratigraphy); (1980) Stratigraphy of South Africa. Part 1 (Compiler L.E. Kent). Lithostratigraphy of the Republic of South Africa, South West Africa / Namibia, and the Republics of Bophuthatswana, Transkei and Venda: *Handbook of the Geological Survey of South Africa*, 8, 690 pp.

SAMREC (The South African Mineral Resource Committee working group); (2007). The South African Code for the reporting of exploration results, mineral resources and mineral reserves (THE SAMREC CODE).

Schwellnus, J.S.I., Hiemstra, S.A. and Gasparrini, E. (1976). The Merensky reef at the Atok platinum mine and its environs. *Economic Geology*, **71**, 249-260.

Scoates, J.S. and Friedman, R.M. (2008). Precise age of the platiniferous Merensky Reef, Bushveld Complex, South Africa, by the U-Pb zircon chemical abrasion ID-TIMS technique. *Economic Geology*, **103**, 465-471.

Seabrook, C.L. (2005). *The Upper Critical and Lower Main Zones of the eastern Bushveld Complex.* PhD thesis (Unpublished), University of the Witwatersrand, Johannesburg, South Africa, 260pp.

Snelling, C. (Compiler). (Last modified 2010). *Density of Water at Temperatures from 0℃ (liquid state) to 30.9℃ by 0.1 increments* (Internet). Roger Walker 2008-2011.1p. Available from: http://www.simetric.co.uk/si_water.htm

Snowrex Precision Scales (2008). *Model NV/NHV Operating manual*. Snowrex International CO., LTD, 7pp.
Available from http://www.snowrex.com.tw/products_WeighingScale.htm

Stevenson, P.C.A. (2009a). *Lebowa Merensky Reef Geological Resource Modelling 2009.* (Unpublished), Anglo Platinum Exploration Geology Internal Report, 352 pp.

Stevenson, P.C.A. (2009b). *Lebowa UG2 Geological Resource Modelling 2009.* (Unpublished), Anglo Platinum Exploration Geology Internal Report, 372 pp.

Turner, P.L., Gilkey, R.W. and Lagus, P.L. (1978). *Gas Comparison Pycnometer*. US Patent 4,083,228. 11 pp.

Von Gruenewaldt, G., Sharpe, M.R. and Hatton, C.J. (1985). The Bushveld Complex: Introduction and Review. *Economic Geology*, **80**, 803-812.

Van der Neut, M. (2008). *QAQC investigation of assay data: Lebowa Mine, Limpopo Province* (Unpublished), Anglo Platinum Geology Internal Report. 15 pp.

Webb, P.A. (2001). *Volume and Density determinations for particle technologists* (Unpublished), Micromeritics Instrument Corp. 2/16/01. 16 pp.
Available from http://www.micromeritics.com

Webb, S.J., Cawthorn, R.G., Nguuri, T. and James, D. (2004). Gravity modelling of Bushveld Complex connectivity supported by Southern African Seismic Experiment results. *South African Journal of Geology*, **107**, 207-218.

Weindorf, D.C. and Wittie, R. (2003). Determining Particle density in Dairy Manure Compost. *The Texas Journal of Agricultural and Natural Resource*, **16**, 60-63.

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APPENDICES

Comparison of rock density determination methods used in South African platinum mines for resource planning purposes

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LIST OF ABBREVIATIONS

4E grade	Weighted average grade of Pt, Pd, Rh and Au in g/t
Au	Gold
AVRD	Average relative difference (refer to equation 8)
BQ	Diamond drill core size diameter equal to 36.10 mm
°C	Degrees Celsius
cm	Centimeters
Driekop	Water hydrostatic method of rock density determination, conducted on solid core samples at the exploration site
Driekop check	Water hydrostatic method of rock density determination, conducted on the remaining solid halved core samples at the exploration site in order to check the original results
g	Grams
g/cc or g/cm^3	Grams per cubic centimetre
g/t	Grams per ton
Ga	One billion years
GPM	Gapasha Project
Grabner Milled	Grabner Minidens air gas pycnometer method of rock density determination, conducted on milled/powdered core samples at the laboratory in Johannesburg
Grabner Solid	Grabner Minidens air gas pycnometer method of rock density determination, conducted on solid core samples at the laboratory in Johannesburg
KPa	Kilopascals
km	Kilometers
Lab water solid	Water hydrostatic method of rock density determination, conducted on solid core samples at the laboratory in Johannesburg
LPM	Lebowa Project
m	Meters
Ma	One million years
ml	Milliliters
mm	Millimeters
MR	Merensky reef
MRFW	Merensky reef footwall
MRHW	Merensky reef hangingwall
Oz	Ounce (31.1034831 grams)
Pd	Palladium
PGE	Platinum group elements
Pt	Platinum
Rh	Rhodium
t/m^3	Tons per cubic meter
THP	Twickenham Project
Tons	One thousand kilograms
UG2	Upper Group 2 chromitite layer
UG2FW	Upper Group 2 chromitite footwall
UG2HW	Upper Group 2 chromitite hangingwall
°	Degrees

LIST OF DEFINITIONS

Accuracy	Measure of closeness to the true value
Apparent or skeletal density	Mass divided by apparent volume
Apparent or skeletal volume	Solid volume plus closed pore volume, all open pore volume is excluded
Bulk density	Mass divided by bulk volume
Bulk volume	Solid volume plus all pore volume, open, closed and inter-particle, as with powders
Comminution	The process whereby rocks are reduced in size by crushing, grinding and milling
Density	The concentration of matter, that is mass per unit volume
Envelope volume	The volume of a particle around a tight fitting envelope
Grade	Metal or element content in g/t
Mining cut	The reef, together with the optimal thickness of hangingwall and footwall
Precision	Measure reproducibility or repeatability
Sampling cut	The sampled components of the hangingwall, reef and footwall
True or absolute density	Mass divided by true volume
True or absolute volume	The volume of only the solid; all open and closed pore volume is excluded

APPENDIX A

Hydrostatic density determination using the Snowrex NH - 3 Clover Scale

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Standard Procedure for the Determination of Density.

Revision 3

Report ID: Standard Procedure for the Determination of Density.

Contact: Gordon Chunnett, Barry Jones and Anthony Rutherford

Date: 20 November 2005

CONFIDENTIALITY

CONTENTS

1. Introduction

This document seeks to introduce quality assessment and quality control (QA/QC) to density measurements. Currently density measurements are under taken by either an internal or external commercial laboratory. In these laboratories density measurements are typically made using a gas pycnometer. In order to QA/QC the results obtained from the laboratories a manual hydrostatic method will be used. This document sets out the appropriate procedures and methods to be used when undertaking QA/QC density measurements. This is to ensure standardized and precise results.

The hydrostatic method makes use of an adapted electronic digital scale. The method simply requires the sample to be weighed in air and then in water. The measured masses are then entered into a simple formula to calculate the density. This document illustrates the method using a "Clover Scale" (it should be noted however that any suitably adapted scale would do).

Density is an intrinsic property of rock and is merely the mass per volume

$$\left(Density = \frac{mass}{volume}\right).$$

It is customary for the mining industry to express this quantity in terms of g/cm^3 or t/m^3. A term sometimes used is "relative density" which is merely the density of the substance (in this case rock) divided by the density of water (i.e. it is the density normalized to the density of water). It should be noted that at 4^oC the density of water is 1 g/cm^3. Previously the term "specific gravity' was also used to describe density. When reporting results only the term **density** should be used and not "relative density" nor "specific gravity". However, as will be shown what you actually work out is in fact Relative Density.

2. The Theory

The method makes use of Archimedes' Principal i.e. a body immersed in a fluid is buoyed up by a force equal to the weight of the displaced water. In order to obtain the density of the core (or any sample for that matter) the sample needs to be weighed in air and then in water. The values then entered into a formula and the result acquired. The formula is:

$$RelativeDensity = \frac{Density_{sample}}{Density_{water}} = \frac{\frac{Weight_{sample}}{Volume_{sample}}}{\frac{Weight_{water}}{Volume_{water}}} = \frac{Weight_{sample}}{Weight_{water}}$$

However the weight of the water (remember weight is a force) is, according to Archimedes' Principal, equal to the buoyancy force (i.e. the force acting upwards on the sample, so;

$$RelativeDensity = \frac{Weight_{sample}}{BuoyancyForce}$$

And the buoyancy force is equivalent to the difference between the weight of the sample in air and the weight of the sample in water i.e. $BuoyancyForce = Weight_{Air} - Weight_{water}$, therefore;

$$RelativeDensity = \frac{Weight_{sample(air)}}{(Weight_{sample(air)} - Weight_{sample(water)})}$$

In order to get the actual density of the sample simply multiply the equation by the density of water which is 1 or at least sufficiently close to 1.

Note: *weight* is defined as "the vertical force exerted by a mass as a result of gravity" measured in SI by Newtons.

3. The Procedure

The method described below makes use of the "Clover Scale". However any suitable scale will do provided the weightometer within the instrument can be accessed from below the instrument to attach the hanging basket. It is suggested that the manual be read before proceeding with measurements.

A. Setting up of the instrument

The Clover Scale should be placed in a stable dust free area with minimal disturbance; external influences such as wind and movement will affect the measurements of the sample. So mounting it on a wobbly table in the core yard will not do.

The following steps will ensure that the clover scale is set up correctly:

1. Remove components from their boxes.
2. Carefully turn the scale on its back and observe the hole under the scale (in the centre of the scale), this is to attach the hanging basket hook.
3. Attach the threaded hook to the base of the scale plate (there is a place for it), taking care not to screw it in too far, a few turns into the base plate is sufficient, screwing it in completely will damage the scale. Note: the hook may need to be shortened to allow the basket to hang free.
4. Place the scale upright on the white metal frame taking care to ensure the hanging hook is centered over the hole provided.
5. Hang the cradle from the hook. Ensure that the hook does not touch the scale plate
6. Ensure that the cradle does not touch the sides or the bottom of the catch pan (container in which to place water).
7. Ensure that the scale is level using the "spirit level" on the scale. It is suggested that the scale is leveled on the intended flat surface first and then fine adjustments done once it is on the white stand.
8. Fill the container up with clean water until it covers the basket and is sufficiently deep to cover any sample. It is very important that samples be completely submerged. For example for half core BQ size there needs to be a minimum depth of 6cm whilst for full BQ 12cm would be needed.
9. A single drop of dishwashing liquid should be added to the water in order to break the surface tension. Note: if too much dishwashing liquid is added to the water, the density of the water will be altered and the formula no longer works.
10. Attach the charger provided and recharge the battery on the scale. A flashing light will appear next to the display screen.
11. The Clover Scale requires half an hour to warm up. Do not attempt to measure before this.

B. Taking measurements

As there will inevitably be variations in conditions (water temperature, instrument drift) it is very important that standards are created at the outset. A representative selection of samples (for example 12 samples, being a selection of reef(s), hanging and footwall samples) should be collected (it is preferable that individual samples that are homogenous with regard to grain size, lithology and texture be used). These become the "standard reference materials" (SRMs) and regular rechecking of these samples will ensure that your methodology is consistent. Ensure that the data for the SRMs is retained separately to demonstrate that regular checking of the accuracy is being completed. Record the date of each measurement.

1. It is important that the scale be turned on at least half an hour prior to measurement being taken.
2. Once the scale has been turned on for half an hour it will need to be "zeroed" (reset to zero). This is done by pressing the button marked with a "T" (see diagram attached: Appendix 1).
3. Place the sample on the top scale; wait until the scale has settled at a value. Record this value as $Weight_{air}$. It is very important that the sample be weighed in air first. The sample should also have been dry and free of loose dirt. If it is not it will give a false reading i.e. it will not be just the weight of the sample but that of the water and dirt.
4. Now place the sample in the basket underneath the scale. Ensure that it is completely covered by water. Record the value.
5. Before proceeding with the next sample zero the scale and ensure the water level is correct.

C. Recording and Reporting

All data recorded should be placed on the provided Excel spreadsheet (Appendix 2). The wet and dry values received from the scale are used to calculate the density using the equation derived above viz.:

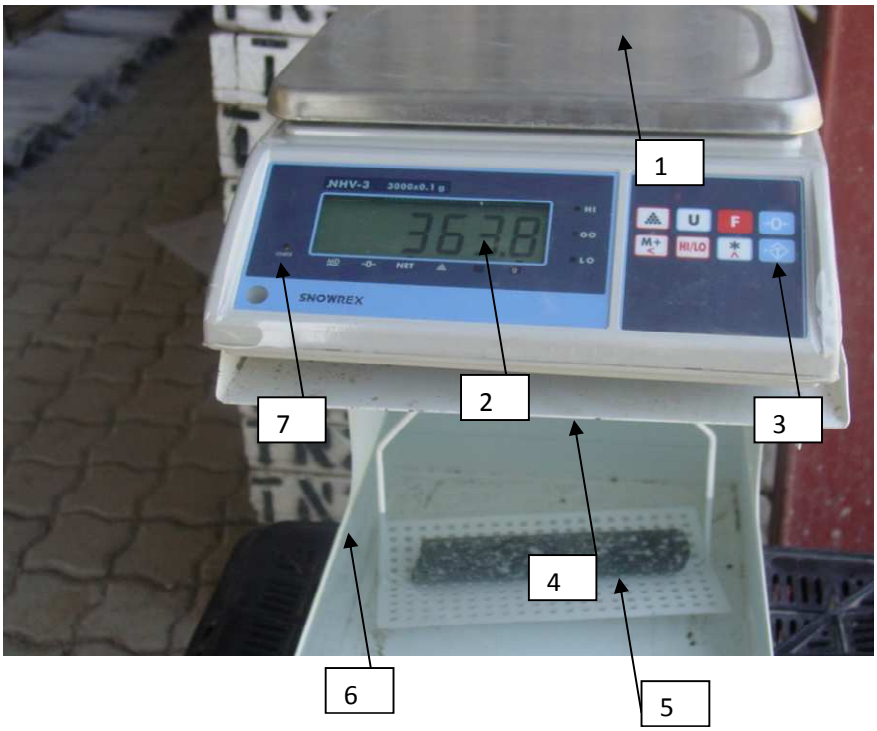
$$\mathrm{Re}\,lativeDensity = \frac{Weight_{sample(air)}}{(Weight_{sample(air)} - Weight_{sample(water)})}$$

In addition to the sample numbers, position, measured values ($weight_{air}$, $weight_{water}$) and date, the rock type should also be recorded.

The results can then be compared with those obtained from internal or commercial laboratories.

Appendix 1

Photograph showing instrument



1. Scale plate
2. Scale display (sample weight is displayed here in grams)
3. Button used to zero scale
4. Position of hook into base plate
5. Cradle submerged in water
6. Catch pan filled with water
7. Recharging light

Appendix 2

Excel based spreadsheet for the collection and collation of Density data between laboratory measurements which should be graphically displayed

	A	B	C	D	E	F	G	H
1	SAMPLE DENSITY DETERMINATION (Hydrostatic Method)					Rock Codes		
2						Poik. Pyroxene anorthosite		PPAN
3	Mass of empty vessel only needs to be determined once, and thereafter remains as a constant					Pyroxene anorthosite		PAN
4	If the exact same amount of water is used in the vessel each time, mass vessel + n ml water can also b					Norite		N
5	Use H, R, FW to represent hanging wall, reef, footwall					Gabbronorite		GN
6						Plagioclase pyroxenite		FPYX
7	Date:					Peg. Plagioclase pyroxenite		PFPYX
8	Operator:					Plagioclase harzburgite		FHAR
9						Chromitite		CR
10	Sample ID	Rock Type Code	HW, Reef or FW	Mass Dry Sample in Air (g)	Mass Suspended Sample in Water (g)	Density	Lab result	Difference beteen Lab and actual measureme
11								
12						#DIV/0!		
13						#DIV/0!		
14						#DIV/0!		
15						#DIV/0!		
16						#DIV/0!		
17						#DIV/0!		
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39						#DIV/0!		
40						#DIV/0!		
41						#DIV/0!		

The formula in column F which currently reflects #DIV/0! is intended to be: =D12/(D12-E12)

Copy this into each cell and as data accumulates the Hydrostatic density will be determined. This can then be compared with the laboratory determined method which is typically the Gas Pycnometer method. An XY plot of the results will provide insight into the correlation curve of the relationship between these two datasets and provide QA/QC of the data

APPENDIX B

Table B 1. Descriptive statistics for the LPM raw dataset.

LPM raw dataset descriptive statistics					
Driekop dataset statistics		**Grabner Milled dataset statistics**		**AVRD**	
Mean	3.293	Mean	3.475	Mean	5.325
Standard Error	0.003	Standard Error	0.004	Standard Error	0.034
Median	3.230	Median	3.400	Median	5.160
Mode	3.250	Mode	3.410	Mode	1.470
Standard Deviation	0.322	Standard Deviation	0.356	Standard Deviation	3.241
Sample Variance	0.104	Sample Variance	0.127	Sample Variance	10.505
Kurtosis	2.090	Kurtosis	2.176	Kurtosis	3.478
Skewness	1.551	Skewness	1.522	Skewness	0.407
Range	2.048	Range	2.080	Range	39.553
Minimum	2.645	Minimum	2.750	Minimum	-10.246
Maximum	4.693	Maximum	4.830	Maximum	29.308
Count	8924	Count	8924	Count	8924
Confidence Level (95.0%)	0.007	Confidence Level (95.0%)	0.007	Confidence Level (95.0%)	0.067

Table B 2. LPM outlier parameters.

LPM standard deviations from mean			
Number of standard deviations from the mean	**Driekop**	**Grabner Milled**	**AVRD**
3	4.260	4.542	15.049
2	3.938	4.186	11.808
1	3.615	3.830	8.567
0	3.293	3.475	5.325
-1	2.971	3.119	2.084
-2	2.648	2.763	-1.157
-3	2.326	2.407	-4.398

Table B 3. List of LPM outliers that were remov

LPM dataset outliers					
Sample number	**Rock type**	**Stratigraphy**	**Grabner Milled density**	**Driekop density**	**AVRD**
LPM08777	POIKFPYX	UG2HW	3.38	3.58	-5.8
LPM08778	GN	MRFW	3.49	2.92	17.8
LPM08779	CR	UG2	3.98	4.20	-5.4
LPM08780	N	MRHW	3.47	2.87	18.7
LPM08781	N	MRHW	3.44	2.90	16.9
LPM08782	PEGFPYX	UG2FW	3.73	3.97	-6.1
LPM08783	CR	UG2	3.48	3.77	-8.1
LPM08784	CR	UG2	4.47	3.47	25.1
LPM08785	PYX	UG2FW	3.73	3.20	15.2
LPM08786	PYX	UG2FW	3.73	3.20	15.2
LPM08787	PYX	UG2FW	3.75	3.21	15.5
LPM08788	PYX	UG2FW	3.75	3.21	15.5
LPM08789	CR	UG2	4.67	4.01	15.2
LPM08790	CR	UG2	4.67	4.01	15.2
LPM08791	CR	UG2	4.78	4.03	16.9
LPM08792	CR	UG2	4.78	4.03	16.9
LPM08793	CR	UG2	3.90	4.09	-4.9
LPM08794	CR	UG2	3.85	4.07	-5.5
LPM08795	CR	UG2	3.80	4.07	-6.8
LPM08796	CR	UG2	3.76	4.08	-8.3
LPM08797	CR	UG2	3.87	4.13	-6.5
LPM08798	CR	UG2	3.68	4.06	-9.9
LPM08799	PEGFPYX	UG2FW	3.76	3.23	15.2
LPM08800	MR	MR	3.78	3.21	16.3
LPM08801	CR	UG2	4.15	3.31	22.4
LPM08802	PYX	UG2FW	3.51	3.01	15.2
LPM08803	PYX	MR	3.86	3.31	15.3
LPM08804	PYX	MRFW	2.98	3.25	-8.6
LPM08805	N	MRHW	3.47	2.93	17.0
LPM08806	PYX	MRFW	3.36	3.62	-7.6
LPM08807	FPYX	UG2FW	3.52	3.02	15.4
LPM08808	FPYX	MRHW	3.36	2.83	17.2
LPM08809	CR	UG2	4.57	3.69	21.2
LPM08810	CR	UG2	3.97	4.17	-5.0
LPM08811	GN	MRFW	3.00	3.25	-8.1
LPM08812	CR	UG2	4.57	3.83	17.6
LPM08813	CR	UG2	3.88	4.08	-5.1
LPM08814	PEGFPYX	MRFW	2.90	3.12	-7.4
LPM08815	POIKFPYX	UG2HW	3.07	3.30	-7.3
LPM08816	CR	UG2	4.07	3.45	16.6
LPM08817	PYX	UG2FW	3.07	3.29	-6.9
LPM08818	PYX	UG2FW	3.07	3.24	-5.4
LPM08819	PYX	MRFW	3.34	2.84	16.3
LPM08820	CR	UG2	3.69	4.04	-9.2
LPM08821	CR	UG2	4.41	3.74	16.3
LPM08822	CR	UG2	4.42	3.74	16.8
LPM08823	PYX	UG2FW	3.64	3.09	16.5
LPM08824	PYX	UG2FW	3.58	3.06	15.5
LPM08825	CR	UG2	4.48	3.85	15.1
LPM08826	PYX	MRFW	3.55	3.03	15.7
LPM08827	PYX	MRFW	3.61	3.07	16.2
LPM08828	N	MRFW	3.46	2.95	16.0
LPM08829	N	MRFW	3.51	2.97	16.7

Table B 3. List of LPM outliers that were remov

LPM dataset outliers					
Sample number	**Rock type**	**Stratigraphy**	**Grabner Milled density**	**Driekop density**	**AVRD**
LPM08830	N	MRHW	3.42	2.89	16.7
LPM08831	CR	UG2	4.29	3.62	17.1
LPM08832	FPYX	MR	3.33	2.73	19.6
LPM08833	FPYX	MRFW	2.98	3.17	-6.1
LPM08834	N	MRHW	3.51	2.95	17.3
LPM08835	N	MRHW	3.58	3.00	17.6
LPM08836	OTHER	UG2	4.44	3.35	27.9
LPM08837	CR	UG2	4.71	3.95	17.5
LPM08838	OTHER	UG2	4.69	3.95	17.1
LPM08839	CR	UG2	4.66	3.96	16.3
LPM08840	OTHER	UG2	4.62	3.96	15.5
LPM08841	FPYX	MR	3.80	2.99	24.0
LPM08842	FPYX	MR	3.82	3.27	15.4
LPM08843	FPYX	MR	3.83	3.24	16.8
LPM08844	N	MRHW	3.56	3.02	16.5
LPM08845	N	MRHW	3.61	3.04	17.2
LPM08846	FPYX	MR	3.86	3.26	16.9
LPM08847	CR	UG2	4.24	3.64	15.4
LPM08848	FPYX	UG2FW	3.57	3.01	17.0
LPM08849	FPYX	UG2FW	3.61	2.97	19.4
LPM08850	FPYX	MR	3.05	3.26	-6.5
LPM08851	FPYX	UG2FW	3.35	3.52	-5.0
LPM08852	PYX	UG2HW	2.91	3.04	-4.7
LPM08853	CR	UG2	4.28	3.59	17.5
LPM08854	PYX	MRHW	3.40	3.55	-4.5
LPM08855	CR	UG2	4.28	3.62	16.7
LPM08856	PYX	MRFW	3.27	3.57	-8.7
LPM08857	PYX	MRHW	3.39	2.90	15.5
LPM08858	CR	UG2	4.47	3.51	24.1
LPM08859	CR	UG2	4.18	3.43	19.8
LPM08860	FPYX	UG2FW	3.64	3.09	16.2
LPM08861	FPYX	UG2FW	3.66	3.04	18.4
LPM08862	FPYX	UG2FW	3.76	3.22	15.4
LPM08863	CR	UG2	4.69	4.01	15.7
LPM08864	CR	UG2	3.67	4.07	-10.2
LPM08865	CR	UG2	3.96	4.16	-4.8
LPM08866	PYX	UG2FW	3.68	3.16	15.3
LPM08867	PYX	MRHW	3.53	2.85	21.2
LPM08868	PYX	MRHW	3.47	2.95	16.2
LPM08869	PYX	UG2FW	3.56	3.04	15.8
LPM08870	CR	UG2	4.37	3.75	15.3
LPM08871	N	MRFW	3.44	2.94	15.7
LPM08872	CR	UG2	3.88	4.06	-4.6
LPM08873	CR	UG2	4.11	4.34	-5.3
LPM08874	N	MRFW	3.48	2.94	16.8
LPM08875	CR	UG2	4.04	4.27	-5.5
LPM08876	CR	UG2	4.25	4.69	-9.9
LPM08877	OTHER	MRHW	3.32	2.80	16.9
LPM08878	OTHER	MRHW	3.39	2.81	18.8
LPM08879	PYX	UG2FW	3.44	3.70	-7.3
LPM08880	PYX	UG2FW	3.50	3.71	-5.8
LPM08881	CR	UG2	3.59	3.94	-9.5
LPM08882	FPYX	MRHW	3.08	3.26	-5.7

Table B 3. List of LPM outliers that were remov

LPM dataset outliers					
Sample number	**Rock type**	**Stratigraphy**	**Grabner Milled density**	**Driekop density**	**AVRD**
LPM08883	FPYX	MRFW	3.57	3.04	16.2
LPM08884	N	MRFW	3.56	3.05	15.6
LPM08885	FPYX	MRFW	3.66	3.04	18.3
LPM08886	FPYX	MR	3.79	3.25	15.3
LPM08887	FPYX	MR	3.83	3.19	18.3
LPM08888	FPYX	MR	3.75	3.20	15.8
LPM08889	FPYX	MRFW	3.51	2.93	17.9
LPM08890	PYX	UG2FW	3.02	3.21	-6.0
LPM08891	CR	UG2	4.46	3.32	29.3
LPM08892	CR	UG2	4.27	3.57	18.0
LPM08893	PYX	MR	3.42	2.90	16.4
LPM08894	PYX	UG2FW	3.49	3.65	-4.5
LPM08895		UG2HW	3.19	3.37	-5.5
LPM08896	PYX	MRHW	3.53	2.88	20.1
LPM08897	CR	UG2	4.29	3.32	25.6
LPM08898		UG2FW	3.48	2.94	16.8
LPM08899	CR	UG2	4.42	3.78	15.7
LPM08900	PYX	MRFW	3.09	3.28	-6.1
LPM08901	N	MRHW	3.60	3.03	17.3
LPM08902	FPYX	MRHW	3.05	3.25	-6.5
LPM08903	FPYX	MRFW	2.96	3.18	-7.2
LPM08904	FPYX	MRFW	2.99	3.17	-5.9
LPM08905	CR	UG2	3.89	4.12	-5.6
LPM08906	CR	UG2	3.38	3.55	-4.9
LPM08907	CR	UG2	4.26	3.58	17.4
LPM08908	CR	UG2	3.53	3.76	-6.2
LPM08909	CR	UG2	3.89	4.18	-7.1
LPM08910	CR	UG2	3.83	4.04	-5.4
LPM08911	PYX	UG2FW	3.25	3.40	-4.7
LPM08912	PYX	UG2FW	3.71	3.07	18.9
LPM08913	PYX	UG2HW	3.31	3.48	-4.9
LPM08914	OTHER	UG2FW	2.87	3.08	-7.1
LPM08915	CR	UG2	4.03	3.38	17.5
LPM08916	CR	UG2	3.42	3.77	-9.8
LPM08917	PYX	MR	3.49	3.72	-6.4
LPM08918	CR	UG2	4.18	3.52	17.1
LPM08919	CR	UG2	3.86	4.04	-4.5
LPM08920	CR	UG2	3.93	3.34	16.2
LPM08921	PYX	UG2FW	3.24	3.43	-5.8
LPM08922	PYX	UG2FW	3.34	3.56	-6.3
LPM08923	PYX	UG2FW	3.69	3.16	15.4
LPM08924	CR	UG2	3.79	3.97	-4.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00001	PYX	MR	3.45	3.27	5.4
LPM00002	PYX	MR	3.46	3.28	5.3
LPM00003	PYX	MR	3.56	3.32	7.1
LPM00004	PYX	MR	3.47	3.32	4.3
LPM00005	PYX	MR	3.45	3.25	6.1
LPM00006	PYX	MR	3.48	3.36	3.4
LPM00007	PYX	MR	3.52	3.31	6.1
LPM00008	PYX	MR	3.43	3.34	2.8
LPM00009	PYX	MR	3.47	3.02	13.9
LPM00010	PYX	MR	3.28	3.21	2.2
LPM00011	PYX	MR	3.46	3.32	4.0
LPM00012	PYX	MR	3.38	3.22	4.9
LPM00013	PYX	MR	3.39	3.25	4.1
LPM00014	PYX	MR	3.37	3.25	3.6
LPM00015	PYX	MR	3.40	3.31	2.7
LPM00016	PYX	MR	3.48	3.33	4.3
LPM00017	PYX	MR	3.44	3.26	5.3
LPM00018	PYX	MR	3.45	3.27	5.1
LPM00019	PYX	MR	3.40	3.26	4.1
LPM00020	PYX	MR	3.40	3.15	7.6
LPM00021	PYX	MR	3.43	3.27	4.5
LPM00022	PYX	MR	3.44	3.33	3.3
LPM00023	PYX	MR	3.39	3.24	4.4
LPM00024	PYX	MR	3.42	3.27	4.4
LPM00025	PYX	MR	3.42	3.25	5.0
LPM00026	PYX	MR	3.46	3.22	7.0
LPM00027	PYX	MR	3.41	3.20	6.3
LPM00028	PYX	MR	3.47	3.27	5.9
LPM00029	PYX	MR	3.55	3.29	7.5
LPM00030	PYX	MR	3.49	3.26	6.9
LPM00031	PYX	MR	3.46	3.26	6.0
LPM00032	PYX	MR	3.51	3.33	5.4
LPM00033	PYX	MR	3.41	3.22	5.9
LPM00034	PYX	MR	3.39	3.24	4.5
LPM00035	PYX	MR	3.40	3.29	3.2
LPM00036	PYX	MR	3.38	3.19	5.7
LPM00037	PYX	MR	3.39	3.21	5.6
LPM00038	PYX	MR	3.42	3.28	4.2
LPM00039	PYX	MR	3.38	3.19	5.7
LPM00040	PYX	MR	3.38	3.21	5.2
LPM00041	PYX	MR	3.41	3.22	5.8
LPM00042	PYX	MR	3.40	3.20	6.0
LPM00043	PYX	MR	3.42	3.22	6.0
LPM00044	PYX	MR	3.39	3.21	5.6
LPM00045	PYX	MR	3.50	3.28	6.5
LPM00046	PYX	MR	3.42	3.25	5.0
LPM00047	PYX	MR	3.47	3.24	6.8
LPM00048	PYX	MR	3.53	3.34	5.4
LPM00049	PYX	MR	3.15	3.20	-1.7
LPM00050	PYX	MR	3.38	3.24	4.1
LPM00051	PYX	MR	3.38	3.22	4.7
LPM00052	PYX	MR	3.46	3.36	2.8
LPM00053	PYX	MR	3.40	3.26	4.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM00054	PYX	MR	3.37	3.30	2.1
LPM00055	PYX	MR	3.38	3.27	3.2
LPM00056	PYX	MR	3.41	3.29	3.4
LPM00057	PYX	MR	3.39	3.24	4.5
LPM00058	PYX	MR	3.41	3.26	4.4
LPM00059	PYX	MR	3.35	3.12	7.1
LPM00060	PYX	MR	3.38	3.22	4.8
LPM00061	PYX	MR	3.34	3.21	3.8
LPM00062	PYX	MR	3.36	3.23	4.1
LPM00063	PYX	MR	3.26	2.99	8.7
LPM00064	PYX	MR	3.40	3.27	3.8
LPM00065	PYX	MR	3.36	3.23	4.1
LPM00066	PYX	MR	3.34	3.06	8.9
LPM00067	PYX	MR	3.51	3.31	5.9
LPM00068	PYX	MR	3.42	3.21	6.2
LPM00069	PYX	MR	3.46	3.31	4.5
LPM00070	PYX	MR	3.43	3.36	2.2
LPM00071	PYX	MR	3.55	3.30	7.3
LPM00072	PYX	MR	3.47	3.19	8.4
LPM00073	PYX	MR	3.45	3.22	6.9
LPM00074	PYX	MR	3.37	3.30	2.2
LPM00075	PYX	MR	3.51	3.32	5.4
LPM00076	PYX	MR	3.50	3.33	4.9
LPM00077	PYX	MR	3.51	3.23	8.4
LPM00078	PYX	MR	3.51	3.31	5.7
LPM00079	PYX	MR	3.57	3.32	7.4
LPM00080	PYX	MR	3.50	3.22	8.4
LPM00081	PYX	MR	3.64	3.32	9.1
LPM00082	PYX	MR	3.51	3.43	2.3
LPM00083	PYX	MR	3.51	3.32	5.6
LPM00084	PYX	MR	3.53	3.34	5.6
LPM00085	PYX	MR	3.54	3.26	8.4
LPM00086	PYX	MR	3.50	3.11	11.8
LPM00087	PYX	MR	3.47	3.29	5.4
LPM00088	PYX	MR	3.48	3.28	5.9
LPM00089	PYX	MR	3.49	3.35	4.0
LPM00090	PYX	MR	3.44	3.21	6.9
LPM00091	PYX	MR	3.42	3.27	4.6
LPM00092	PYX	MR	3.18	3.14	1.4
LPM00093	PYX	MR	3.12	3.26	-4.4
LPM00094	PYX	MR	3.28	3.23	1.6
LPM00095	PYX	MR	3.28	3.13	4.5
LPM00096	PYX	MR	3.37	3.21	4.8
LPM00097	PYX	MR	3.40	3.23	5.2
LPM00098	PYX	MR	3.39	3.22	5.2
LPM00099	PYX	MR	3.44	3.26	5.4
LPM00100	PYX	MR	3.35	3.16	5.9
LPM00101	PYX	MR	3.41	3.26	4.5
LPM00102	PYX	MR	3.37	3.18	5.7
LPM00103	PYX	MR	3.26	3.14	3.9
LPM00104	PYX	MR	3.34	3.16	5.7
LPM00105	PYX	MR	3.29	3.13	5.0
LPM00106	POIKFPYX	MR	3.85	3.33	14.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00107	POIKFPYX	MR	3.67	3.30	10.7
LPM00108	POIKFPYX	MR	3.68	3.26	12.0
LPM00109	POIKFPYX	MR	3.64	3.26	11.1
LPM00110	POIKFPYX	MR	3.66	3.17	14.2
LPM00111	PYX	MR	3.72	3.31	11.6
LPM00112	PYX	MR	3.56	3.24	9.2
LPM00113	PYX	MR	3.61	3.27	10.0
LPM00114	PYX	MR	3.55	3.19	10.6
LPM00115	PYX	MR	3.55	3.10	13.6
LPM00116	PYX	MR	3.65	3.14	15.0
LPM00117	PYX	MR	3.53	3.10	13.0
LPM00118	PYX	MR	3.58	3.23	10.2
LPM00119	PYX	MR	3.61	3.25	10.4
LPM00120	PYX	MR	3.39	3.18	6.4
LPM00121	PYX	MR	3.39	3.22	5.1
LPM00122	PYX	MR	3.31	3.23	2.5
LPM00123	PYX	MR	3.36	3.23	3.9
LPM00124	PYX	MR	3.39	3.29	2.8
LPM00125	PYX	MR	3.48	3.25	6.8
LPM00126	PYX	MR	3.51	3.24	7.9
LPM00127	PYX	MR	3.60	3.26	9.8
LPM00128	PYX	MR	3.59	3.24	10.3
LPM00129	PYX	MR	3.72	3.31	11.6
LPM00130	PYX	MR	3.76	3.29	13.2
LPM00131	PYX	MR	3.42	3.26	4.7
LPM00132	PYX	MR	3.44	3.25	5.7
LPM00133	PYX	MR	3.32	3.22	3.0
LPM00134	PYX	MR	3.39	3.20	5.7
LPM00135	PYX	MR	3.51	3.39	3.4
LPM00136	PYX	MR	3.44	3.22	6.5
LPM00137	PYX	MR	3.35	3.16	5.7
LPM00138	PYX	MR	3.37	3.23	4.3
LPM00139	PYX	MR	3.54	3.43	3.1
LPM00140	PYX	MR	3.47	3.27	6.0
LPM00141	PYX	MR	3.45	3.26	5.7
LPM00142	PYX	MR	3.52	3.37	4.3
LPM00143	POIKPYX	MR	3.40	3.23	5.3
LPM00144	POIKPYX	MR	3.39	3.19	6.1
LPM00145	POIKPYX	MR	3.47	3.24	7.0
LPM00146	FPYX	MR	3.27	3.19	2.3
LPM00147	FPYX	MR	3.23	3.25	-0.5
LPM00148	FPYX	MR	3.46	3.25	6.1
LPM00149	FPYX	MR	3.41	3.20	6.4
LPM00150	FPYX	MR	3.33	3.13	6.3
LPM00151	FPYX	MR	3.53	3.32	6.2
LPM00152	FPYX	MR	3.23	3.13	3.2
LPM00153	FPYX	MR	3.26	3.26	0.1
LPM00154	FPYX	MR	3.23	3.28	-1.6
LPM00155	FPYX	MR	3.24	3.09	4.7
LPM00156	FPYX	MR	3.19	3.17	0.7
LPM00157	FPYX	MR	3.33	3.39	-1.9
LPM00158	POIKPYX	MR	3.25	3.16	2.7
LPM00159	POIKPYX	MR	3.23	3.17	1.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00160	POIKFPYX	MR	3.30	3.30	0.0
LPM00161	POIKFPYX	MR	3.39	3.24	4.5
LPM00162	POIKFPYX	MR	3.30	3.23	2.1
LPM00163	POIKFPYX	MR	3.31	3.38	-2.1
LPM00164	POIKFPYX	MR	3.33	3.28	1.6
LPM00165	POIKFPYX	MR	3.33	3.31	0.7
LPM00166	POIKFPYX	MR	3.38	3.28	2.9
LPM00167	POIKFPYX	MR	3.32	3.26	1.7
LPM00168	POIKFPYX	MR	3.33	3.26	2.1
LPM00169	POIKFPYX	MR	3.33	3.31	0.6
LPM00170	POIKFPYX	MR	3.39	3.42	-0.8
LPM00171	POIKFPYX	MR	3.36	3.27	2.6
LPM00172	POIKFPYX	MR	3.33	3.25	2.4
LPM00173	POIKFPYX	MR	3.33	3.27	1.7
LPM00174	POIKFPYX	MR	3.31	3.21	2.9
LPM00175	PYX	MR	3.66	3.29	10.5
LPM00176	PYX	MR	3.68	3.28	11.5
LPM00177	PYX	MR	3.51	3.24	7.9
LPM00178	PYX	MR	3.66	3.24	12.2
LPM00179	PYX	MR	3.48	3.23	7.5
LPM00180	FPYX	MR	3.53	3.22	9.3
LPM00181	FPYX	MR	3.48	3.05	13.0
LPM00182	FPYX	MR	3.48	3.27	6.1
LPM00183	FPYX	MR	3.53	3.32	6.1
LPM00184	FPYX	MR	3.62	3.40	6.2
LPM00185	FPYX	MR	3.38	3.23	4.4
LPM00186	FPYX	MR	3.54	3.34	5.9
LPM00187	FPYX	MR	3.46	3.24	6.6
LPM00188	FPYX	MR	3.38	3.05	10.4
LPM00189	FPYX	MR	3.44	3.14	9.1
LPM00190	FPYX	MR	3.35	3.12	7.0
LPM00191	FPYX	MR	3.74	3.33	11.5
LPM00192	FPYX	MR	3.79	3.26	15.0
LPM00193	FPYX	MR	3.55	3.18	10.9
LPM00194	FPYX	MR	3.17	2.81	12.1
LPM00195	FPYX	MR	3.66	3.21	13.1
LPM00196	FPYX	MR	3.49	3.36	3.7
LPM00197	FPYX	MR	3.45	3.29	4.7
LPM00198	FPYX	MR	3.44	3.26	5.3
LPM00199	FPYX	MR	3.29	3.21	2.4
LPM00200	FPYX	MR	3.42	3.23	5.8
LPM00201	FPYX	MR	3.43	3.22	6.5
LPM00202	FPYX	MR	3.39	3.20	5.6
LPM00203	FPYX	MR	3.32	3.14	5.6
LPM00204	FPYX	MR	3.39	3.21	5.3
LPM00205	FPYX	MR	3.50	3.23	8.1
LPM00206	FPYX	MR	3.35	3.18	5.3
LPM00207	FPYX	MR	3.50	3.25	7.4
LPM00208	FPYX	MR	3.53	3.30	6.8
LPM00209	FPYX	MR	3.51	3.31	5.8
LPM00210	FPYX	MR	3.48	3.27	6.4
LPM00211	FPYX	MR	3.43	3.24	5.8
LPM00212	FPYX	MR	3.45	3.22	6.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00213	FPYX	MR	3.73	3.24	14.2
LPM00214	FPYX	MR	3.41	2.96	14.2
LPM00215	FPYX	MR	3.69	3.25	12.8
LPM00216	FPYX	MR	3.36	3.28	2.5
LPM00217	FPYX	MR	3.32	3.21	3.2
LPM00218	FPYX	MR	3.31	3.22	2.8
LPM00219	FPYX	MR	3.37	3.30	2.1
LPM00220	FPYX	MR	3.35	3.22	3.9
LPM00221	FPYX	MR	3.36	3.24	3.8
LPM00222	FPYX	MR	3.35	3.22	3.8
LPM00223	FPYX	MR	3.36	3.23	3.9
LPM00224	FPYX	MR	3.39	3.26	3.9
LPM00225	FPYX	MR	3.36	3.21	4.5
LPM00226	FPYX	MR	3.36	3.20	4.7
LPM00227	FPYX	MR	3.37	3.23	4.4
LPM00228	FPYX	MR	3.43	3.25	5.4
LPM00229	FPYX	MR	3.38	3.25	3.8
LPM00230	FPYX	MR	3.42	3.21	6.4
LPM00231	FPYX	MR	3.39	3.26	3.9
LPM00232	FPYX	MR	3.36	3.20	5.0
LPM00233	FPYX	MR	3.40	3.27	3.8
LPM00234	FPYX	MR	3.43	3.19	7.4
LPM00235	FPYX	MR	3.47	3.27	6.1
LPM00236	FPYX	MR	3.32	3.24	2.3
LPM00237	FPYX	MR	3.43	3.17	7.8
LPM00238	FPYX	MR	3.37	3.22	4.5
LPM00239	OTHER	MR	3.33	3.24	2.7
LPM00240	FPYX	MR	3.49	3.16	9.8
LPM00241	FPYX	MR	3.41	3.28	4.0
LPM00242	FPYX	MR	3.45	3.26	5.6
LPM00243	FPYX	MR	3.43	3.25	5.5
LPM00244	FPYX	MR	3.46	3.24	6.6
LPM00245	FPYX	MR	3.44	3.24	5.9
LPM00246	FPYX	MR	3.53	3.25	8.3
LPM00247	FPYX	MR	3.44	3.24	6.1
LPM00248	FPYX	MR	3.55	3.32	6.8
LPM00249	FPYX	MR	3.39	3.17	6.7
LPM00250	FPYX	MR	3.41	3.25	4.7
LPM00251	FPYX	MR	3.37	3.25	3.7
LPM00252	FPYX	MR	3.51	3.28	6.7
LPM00253	FPYX	MR	3.45	3.23	6.7
LPM00254	FPYX	MR	3.48	3.26	6.4
LPM00255	FPYX	MR	3.49	3.25	7.0
LPM00256	FPYX	MR	3.31	3.08	7.1
LPM00257	FPYX	MR	3.50	3.32	5.3
LPM00258	FPYX	MR	3.49	3.24	7.5
LPM00259	FPYX	MR	3.29	3.15	4.2
LPM00260	FPYX	MR	3.45	3.33	3.4
LPM00261	FPYX	MR	3.47	3.30	4.9
LPM00262	FPYX	MR	3.52	3.33	5.7
LPM00263	FPYX	MR	3.38	3.28	2.9
LPM00264	FPYX	MR	3.35	3.25	3.1
LPM00265	FPYX	MR	3.37	3.27	3.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00266	FPYX	MR	3.32	3.22	3.2
LPM00267	FPYX	MR	3.21	3.09	3.7
LPM00268	FPYX	MR	3.27	3.20	2.0
LPM00269	FPYX	MR	3.29	3.22	2.2
LPM00270	FPYX	MR	3.47	3.24	6.9
LPM00271	FPYX	MR	3.24	3.24	0.2
LPM00272	FPYX	MR	3.37	3.32	1.6
LPM00273	FPYX	MR	3.32	3.29	0.8
LPM00274	FPYX	MR	3.37	3.31	1.8
LPM00275	FPYX	MR	3.44	3.24	5.9
LPM00276	FPYX	MR	3.40	3.24	4.9
LPM00277	FPYX	MR	3.43	3.33	2.8
LPM00278	FPYX	MR	3.39	3.26	3.9
LPM00279	FPYX	MR	3.46	3.33	3.6
LPM00280	FPYX	MR	3.41	3.26	4.6
LPM00281	FPYX	MR	3.46	3.27	5.8
LPM00282	FPYX	MR	3.48	3.28	5.8
LPM00283	PYX	MR	3.35	3.16	5.8
LPM00284	PYX	MR	3.34	3.23	3.3
LPM00285	PYX	MR	3.37	3.25	3.6
LPM00286	PYX	MR	3.32	3.20	3.8
LPM00287	PYX	MR	3.38	3.23	4.6
LPM00288	PYX	MR	3.39	3.20	5.7
LPM00289	PYX	MR	3.44	3.28	4.7
LPM00290	PYX	MR	3.41	3.28	4.0
LPM00291	PYX	MR	3.31	2.92	12.6
LPM00292	PYX	MR	3.38	3.20	5.5
LPM00293	PYX	MR	3.36	3.15	6.5
LPM00294	PYX	MR	3.31	3.18	4.0
LPM00295	PYX	MR	3.23	2.92	10.0
LPM00296	PYX	MR	3.35	3.22	3.9
LPM00297	PYX	MR	3.29	3.15	4.5
LPM00298	PYX	MR	3.32	3.21	3.5
LPM00299	PYX	MR	3.39	3.26	4.0
LPM00300	PYX	MR	3.37	3.23	4.1
LPM00301	PYX	MR	3.43	3.29	4.2
LPM00302	PYX	MR	3.42	3.13	9.0
LPM00303	PYX	MR	3.40	3.27	3.8
LPM00304	PYX	MR	3.28	3.15	4.0
LPM00305	PYX	MR	3.30	3.19	3.5
LPM00306	PYX	MR	3.41	3.28	3.9
LPM00307	PYX	MR	3.31	3.20	3.3
LPM00308	PYX	MR	3.36	3.25	3.4
LPM00309	PYX	MR	3.38	3.21	5.2
LPM00310	PYX	MR	3.28	2.95	10.6
LPM00311	PYX	MR	3.52	3.14	11.5
LPM00312	PYX	MR	3.40	3.26	4.1
LPM00313	PYX	MR	3.42	3.32	3.1
LPM00314	PYX	MR	3.40	3.18	6.6
LPM00315	PYX	MR	3.47	3.29	5.4
LPM00316	PYX	MR	3.41	3.28	3.8
LPM00317	CR	MR	3.46	3.34	3.5
LPM00318	CR	MR	3.42	3.28	4.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM00319	PYX	MR	3.31	3.19	3.6
LPM00320	PYX	MR	3.36	3.18	5.6
LPM00321	CR	MR	3.39	3.32	2.0
LPM00322	CR	MR	3.35	3.22	3.9
LPM00323	PYX	MR	3.33	3.22	3.5
LPM00324	PYX	MR	3.34	3.30	1.1
LPM00325	PYX	MR	3.30	3.22	2.4
LPM00326	PYX	MR	3.29	3.24	1.5
LPM00327	PYX	MR	3.46	3.32	4.1
LPM00328	PYX	MR	3.45	3.22	6.8
LPM00329	PYX	MR	3.38	3.25	3.9
LPM00330	PYX	MR	3.35	3.24	3.2
LPM00331	PYX	MR	3.29	3.24	1.7
LPM00332	PYX	MR	3.47	3.30	5.0
LPM00333	PYX	MR	3.42	3.26	4.8
LPM00334	PYX	MR	3.42	3.27	4.5
LPM00335	PYX	MR	3.41	3.32	2.6
LPM00336	PYX	MR	3.38	3.35	0.8
LPM00337	PYX	MR	3.36	3.27	2.6
LPM00338	PYX	MR	3.43	3.29	4.2
LPM00339	PYX	MR	3.42	3.28	4.1
LPM00340	PYX	MR	3.41	3.30	3.3
LPM00341	PYX	MR	3.52	3.33	5.7
LPM00342	PYX	MR	3.46	3.33	3.8
LPM00343	PYX	MR	3.43	3.29	4.1
LPM00344	PYX	MR	3.48	3.35	3.9
LPM00345	PYX	MR	3.40	3.27	3.9
LPM00346	PYX	MR	3.51	3.27	7.0
LPM00347	PYX	MR	3.53	3.31	6.4
LPM00348	FPYX	MR	3.38	3.28	3.0
LPM00349	FPYX	MR	3.44	3.28	4.6
LPM00350	FPYX	MR	3.35	3.25	2.9
LPM00351	FPYX	MR	3.35	3.27	2.5
LPM00352	FPYX	MR	3.36	3.25	3.2
LPM00353	FPYX	MR	3.39	3.22	5.1
LPM00354	FPYX	MR	3.29	3.17	3.7
LPM00355	FPYX	MR	3.36	3.23	4.0
LPM00356	PYX	MR	3.38	3.29	2.6
LPM00357	PYX	MR	3.32	3.21	3.3
LPM00358	PYX	MR	3.31	3.21	3.1
LPM00359	PYX	MR	3.31	3.22	2.7
LPM00360	PYX	MR	3.28	3.21	2.3
LPM00361	PYX	MR	3.61	3.32	8.5
LPM00362	PYX	MR	3.57	3.28	8.5
LPM00363	PYX	MR	3.59	3.18	12.1
LPM00364	PYX	MR	3.49	3.24	7.6
LPM00365	PYX	MR	3.50	3.05	13.7
LPM00366	PYX	MR	3.57	3.29	8.3
LPM00367	PYX	MR	3.54	3.25	8.5
LPM00368	PYX	MR	3.48	3.24	7.1
LPM00369	PYX	MR	3.53	3.24	8.5
LPM00370	PYX	MR	3.52	3.20	9.5
LPM00371	PYX	MR	3.60	3.37	6.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00372	PYX	MR	3.53	3.21	9.2
LPM00373	PYX	MR	3.60	3.29	9.1
LPM00374	PYX	MR	3.53	3.25	8.2
LPM00375	PYX	MR	3.47	3.31	4.9
LPM00376	PYX	MR	3.41	3.24	5.0
LPM00377	PYX	MR	3.55	3.28	7.8
LPM00378	PYX	MR	3.52	3.26	7.6
LPM00379	PYX	MR	3.54	3.25	8.4
LPM00380	PYX	MR	3.48	3.15	9.8
LPM00381	PYX	MR	3.54	3.29	7.4
LPM00382	PYX	MR	3.55	3.15	12.1
LPM00383	PYX	MR	3.64	3.27	10.7
LPM00384	PYX	MR	3.57	3.28	8.5
LPM00385	PYX	MR	3.52	3.10	12.7
LPM00386	PYX	MR	3.53	3.25	8.3
LPM00387	PYX	MR	3.55	3.25	8.9
LPM00388	PYX	MR	3.53	3.30	6.7
LPM00389	PYX	MR	3.57	3.28	8.4
LPM00390	PYX	MR	3.46	3.20	7.8
LPM00391	PYX	MR	3.23	3.25	-0.5
LPM00392	PYX	MR	3.57	3.29	8.1
LPM00393	PYX	MR	3.47	3.26	6.4
LPM00394	PYX	MR	3.49	3.19	8.9
LPM00395	PYX	MR	3.51	3.28	6.9
LPM00396	PYX	MR	3.50	3.33	5.0
LPM00397	PYX	MR	3.39	3.23	4.8
LPM00398	PYX	MR	3.32	3.19	3.9
LPM00399	PYX	MR	3.38	3.22	5.0
LPM00400	PYX	MR	3.35	3.23	3.6
LPM00401	PYX	MR	3.31	3.13	5.6
LPM00402	PYX	MR	3.35	3.26	2.9
LPM00403	PYX	MR	3.38	3.27	3.4
LPM00404	PYX	MR	3.38	3.22	4.8
LPM00405	PYX	MR	3.39	3.23	4.9
LPM00406	FPYX	MR	3.27	3.23	1.3
LPM00407	FPYX	MR	3.34	3.28	1.9
LPM00408	FPYX	MR	3.36	3.28	2.4
LPM00409	FPYX	MR	3.27	3.22	1.6
LPM00410	FPYX	MR	3.00	2.87	4.4
LPM00411	FPYX	MR	3.39	3.10	9.0
LPM00412	FPYX	MR	3.46	3.32	4.0
LPM00413	FPYX	MR	3.39	3.27	3.5
LPM00414	FPYX	MR	3.47	3.31	4.7
LPM00415	FPYX	MR	3.44	3.25	5.6
LPM00416	FPYX	MR	3.46	3.29	5.1
LPM00417	FPYX	MR	3.51	3.30	5.9
LPM00418	FPYX	MR	3.61	3.32	8.5
LPM00419	FPYX	MR	3.65	3.28	10.8
LPM00420	FPYX	MR	3.72	3.37	9.9
LPM00421	FPYX	MR	3.53	3.21	9.6
LPM00422	FPYX	MR	3.74	3.29	12.8
LPM00423	FPYX	MR	3.49	3.31	5.3
LPM00424	FPYX	MR	3.48	3.33	4.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00425	FPYX	MR	3.46	3.27	5.8
LPM00426	FPYX	MR	3.37	3.19	5.5
LPM00427	FPYX	MR	3.62	3.27	10.2
LPM00428	FPYX	MR	3.48	3.17	9.3
LPM00429	FPYX	MR	3.56	3.26	8.8
LPM00430	FPYX	MR	3.67	3.27	11.6
LPM00431	FPYX	MR	3.49	3.27	6.5
LPM00432	FPYX	MR	3.40	3.41	-0.4
LPM00433	FPYX	MR	3.32	3.11	6.5
LPM00434	N	MR	3.22	2.91	10.2
LPM00435	FPYX	MR	3.44	3.15	8.8
LPM00436	FPYX	MR	3.63	3.28	10.1
LPM00437	FPYX	MR	3.44	3.17	8.2
LPM00438	FPYX	MR	3.52	3.23	8.7
LPM00439	FPYX	MR	3.46	3.23	7.0
LPM00440	FPYX	MR	3.68	3.36	9.1
LPM00441	FPYX	MR	3.32	3.18	4.3
LPM00442	FPYX	MR	3.40	3.26	4.2
LPM00443	FPYX	MR	3.46	3.23	6.8
LPM00444	FPYX	MR	3.47	3.22	7.4
LPM00445	FPYX	MR	3.53	3.28	7.4
LPM00446	FPYX	MR	3.40	3.19	6.3
LPM00447	FPYX	MR	3.38	3.33	1.4
LPM00448	FPYX	MR	3.37	3.26	3.4
LPM00449	FPYX	MR	3.44	3.27	5.0
LPM00450	FPYX	MR	3.28	3.18	3.1
LPM00451	FPYX	MR	3.39	3.24	4.6
LPM00452	FPYX	MR	3.34	3.24	2.9
LPM00453	FPYX	MR	3.36	3.24	3.7
LPM00454	FPYX	MR	3.35	3.24	3.2
LPM00455	FPYX	MR	3.32	3.19	3.7
LPM00456	FPYX	MR	3.33	3.27	1.8
LPM00457	FPYX	MR	3.38	3.30	2.5
LPM00458	FPYX	MR	3.30	3.24	1.8
LPM00459	FPYX	MR	3.17	3.23	-1.9
LPM00460	FPYX	MR	3.52	3.33	5.5
LPM00461	FPYX	MR	3.45	3.28	5.0
LPM00462	FPYX	MR	3.45	3.26	5.7
LPM00463	FPYX	MR	3.44	3.26	5.5
LPM00464	FPYX	MR	3.54	3.30	6.9
LPM00465	FPYX	MR	3.52	3.33	5.4
LPM00466	FPYX	MR	3.52	3.30	6.4
LPM00467	FPYX	MR	3.50	3.26	7.2
LPM00468	FPYX	MR	3.48	3.46	0.6
LPM00469	FPYX	MR	3.49	3.30	5.5
LPM00470	FPYX	MR	3.52	3.31	6.2
LPM00471	FPYX	MR	3.48	3.26	6.7
LPM00472	FPYX	MR	3.48	3.24	7.3
LPM00473	FPYX	MR	3.48	3.26	6.6
LPM00474	FPYX	MR	3.49	3.24	7.6
LPM00475	FPYX	MR	3.54	3.21	9.8
LPM00476	FPYX	MR	3.51	3.25	7.5
LPM00477	FPYX	MR	3.54	3.28	7.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM00478	PYX	MR	3.31	3.22	2.6
LPM00479	PYX	MR	3.30	3.21	2.8
LPM00480	PYX	MR	3.30	3.21	2.8
LPM00481	PYX	MR	3.29	3.23	1.9
LPM00482	PYX	MR	3.24	3.20	1.4
LPM00483	PYX	MR	3.26	3.19	2.3
LPM00484	PYX	MR	3.27	3.20	2.3
LPM00485	PYX	MR	3.26	2.99	8.7
LPM00486	PYX	MR	3.29	3.20	2.7
LPM00487	PYX	MR	3.34	3.23	3.2
LPM00488	PYX	MR	3.36	3.37	-0.6
LPM00489	PYX	MR	3.37	3.24	3.9
LPM00490	PYX	MR	3.38	3.25	4.0
LPM00491	PYX	MR	3.35	3.26	2.6
LPM00492	PYX	MR	3.40	3.22	5.3
LPM00493	PYX	MR	3.40	3.19	6.5
LPM00494	PYX	MR	3.40	3.21	5.6
LPM00495	PYX	MR	3.37	3.25	3.6
LPM00496	PYX	MR	3.39	3.28	3.4
LPM00497	PYX	MR	3.36	3.24	3.4
LPM00498	PYX	MR	3.36	3.25	3.4
LPM00499	PYX	MR	3.46	3.30	4.6
LPM00500	PYX	MR	3.41	3.46	-1.6
LPM00501	PYX	MR	3.40	3.22	5.6
LPM00502	PYX	MR	3.42	3.26	4.7
LPM00503	PYX	MR	3.45	3.29	4.7
LPM00504	PYX	MR	3.41	3.28	3.9
LPM00505	PYX	MR	3.45	3.28	5.0
LPM00506	PYX	MR	3.43	3.23	5.9
LPM00507	PYX	MR	3.41	3.24	5.1
LPM00508	PYX	MR	3.44	3.30	4.1
LPM00509	PYX	MR	3.40	3.26	4.1
LPM00510	PYX	MR	3.42	3.23	5.8
LPM00511	PYX	MR	3.41	3.26	4.6
LPM00512	PYX	MR	3.39	3.20	5.7
LPM00513	PYX	MR	3.45	3.26	5.7
LPM00514	PYX	MR	3.39	3.27	3.6
LPM00515	PYX	MR	3.38	3.24	4.3
LPM00516	PYX	MR	3.41	3.24	5.0
LPM00517	PYX	MR	3.52	3.35	4.9
LPM00518	PYX	MR	3.61	3.28	9.6
LPM00519	PYX	MR	3.49	3.26	7.0
LPM00520	PYX	MR	3.52	3.22	8.9
LPM00521	PYX	MR	3.52	3.26	7.5
LPM00522	PYX	MR	3.49	3.31	5.2
LPM00523	PYX	MR	3.42	3.25	5.0
LPM00524	PYX	MR	3.40	3.22	5.4
LPM00525	PYX	MR	3.43	3.29	4.1
LPM00526	PYX	MR	3.41	3.32	2.7
LPM00527	PYX	MR	3.35	3.26	2.6
LPM00528	PYX	MR	3.32	3.23	2.7
LPM00529	PYX	MR	3.39	3.25	4.2
LPM00530	PYX	MR	3.44	3.25	5.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00531	PYX	MR	3.43	3.24	5.7
LPM00532	PYX	MR	3.39	3.21	5.5
LPM00533	PYX	MR	3.44	3.21	6.9
LPM00534	PYX	MR	3.42	3.24	5.4
LPM00535	PYX	MR	3.43	3.22	6.3
LPM00536	PYX	MR	3.34	3.22	3.6
LPM00537	PYX	MR	3.37	3.17	6.1
LPM00538	PYX	MR	3.41	3.20	6.2
LPM00539	PYX	MR	3.45	3.23	6.5
LPM00540	PYX	MR	3.14	3.04	3.1
LPM00541	PYX	MR	3.43	3.28	4.6
LPM00542	PYX	MR	3.45	3.25	5.9
LPM00543	PYX	MR	3.52	3.27	7.3
LPM00544	PYX	MR	3.48	3.26	6.6
LPM00545	PYX	MR	3.47	3.28	5.5
LPM00546	PYX	MR	3.45	3.26	5.7
LPM00547	PYX	MR	3.57	3.28	8.6
LPM00548	PYX	MR	3.49	3.25	7.0
LPM00549	PYX	MR	3.51	3.29	6.4
LPM00550	PYX	MR	3.54	3.29	7.2
LPM00551	PYX	MR	3.46	3.26	6.0
LPM00552	PYX	MR	3.60	3.35	7.3
LPM00553	PYX	MR	3.48	3.36	3.5
LPM00554	PYX	MR	3.47	3.27	5.9
LPM00555	PYX	MR	3.52	3.31	6.1
LPM00556	PYX	MR	3.44	3.27	5.0
LPM00557	PYX	MR	3.48	3.30	5.2
LPM00558	PYX	MR	3.49	3.38	3.2
LPM00559	PYX	MR	3.46	3.28	5.5
LPM00560	PYX	MR	3.38	3.27	3.2
LPM00561	PYX	MR	3.44	3.30	4.0
LPM00562	PYX	MR	3.43	3.32	3.2
LPM00563	PYX	MR	3.48	3.27	6.3
LPM00564	PYX	MR	3.42	3.26	4.8
LPM00565	PYX	MR	3.38	3.25	4.0
LPM00566	PYX	MR	3.49	3.33	4.7
LPM00567	PYX	MR	3.36	3.28	2.3
LPM00568	PYX	MR	3.35	3.18	5.1
LPM00569	PYX	MR	3.44	3.25	5.7
LPM00570	N	MR	3.07	2.89	6.1
LPM00571	PYX	MR	3.42	3.21	6.2
LPM00572	PYX	MR	3.44	3.23	6.3
LPM00573	PYX	MR	3.42	3.17	7.5
LPM00574	PYX	MR	3.40	3.30	3.0
LPM00575	PYX	MR	3.41	3.20	6.5
LPM00576	PYX	MR	3.49	3.23	7.6
LPM00577	PYX	MR	3.32	3.24	2.4
LPM00578	FPYX	MR	3.54	3.32	6.5
LPM00579	FPYX	MR	3.67	3.33	9.8
LPM00580	FPYX	MR	3.57	3.20	11.1
LPM00581	N	MR	3.48	3.06	12.9
LPM00582	FPYX	MR	3.46	3.26	6.0
LPM00583	FPYX	MR	3.34	3.31	0.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00584	FPYX	MR	3.35	3.23	3.6
LPM00585	FPYX	MR	3.43	3.36	2.0
LPM00586	FPYX	MR	3.39	3.32	2.1
LPM00587	FPYX	MR	3.36	3.27	2.7
LPM00588	FPYX	MR	3.31	3.27	1.3
LPM00589	FPYX	MR	3.41	3.23	5.5
LPM00590	FPYX	MR	3.38	3.21	5.1
LPM00591	FPYX	MR	3.37	3.24	3.9
LPM00592	FPYX	MR	3.40	3.29	3.2
LPM00593	FPYX	MR	3.48	3.26	6.4
LPM00594	FPYX	MR	3.35	3.18	5.1
LPM00595	FPYX	MR	3.15	3.06	2.9
LPM00596	N	MR	3.10	2.94	5.1
LPM00597	FPYX	MR	3.18	3.10	2.4
LPM00598	FPYX	MR	3.47	3.18	8.6
LPM00599	FPYX	MR	3.40	3.20	5.9
LPM00600	FPYX	MR	3.34	3.10	7.4
LPM00601	FPYX	MR	3.14	2.98	5.3
LPM00602	PYX	MR	3.38	3.24	4.3
LPM00603	PYX	MR	3.40	3.25	4.7
LPM00604	PYX	MR	3.38	3.23	4.5
LPM00605	PYX	MR	3.37	3.22	4.5
LPM00606	PYX	MR	3.37	3.24	4.0
LPM00607	PYX	MR	3.38	3.23	4.6
LPM00608	PYX	MR	3.39	3.22	5.2
LPM00609	PYX	MR	3.35	3.23	3.6
LPM00610	FPYX	MR	3.41	3.31	3.1
LPM00611	FPYX	MR	3.31	3.12	6.0
LPM00612	FPYX	MR	3.31	3.14	5.3
LPM00613	FPYX	MR	3.36	3.14	6.7
LPM00614	PYX	MR	3.45	3.28	5.1
LPM00615	PYX	MR	3.46	3.29	5.0
LPM00616	PYX	MR	3.46	3.29	5.1
LPM00617	PYX	MR	3.57	3.33	6.8
LPM00618	PYX	MR	3.56	3.27	8.5
LPM00619	PYX	MR	3.44	3.26	5.5
LPM00620	PYX	MR	3.55	3.37	5.1
LPM00621	N	MR	3.50	3.29	6.3
LPM00622	PYX	MR	3.49	3.28	6.3
LPM00623	PYX	MR	3.46	3.26	5.8
LPM00624	PYX	MR	3.37	3.23	4.2
LPM00625	PEGFPYX	MRFW	3.44	3.22	6.5
LPM00626	PEGFPYX	MRFW	3.34	3.14	6.3
LPM00627	PEGFPYX	MRFW	3.43	3.24	5.6
LPM00628	PEGFPYX	MRFW	3.37	3.13	7.2
LPM00629	PP	MRFW	3.20	2.96	7.8
LPM00630	N	MRFW	3.10	2.97	4.4
LPM00631	FPYX	MRFW	3.28	3.13	4.7
LPM00632	LN	MRFW	3.15	3.00	4.8
LPM00633	FPYX	MRFW	3.17	2.99	5.8
LPM00634	N	MRFW	3.17	3.02	4.9
LPM00635	N	MRFW	3.11	2.97	4.5
LPM00636	PEGFPYX	MRFW	3.35	3.21	4.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00637	PEGFPYX	MRFW	3.41	3.13	8.7
LPM00638	PEGFPYX	MRFW	3.41	3.23	5.3
LPM00639	FPYX	MRFW	3.39	3.23	4.9
LPM00640	N	MRFW	3.12	2.98	4.7
LPM00641	N	MRFW	3.24	3.03	6.8
LPM00642	PEGFPYX	MRFW	3.13	2.99	4.6
LPM00643	N	MRFW	3.08	2.97	3.5
LPM00644	N	MRFW	3.03	2.93	3.3
LPM00645	N	MRFW	3.09	2.97	3.9
LPM00646	N	MRFW	3.07	2.96	3.8
LPM00647	N	MRFW	2.83	2.75	3.0
LPM00648	N	MRFW	2.92	2.82	3.5
LPM00649	PEGPYX	MRFW	3.36	3.22	4.3
LPM00650	PEGPYX	MRFW	3.36	3.20	4.7
LPM00651	POIKPYX	MRFW	3.38	3.20	5.5
LPM00652	POKFPYX	MRFW	3.37	3.24	4.0
LPM00653	POKFPYX	MRFW	3.36	3.22	4.2
LPM00654	POKFPYX	MRFW	3.31	3.17	4.2
LPM00655	GN	MRFW	3.09	2.96	4.0
LPM00656	GN	MRFW	3.09	2.98	3.5
LPM00657	GN	MRFW	3.12	2.98	4.6
LPM00658	GN	MRFW	3.06	2.96	3.3
LPM00659	GN	MRFW	3.07	2.96	3.6
LPM00660	GN	MRFW	3.09	2.96	4.4
LPM00661	GN	MRFW	3.15	3.03	4.0
LPM00662	GN	MRFW	3.09	2.99	3.2
LPM00663	PEGPYX	MRFW	3.29	3.20	2.7
LPM00664	POIKPYX	MRFW	3.34	3.12	6.8
LPM00665	POIKPYX	MRFW	3.34	3.20	4.2
LPM00666	POIKPYX	MRFW	3.36	3.23	4.0
LPM00667	POIKPYX	MRFW	3.34	3.22	3.6
LPM00668	POIKPYX	MRFW	3.33	3.21	3.6
LPM00669	GN	MRFW	3.11	2.99	3.9
LPM00670	POIKFPYX	MRFW	3.13	3.06	2.4
LPM00671	GN	MRFW	3.12	2.99	4.1
LPM00672	GN	MRFW	3.07	2.95	4.1
LPM00673	GN	MRFW	3.06	2.95	3.7
LPM00674	GN	MRFW	3.07	2.97	3.4
LPM00675	GN	MRFW	3.14	3.03	3.6
LPM00676	GN	MRFW	3.11	2.98	4.1
LPM00677	MOT	MRFW	2.91	2.75	5.8
LPM00678	POIKFPYX	MRFW	3.45	3.24	6.3
LPM00679	POIKFPYX	MRFW	3.44	3.23	6.4
LPM00680	POIKFPYX	MRFW	3.45	3.23	6.7
LPM00681	POIKFPYX	MRFW	3.24	3.06	5.6
LPM00682	N	MRFW	3.26	3.12	4.2
LPM00683	N	MRFW	3.20	3.02	5.7
LPM00684	N	MRFW	3.14	2.94	6.7
LPM00685	N	MRFW	3.20	2.97	7.3
LPM00686	N	MRFW	3.12	2.94	5.8
LPM00687	N	MRFW	3.19	2.99	6.6
LPM00688	N	MRFW	3.15	2.95	6.5
LPM00689	PEGFPYX	MRFW	3.45	3.21	7.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00690	POIKFPYX	MRFW	3.46	3.23	7.0
LPM00691	POIKFPYX	MRFW	3.45	3.22	6.9
LPM00692	N	MRFW	3.25	3.06	6.2
LPM00693	N	MRFW	3.27	3.07	6.3
LPM00694	N	MRFW	3.23	3.04	6.1
LPM00695	N	MRFW	3.22	3.01	6.6
LPM00696	N	MRFW	3.20	3.00	6.4
LPM00697	N	MRFW	3.19	2.99	6.5
LPM00698	PEGFPYX	MRFW	3.37	3.24	4.1
LPM00699	N	MRFW	3.14	2.97	5.6
LPM00700	N	MRFW	3.27	3.07	6.2
LPM00701	PP N	MRFW	3.17	3.04	4.3
LPM00702	N	MRFW	2.97	2.86	3.9
LPM00703	PA	MRFW	2.99	2.89	3.3
LPM00704	PA	MRFW	3.10	2.99	3.8
LPM00705	POIKPYX	MRFW	3.28	3.13	4.7
LPM00706	GN	MRFW	3.09	2.92	5.6
LPM00707	GN	MRFW	3.07	2.93	4.8
LPM00708	GN	MRFW	3.08	2.95	4.2
LPM00709	GN	MRFW	3.08	2.96	4.1
LPM00710	PEGFPYX	MRFW	3.39	3.19	6.1
LPM00711	PP	MRFW	3.34	3.13	6.3
LPM00712	GN	MRFW	3.26	3.13	4.2
LPM00713	GN	MRFW	3.24	3.10	4.5
LPM00714	GN	MRFW	3.02	2.89	4.4
LPM00715	N	MRFW	2.98	2.83	5.0
LPM00716	PEGFPYX	MRFW	3.16	3.14	0.8
LPM00717	PEGFPYX	MRFW	3.33	3.24	2.7
LPM00718	PEGFPYX	MRFW	3.41	3.05	11.3
LPM00719	GN	MRFW	3.22	2.93	9.4
LPM00720	GN	MRFW	3.09	2.95	4.7
LPM00721	PP	MRFW	3.12	2.96	5.3
LPM00722	PP	MRFW	3.20	3.05	4.7
LPM00723	PP	MRFW	3.27	3.02	8.0
LPM00724	PP	MRFW	3.31	3.10	6.6
LPM00725	PP	MRFW	3.27	3.06	6.8
LPM00726	PP	MRFW	3.11	2.93	5.9
LPM00727	PP	MRFW	3.09	2.92	5.7
LPM00728	PP	MRFW	3.23	3.00	7.3
LPM00729	PEGFPYX	MRFW	3.31	3.18	4.2
LPM00730	PP / N	MRFW	3.36	3.17	5.7
LPM00731	PP / N	MRFW	3.15	2.89	8.5
LPM00732	N	MRFW	3.07	2.92	4.9
LPM00733	N	MRFW	3.08	2.94	4.6
LPM00734	N	MRFW	3.15	2.97	5.9
LPM00735	PP	MRFW	3.15	3.01	4.6
LPM00736	PP	MRFW	3.24	3.06	5.6
LPM00737	PP	MRFW	3.32	3.10	6.9
LPM00738	PP	MRFW	3.34	3.12	6.8
LPM00739	PP	MRFW	3.32	3.10	7.0
LPM00740	PP	MRFW	3.11	2.89	7.2
LPM00741	PP	MRFW	3.14	2.95	6.4
LPM00742	PP	MRFW	3.23	3.00	7.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00743	PEGFPYX	MRFW	3.38	3.13	7.8
LPM00744	N	MRFW	3.32	3.14	5.6
LPM00745	N	MRFW	3.28	3.07	6.5
LPM00746	LN	MRFW	3.16	2.99	5.5
LPM00747	LN	MRFW	3.16	2.98	6.0
LPM00748	LN	MRFW	3.16	2.99	5.6
LPM00749	GN	MRFW	3.04	2.93	3.8
LPM00750	GN	MRFW	3.24	2.97	8.5
LPM00751	GN	MRFW	3.09	2.98	3.6
LPM00752	GN	MRFW	3.08	2.93	4.9
LPM00753	GN	MRFW	3.05	2.88	5.7
LPM00754	GN	MRFW	3.06	2.92	4.8
LPM00755	PEGFPYX	MRFW	3.37	3.20	5.1
LPM00756	PEGFPYX	MRFW	3.28	3.14	4.5
LPM00757	PEGFPYX	MRFW	3.21	3.09	3.9
LPM00758	POIKFPYX	MRFW	3.26	3.07	6.0
LPM00759	POIKFPYX	MRFW	3.12	2.94	5.8
LPM00760	GN	MRFW	3.13	2.98	4.9
LPM00761	GN	MRFW	3.09	2.99	3.2
LPM00762	GN	MRFW	3.14	2.90	8.1
LPM00763	GN	MRFW	3.06	2.89	5.8
LPM00764	GN	MRFW	3.08	2.93	5.1
LPM00765	GN	MRFW	3.07	2.91	5.2
LPM00766	PEGFPYX	MRFW	3.38	3.22	4.9
LPM00767	PEGFPYX	MRFW	3.30	3.14	5.0
LPM00768	PEGFPYX	MRFW	3.13	3.14	-0.3
LPM00769	GN	MRFW	3.08	2.95	4.3
LPM00770	GN	MRFW	3.05	2.97	2.6
LPM00771	GN	MRFW	3.18	3.07	3.5
LPM00772	GN	MRFW	3.30	3.10	6.1
LPM00773	POIKPYX	MRFW	3.38	3.18	6.2
LPM00774	POIKPYX	MRFW	3.31	3.23	2.5
LPM00775	GN	MRFW	3.22	3.02	6.4
LPM00776	POIKPYX	MRFW	3.29	3.17	3.7
LPM00777	GN	MRFW	3.18	3.00	5.9
LPM00778	POIKPYX	MRFW	3.41	3.16	7.5
LPM00779	PEGFPYX	MRFW	3.34	3.23	3.5
LPM00780	PEGFPYX	MRFW	3.37	3.20	5.3
LPM00781	PEGFPYX	MRFW	3.34	3.19	4.5
LPM00782	PEGFPYX	MRFW	3.33	3.19	4.1
LPM00783	GN	MRFW	3.04	2.96	2.7
LPM00784	GN	MRFW	3.06	2.92	4.6
LPM00785	GN	MRFW	3.04	2.94	3.2
LPM00786	POIKPYX	MRFW	3.27	3.14	4.0
LPM00787	POIKPYX	MRFW	3.32	3.20	3.6
LPM00788	POIKPYX	MRFW	3.31	3.18	4.0
LPM00789	POIKPYX	MRFW	3.32	3.23	2.9
LPM00790	POIKPYX	MRFW	3.06	2.98	2.6
LPM00791	POIKPYX	MRFW	3.04	2.95	3.0
LPM00792	POIKPYX	MRFW	3.10	2.97	4.1
LPM00793	MOT	MRFW	2.92	2.77	4.9
LPM00794	MOT	MRFW	2.90	2.78	4.3
LPM00795	MOT	MRFW	2.89	2.74	5.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00796	MOT	MRFW	2.89	2.77	4.1
LPM00797	MOT	MRFW	2.90	2.78	4.3
LPM00798	MOT	MRFW	2.85	2.76	3.1
LPM00799	MOT	MRFW	2.87	2.77	3.6
LPM00800	MOT	MRFW	2.86	2.76	3.4
LPM00801	LN	MRFW	3.00	2.89	3.8
LPM00802	LN	MRFW	3.07	2.90	5.7
LPM00803	GN	MRFW	3.17	3.02	4.8
LPM00804	GN	MRFW	3.22	3.10	3.8
LPM00805	GN	MRFW	3.16	3.02	4.4
LPM00806	PEGFPYX	MRFW	2.82	2.74	2.8
LPM00807	MOT	MRFW	2.84	2.79	1.9
LPM00808	MOT	MRFW	2.86	2.77	3.3
LPM00809	MOT	MRFW	2.88	2.79	3.3
LPM00810	MOT	MRFW	2.86	2.78	2.8
LPM00811	MOT	MRFW	2.87	2.79	3.0
LPM00812	MOT	MRFW	2.84	2.74	3.5
LPM00813	MOT	MRFW	2.82	2.73	3.1
LPM00814	N	MRFW	2.98	2.88	3.3
LPM00815	N	MRFW	3.00	2.88	4.2
LPM00816	GN	MRFW	3.15	3.00	4.8
LPM00817	GN	MRFW	3.28	3.16	3.9
LPM00818	GN	MRFW	3.18	3.03	4.7
LPM00819	GN	MRFW	3.15	2.97	6.0
LPM00820	MOT	MRFW	2.84	2.73	4.1
LPM00821	MOT	MRFW	2.88	2.78	3.5
LPM00822	MOT	MRFW	2.91	2.80	3.7
LPM00823	MOT	MRFW	2.88	2.79	3.1
LPM00824	MOT	MRFW	2.92	2.78	4.8
LPM00825	PYXAN	MRFW	3.01	2.89	4.2
LPM00826	PYXAN	MRFW	3.01	2.85	5.5
LPM00827	N PP	MRFW	3.09	3.02	2.1
LPM00828	POIKPYX	MRFW	3.23	3.12	3.5
LPM00829	POIKPYX	MRFW	3.21	3.05	5.2
LPM00830	POIKPYX	MRFW	3.32	3.16	5.0
LPM00831	POIKPYX	MRFW	3.24	3.01	7.4
LPM00832	PYXAN	MRFW	3.03	2.87	5.4
LPM00833	PYXAN	MRFW	3.11	2.93	6.1
LPM00834	POIKAN	MRFW	2.89	2.68	7.5
LPM00835	POIKAN	MRFW	2.91	2.75	5.6
LPM00836	POIKAN	MRFW	2.94	2.83	3.7
LPM00837	POIKAN	MRFW	2.95	2.75	6.9
LPM00838	POIKAN	MRFW	2.90	2.75	5.4
LPM00839	GN	MRFW	3.00	2.89	3.8
LPM00840	GN	MRFW	3.02	2.92	3.3
LPM00841	GN	MRFW	3.05	2.88	5.9
LPM00842	POIKFPYX	MRFW	3.24	3.04	6.3
LPM00843	POIKFPYX	MRFW	3.23	3.07	5.1
LPM00844	POIKFPYX	MRFW	3.32	3.10	6.8
LPM00845	MOT	MRFW	2.81	2.73	2.9
LPM00846	MOT	MRFW	2.85	2.75	3.7
LPM00847	MOT	MRFW	2.84	2.73	3.8
LPM00848	MOT	MRFW	2.91	2.82	3.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00849	MOT	MRFW	2.85	2.75	3.7
LPM00850	MOT	MRFW	2.87	2.78	3.2
LPM00851	PYXAN	MRFW	2.96	2.83	4.4
LPM00852	PYXAN	MRFW	2.95	2.82	4.5
LPM00853	N	MRFW	3.04	2.91	4.5
LPM00854	N	MRFW	3.15	3.02	4.3
LPM00855	PYX	MRFW	3.04	2.93	3.6
LPM00856	PYX	MRFW	3.13	3.03	3.3
LPM00857	PYX	MRFW	3.13	2.95	5.8
LPM00858	PYX	MRFW	3.25	3.09	5.0
LPM00859	MOT	MRFW	2.93	2.74	6.6
LPM00860	MOT	MRFW	2.94	2.75	6.7
LPM00861	MOT	MRFW	2.96	3.04	-2.6
LPM00862	MOT	MRFW	2.95	2.73	7.6
LPM00863	MOT	MRFW	2.89	2.75	5.0
LPM00864	MOT	MRFW	3.03	2.81	7.5
LPM00865	MOT	MRFW	3.03	2.75	9.8
LPM00866	MOT	MRFW	3.01	2.76	8.7
LPM00867	PEGFPYX	MRFW	3.36	3.20	4.7
LPM00868	PEGFPYX	MRFW	3.15	3.22	-2.1
LPM00869	N	MRFW	3.08	2.97	3.7
LPM00870	N	MRFW	3.19	2.82	12.2
LPM00871	PYX	MRFW	3.18	3.00	5.7
LPM00872	PYX	MRFW	3.17	3.12	1.5
LPM00873	PYX	MRFW	3.16	3.00	5.0
LPM00874	PYX	MRFW	3.38	3.06	9.9
LPM00875	PYX	MRFW	3.18	3.06	3.7
LPM00876	PYX	MRFW	3.15	2.98	5.6
LPM00877	PYX	MRFW	3.29	3.12	5.3
LPM00878	PEGFPYX	MRFW	3.36	3.21	4.7
LPM00879	PEGFPYX	MRFW	3.36	3.17	5.8
LPM00880	PEGFPYX	MRFW	3.40	3.23	5.0
LPM00881	PEGFPYX	MRFW	3.35	3.28	2.1
LPM00882	GN	MRFW	3.13	2.99	4.6
LPM00883	GN	MRFW	3.24	2.98	8.4
LPM00884	GN	MRFW	3.17	3.06	3.7
LPM00885	GN	MRFW	3.16	2.95	6.7
LPM00886	PYX	MRFW	3.25	3.06	5.9
LPM00887	PYX	MRFW	3.35	3.18	5.1
LPM00888	PYX	MRFW	3.17	3.01	5.1
LPM00889	PYX	MRFW	3.18	3.03	4.8
LPM00890	PYX	MRFW	3.16	2.97	6.1
LPM00891	PYX	MRFW	3.29	3.18	3.3
LPM00892	PEGFPYX	MRFW	3.41	3.22	5.6
LPM00893	PEGFPYX	MRFW	3.33	3.13	6.2
LPM00894	PEGFPYX	MRFW	3.30	3.12	5.7
LPM00895	PYX	MRFW	3.28	3.19	2.9
LPM00896	PYX	MRFW	3.07	2.92	4.9
LPM00897	N	MRFW	3.07	2.88	6.2
LPM00898	PYX	MRFW	3.19	3.03	5.2
LPM00899	PYX	MRFW	3.19	3.04	4.9
LPM00900	PYX	MRFW	3.21	3.06	4.8
LPM00901	PYX	MRFW	3.28	3.12	5.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00902	PYX	MRFW	3.36	3.15	6.3
LPM00903	GN	MRFW	3.19	3.03	5.0
LPM00904	GN	MRFW	3.16	3.02	4.5
LPM00905	GN	MRFW	3.27	3.12	4.7
LPM00906	MOT	MRFW	2.91	2.79	4.4
LPM00907	MOT	MRFW	2.94	2.75	6.6
LPM00908	MOT	MRFW	2.93	2.82	3.7
LPM00909	MOT	MRFW	2.92	2.82	3.3
LPM00910	MOT	MRFW	2.90	2.78	4.3
LPM00911	MOT	MRFW	2.89	2.75	5.1
LPM00912	MOT	MRFW	2.86	2.78	2.8
LPM00913	MOT	MRFW	2.86	2.74	4.4
LPM00914	N	MRFW	2.88	2.79	3.1
LPM00915	N	MRFW	2.91	2.82	3.2
LPM00916	N	MRFW	2.94	2.84	3.6
LPM00917	N	MRFW	2.94	2.87	2.3
LPM00918	N	MRFW	2.92	2.80	4.3
LPM00919	MOT	MRFW	2.86	2.73	4.5
LPM00920	MOT	MRFW	2.90	2.78	4.2
LPM00921	MOT	MRFW	2.93	2.81	4.1
LPM00922	MOT	MRFW	2.93	2.81	4.3
LPM00923	MOT	MRFW	2.94	2.80	4.8
LPM00924	MOT	MRFW	2.88	2.75	4.7
LPM00925	MOT	MRFW	2.91	2.78	4.4
LPM00926	MOT	MRFW	2.91	2.80	3.9
LPM00927	MOT	MRFW	2.88	2.77	3.9
LPM00928	MOT	MRFW	2.91	2.78	4.6
LPM00929	MOT	MRFW	2.96	2.82	5.0
LPM00930	MOT	MRFW	2.97	2.84	4.4
LPM00931	MOT	MRFW	3.00	2.85	4.9
LPM00932	MOT	MRFW	2.99	2.87	4.1
LPM00933	MOT	MRFW	2.94	2.81	4.5
LPM00934	MOT	MRFW	2.91	2.80	4.0
LPM00935	MOT	MRFW	2.95	2.81	4.6
LPM00936	MOT	MRFW	2.95	2.80	5.3
LPM00937	POIKAN	MRFW	2.95	2.79	5.5
LPM00938	POIKAN	MRFW	2.94	2.77	5.9
LPM00939	POIKAN	MRFW	2.95	2.82	4.7
LPM00940	POIKAN	MRFW	2.94	2.79	5.2
LPM00941	POIKAN	MRFW	2.92	2.79	4.7
LPM00942	N	MRFW	2.90	2.79	3.8
LPM00943	N	MRFW	2.93	2.84	2.9
LPM00944	N	MRFW	3.01	2.79	7.5
LPM00945	POIKAN	MRFW	3.01	2.87	4.7
LPM00946	POIKAN	MRFW	3.02	2.89	4.5
LPM00947	PEGFPYX	MRFW	3.55	3.06	14.9
LPM00948	PEGFPYX	MRFW	3.65	3.24	11.8
LPM00949	PEGFPYX	MRFW	3.42	3.25	5.1
LPM00950	GN	MRFW	3.19	2.93	8.5
LPM00951	GN	MRFW	3.15	2.95	6.7
LPM00952	GN	MRFW	3.16	2.94	7.3
LPM00953	GN	MRFW	3.18	2.95	7.4
LPM00954	GN	MRFW	3.16	2.94	7.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM00955	GN	MRFW	3.17	2.95	7.1
LPM00956	GN	MRFW	3.22	2.96	8.3
LPM00957	GN	MRFW	3.24	2.95	9.4
LPM00958	GN	MRFW	3.21	2.97	7.8
LPM00959	GN	MRFW	3.27	3.02	7.8
LPM00960	GN	MRFW	3.27	3.00	8.7
LPM00961	PEGFPYX	MRFW	3.56	3.20	10.6
LPM00962	PEGFPYX	MRFW	3.58	3.21	10.8
LPM00963	PEGFPYX	MRFW	3.30	3.08	6.9
LPM00964	GN	MRFW	3.15	2.93	7.1
LPM00965	GN	MRFW	3.13	2.93	6.7
LPM00966	GN	MRFW	3.16	2.95	7.0
LPM00967	GN	MRFW	3.20	2.95	8.1
LPM00968	GN	MRFW	3.17	2.94	7.4
LPM00969	GN	MRFW	3.20	2.95	8.1
LPM00970	GN	MRFW	3.19	2.95	7.8
LPM00971	GN	MRFW	3.19	2.96	7.6
LPM00972	GN	MRFW	3.21	3.00	6.7
LPM00973	GN	MRFW	3.20	2.97	7.5
LPM00974	PEGFPYX	MRFW	3.62	3.18	12.9
LPM00975	PEGFPYX	MRFW	3.57	3.12	13.4
LPM00976	PEGFPYX	MRFW	3.47	3.09	11.7
LPM00977	GN	MRFW	3.17	2.91	8.6
LPM00978	GN	MRFW	3.15	2.94	7.1
LPM00979	GN	MRFW	3.18	2.93	8.3
LPM00980	GN	MRFW	3.17	2.94	7.6
LPM00981	GN	MRFW	3.18	2.96	7.2
LPM00982	GN	MRFW	3.19	2.96	7.6
LPM00983	GN	MRFW	3.16	2.93	7.4
LPM00984	GN	MRFW	3.19	2.97	7.0
LPM00985	GN	MRFW	3.17	2.98	6.2
LPM00986	GN	MRFW	3.21	2.99	6.8
LPM00987	PYX	MRFW	3.30	3.18	3.6
LPM00988	PYX	MRFW	3.32	3.14	5.5
LPM00989	PYX	MRFW	3.31	3.20	3.2
LPM00990	PYX	MRFW	3.13	3.01	4.0
LPM00991	PYX	MRFW	3.15	3.02	4.1
LPM00992	PYX	MRFW	3.15	3.07	2.5
LPM00993	PYX	MRFW	3.19	3.12	2.2
LPM00994	PYX	MRFW	3.17	2.99	5.9
LPM00995	PYX	MRFW	3.29	3.12	5.3
LPM00996	PYX	MRFW	3.31	3.18	3.9
LPM00997	PYX	MRFW	3.29	3.22	2.3
LPM00998	PYX	MRFW	3.31	3.20	3.3
LPM00999	PYX	MRFW	3.32	3.20	3.8
LPM01000	PYX	MRFW	3.42	3.27	4.4
LPM01001	PYX	MRFW	3.41	3.15	7.8
LPM01002	PYX	MRFW	3.43	3.19	7.2
LPM01003	PYX	MRFW	3.29	3.03	8.2
LPM01004	PYX	MRFW	3.37	3.02	10.8
LPM01005	PYX	MRFW	3.46	3.08	11.7
LPM01006	PYX	MRFW	3.50	3.06	13.5
LPM01007	PYX	MRFW	3.50	3.10	12.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01008	PYX	MRFW	3.32	3.23	2.9
LPM01009	PYX	MRFW	3.30	3.20	2.9
LPM01010	PYX	MRFW	3.41	3.22	5.8
LPM01011	PYX	MRFW	3.44	3.21	6.8
LPM01012	PYX	MRFW	3.51	3.21	8.8
LPM01013	PYX	MRFW	3.55	3.24	9.1
LPM01014	PYX	MRFW	3.39	3.24	4.5
LPM01015	PYX	MRFW	3.42	3.26	4.9
LPM01016	PYX	MRFW	3.40	3.10	9.1
LPM01017	PYX	MRFW	3.47	2.99	14.6
LPM01018	PYX	MRFW	3.52	3.22	9.0
LPM01019	PYX	MRFW	3.52	3.27	7.4
LPM01020	PYX	MRFW	3.50	3.29	6.1
LPM01021	PYX	MRFW	3.50	3.26	7.2
LPM01022	PYX	MRFW	3.53	3.22	9.3
LPM01023	PYX	MRFW	3.55	3.26	8.6
LPM01024	PYX	MRFW	3.58	3.23	10.1
LPM01025	PYX	MRFW	3.57	3.26	9.2
LPM01026	PYX	MRFW	3.59	3.21	11.1
LPM01027	DUPLICATE	MRFW	3.44	3.21	6.8
LPM01028	PYX	MRFW	3.37	3.19	5.6
LPM01029	PYX	MRFW	3.40	3.22	5.4
LPM01030	PYX	MRFW	3.44	3.24	6.1
LPM01031	PYX	MRFW	3.37	3.24	3.8
LPM01032	PYX	MRFW	3.23	3.11	3.7
LPM01033	PYX	MRFW	3.38	3.21	5.0
LPM01034	PYX	MRFW	3.43	3.11	9.9
LPM01035	PYX	MRFW	3.38	3.26	3.5
LPM01036	PYX	MRFW	3.42	3.30	3.6
LPM01037	PYX	MRFW	3.45	3.30	4.5
LPM01038	PYX	MRFW	3.44	3.28	4.6
LPM01039	PYX	MRFW	3.44	3.33	3.4
LPM01040	PYX	MRFW	3.42	3.25	5.1
LPM01041	PYX	MRFW	3.44	3.25	5.7
LPM01042	DUPLICATE	MRFW	3.42	3.25	5.1
LPM01043	PYX	MRFW	3.47	3.30	5.1
LPM01044	PYX	MRFW	3.40	3.38	0.7
LPM01045	PYX	MRFW	3.44	3.34	2.9
LPM01046	PYX	MRFW	3.40	3.25	4.6
LPM01047	PYX	MRFW	3.45	3.28	5.2
LPM01048	PYX	MRFW	3.38	3.21	5.3
LPM01049	PYX	MRFW	3.39	3.25	4.2
LPM01050	PYX	MRFW	3.42	3.25	5.2
LPM01051	PYX	MRFW	3.43	3.25	5.3
LPM01052	PYX	MRFW	3.35	3.25	2.9
LPM01053	PYX	MRFW	3.36	3.24	3.7
LPM01054	PYX	MRFW	3.45	3.27	5.4
LPM01055	PYX	MRFW	3.43	3.25	5.4
LPM01056	DUPLICATE	MRFW	3.47	3.25	6.6
LPM01057	POIKPYX	MRFW	2.88	2.78	3.4
LPM01058	N	MRFW	3.04	2.90	4.9
LPM01059	N	MRFW	3.12	2.93	6.3
LPM01060	N	MRFW	3.10	3.01	2.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM01061	N	MRFW	3.02	2.96	2.2
LPM01062	N	MRFW	3.14	3.01	4.3
LPM01063	N	MRFW	3.03	2.92	3.8
LPM01064	N	MRFW	3.03	2.92	3.6
LPM01065	N	MRFW	3.04	2.85	6.3
LPM01066	N	MRFW	3.05	2.88	5.9
LPM01067	N	MRFW	3.13	2.97	5.4
LPM01068	N	MRFW	3.08	3.03	1.7
LPM01069	POIKPYX	MRFW	2.79	2.73	2.3
LPM01070	POIKPYX	MRFW	2.87	2.73	5.0
LPM01071	POIKPYX	MRFW	2.88	2.85	1.2
LPM01072	POIKPYX	MRFW	2.90	2.75	5.2
LPM01073	POIKPYX	MRFW	3.03	2.96	2.3
LPM01074	POIKPYX	MRFW	3.05	2.99	2.0
LPM01075	POIKPYX	MRFW	2.89	2.88	0.3
LPM01076	N	MRFW	3.05	2.94	3.6
LPM01077	N	MRFW	2.95	2.92	1.1
LPM01078	N	MRFW	2.96	2.92	1.4
LPM01079	N	MRFW	2.92	2.89	1.1
LPM01080	N	MRFW	3.17	3.00	5.6
LPM01081	N	MRFW	3.15	2.91	7.9
LPM01082	N	MRFW	2.92	2.83	3.0
LPM01083	FPYX	MRFW	3.47	3.25	6.5
LPM01084	FPYX	MRFW	3.55	3.30	7.2
LPM01085	FPYX	MRFW	3.43	3.23	6.0
LPM01086	FPYX	MRFW	3.41	3.25	4.9
LPM01087	FPYX	MRFW	3.34	3.00	10.7
LPM01088	GN	MRFW	3.14	2.96	5.8
LPM01089	GN	MRFW	3.13	2.97	5.2
LPM01090	GN	MRFW	3.17	2.98	6.3
LPM01091	GN	MRFW	3.16	2.98	5.9
LPM01092	GN	MRFW	3.19	3.01	5.9
LPM01093	GN	MRFW	3.13	3.02	3.5
LPM01094	GN	MRFW	3.17	3.01	5.3
LPM01095	GN	MRFW	3.24	3.07	5.3
LPM01096	GN	MRFW	3.14	2.98	5.1
LPM01097	GN	MRFW	3.05	2.92	4.5
LPM01098	FPYX	MRFW	3.20	3.01	6.1
LPM01099	PEGFPYX	MRFW	3.23	3.26	-0.8
LPM01100	PEGFPYX	MRFW	3.19	3.23	-1.4
LPM01101	PEGFPYX	MRFW	3.18	3.09	2.9
LPM01102	GN	MRFW	2.99	2.98	0.3
LPM01103	GN	MRFW	3.01	2.98	1.0
LPM01104	GN	MRFW	3.01	2.98	1.1
LPM01105	GN	MRFW	3.00	3.00	0.2
LPM01106	GN	MRFW	2.99	2.98	0.3
LPM01107	GN	MRFW	2.98	2.95	0.9
LPM01108	GN	MRFW	2.96	2.75	7.1
LPM01109	POIKPYX	MRFW	3.29	3.19	3.1
LPM01110	POIKPYX	MRFW	3.24	3.21	1.0
LPM01111	POIKPYX	MRFW	3.07	3.11	-1.2
LPM01112	GN	MRFW	3.04	3.04	-0.1
LPM01113	GN	MRFW	2.93	2.90	1.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM01114	GN	MRFW	2.99	2.95	1.4
LPM01115	GN	MRFW	2.99	2.95	1.3
LPM01116	GN	MRFW	3.00	2.96	1.3
LPM01117	GN	MRFW	3.01	2.96	1.7
LPM01118	GN	MRFW	2.99	2.96	1.0
LPM01119	GN	MRFW	3.13	3.09	1.4
LPM01120	POIKPYX	MRFW	3.04	2.94	3.3
LPM01121	GN	MRFW	2.91	2.87	1.3
LPM01122	GN	MRFW	2.93	2.93	0.1
LPM01123	GN	MRFW	2.98	2.98	0.1
LPM01124	GN	MRFW	2.97	2.95	0.7
LPM01125	GN	MRFW	2.98	2.94	1.3
LPM01126	GN	MRFW	2.97	2.96	0.5
LPM01127	GN	MRFW	2.98	2.96	0.8
LPM01128	GN	MRFW	2.98	2.93	1.5
LPM01129	GN	MRFW	3.08	3.06	0.8
LPM01130	GN	MRFW	3.14	3.10	1.3
LPM01131	GN	MRFW	3.00	2.96	1.2
LPM01132	GN	MRFW	2.97	2.93	1.2
LPM01133	GN	MRFW	3.05	2.99	1.9
LPM01134	GN	MRFW	3.20	2.87	10.7
LPM01135	GN	MRFW	3.02	2.94	2.8
LPM01136	GN	MRFW	3.01	2.92	3.0
LPM01137	GN	MRFW	2.98	2.94	1.2
LPM01138	GN	MRFW	2.99	2.98	0.4
LPM01139	GN	MRFW	3.06	2.89	5.6
LPM01140	GN	MRFW	2.97	2.91	1.9
LPM01141	GN	MRFW	3.00	3.01	-0.3
LPM01142	GN	MRFW	3.08	2.95	4.4
LPM01143	GN	MRFW	3.02	2.96	2.1
LPM01144	GN	MRFW	3.04	2.99	1.6
LPM01145	GN	MRFW	3.11	2.80	10.2
LPM01146	GN	MRFW	2.98	2.92	2.1
LPM01147	GN	MRFW	2.99	2.85	4.7
LPM01148	GN	MRFW	2.98	2.95	1.1
LPM01149	DUPLICATE	MRFW	2.99	2.95	1.4
LPM01150	GN	MRFW	2.97	2.94	1.1
LPM01151	GN	MRFW	3.00	2.92	2.8
LPM01152	GN	MRFW	2.92	2.79	4.7
LPM01153	GN	MRFW	2.98	2.92	1.9
LPM01154	GN	MRFW	3.01	2.95	1.7
LPM01155	GN	MRFW	3.03	2.97	2.0
LPM01156	GN	MRFW	3.02	3.00	0.7
LPM01157	GN	MRFW	3.07	3.04	0.8
LPM01158	PEGFPYX	MRFW	3.27	3.21	1.9
LPM01159	PEGFPYX	MRFW	3.10	3.15	-1.7
LPM01160	GN	MRFW	2.98	3.00	-0.6
LPM01161	GN	MRFW	2.97	2.97	0.0
LPM01162	GN	MRFW	2.99	2.94	1.8
LPM01163	DUPLICATE	MRFW	2.97	2.94	1.1
LPM01164	GN	MRFW	3.02	2.98	1.2
LPM01165	GN	MRFW	3.06	3.00	2.0
LPM01166	GN	MRFW	3.00	2.97	1.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM01167	GN	MRFW	3.05	3.00	1.6
LPM01168	GN	MRFW	3.00	2.92	2.6
LPM01169	GN	MRFW	3.04	2.99	1.6
LPM01170	GN	MRFW	3.04	3.00	1.3
LPM01171	PEGFPYX	MRFW	3.18	3.04	4.5
LPM01172	GN	MRFW	3.02	2.93	3.1
LPM01173	GN	MRFW	3.01	2.80	7.4
LPM01174	GN	MRFW	3.16	3.11	1.7
LPM01175	GN	MRFW	3.19	2.86	10.9
LPM01176	GN	MRFW	3.03	3.01	0.7
LPM01177	GN	MRFW	3.00	2.95	1.7
LPM01178	GN	MRFW	3.04	2.97	2.3
LPM01179	DUPLICATE	MRFW	3.02	2.97	1.6
LPM01180	GN	MRFW	3.02	2.92	3.5
LPM01181	GN	MRFW	3.03	2.78	8.5
LPM01182	GN	MRFW	3.05	3.09	-1.2
LPM01183	GN	MRFW	3.13	3.02	3.6
LPM01184	PYX	MRFW	3.42	2.96	14.6
LPM01185	PYX	MRFW	3.51	3.11	12.0
LPM01186	PYX	MRFW	3.45	3.25	5.8
LPM01187	PYX	MRFW	3.26	3.06	6.4
LPM01188	PYX	MRFW	3.17	3.03	4.5
LPM01189	PYX	MRFW	3.04	2.91	4.5
LPM01190	PYX	MRFW	3.10	2.95	5.0
LPM01191	PYX	MRFW	3.10	2.92	5.9
LPM01192	PYX	MRFW	3.06	2.86	6.6
LPM01193	PYX	MRFW	3.44	3.07	11.3
LPM01194	PYX	MRFW	3.61	3.25	10.5
LPM01195	PYX	MRFW	3.54	3.26	8.2
LPM01196	PYX	MRFW	3.66	3.33	9.3
LPM01197	PYX	MRFW	3.64	3.29	10.0
LPM01198	PYX	MRFW	3.47	3.16	9.2
LPM01199	PYX	MRFW	3.58	3.21	11.0
LPM01200	PYX	MRFW	3.50	3.20	9.0
LPM01201	PYX	MRFW	3.50	3.19	9.1
LPM01202	PYX	MRFW	3.48	3.19	8.7
LPM01203	PYX	MRFW	3.63	3.24	11.3
LPM01204	PYX	MRFW	3.65	3.25	11.5
LPM01205	PYX	MRFW	3.64	3.26	11.1
LPM01206	PYX	MRFW	3.61	3.25	10.4
LPM01207	PYX	MRFW	3.66	3.20	13.4
LPM01208	PYX	MRFW	3.51	3.26	7.3
LPM01209	PYX	MRFW	3.42	3.14	8.4
LPM01210	PYX	MRFW	3.40	3.10	9.1
LPM01211	PYX	MRFW	3.46	3.11	10.5
LPM01212	PYX	MRFW	3.54	3.19	10.4
LPM01213	PYX	MRFW	3.54	3.17	10.9
LPM01214	PYX	MRFW	3.47	3.26	6.2
LPM01215	FPYX	MRFW	3.33	3.21	3.6
LPM01216	FPYX	MRFW	3.37	3.19	5.5
LPM01217	FPYX	MRFW	3.43	3.19	7.2
LPM01218	FPYX	MRFW	3.38	3.20	5.6
LPM01219	N	MRFW	3.13	2.98	5.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01220	N	MRFW	3.11	3.08	0.9
LPM01221	N	MRFW	3.12	3.00	4.0
LPM01222	N	MRFW	3.18	3.02	5.3
LPM01223	FPYX	MRFW	3.42	3.11	9.5
LPM01224	FPYX	MRFW	3.23	3.15	2.7
LPM01225	FPYX	MRFW	3.53	3.25	8.4
LPM01226	FPYX	MRFW	3.50	3.22	8.5
LPM01227	FPYX	MRFW	3.58	3.22	10.6
LPM01228	OTHER	MRFW	3.46	3.22	7.2
LPM01229	FPYX	MRFW	3.40	3.07	10.1
LPM01230	N	MRFW	3.28	2.91	11.9
LPM01231	FPYX	MRFW	3.56	3.16	11.6
LPM01232	FPYX	MRFW	3.49	3.09	12.1
LPM01233	N	MRFW	3.38	2.96	13.3
LPM01234	FPYX	MRFW	3.35	3.19	4.8
LPM01235	FPYX	MRFW	3.32	3.09	7.3
LPM01236	FPYX	MRFW	3.35	3.19	5.0
LPM01237	FPYX	MRFW	3.44	3.26	5.4
LPM01238	FPYX	MRFW	3.40	3.22	5.5
LPM01239	FPYX	MRFW	3.42	3.25	5.1
LPM01240	FPYX	MRFW	3.42	3.24	5.4
LPM01241	FPYX	MRFW	3.35	3.04	9.9
LPM01242	N	MRFW	3.17	2.96	6.8
LPM01243	FPYX	MRFW	3.27	3.09	5.5
LPM01244	FPYX	MRFW	3.35	3.17	5.5
LPM01245	FPYX	MRFW	3.38	3.17	6.3
LPM01246	FPYX	MRFW	3.50	3.22	8.3
LPM01247	FPYX	MRFW	3.59	3.23	10.7
LPM01248	FPYX	MRFW	3.39	3.22	5.3
LPM01249	OTHER	MRFW	3.48	3.22	7.9
LPM01250	FPYX	MRFW	3.38	3.21	5.3
LPM01251	FPYX	MRFW	3.45	3.27	5.3
LPM01252	FPYX	MRFW	3.42	3.24	5.4
LPM01253	FPYX	MRFW	3.40	3.24	4.8
LPM01254	OTHER	MRFW	3.41	3.24	5.1
LPM01255	FPYX	MRFW	3.40	3.21	5.7
LPM01256	FPYX	MRFW	3.39	3.25	4.3
LPM01257	FPYX	MRFW	3.39	3.25	4.2
LPM01258	FPYX	MRFW	3.41	3.23	5.4
LPM01259	FPYX	MRFW	3.39	3.21	5.3
LPM01260	FPYX	MRFW	3.42	3.25	5.0
LPM01261	OTHER	MRFW	3.44	3.25	5.6
LPM01262	FPYX	MRFW	3.40	3.23	5.1
LPM01263	FPYX	MRFW	3.40	3.22	5.5
LPM01264	FPYX	MRFW	3.42	3.25	5.0
LPM01265	FPYX	MRFW	3.44	3.23	6.2
LPM01266	FPYX	MRFW	3.43	3.23	5.9
LPM01267	FPYX	MRFW	3.43	3.24	5.8
LPM01268	FPYX	MRFW	3.42	3.22	5.9
LPM01269	FPYX	MRFW	3.22	3.08	4.5
LPM01270	FPYX	MRFW	3.29	3.12	5.5
LPM01271	FPYX	MRFW	3.44	3.27	5.2
LPM01272	FPYX	MRFW	3.43	3.25	5.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01273	FPYX	MRFW	3.44	3.25	5.7
LPM01274	FPYX	MRFW	3.45	3.25	6.0
LPM01275	OTHER	MRFW	3.46	3.25	6.3
LPM01276	FPYX	MRFW	3.43	3.24	5.7
LPM01277	FPYX	MRFW	3.40	3.18	6.5
LPM01278	FPYX	MRFW	3.37	3.18	5.9
LPM01279	FPYX	MRFW	3.43	3.24	5.6
LPM01280	FPYX	MRFW	3.44	3.24	5.9
LPM01281	FPYX	MRFW	3.41	3.22	5.6
LPM01282	FPYX	MRFW	3.42	3.23	5.8
LPM01283	FPYX	MRFW	3.42	3.16	8.0
LPM01284	FPYX	MRFW	3.42	3.22	6.0
LPM01285	OTHER	MRFW	3.44	3.23	6.4
LPM01286	FPYX	MRFW	3.42	3.21	6.3
LPM01287	FPYX	MRFW	3.46	3.22	7.1
LPM01288	FPYX	MRFW	3.44	3.22	6.5
LPM01289	FPYX	MRFW	3.43	3.21	6.7
LPM01290	FPYX	MRFW	3.44	3.22	6.5
LPM01291	FPYX	MRFW	3.40	3.22	5.4
LPM01292	FPYX	MRFW	3.51	3.29	6.6
LPM01293	FPYX	MRFW	3.60	3.21	11.4
LPM01294	FPYX	MRFW	3.31	3.23	2.6
LPM01295	FPYX	MRFW	3.32	3.23	2.8
LPM01296	FPYX	MRFW	3.35	3.23	3.6
LPM01297	FPYX	MRFW	3.37	3.24	3.9
LPM01298	OTHER	MRFW	3.35	3.24	3.5
LPM01299	FPYX	MRFW	3.34	3.23	3.3
LPM01300	FPYX	MRFW	3.35	3.23	3.6
LPM01301	FPYX	MRFW	3.36	3.22	4.4
LPM01302	FPYX	MRFW	3.35	3.23	3.7
LPM01303	FPYX	MRFW	3.37	3.24	4.0
LPM01304	FPYX	MRFW	3.36	3.24	3.8
LPM01305	FPYX	MRFW	3.37	3.23	4.3
LPM01306	OTHER	MRFW	3.36	3.23	4.0
LPM01307	FPYX	MRFW	3.36	3.23	3.9
LPM01308	FPYX	MRFW	3.41	3.20	6.2
LPM01309	FPYX	MRFW	3.39	3.21	5.5
LPM01310	FPYX	MRFW	3.38	3.22	4.7
LPM01311	FPYX	MRFW	3.39	3.21	5.4
LPM01312	FPYX	MRFW	3.39	3.23	5.0
LPM01313	FPYX	MRFW	3.36	3.22	4.2
LPM01314	FPYX	MRFW	3.40	3.17	7.0
LPM01315	FPYX	MRFW	3.31	3.15	4.8
LPM01316	FPYX	MRFW	3.14	3.01	4.4
LPM01317	FPYX	MRFW	3.38	3.26	3.6
LPM01318	FPYX	MRFW	3.42	3.19	7.0
LPM01319	FPYX	MRFW	3.39	3.28	3.4
LPM01320	FPYX	MRFW	3.48	3.33	4.5
LPM01321	OTHER	MRFW	3.53	3.33	6.0
LPM01322	FPYX	MRFW	3.45	3.27	5.3
LPM01323	FPYX	MRFW	3.45	3.37	2.3
LPM01324	FPYX	MRFW	3.40	3.23	5.2
LPM01325	FPYX	MRFW	3.38	3.24	4.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01326	FPYX	MRFW	3.41	3.24	5.0
LPM01327	FPYX	MRFW	3.40	3.23	5.0
LPM01328	FPYX	MRFW	3.38	3.23	4.7
LPM01329	FPYX	MRFW	3.18	3.09	2.8
LPM01330	FPYX	MRFW	3.31	3.12	6.1
LPM01331	FPYX	MRFW	3.37	3.16	6.3
LPM01332	FPYX	MRFW	3.39	3.22	5.1
LPM01333	FPYX	MRFW	3.39	3.24	4.4
LPM01334	FPYX	MRFW	3.37	3.22	4.5
LPM01335	FPYX	MRFW	3.38	3.22	4.7
LPM01336	FPYX	MRFW	3.38	3.24	4.3
LPM01337	FPYX	MRFW	3.40	3.21	5.8
LPM01338	FPYX	MRFW	3.39	3.20	5.8
LPM01339	FPYX	MRFW	3.31	3.18	4.0
LPM01340	FPYX	MRFW	3.43	3.23	6.1
LPM01341	FPYX	MRFW	3.43	3.26	5.2
LPM01342	FPYX	MRFW	3.42	3.22	6.2
LPM01343	FPYX	MRFW	3.45	3.01	13.7
LPM01344	FPYX	MRFW	3.44	3.23	6.3
LPM01345	FPYX	MRFW	3.37	3.19	5.6
LPM01346	FPYX	MRFW	3.41	3.20	6.2
LPM01347	OTHER	MRFW	3.42	3.20	6.5
LPM01348	FPYX	MRFW	3.50	3.22	8.4
LPM01349	FPYX	MRFW	3.42	3.07	10.7
LPM01350	FPYX	MRFW	3.44	3.09	10.9
LPM01351	FPYX	MRFW	3.29	3.04	7.8
LPM01352	FPYX	MRFW	3.46	3.17	8.6
LPM01353	FPYX	MRFW	3.49	3.05	13.6
LPM01354	FPYX	MRFW	3.45	3.23	6.5
LPM01355	FPYX	MRFW	3.50	3.23	8.2
LPM01356	FPYX	MRFW	3.46	3.27	5.5
LPM01357	FPYX	MRFW	3.47	3.27	5.9
LPM01358	FPYX	MRFW	3.45	3.21	7.1
LPM01359	FPYX	MRFW	3.50	3.25	7.3
LPM01360	FPYX	MRFW	3.43	3.19	7.1
LPM01361	FPYX	MRFW	3.32	2.91	13.0
LPM01362	FPYX	MRFW	3.43	3.20	6.9
LPM01363	FPYX	MRFW	3.43	3.19	7.3
LPM01364	FPYX	MRFW	3.47	3.25	6.6
LPM01365	FPYX	MRFW	3.48	3.20	8.4
LPM01366	FPYX	MRFW	3.50	3.28	6.5
LPM01367	FPYX	MRFW	3.44	3.19	7.5
LPM01368	FPYX	MRFW	3.45	3.19	7.5
LPM01369	FPYX	MRFW	3.46	3.06	12.4
LPM01370	FPYX	MRFW	3.46	3.19	8.2
LPM01371	FPYX	MRFW	3.47	3.19	8.4
LPM01372	FPYX	MRFW	3.32	3.14	5.4
LPM01373	FPYX	MRFW	3.34	3.31	0.9
LPM01374	FPYX	MRFW	3.31	3.21	3.0
LPM01375	FPYX	MRFW	3.40	3.27	3.8
LPM01376	FPYX	MRFW	3.25	2.90	11.5
LPM01377	FPYX	MRFW	3.36	3.15	6.5
LPM01378	FPYX	MRFW	3.29	3.02	8.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01379	FPYX	MRFW	3.37	3.16	6.3
LPM01380	FPYX	MRFW	3.44	3.27	5.2
LPM01381	FPYX	MRFW	3.44	3.24	6.0
LPM01382	FPYX	MRFW	3.19	3.06	4.2
LPM01383	FPYX	MRFW	3.40	3.26	4.2
LPM01384	FPYX	MRFW	3.44	3.20	7.1
LPM01385	FPYX	MRFW	3.38	3.19	5.8
LPM01386	FPYX	MRFW	3.45	3.24	6.2
LPM01387	OTHER	MRFW	3.43	3.24	5.6
LPM01388	FPYX	MRFW	3.41	3.23	5.5
LPM01389	FPYX	MRFW	3.41	3.17	7.2
LPM01390	FPYX	MRFW	3.50	3.26	7.2
LPM01391	FPYX	MRFW	3.44	3.23	6.1
LPM01392	FPYX	MRFW	3.45	3.20	7.7
LPM01393	OTHER	MRFW	3.46	3.20	7.9
LPM01394	FPYX	MRFW	3.43	3.21	6.5
LPM01395	FPYX	MRFW	3.38	3.21	5.0
LPM01396	FPYX	MRFW	3.39	3.17	6.7
LPM01397	FPYX	MRFW	3.49	3.15	10.4
LPM01398	FPYX	MRFW	3.40	3.21	5.8
LPM01399	OTHER	MRFW	3.42	3.21	6.4
LPM01400	FPYX	MRFW	3.45	3.25	6.0
LPM01401	FPYX	MRFW	3.06	3.04	0.7
LPM01402	FPYX	MRFW	3.40	3.29	3.2
LPM01403	FPYX	MRFW	3.37	3.25	3.7
LPM01404	FPYX	MRFW	3.39	3.25	4.2
LPM01405	FPYX	MRFW	3.34	3.22	3.8
LPM01406	FPYX	MRFW	3.36	3.23	4.0
LPM01407	FPYX	MRFW	3.44	3.24	6.0
LPM01408	FPYX	MRFW	3.06	2.79	9.4
LPM01409	FPYX	MRFW	3.13	2.89	8.1
LPM01410	FPYX	MRFW	2.99	2.97	0.5
LPM01411	FPYX	MRFW	3.08	2.96	4.0
LPM01412	FPYX	MRFW	3.31	3.15	4.9
LPM01413	FPYX	MRFW	3.08	3.20	-3.7
LPM01414	N	MRFW	3.17	2.99	6.0
LPM01415	N	MRFW	3.17	2.95	7.1
LPM01416	OTHER	MRFW	3.14	2.95	6.2
LPM01417	N	MRFW	3.10	3.07	1.0
LPM01418	N	MRFW	3.14	3.10	1.4
LPM01419	N	MRFW	3.39	3.00	12.2
LPM01420	N	MRFW	3.00	2.89	3.9
LPM01421	N	MRFW	3.09	2.98	3.5
LPM01422	FPYX	MRFW	3.08	3.08	0.1
LPM01423	FPYX	MRFW	3.10	3.08	0.6
LPM01424	FPYX	MRFW	3.26	3.10	4.8
LPM01425	OTHER	MRFW	3.16	3.10	1.8
LPM01426	FPYX	MRFW	3.09	3.11	-0.5
LPM01427	FPYX	MRFW	3.26	3.16	3.1
LPM01428	FPYX	MRFW	3.36	3.32	1.1
LPM01429	FPYX	MRFW	3.33	3.27	1.8
LPM01430	FPYX	MRFW	3.23	3.20	0.8
LPM01431	FPYX	MRFW	3.21	3.16	1.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01432	FPYX	MRFW	3.22	3.18	1.3
LPM01433	FPYX	MRFW	3.27	3.18	2.9
LPM01434	OTHER	MRFW	3.29	3.18	3.3
LPM01435	FPYX	MRFW	2.95	2.75	7.1
LPM01436	FPYX	MRFW	2.81	2.74	2.5
LPM01437	FPYX	MRFW	3.13	3.07	2.1
LPM01438	FPYX	MRFW	3.13	3.11	0.6
LPM01439	FPYX	MRFW	3.15	3.11	1.2
LPM01440	FPYX	MRFW	3.37	2.98	12.3
LPM01441	FPYX	MRFW	3.38	3.27	3.2
LPM01442	FPYX	MRFW	3.38	3.24	4.1
LPM01443	FPYX	MRFW	3.31	3.16	4.6
LPM01444	FPYX	MRFW	3.35	3.19	4.8
LPM01445	FPYX	MRFW	3.35	3.19	5.0
LPM01446	OTHER	MRFW	3.36	3.28	2.3
LPM01447	POIKAN	MRFW	2.85	2.74	3.8
LPM01448	POIKAN	MRFW	2.87	2.81	2.2
LPM01449	N	MRFW	3.11	2.99	3.9
LPM01450	FPYX	MRFW	3.26	3.11	4.6
LPM01451	FPYX	MRFW	3.17	3.12	1.7
LPM01452	FPYX	MRFW	3.37	3.30	2.0
LPM01453	FPYX	MRFW	3.36	3.27	2.7
LPM01454	FPYX	MRFW	3.33	3.23	3.1
LPM01455	FPYX	MRFW	3.32	3.21	3.2
LPM01456	FPYX	MRFW	3.33	3.22	3.4
LPM01457	FPYX	MRFW	3.47	3.31	4.6
LPM01458	OTHER	MRFW	2.85	2.75	3.8
LPM01459	POIKAN	MRFW	2.82	2.74	3.0
LPM01460	POIKAN	MRFW	2.86	2.74	4.5
LPM01461	N	MRFW	3.22	3.05	5.4
LPM01462	FPYX	MRFW	3.35	3.25	3.1
LPM01463	FPYX	MRFW	3.24	3.03	6.8
LPM01464	FPYX	MRFW	3.48	3.31	5.1
LPM01465	FPYX	MRFW	3.42	3.25	5.2
LPM01466	FPYX	MRFW	3.38	3.21	5.2
LPM01467	FPYX	MRFW	3.38	3.18	6.0
LPM01468	FPYX	MRFW	3.38	3.22	4.8
LPM01469	FPYX	MRFW	3.29	3.10	5.8
LPM01470	OTHER	MRFW	2.88	2.74	4.9
LPM01471	POIKAN	MRFW	2.86	2.73	4.5
LPM01472	POIKAN	MRFW	2.92	2.84	2.7
LPM01473	POIKAN	MRFW	3.23	3.10	4.2
LPM01474	FPYX	MRFW	3.34	3.17	5.3
LPM01475	FPYX	MRFW	3.25	3.13	3.7
LPM01476	FPYX	MRFW	3.50	3.29	6.2
LPM01477	FPYX	MRFW	3.49	3.31	5.3
LPM01478	FPYX	MRFW	3.49	3.33	4.6
LPM01479	FPYX	MRFW	3.43	3.22	6.4
LPM01480	FPYX	MRFW	3.46	3.26	5.8
LPM01481	POIKAN	MRFW	3.10	2.93	5.7
LPM01482	OTHER	MRFW	3.09	2.93	5.3
LPM01483	POIKAN	MRFW	2.86	2.72	5.1
LPM01484	POIKAN	MRFW	2.85	2.70	5.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM01485	N	MRFW	2.93	2.78	5.4
LPM01486	FPYX	MRFW	3.22	3.03	6.0
LPM01487	FPYX	MRFW	3.34	3.17	5.4
LPM01488	PYX	MRFW	3.36	3.18	5.6
LPM01489	PYX	MRFW	3.38	3.18	6.1
LPM01490	PYX	MRFW	3.47	3.28	5.5
LPM01491	PYX	MRFW	3.44	3.17	8.1
LPM01492	PYX	MRFW	3.46	3.30	4.8
LPM01493	PYX	MRFW	3.37	3.20	5.1
LPM01494	PYX	MRFW	3.36	3.21	4.5
LPM01495	PYX	MRFW	3.41	3.15	8.1
LPM01496	PYX	MRFW	3.31	3.16	4.5
LPM01497	PYX	MRFW	3.39	3.27	3.7
LPM01498	PYX	MRFW	3.34	3.26	2.4
LPM01499	PYX	MRFW	3.36	3.26	3.1
LPM01500	PYX	MRFW	3.28	3.15	3.8
LPM01501	PYX	MRFW	3.37	3.26	3.5
LPM01502	PYX	MRFW	3.36	3.19	5.1
LPM01503	PYX	MRFW	3.41	3.21	6.2
LPM01504	PYX	MRFW	3.51	3.24	7.9
LPM01505	PYX	MRFW	3.49	3.20	8.7
LPM01506	PYX	MRFW	3.51	3.32	5.6
LPM01507	PYX	MRFW	3.46	3.10	10.9
LPM01508	PYX	MRFW	3.44	3.24	5.9
LPM01509	PYX	MRFW	3.52	3.22	9.0
LPM01510	PYX	MRFW	3.42	3.07	10.7
LPM01511	PYX	MRFW	3.45	3.19	7.8
LPM01512	PYX	MRFW	3.41	3.29	3.5
LPM01513	PYX	MRFW	3.41	3.27	4.3
LPM01514	PYX	MRFW	3.42	3.23	5.6
LPM01515	PYX	MRFW	3.48	3.26	6.6
LPM01516	PYX	MRFW	3.48	3.20	8.4
LPM01517	PYX	MRFW	3.47	3.19	8.5
LPM01518	PYX	MRFW	3.48	3.27	6.2
LPM01519	PYX	MRFW	3.49	3.15	10.3
LPM01520	PYX	MRFW	3.34	3.26	2.6
LPM01521	PYX	MRFW	3.33	3.17	4.8
LPM01522	PYX	MRFW	3.35	3.15	6.1
LPM01523	PYX	MRFW	3.36	3.25	3.5
LPM01524	PYX	MRFW	3.33	3.17	5.1
LPM01525	PYX	MRFW	3.34	3.18	5.0
LPM01526	PYX	MRFW	3.41	3.15	7.9
LPM01527	PYX	MRFW	3.43	3.26	5.1
LPM01528	PYX	MRFW	3.37	3.25	3.6
LPM01529	PYX	MRFW	3.32	3.23	2.7
LPM01530	PYX	MRFW	3.38	3.23	4.4
LPM01531	PYX	MRFW	3.42	3.21	6.3
LPM01532	PYX	MRFW	3.45	3.20	7.4
LPM01533	PYX	MRFW	2.90	2.73	6.1
LPM01534	OTHER	MRFW	2.95	2.73	7.8
LPM01535	PYX	MRFW	2.86	2.79	2.3
LPM01536	PYX	MRFW	3.09	3.00	3.0
LPM01537	PYX	MRFW	3.23	3.12	3.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01538	PYX	MRFW	3.21	3.08	4.2
LPM01539	PYX	MRFW	3.09	2.94	4.9
LPM01540	PYX	MRFW	3.19	3.06	4.0
LPM01541	PYX	MRFW	3.25	3.11	4.2
LPM01542	PYX	MRFW	3.14	3.09	1.7
LPM01543	PYX	MRFW	3.24	3.14	3.1
LPM01544	PYX	MRFW	3.22	3.14	2.6
LPM01545	PYX	MRFW	3.34	3.22	3.6
LPM01546	PYX	MRFW	3.32	3.13	5.9
LPM01547	PYX	MRFW	3.18	3.17	0.2
LPM01548	OTHER	MRFW	2.82	2.75	2.7
LPM01549	OTHER	MRFW	2.82	2.74	3.0
LPM01550	OTHER	MRFW	2.98	2.91	2.5
LPM01551	PYX	MRFW	3.23	3.13	3.2
LPM01552	PYX	MRFW	3.24	3.04	6.2
LPM01553	PYX	MRFW	3.19	3.04	4.7
LPM01554	OTHER	MRFW	3.19	3.04	4.7
LPM01555	N	MRFW	3.08	3.02	1.9
LPM01556	PYX	MRFW	3.27	3.19	2.4
LPM01557	PYX	MRFW	3.16	2.97	6.2
LPM01558	PYX	MRFW	3.24	3.15	2.9
LPM01559	PYX	MRFW	3.33	3.20	3.9
LPM01560	PYX	MRFW	3.33	3.25	2.5
LPM01561	PYX	MRFW	3.23	3.20	0.8
LPM01562	OTHER	MRFW	2.82	2.75	2.7
LPM01563	OTHER	MRFW	2.83	2.74	3.1
LPM01564	N	MRFW	3.02	2.84	6.2
LPM01565	PYX	MRFW	3.22	3.11	3.4
LPM01566	PYX	MRFW	3.20	3.11	3.0
LPM01567	PYX	MRFW	3.13	3.04	3.0
LPM01568	N	MRFW	3.08	3.01	2.1
LPM01569	N	MRFW	3.31	3.19	3.6
LPM01570	N	MRFW	3.14	3.05	2.9
LPM01571	N	MRFW	3.25	3.17	2.5
LPM01572	OTHER	MRFW	3.27	3.17	3.1
LPM01573	PYX	MRFW	3.26	3.25	0.3
LPM01574	PYX	MRFW	3.27	3.25	0.6
LPM01575	PYX	MRFW	3.34	3.22	3.5
LPM01576	PYX	MRFW	3.36	3.20	4.9
LPM01577	PYX	MRFW	3.34	3.18	4.8
LPM01578	PYX	MRFW	3.35	3.20	4.6
LPM01579	PYX	MRFW	3.37	3.22	4.5
LPM01580	PYX	MRFW	3.36	3.23	4.0
LPM01581	PYX	MRFW	3.39	3.23	4.9
LPM01582	PYX	MRFW	3.38	3.24	4.3
LPM01583	PYX	MRFW	3.38	3.23	4.3
LPM01584	PYX	MRFW	3.39	3.23	4.8
LPM01585	PYX	MRFW	3.34	3.16	5.4
LPM01586	PYX	MRFW	3.53	3.39	4.0
LPM01587	PYX	MRFW	3.37	3.24	3.8
LPM01588	PYX	MRFW	3.32	3.21	3.5
LPM01589	PYX	MRFW	3.47	3.34	3.8
LPM01590	PYX	MRFW	3.40	3.20	6.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01591	PYX	MRFW	3.29	3.19	3.2
LPM01592	PYX	MRFW	3.37	3.23	4.3
LPM01593	PYX	MRFW	3.35	3.22	4.1
LPM01594	PYX	MRFW	3.37	3.23	4.2
LPM01595	PYX	MRFW	3.37	3.23	4.2
LPM01596	PYX	MRFW	3.36	3.22	4.3
LPM01597	PYX	MRFW	3.37	3.25	3.7
LPM01598	PYX	MRFW	3.33	3.21	3.6
LPM01599	PYX	MRFW	3.24	3.25	-0.4
LPM01600	PYX	MRFW	3.21	3.18	0.8
LPM01601	PYX	MRFW	3.20	3.18	0.6
LPM01602	PYX	MRFW	3.28	3.25	0.8
LPM01603	PYX	MRFW	3.22	3.19	0.8
LPM01604	PYX	MRFW	3.20	3.18	0.5
LPM01605	PYX	MRFW	3.22	3.20	0.5
LPM01606	PYX	MRFW	3.20	3.21	-0.3
LPM01607	PYX	MRFW	3.25	3.24	0.3
LPM01608	PYX	MRFW	3.21	3.23	-0.7
LPM01609	PYX	MRFW	3.22	3.24	-0.6
LPM01610	PYX	MRFW	3.25	3.24	0.4
LPM01611	PYX	MRFW	3.24	3.24	-0.1
LPM01612	PYX	MRFW	3.24	3.24	0.1
LPM01613	PYX	MRFW	3.28	3.14	4.4
LPM01614	PYX	MRFW	3.35	3.28	2.2
LPM01615	PYX	MRFW	3.44	3.28	4.7
LPM01616	PYX	MRFW	3.33	3.17	4.9
LPM01617	PYX	MRFW	3.38	3.19	5.6
LPM01618	PYX	MRFW	3.41	3.21	6.0
LPM01619	PYX	MRFW	3.39	3.23	5.0
LPM01620	PYX	MRFW	3.40	3.23	5.2
LPM01621	PYX	MRFW	3.39	3.21	5.5
LPM01622	PYX	MRFW	3.36	3.18	5.6
LPM01623	PYX	MRFW	3.41	3.24	5.2
LPM01624	PYX	MRFW	3.41	3.23	5.3
LPM01625	PYX	MRFW	3.41	3.23	5.4
LPM01626	PYX	MRFW	3.14	3.13	0.2
LPM01627	PYX	MRFW	3.32	3.22	3.2
LPM01628	PYX	MRFW	3.33	3.26	2.3
LPM01629	PYX	MRFW	3.28	3.28	-0.1
LPM01630	PYX	MRFW	3.24	3.25	-0.2
LPM01631	PYX	MRFW	3.32	3.22	3.1
LPM01632	PYX	MRFW	3.30	3.23	2.2
LPM01633	PYX	MRFW	3.28	3.25	1.0
LPM01634	PYX	MRFW	3.23	3.21	0.6
LPM01635	PYX	MRFW	3.26	3.23	0.9
LPM01636	PYX	MRFW	3.24	3.22	0.6
LPM01637	PYX	MRFW	3.25	3.34	-2.9
LPM01638	PYX	MRFW	3.28	3.24	1.1
LPM01639	PYX	MRFW	3.28	3.21	2.1
LPM01640	PYX	MRFW	3.31	3.25	1.9
LPM01641	PYX	MRFW	3.34	3.26	2.6
LPM01642	PYX	MRFW	3.31	3.18	4.0
LPM01643	PYX	MRFW	3.26	3.12	4.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01644	PYX	MRFW	3.33	3.23	3.2
LPM01645	PYX	MRFW	3.35	3.24	3.3
LPM01646	PYX	MRFW	3.30	3.20	3.2
LPM01647	PYX	MRFW	3.29	3.22	2.1
LPM01648	PYX	MRFW	3.29	3.19	3.0
LPM01649	PYX	MRFW	3.33	3.26	2.2
LPM01650	PYX	MRFW	3.32	3.23	2.7
LPM01651	PYX	MRFW	3.31	3.23	2.3
LPM01652	PYX	MRFW	3.28	3.23	1.6
LPM01653	PYX	MRFW	3.25	3.33	-2.5
LPM01654	PYX	MRFW	3.26	3.22	1.2
LPM01655	PYX	MRFW	3.25	3.21	1.1
LPM01656	PYX	MRFW	3.24	3.22	0.7
LPM01657	PYX	MRFW	3.20	3.15	1.5
LPM01658	PYX	MRFW	3.11	3.09	0.6
LPM01659	N	MRFW	3.01	2.96	1.5
LPM01660	N	MRFW	2.99	2.96	1.1
LPM01661	N	MRFW	2.98	2.98	-0.1
LPM01662	N	MRFW	2.96	2.96	0.0
LPM01663	N	MRFW	3.00	2.98	0.6
LPM01664	N	MRFW	3.04	2.96	2.7
LPM01665	N	MRFW	2.98	3.01	-1.0
LPM01666	N	MRFW	3.25	2.93	10.3
LPM01667	PYX	MRFW	3.35	3.47	-3.5
LPM01668	PYX	MRFW	3.38	3.08	9.3
LPM01669	PYX	MRFW	3.29	3.20	2.8
LPM01670	PYX	MRFW	3.32	3.22	3.1
LPM01671	PYX	MRFW	3.30	3.22	2.4
LPM01672	PYX	MRFW	3.39	3.34	1.6
LPM01673	N	MRFW	3.30	3.24	1.7
LPM01674	N	MRFW	3.07	2.98	3.1
LPM01675	N	MRFW	3.07	3.00	2.2
LPM01676	N	MRFW	3.03	2.86	5.8
LPM01677	N	MRFW	3.06	2.96	3.2
LPM01678	N	MRFW	3.07	2.94	4.3
LPM01679	N	MRFW	3.06	2.95	3.8
LPM01680	N	MRFW	3.10	2.97	4.2
LPM01681	PYX	MRFW	3.41	3.28	4.0
LPM01682	PYX	MRFW	3.37	3.22	4.4
LPM01683	PYX	MRFW	3.37	3.21	4.9
LPM01684	PYX	MRFW	3.09	3.22	-4.2
LPM01685	PYX	MRFW	3.05	3.10	-1.5
LPM01686	PYX	MRFW	3.15	2.84	10.4
LPM01687	PYX	MRFW	3.17	3.02	4.9
LPM01688	N	MRFW	3.18	2.97	6.9
LPM01689	N	MRFW	3.14	2.97	5.5
LPM01690	N	MRFW	3.11	2.91	6.8
LPM01691	N	MRFW	3.12	2.96	5.3
LPM01692	N	MRFW	3.09	2.90	6.2
LPM01693	N	MRFW	3.12	2.93	6.2
LPM01694	PYX	MRFW	3.45	3.24	6.2
LPM01695	PYX	MRFW	3.43	3.26	5.0
LPM01696	PYX	MRFW	3.37	3.23	4.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01697	PYX	MRFW	3.44	3.28	4.9
LPM01698	PYX	MRFW	3.39	3.21	5.5
LPM01699	PYX	MRFW	3.38	3.23	4.5
LPM01700	PYX	MRFW	3.38	3.24	4.2
LPM01701	PYX	MRFW	3.37	3.19	5.5
LPM01702	PYX	MRFW	3.34	3.21	3.9
LPM01703	PYX	MRFW	3.33	3.22	3.3
LPM01704	PYX	MRFW	3.33	3.20	4.0
LPM01705	PYX	MRFW	3.33	3.23	3.1
LPM01706	PYX	MRFW	3.33	3.21	3.6
LPM01707	PYX	MRFW	3.33	3.23	3.2
LPM01708	PYX	MRFW	3.49	3.25	7.1
LPM01709	PYX	MRFW	3.49	3.25	7.1
LPM01710	PYX	MRFW	3.47	3.25	6.4
LPM01711	PYX	MRFW	3.43	3.25	5.5
LPM01712	PYX	MRFW	3.41	3.23	5.6
LPM01713	PYX	MRFW	3.42	3.24	5.3
LPM01714	PYX	MRFW	3.41	3.22	5.9
LPM01715	PYX	MRFW	3.40	3.22	5.5
LPM01716	PYX	MRFW	3.40	3.21	5.6
LPM01717	PYX	MRFW	3.40	3.20	5.9
LPM01718	PYX	MRFW	3.40	3.21	5.6
LPM01719	PYX	MRFW	3.40	3.20	6.0
LPM01720	PYX	MRFW	3.39	3.20	5.8
LPM01721	PYX	MRFW	3.40	3.21	5.8
LPM01722	PYX	MRFW	3.41	3.31	3.1
LPM01723	PYX	MRFW	3.44	3.25	5.6
LPM01724	PYX	MRFW	3.48	3.25	6.8
LPM01725	PYX	MRFW	3.47	3.20	8.0
LPM01726	PYX	MRFW	3.43	3.25	5.2
LPM01727	PYX	MRFW	3.40	3.22	5.4
LPM01728	PYX	MRFW	3.40	3.19	6.3
LPM01729	PYX	MRFW	3.38	3.19	5.6
LPM01730	PYX	MRFW	3.40	3.23	5.1
LPM01731	PYX	MRFW	3.42	3.23	5.6
LPM01732	PYX	MRFW	3.42	3.20	6.4
LPM01733	PYX	MRFW	3.39	3.23	4.8
LPM01734	PYX	MRFW	3.39	3.21	5.6
LPM01735	PYX	MRFW	3.40	3.11	8.9
LPM01736	FPYX	MRFW	3.33	3.16	5.3
LPM01737	FPYX	MRFW	3.40	3.24	4.9
LPM01738	FPYX	MRFW	3.30	3.20	3.0
LPM01739	FPYX	MRFW	3.38	3.05	10.1
LPM01740	FPYX	MRFW	3.38	3.28	3.1
LPM01741	FPYX	MRFW	3.33	3.20	4.1
LPM01742	N	MRFW	3.11	2.90	7.0
LPM01743	N	MRFW	3.15	2.90	8.2
LPM01744	N	MRFW	3.04	2.95	3.1
LPM01745	FPYX	MRFW	3.06	2.96	3.1
LPM01746	FPYX	MRFW	3.20	3.05	4.6
LPM01747	FPYX	MRFW	3.30	3.22	2.5
LPM01748	FPYX	MRFW	3.30	3.21	2.7
LPM01749	FPYX	MRFW	3.22	3.14	2.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01750	FPYX	MRFW	3.27	3.23	1.2
LPM01751	FPYX	MRFW	3.26	3.19	2.3
LPM01752	FPYX	MRFW	3.30	3.24	1.9
LPM01753	FPYX	MRFW	3.30	3.24	1.8
LPM01754	FPYX	MRFW	3.31	3.22	2.8
LPM01755	N	MRFW	3.10	3.04	2.0
LPM01756	N	MRFW	3.02	2.95	2.3
LPM01757	N	MRFW	3.02	2.99	1.2
LPM01758	N	MRFW	3.18	3.26	-2.5
LPM01759	OTHER	MRFW	3.16	3.26	-3.1
LPM01760	FPYX	MRFW	3.26	3.18	2.4
LPM01761	FPYX	MRFW	3.30	3.19	3.3
LPM01762	FPYX	MRFW	3.30	3.19	3.5
LPM01763	FPYX	MRFW	3.27	3.18	2.8
LPM01764	FPYX	MRFW	3.31	3.20	3.2
LPM01765	FPYX	MRFW	3.35	3.23	3.7
LPM01766	FPYX	MRFW	3.32	3.23	2.8
LPM01767	FPYX	MRFW	3.33	3.25	2.5
LPM01768	N	MRFW	3.05	2.99	2.1
LPM01769	OTHER	MRFW	3.05	2.97	2.6
LPM01770	N	MRFW	3.00	2.94	2.0
LPM01771	N	MRFW	3.00	2.96	1.3
LPM01772	N	MRFW	3.07	3.02	1.6
LPM01773	N	MRFW	3.24	3.16	2.4
LPM01774	N	MRFW	3.25	3.17	2.4
LPM01775	FPYX	MRFW	3.31	3.19	3.8
LPM01776	FPYX	MRFW	3.37	3.27	3.0
LPM01777	FPYX	MRFW	3.30	3.20	3.1
LPM01778	N	MRFW	3.25	3.21	1.3
LPM01779	OTHER	MRFW	3.16	3.09	2.2
LPM01780	N	MRFW	3.13	3.09	1.2
LPM01781	N	MRFW	2.99	2.95	1.3
LPM01782	N	MRFW	2.98	2.95	1.0
LPM01783	N	MRFW	3.02	3.00	0.7
LPM01784	N	MRFW	3.18	3.14	1.0
LPM01785	N	MRFW	3.25	3.19	1.7
LPM01786	N	MRFW	3.22	3.19	0.8
LPM01787	PYX	MRFW	3.33	3.19	4.2
LPM01788	N	MRFW	3.23	3.12	3.3
LPM01789	N	MRFW	3.20	3.08	3.7
LPM01790	N	MRFW	3.09	3.01	2.5
LPM01791	N	MRFW	3.23	3.14	2.8
LPM01792	N	MRFW	3.14	3.05	2.8
LPM01793	N	MRFW	3.08	3.00	2.5
LPM01794	N	MRFW	3.11	3.06	1.8
LPM01795	N	MRFW	3.21	3.13	2.4
LPM01796	N	MRFW	3.19	3.09	2.9
LPM01797	N	MRFW	3.13	3.08	1.5
LPM01798	N	MRFW	3.10	2.99	3.5
LPM01799	N	MRFW	3.11	3.04	2.2
LPM01800	PYX	MRFW	3.45	3.11	10.3
LPM01801	N	MRFW	3.31	3.00	9.7
LPM01802	N	MRFW	3.34	2.99	10.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01803	N	MRFW	3.29	2.92	12.0
LPM01804	N	MRFW	3.31	3.06	7.8
LPM01805	N	MRFW	3.36	3.10	8.0
LPM01806	N	MRFW	3.28	2.95	10.7
LPM01807	N	MRFW	3.28	3.03	7.8
LPM01808	N	MRFW	3.38	3.08	9.3
LPM01809	N	MRFW	3.39	3.13	8.0
LPM01810	N	MRFW	3.32	2.97	11.0
LPM01811	N	MRFW	3.29	3.05	7.7
LPM01812	N	MRFW	3.20	2.93	8.9
LPM01813	N	MRFW	3.21	2.91	9.7
LPM01814	PYX	MRFW	3.48	3.22	7.7
LPM01815	N	MRFW	3.35	3.09	8.0
LPM01816	N	MRFW	3.29	3.02	8.4
LPM01817	N	MRFW	3.41	3.16	7.5
LPM01818	N	MRFW	3.49	3.17	9.5
LPM01819	N	MRFW	3.39	3.13	8.1
LPM01820	N	MRFW	3.27	3.01	8.2
LPM01821	N	MRFW	3.30	3.03	8.6
LPM01822	N	MRFW	3.40	3.13	8.3
LPM01823	N	MRFW	3.35	3.09	8.0
LPM01824	N	MRFW	3.29	3.01	8.9
LPM01825	N	MRFW	3.30	2.97	10.4
LPM01826	N	MRFW	3.39	3.02	11.6
LPM01827	N	MRFW	3.35	3.04	9.7
LPM01828	PYX	MRFW	3.49	3.24	7.6
LPM01829	PYX	MRFW	3.45	3.22	6.8
LPM01830	PYX	MRFW	3.49	3.22	7.9
LPM01831	PYX	MRFW	3.49	3.24	7.4
LPM01832	PYX	MRFW	3.45	3.22	6.9
LPM01833	PYX	MRFW	3.47	3.20	8.2
LPM01834	PYX	MRFW	3.47	3.22	7.4
LPM01835	PYX	MRFW	3.47	3.23	7.1
LPM01836	PYX	MRFW	3.36	3.22	4.2
LPM01837	N	MRFW	3.21	3.00	6.8
LPM01838	N	MRFW	3.21	3.02	6.0
LPM01839	N	MRFW	3.16	2.95	6.9
LPM01840	PYX	MRFW	3.59	3.30	8.3
LPM01841	PYX	MRFW	3.37	3.11	8.0
LPM01842	PYX	MRFW	3.32	2.97	11.0
LPM01843	PYX	MRFW	3.40	3.17	6.9
LPM01844	PYX	MRFW	3.47	3.24	6.7
LPM01845	PYX	MRFW	3.43	3.14	8.9
LPM01846	PYX	MRFW	3.44	3.22	6.6
LPM01847	PYX	MRFW	3.47	3.21	7.8
LPM01848	PYX	MRFW	3.48	3.22	7.7
LPM01849	PYX	MRFW	3.47	3.21	7.8
LPM01850	N	MRFW	3.30	3.11	5.9
LPM01851	N	MRFW	3.17	3.06	3.4
LPM01852	N	MRFW	3.20	3.00	6.5
LPM01853	PYX	MRFW	3.36	3.24	3.6
LPM01854	PYX	MRFW	3.41	3.18	6.9
LPM01855	PYX	MRFW	3.38	3.24	4.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01856	PYX	MRFW	3.43	3.24	5.6
LPM01857	PYX	MRFW	3.39	3.21	5.5
LPM01858	PYX	MRFW	3.47	3.22	7.6
LPM01859	PYX	MRFW	3.37	3.07	9.4
LPM01860	PYX	MRFW	2.93	2.85	2.7
LPM01861	PYX	MRFW	3.55	3.13	12.4
LPM01862	N	MRFW	3.20	3.01	6.1
LPM01863	PYX	MRFW	3.45	3.19	7.9
LPM01864	PYX	MRFW	3.46	3.24	6.7
LPM01865	PYX	MRFW	3.23	3.09	4.3
LPM01866	N	MRFW	3.14	2.95	6.3
LPM01867	N	MRFW	3.18	2.95	7.6
LPM01868	N	MRFW	3.24	3.03	6.7
LPM01869	N	MRFW	3.21	3.00	6.7
LPM01870	N	MRFW	3.35	3.17	5.6
LPM01871	N	MRFW	3.30	3.08	7.0
LPM01872	N	MRFW	3.26	3.03	7.2
LPM01873	N	MRFW	3.31	3.10	6.7
LPM01874	N	MRFW	3.35	3.12	7.1
LPM01875	N	MRFW	3.34	3.16	5.4
LPM01876	PYX	MRFW	3.51	3.25	7.8
LPM01877	PYX	MRFW	3.52	3.21	9.1
LPM01878	PYX	MRFW	3.45	3.14	9.3
LPM01879	N	MRFW	3.17	2.94	7.5
LPM01880	N	MRFW	3.26	2.97	9.5
LPM01881	N	MRFW	3.26	3.03	7.3
LPM01882	N	MRFW	3.16	2.95	6.9
LPM01883	N	MRFW	3.31	3.19	3.7
LPM01884	N	MRFW	3.23	3.06	5.5
LPM01885	N	MRFW	3.30	3.03	8.6
LPM01886	N	MRFW	3.32	3.08	7.6
LPM01887	N	MRFW	3.30	3.08	6.9
LPM01888	N	MRFW	3.22	3.00	7.2
LPM01889	N	MRFW	3.24	3.00	7.7
LPM01890	PYX	MRFW	3.52	3.21	9.2
LPM01891	PYX	MRFW	3.39	3.15	7.4
LPM01892	N	MRFW	3.24	2.87	12.2
LPM01893	N	MRFW	3.19	2.96	7.5
LPM01894	N	MRFW	3.27	3.01	8.4
LPM01895	N	MRFW	3.29	3.05	7.6
LPM01896	N	MRFW	3.19	2.92	8.6
LPM01897	N	MRFW	3.44	3.18	7.9
LPM01898	N	MRFW	3.29	3.02	8.4
LPM01899	N	MRFW	3.23	2.97	8.4
LPM01900	N	MRFW	3.33	3.02	9.6
LPM01901	N	MRFW	3.34	3.10	7.5
LPM01902	N	MRFW	3.30	3.02	8.8
LPM01903	N	MRFW	3.35	3.04	9.6
LPM01904	N	MRFW	3.35	3.04	9.6
LPM01905	PYX	MRFW	3.43	3.02	12.9
LPM01906	PYX	MRFW	3.39	3.26	4.0
LPM01907	PYX	MRFW	3.35	3.32	1.0
LPM01908	PYX	MRFW	3.33	3.21	3.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01909	PYX	MRFW	3.40	3.15	7.5
LPM01910	PYX	MRFW	3.37	3.24	3.9
LPM01911	PYX	MRFW	3.39	3.22	5.0
LPM01912	PYX	MRFW	3.32	3.20	3.4
LPM01913	PYX	MRFW	3.32	3.19	4.0
LPM01914	N	MRFW	3.22	3.09	4.1
LPM01915	N	MRFW	3.22	3.08	4.3
LPM01916	N	MRFW	3.24	3.13	3.3
LPM01917	N	MRFW	3.24	3.16	2.5
LPM01918	N	MRFW	3.26	3.15	3.3
LPM01919	PYX	MRFW	3.41	3.21	6.0
LPM01920	PYX	MRFW	3.46	3.25	6.2
LPM01921	PYX	MRFW	3.40	3.22	5.6
LPM01922	PYX	MRFW	3.44	3.22	6.5
LPM01923	PYX	MRFW	3.42	3.24	5.5
LPM01924	PYX	MRFW	3.43	3.23	6.1
LPM01925	PYX	MRFW	3.47	3.13	10.2
LPM01926	N	MRFW	3.30	3.08	6.9
LPM01927	N	MRFW	3.22	3.07	4.9
LPM01928	N	MRFW	3.29	3.04	8.0
LPM01929	N	MRFW	3.31	3.14	5.3
LPM01930	N	MRFW	3.33	3.15	5.5
LPM01931	N	MRFW	3.31	3.18	4.1
LPM01932	N	MRFW	3.35	3.18	5.1
LPM01933	PYX	MRFW	3.35	3.03	10.0
LPM01934	PYX	MRFW	3.40	3.20	6.1
LPM01935	PYX	MRFW	3.40	3.22	5.5
LPM01936	PYX	MRFW	3.41	3.21	6.0
LPM01937	PYX	MRFW	3.40	3.19	6.4
LPM01938	PYX	MRFW	3.39	3.21	5.5
LPM01939	PYX	MRFW	3.35	3.14	6.4
LPM01940	N	MRFW	3.19	3.06	4.2
LPM01941	N	MRFW	3.22	3.05	5.5
LPM01942	N	MRFW	3.24	3.06	5.7
LPM01943	N	MRFW	3.25	3.10	4.7
LPM01944	N	MRFW	3.30	3.13	5.4
LPM01945	N	MRFW	3.31	3.11	6.2
LPM01946	N	MRFW	3.30	3.12	5.5
LPM01947	PYX	MRFW	3.42	3.22	6.1
LPM01948	PYX	MRFW	3.40	3.28	3.6
LPM01949	PYX	MRFW	3.40	3.26	4.1
LPM01950	PYX	MRFW	3.37	3.22	4.5
LPM01951	PYX	MRFW	3.34	3.23	3.4
LPM01952	PYX	MRFW	3.34	3.25	2.8
LPM01953	PYX	MRFW	3.34	3.21	4.1
LPM01954	PYX	MRFW	3.34	3.21	4.1
LPM01955	PYX	MRFW	3.38	3.14	7.4
LPM01956	PYX	MRFW	3.39	3.28	3.2
LPM01957	PYX	MRFW	3.35	3.25	3.1
LPM01958	PYX	MRFW	3.34	3.22	3.7
LPM01959	PYX	MRFW	3.32	3.18	4.4
LPM01960	PYX	MRFW	3.34	3.27	2.0
LPM01961	PYX	MRFW	3.32	3.20	3.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM01962	PYX	MRFW	3.34	3.21	4.0
LPM01963	PYX	MRFW	3.35	3.30	1.6
LPM01964	PYX	MRFW	3.34	3.21	4.0
LPM01965	PYX	MRFW	3.34	3.20	4.2
LPM01966	PYX	MRFW	3.34	3.11	7.0
LPM01967	PYX	MRFW	3.35	3.16	5.7
LPM01968	PYX	MRFW	3.34	3.21	4.1
LPM01969	PYX	MRFW	3.41	3.27	4.3
LPM01970	PYX	MRFW	3.41	3.24	5.1
LPM01971	PYX	MRFW	3.38	3.20	5.4
LPM01972	PYX	MRFW	3.35	3.19	4.9
LPM01973	PYX	MRFW	3.35	3.23	3.7
LPM01974	PYX	MRFW	3.33	3.16	5.1
LPM01975	PYX	MRFW	3.39	3.23	4.6
LPM01976	PYX	MRFW	3.36	3.18	5.6
LPM01977	PYX	MRFW	3.35	3.21	4.2
LPM01978	PYX	MRFW	3.34	3.24	3.0
LPM01979	PYX	MRFW	3.37	3.20	5.1
LPM01980	PYX	MRFW	3.35	3.19	4.7
LPM01981	PYX	MRFW	3.36	3.18	5.7
LPM01982	PYX	MRFW	3.34	3.22	3.8
LPM01983	FPYX	MRFW	3.29	3.08	6.5
LPM01984	FPYX	MRFW	3.29	3.23	2.0
LPM01985	FPYX	MRFW	3.30	3.24	1.9
LPM01986	FPYX	MRFW	3.29	3.22	2.0
LPM01987	FPYX	MRFW	3.30	3.24	1.9
LPM01988	FPYX	MRFW	3.41	3.24	5.1
LPM01989	FPYX	MRFW	3.40	3.22	5.3
LPM01990	FPYX	MRFW	3.36	3.20	4.9
LPM01991	OTHER	MRFW	3.21	3.07	4.4
LPM01992	OTHER	MRFW	3.17	3.10	2.2
LPM01993	OTHER	MRFW	3.15	3.08	2.3
LPM01994	OTHER	MRFW	3.16	2.78	12.7
LPM01995	OTHER	MRFW	3.20	3.06	4.4
LPM01996	FPYX	MRFW	3.24	3.08	5.0
LPM01997	FPYX	MRFW	3.31	3.18	4.1
LPM01998	FPYX	MRFW	3.29	3.10	6.0
LPM01999	FPYX	MRFW	3.40	3.18	6.7
LPM02000	FPYX	MRFW	3.41	3.24	5.0
LPM02001	FPYX	MRFW	3.38	3.20	5.4
LPM02002	FPYX	MRFW	3.39	3.24	4.6
LPM02003	FPYX	MRFW	3.39	3.24	4.7
LPM02004	FPYX	MRFW	3.41	3.25	4.7
LPM02005	FPYX	MRFW	3.43	3.15	8.5
LPM02006	OTHER	MRFW	3.42	3.15	8.2
LPM02007	FPYX	MRFW	3.43	3.24	5.5
LPM02008	FPYX	MRFW	3.42	3.23	5.8
LPM02009	FPYX	MRFW	3.40	3.22	5.6
LPM02010	FPYX	MRFW	3.41	3.23	5.4
LPM02011	FPYX	MRFW	3.43	3.24	5.6
LPM02012	FPYX	MRFW	3.42	3.25	4.9
LPM02013	FPYX	MRFW	3.35	3.13	6.9
LPM02014	N	MRFW	3.16	3.02	4.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM02015	N	MRFW	3.06	2.95	3.8
LPM02016	N	MRFW	3.11	2.97	4.5
LPM02017	OTHER	MRFW	3.10	2.97	4.1
LPM02018	N	MRFW	3.15	3.03	4.0
LPM02019	N	MRFW	3.16	3.04	4.0
LPM02020	N	MRFW	3.15	3.01	4.4
LPM02021	FPYX	MRFW	3.37	3.30	2.0
LPM02022	FPYX	MRFW	3.39	3.18	6.4
LPM02023	FPYX	MRFW	3.40	3.22	5.4
LPM02024	FPYX	MRFW	3.41	3.24	5.1
LPM02025	FPYX	MRFW	3.40	3.15	7.6
LPM02026	FPYX	MRFW	3.30	3.10	6.1
LPM02027	FPYX	MRFW	3.15	3.01	4.5
LPM02028	OTHER	MRFW	3.16	3.01	4.8
LPM02029	FPYX	MRFW	3.05	2.95	3.3
LPM02030	FPYX	MRFW	3.10	2.98	3.9
LPM02031	FPYX	MRFW	3.17	3.00	5.4
LPM02032	FPYX	MRFW	3.31	3.03	8.9
LPM02033	FPYX	MRFW	3.28	3.02	8.3
LPM02034	FPYX	MRFW	3.34	3.03	9.9
LPM02035	FPYX	MRFW	3.43	2.96	14.7
LPM02036	FPYX	MRFW	3.66	3.22	12.7
LPM02037	FPYX	MRFW	3.53	3.21	9.4
LPM02038	FPYX	MRFW	3.48	3.20	8.4
LPM02039	FPYX	MRFW	3.45	3.20	7.4
LPM02040	FPYX	MRFW	3.50	3.24	7.7
LPM02041	FPYX	MRFW	3.36	3.22	4.4
LPM02042	FPYX	MRFW	3.21	3.00	6.7
LPM02043	OTHER	MRFW	3.15	3.00	4.8
LPM02044	FPYX	MRFW	3.08	2.93	4.9
LPM02045	FPYX	MRFW	3.11	2.96	4.7
LPM02046	FPYX	MRFW	3.17	2.78	13.2
LPM02047	FPYX	MRFW	3.19	3.07	3.9
LPM02048	FPYX	MRFW	3.14	2.99	4.9
LPM02049	FPYX	MRFW	3.15	3.03	3.8
LPM02050	FPYX	MRFW	3.66	3.28	11.1
LPM02051	FPYX	MRFW	3.40	3.25	4.5
LPM02052	OTHER	MRFW	3.51	3.18	9.7
LPM02053	FPYX	MRFW	3.41	3.04	11.6
LPM02054	N	MRFW	3.33	2.97	11.4
LPM02055	N	MRFW	3.39	2.98	12.8
LPM02056	FPYX	MRFW	3.48	3.02	14.3
LPM02057	FPYX	MRFW	3.63	3.21	12.4
LPM02058	FPYX	MRFW	3.56	3.18	11.2
LPM02059	FPYX	MRFW	3.35	3.20	4.7
LPM02060	FPYX	MRFW	3.34	3.18	5.0
LPM02061	FPYX	MRFW	3.32	3.25	2.2
LPM02062	FPYX	MRFW	3.33	3.22	3.3
LPM02063	FPYX	MRFW	3.07	3.18	-3.4
LPM02064	FPYX	MRFW	3.18	3.12	1.9
LPM02065	FPYX	MRFW	3.08	3.00	2.6
LPM02066	FPYX	MRFW	3.27	2.99	8.8
LPM02067	FPYX	MRFW	3.15	3.05	3.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02068	FPYX	MRFW	3.40	3.18	6.8
LPM02069	FPYX	MRFW	3.33	3.21	3.8
LPM02070	FPYX	MRFW	3.39	3.22	5.2
LPM02071	FPYX	MRFW	3.40	3.23	5.2
LPM02072	N	MRFW	3.18	3.04	4.5
LPM02073	N	MRFW	3.31	3.02	9.2
LPM02074	N	MRFW	3.19	3.01	5.9
LPM02075	N	MRFW	3.21	2.98	7.5
LPM02076	FPYX	MRFW	3.48	3.24	7.3
LPM02077	FPYX	MRFW	3.50	3.24	7.7
LPM02078	FPYX	MRFW	3.51	3.23	8.3
LPM02079	FPYX	MRFW	3.56	3.27	8.4
LPM02080	OTHER	MRFW	3.65	3.27	10.9
LPM02081	FPYX	MRFW	3.63	3.22	11.9
LPM02082	FPYX	MRFW	3.40	3.03	11.7
LPM02083	FPYX	MRFW	3.46	3.23	6.9
LPM02084	FPYX	MRFW	3.49	3.26	6.8
LPM02085	FPYX	MRFW	3.54	3.24	8.6
LPM02086	FPYX	MRFW	3.59	3.22	10.9
LPM02087	FPYX	MRFW	3.61	3.22	11.4
LPM02088	FPYX	MRFW	3.57	3.11	13.7
LPM02089	FPYX	MRFW	3.63	3.24	11.5
LPM02090	FPYX	MRFW	3.54	3.09	13.6
LPM02091	N	MRFW	3.42	3.01	12.9
LPM02092	N	MRFW	3.53	3.05	14.4
LPM02093	FPYX	MRFW	3.34	3.22	3.8
LPM02094	FPYX	MRFW	3.41	3.27	4.3
LPM02095	FPYX	MRFW	3.48	3.26	6.5
LPM02096	FPYX	MRFW	3.59	3.17	12.5
LPM02097	FPYX	MRFW	3.60	3.17	12.6
LPM02098	OTHER	MRFW	3.62	3.17	13.2
LPM02099	FPYX	MRFW	3.66	3.17	14.2
LPM02100	N	MRFW	3.22	2.94	9.2
LPM02101	N	MRFW	3.30	2.97	10.6
LPM02102	FPYX	MRFW	3.62	3.21	12.1
LPM02103	FPYX	MRFW	3.52	3.11	12.2
LPM02104	FPYX	MRFW	3.44	3.12	9.8
LPM02105	FPYX	MRFW	3.55	3.24	9.2
LPM02106	FPYX	MRFW	3.62	3.26	10.6
LPM02107	FPYX	MRFW	3.31	3.16	4.7
LPM02108	FPYX	MRFW	3.38	3.21	5.2
LPM02109	FPYX	MRFW	3.29	3.24	1.4
LPM02110	FPYX	MRFW	2.84	2.74	3.7
LPM02111	FPYX	MRFW	3.13	3.08	1.5
LPM02112	FPYX	MRFW	3.16	3.06	3.1
LPM02113	FPYX	MRFW	3.26	3.05	6.5
LPM02114	OTHER	MRFW	3.27	3.05	6.9
LPM02115	FPYX	MRFW	3.01	2.83	6.2
LPM02116	FPYX	MRFW	2.84	2.78	2.1
LPM02117	FPYX	MRFW	2.83	2.72	4.1
LPM02118	FPYX	MRFW	2.95	2.86	3.2
LPM02119	FPYX	MRFW	3.13	2.97	5.3
LPM02120	FPYX	MRFW	3.19	3.10	2.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02121	FPYX	MRFW	3.17	3.08	2.9
LPM02122	N	MRFW	3.06	2.99	2.3
LPM02123	N	MRFW	3.24	3.07	5.5
LPM02124	N	MRFW	3.22	3.12	3.1
LPM02125	FPYX	MRFW	3.18	3.28	-3.1
LPM02126	POIKAN	MRFW	2.78	2.77	0.3
LPM02127	POIKAN	MRFW	2.78	2.76	0.8
LPM02128	POIKAN	MRFW	2.86	2.76	3.5
LPM02129	N	MRFW	3.02	3.03	-0.2
LPM02130	N	MRFW	3.13	3.09	1.1
LPM02131	N	MRFW	3.03	2.98	1.7
LPM02132	N	MRFW	2.95	2.92	0.9
LPM02133	N	MRFW	3.01	2.96	1.6
LPM02134	N	MRFW	3.06	3.03	1.0
LPM02135	FPYX	MRFW	3.20	3.15	1.7
LPM02136	POIKAN	MRFW	2.77	2.76	0.4
LPM02137	POIKAN	MRFW	2.75	2.72	1.0
LPM02138	PYXAN	MRFW	2.90	2.87	1.1
LPM02139	PYXAN	MRFW	3.07	3.03	1.2
LPM02140	FPYX	MRFW	3.17	3.09	2.5
LPM02141	PYXAN	MRFW	3.02	2.91	3.6
LPM02142	PYXAN	MRFW	2.97	2.90	2.4
LPM02143	PYXAN	MRFW	3.19	3.07	4.0
LPM02144	PYXAN	MRFW	3.13	3.00	4.2
LPM02145	FPYX	MRFW	3.52	3.31	6.2
LPM02146	FPYX	MRFW	3.45	3.25	6.0
LPM02147	FPYX	MRFW	3.48	3.21	8.0
LPM02148	FPYX	MRFW	3.57	3.33	6.8
LPM02149	FPYX	MRFW	3.42	3.27	4.4
LPM02150	FPYX	MRFW	3.37	3.22	4.7
LPM02151	FPYX	MRFW	3.36	3.17	5.7
LPM02152	FPYX	MRFW	3.48	3.27	6.1
LPM02153	FPYX	MRFW	3.41	3.21	6.0
LPM02154	FPYX	MRFW	3.42	3.22	5.8
LPM02155	FPYX	MRFW	3.42	3.19	7.1
LPM02156	FPYX	MRFW	3.46	3.22	7.1
LPM02157	FPYX	MRFW	3.53	3.22	9.1
LPM02158	FPYX	MRFW	3.32	3.17	4.5
LPM02159	FPYX	MRFW	3.42	3.22	6.0
LPM02160	FPYX	MRFW	3.40	3.20	6.0
LPM02161	OTHER	MRFW	3.39	3.20	5.7
LPM02162	FPYX	MRFW	3.42	3.21	6.3
LPM02163	FPYX	MRFW	3.50	3.23	8.0
LPM02164	FPYX	MRFW	3.55	3.30	7.4
LPM02165	FPYX	MRFW	3.53	3.27	7.6
LPM02166	FPYX	MRFW	3.46	3.28	5.4
LPM02167	FPYX	MRFW	3.47	3.29	5.4
LPM02168	FPYX	MRFW	3.43	3.25	5.4
LPM02169	FPYX	MRFW	3.46	3.24	6.7
LPM02170	OTHER	MRFW	3.47	3.20	8.0
LPM02171	FPYX	MRFW	3.47	3.24	7.0
LPM02172	FPYX	MRFW	3.45	3.01	13.6
LPM02173	FPYX	MRFW	3.46	3.18	8.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02174	FPYX	MRFW	3.53	3.19	10.1
LPM02175	FPYX	MRFW	3.41	3.24	5.1
LPM02176	FPYX	MRFW	3.42	3.23	5.8
LPM02177	FPYX	MRFW	3.41	3.24	5.1
LPM02178	FPYX	MRFW	3.44	3.10	10.5
LPM02179	FPYX	MRFW	3.41	3.18	6.9
LPM02180	FPYX	MRFW	3.44	3.09	10.6
LPM02181	FPYX	MRFW	3.45	3.22	6.9
LPM02182	FPYX	MRFW	3.49	3.25	7.2
LPM02183	OTHER	MRFW	3.51	3.25	7.7
LPM02184	FPYX	MRFW	3.57	3.27	8.8
LPM02185	FPYX	MRFW	3.38	3.05	10.4
LPM02186	FPYX	MRFW	3.36	3.23	4.1
LPM02187	FPYX	MRFW	3.42	3.07	10.9
LPM02188	PYX	MRFW	3.30	3.21	2.6
LPM02189	PYX	MRFW	3.31	3.23	2.4
LPM02190	PYX	MRFW	3.29	3.23	1.7
LPM02191	PYX	MRFW	3.29	3.21	2.3
LPM02192	PYX	MRFW	3.28	3.24	1.1
LPM02193	PYX	MRFW	3.28	3.24	1.3
LPM02194	PYX	MRFW	3.25	3.21	1.2
LPM02195	PYX	MRFW	3.26	3.18	2.6
LPM02196	PYX	MRFW	3.27	3.23	1.3
LPM02197	PYX	MRFW	3.28	3.20	2.4
LPM02198	PYX	MRFW	3.27	3.20	2.1
LPM02199	OTHER	MRFW	3.29	3.20	2.5
LPM02200	PYX	MRFW	3.30	3.20	3.0
LPM02201	PYX	MRFW	3.33	3.25	2.3
LPM02202	PYX	MRFW	3.34	3.24	3.0
LPM02203	PYX	MRFW	3.34	3.24	3.0
LPM02204	PYX	MRFW	3.32	3.20	3.6
LPM02205	PYX	MRFW	3.36	3.25	3.5
LPM02206	PYX	MRFW	3.33	3.22	3.3
LPM02207	PYX	MRFW	3.36	3.22	4.3
LPM02208	PYX	MRFW	3.35	3.21	4.3
LPM02209	PYX	MRFW	3.38	3.23	4.6
LPM02210	PYX	MRFW	3.37	3.21	4.7
LPM02211	PYX	MRFW	3.36	3.23	3.9
LPM02212	PYX	MRFW	3.36	3.22	4.2
LPM02213	PYX	MRFW	3.37	3.22	4.7
LPM02214	PYX	MRFW	3.37	3.23	4.3
LPM02215	PYX	MRFW	3.41	3.22	5.7
LPM02216	PYX	MRFW	3.39	3.22	5.0
LPM02217	PYX	MRFW	3.39	3.20	5.8
LPM02218	PYX	MRFW	3.36	3.14	6.7
LPM02219	PYX	MRFW	3.34	3.21	3.9
LPM02220	PYX	MRFW	3.39	3.23	4.7
LPM02221	PYX	MRFW	3.39	3.21	5.4
LPM02222	PYX	MRFW	3.39	3.23	4.9
LPM02223	PYX	MRFW	3.41	3.23	5.3
LPM02224	PYX	MRFW	3.41	3.48	-2.0
LPM02225	PYX	MRFW	3.40	3.24	4.8
LPM02226	PYX	MRFW	3.42	3.23	5.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02227	PYX	MRFW	3.29	3.13	5.0
LPM02228	PYX	MRFW	3.34	3.24	3.0
LPM02229	PYX	MRFW	3.36	3.25	3.4
LPM02230	PYX	MRFW	3.34	3.23	3.2
LPM02231	PYX	MRFW	3.36	3.25	3.3
LPM02232	PYX	MRFW	3.35	3.22	4.1
LPM02233	PYX	MRFW	3.25	3.12	3.9
LPM02234	PYX	MRFW	3.23	3.11	3.8
LPM02235	PYX	MRFW	3.25	3.12	4.2
LPM02236	PYX	MRFW	3.21	3.09	4.0
LPM02237	PYX	MRFW	3.31	3.20	3.5
LPM02238	PYX	MRFW	3.32	3.23	2.8
LPM02239	PYX	MRFW	3.32	3.23	2.9
LPM02240	PYX	MRFW	3.34	3.12	6.9
LPM02241	PYX	MRFW	3.33	3.19	4.4
LPM02242	PYX	MRFW	3.37	3.20	5.2
LPM02243	PYX	MRFW	3.43	3.17	7.9
LPM02244	PYX	MRFW	3.41	3.26	4.6
LPM02245	PYX	MRFW	3.43	3.26	5.0
LPM02246	PYX	MRFW	3.45	3.30	4.5
LPM02247	PYX	MRFW	3.26	3.11	4.8
LPM02248	PYX	MRFW	3.27	3.11	4.8
LPM02249	PYX	MRFW	3.27	3.13	4.3
LPM02250	PYX	MRFW	3.23	3.09	4.5
LPM02251	PYX	MRFW	3.36	3.20	5.0
LPM02252	PYX	MRFW	3.38	3.21	5.0
LPM02253	PYX	MRFW	3.38	3.19	5.9
LPM02254	PYX	MRFW	3.39	3.22	5.2
LPM02255	PYX	MRFW	3.29	3.12	5.2
LPM02256	N	MRFW	3.18	2.95	7.4
LPM02257	N	MRFW	3.10	2.95	5.0
LPM02258	N	MRFW	3.14	3.00	4.7
LPM02259	N	MRFW	3.14	3.01	4.1
LPM02260	PYX	MRFW	3.36	3.15	6.3
LPM02261	PYX	MRFW	3.30	3.11	5.8
LPM02262	PYX	MRFW	3.39	3.27	3.7
LPM02263	N	MRFW	3.12	2.98	4.6
LPM02264	N	MRFW	3.09	2.96	4.3
LPM02265	N	MRFW	3.15	3.00	4.8
LPM02266	N	MRFW	3.12	2.93	6.2
LPM02267	N	MRFW	3.17	2.98	6.0
LPM02268	N	MRFW	3.33	3.19	4.4
LPM02269	PYX	MRFW	3.41	3.20	6.3
LPM02270	PYX	MRFW	3.43	3.26	5.0
LPM02271	PYX	MRFW	3.42	3.24	5.4
LPM02272	PYX	MRFW	3.41	3.25	4.8
LPM02273	PYX	MRFW	3.19	3.02	5.4
LPM02274	PYX	MRFW	3.22	3.07	4.9
LPM02275	PYX	MRFW	3.30	3.14	5.1
LPM02276	PYX	MRFW	3.37	3.21	4.8
LPM02277	PYX	MRFW	3.23	3.06	5.3
LPM02278	PYX	MRFW	3.32	3.13	6.0
LPM02279	PYX	MRFW	3.31	3.19	3.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02280	PYX	MRFW	3.34	3.18	4.8
LPM02281	PYX	MRFW	3.38	3.20	5.4
LPM02282	PYX	MRFW	3.38	3.20	5.3
LPM02283	PYX	MRFW	3.35	3.20	4.5
LPM02284	PYX	MRFW	3.35	3.18	5.1
LPM02285	PYX	MRFW	3.33	3.15	5.5
LPM02286	PYX	MRFW	3.32	3.21	3.4
LPM02287	PYX	MRFW	3.34	3.21	3.8
LPM02288	PYX	MRFW	3.36	3.21	4.4
LPM02289	PYX	MRFW	3.36	3.26	3.1
LPM02290	PYX	MRFW	3.16	3.02	4.7
LPM02291	PYX	MRFW	3.22	3.10	3.7
LPM02292	PYX	MRFW	3.29	3.14	4.5
LPM02293	PYX	MRFW	3.32	3.15	5.3
LPM02294	PYX	MRFW	3.36	3.18	5.6
LPM02295	PYX	MRFW	3.38	3.20	5.5
LPM02296	PYX	MRFW	3.37	3.20	5.2
LPM02297	PYX	MRFW	3.37	3.20	5.0
LPM02298	PYX	MRFW	3.33	3.06	8.4
LPM02299	PYX	MRFW	3.25	3.05	6.4
LPM02300	PYX	MRFW	3.41	3.20	6.2
LPM02301	PYX	MRFW	3.48	3.25	6.9
LPM02302	PYX	MRFW	3.39	3.19	6.2
LPM02303	PYX	MRFW	3.48	3.20	8.5
LPM02304	PYX	MRFW	3.28	3.17	3.4
LPM02305	PYX	MRFW	3.29	3.18	3.5
LPM02306	PYX	MRFW	3.30	3.21	2.7
LPM02307	PYX	MRFW	3.32	3.22	3.0
LPM02308	PYX	MRFW	3.32	3.21	3.2
LPM02309	PYX	MRFW	3.34	3.25	2.6
LPM02310	PYX	MRFW	3.32	3.19	4.1
LPM02311	PYX	MRFW	3.34	3.20	4.4
LPM02312	PYX	MRFW	3.29	3.16	3.9
LPM02313	PYX	MRFW	3.30	3.15	4.7
LPM02314	PYX	MRFW	3.30	3.17	4.1
LPM02315	PYX	MRFW	3.33	3.22	3.4
LPM02316	PYX	MRFW	3.31	3.22	2.8
LPM02317	PYX	MRFW	3.34	3.22	3.4
LPM02318	PYX	MRFW	3.33	3.22	3.4
LPM02319	PYX	MRFW	3.35	3.19	5.0
LPM02320	PYX	MRFW	3.33	3.20	4.0
LPM02321	PYX	MRFW	3.33	3.17	4.9
LPM02322	PYX	MRFW	3.31	3.16	4.6
LPM02323	PYX	MRFW	3.35	3.17	5.6
LPM02324	PYX	MRFW	3.35	2.95	12.7
LPM02325	PYX	MRFW	3.36	3.25	3.2
LPM02326	PYX	MRFW	3.15	3.01	4.5
LPM02327	PYX	MRFW	3.16	3.03	4.2
LPM02328	PYX	MRFW	3.18	3.05	4.1
LPM02329	PYX	MRFW	3.14	2.99	4.9
LPM02330	PYX	MRFW	3.23	3.04	6.0
LPM02331	PYX	MRFW	3.35	3.10	7.9
LPM02332	PYX	MRFW	3.36	3.14	6.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02333	PYX	MRFW	3.37	3.22	4.6
LPM02334	PYX	MRFW	3.36	3.18	5.6
LPM02335	PYX	MRFW	3.35	3.17	5.6
LPM02336	PYX	MRFW	3.39	3.18	6.3
LPM02337	PYX	MRFW	3.20	3.11	2.9
LPM02338	PYX	MRFW	3.28	3.20	2.6
LPM02339	PYX	MRFW	3.33	3.21	3.6
LPM02340	PYX	MRFW	3.37	3.25	3.5
LPM02341	PYX	MRFW	3.24	3.24	0.0
LPM02342	PYX	MRFW	3.10	3.01	2.8
LPM02343	PYX	MRFW	3.14	3.05	3.0
LPM02344	PYX	MRFW	3.17	3.08	2.9
LPM02345	PYX	MRFW	3.09	3.01	2.6
LPM02346	PYX	MRFW	3.12	3.04	2.5
LPM02347	PYX	MRFW	3.19	3.09	3.3
LPM02348	PYX	MRFW	3.32	3.22	3.2
LPM02349	PYX	MRFW	3.33	3.22	3.4
LPM02350	PYX	MRFW	3.33	3.21	3.6
LPM02351	PYX	MRFW	3.33	3.22	3.5
LPM02352	PYX	MRFW	3.33	3.22	3.4
LPM02353	PYX	MRFW	3.37	3.24	4.0
LPM02354	PYX	MRFW	3.30	3.13	5.2
LPM02355	PYX	MRFW	3.30	3.19	3.4
LPM02356	N	MRFW	3.07	2.96	3.8
LPM02357	N	MRFW	3.17	3.06	3.5
LPM02358	N	MRFW	3.17	3.03	4.4
LPM02359	N	MRFW	3.21	2.99	7.2
LPM02360	N	MRFW	3.17	3.01	5.0
LPM02361	N	MRFW	3.10	3.02	2.7
LPM02362	N	MRFW	3.17	3.05	4.0
LPM02363	PYX	MRFW	3.34	3.11	7.1
LPM02364	PYX	MRFW	3.36	3.21	4.5
LPM02365	PYX	MRFW	3.35	3.25	2.9
LPM02366	PYX	MRFW	3.37	3.20	5.2
LPM02367	PYX	MRFW	3.36	3.18	5.4
LPM02368	PYX	MRFW	3.36	3.19	5.1
LPM02369	PYX	MRFW	3.36	3.19	5.0
LPM02370	PYX	MRFW	3.32	3.09	7.3
LPM02371	PYX	MRFW	3.37	3.18	5.9
LPM02372	PYX	MRFW	3.25	3.14	3.5
LPM02373	N	MRFW	3.23	2.95	8.9
LPM02374	N	MRFW	3.17	2.97	6.4
LPM02375	N	MRFW	3.23	3.04	6.1
LPM02376	N	MRFW	3.25	3.07	5.6
LPM02377	N	MRFW	3.23	3.06	5.3
LPM02378	N	MRFW	3.16	3.02	4.6
LPM02379	N	MRFW	3.18	3.00	5.9
LPM02380	PYX	MRFW	3.26	3.08	5.8
LPM02381	PYX	MRFW	3.37	3.20	5.3
LPM02382	PYX	MRFW	3.41	3.20	6.4
LPM02383	PYX	MRFW	3.39	3.20	5.9
LPM02384	PYX	MRFW	3.39	3.22	5.1
LPM02385	PYX	MRFW	3.35	3.22	4.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02386	PYX	MRFW	3.40	3.20	6.0
LPM02387	N	MRFW	3.13	2.98	5.0
LPM02388	N	MRFW	3.41	3.05	11.1
LPM02389	N	MRFW	3.14	2.96	5.7
LPM02390	N	MRFW	3.27	3.12	4.7
LPM02391	PYX	MRFW	3.39	3.19	5.9
LPM02392	PYX	MRFW	3.40	3.17	7.1
LPM02393	PYX	MRFW	3.41	3.19	6.7
LPM02394	PYX	MRFW	3.40	3.17	7.0
LPM02395	PYX	MRFW	3.43	3.20	6.9
LPM02396	PYX	MRFW	3.29	3.13	5.1
LPM02397	PYX	MRFW	3.38	3.17	6.5
LPM02398	PYX	MRFW	3.40	3.23	5.0
LPM02399	PYX	MRFW	3.25	3.13	3.8
LPM02400	N	MRFW	3.17	2.96	6.7
LPM02401	N	MRFW	3.20	3.04	5.3
LPM02402	N	MRFW	3.23	3.05	5.7
LPM02403	N	MRFW	3.14	2.99	5.0
LPM02404	N	MRFW	3.28	3.11	5.2
LPM02405	PYX	MRFW	3.39	3.21	5.3
LPM02406	PYX	MRFW	3.39	3.21	5.4
LPM02407	PYX	MRFW	3.40	3.21	5.8
LPM02408	PYX	MRFW	3.38	3.15	6.9
LPM02409	PYX	MRFW	3.39	3.21	5.6
LPM02410	PYX	MRFW	3.31	3.20	3.4
LPM02411	PYX	MRFW	3.41	3.20	6.5
LPM02412	PYX	MRFW	3.37	3.09	8.7
LPM02413	PYX	MRFW	3.37	2.97	12.7
LPM02414	PYX	MRFW	3.32	3.05	8.6
LPM02415	N	MRFW	3.26	3.11	4.7
LPM02416	PYX	MRFW	3.38	3.18	6.1
LPM02417	PYX	MRFW	3.37	3.14	6.9
LPM02418	PYX	MRFW	3.41	3.29	3.5
LPM02419	PYX	MRFW	3.42	3.10	9.8
LPM02420	PYX	MRFW	3.37	3.16	6.5
LPM02421	PYX	MRFW	3.35	3.19	5.0
LPM02422	PYX	MRFW	3.36	3.09	8.2
LPM02423	PYX	MRFW	3.38	3.15	7.1
LPM02424	PYX	MRFW	3.40	3.13	8.2
LPM02425	PYX	MRFW	3.40	3.17	7.1
LPM02426	PYX	MRFW	3.29	3.05	7.6
LPM02427	PYX	MRFW	3.30	3.13	5.3
LPM02428	PYX	MRFW	3.33	3.18	4.7
LPM02429	PYX	MRFW	3.37	3.15	6.8
LPM02430	PYX	MRFW	3.40	3.20	6.1
LPM02431	PYX	MRFW	3.39	3.19	6.2
LPM02432	PYX	MRFW	3.44	3.23	6.4
LPM02433	PYX	MRFW	3.31	3.17	4.4
LPM02434	PYX	MRFW	3.35	3.22	4.1
LPM02435	PYX	MRFW	3.30	3.15	4.7
LPM02436	PYX	MRFW	3.40	3.23	5.2
LPM02437	PYX	MRFW	3.42	3.26	4.8
LPM02438	PYX	MRFW	3.40	3.27	3.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02439	PYX	MRFW	3.34	3.20	4.2
LPM02440	PYX	MRFW	3.34	3.19	4.5
LPM02441		MRFW	3.10	2.94	5.2
LPM02442		MRFW	3.12	2.98	4.5
LPM02443		MRFW	3.19	3.04	4.8
LPM02444	PYX	MRFW	3.02	3.04	-0.6
LPM02445	PYX	MRFW	3.26	3.12	4.4
LPM02446	PYX	MRFW	3.29	3.14	4.8
LPM02447	PYX	MRFW	3.39	3.20	5.8
LPM02448	PYX	MRFW	3.40	3.21	5.7
LPM02449	PYX	MRFW	3.39	3.14	7.8
LPM02450	PYX	MRFW	3.35	3.16	5.8
LPM02451	PYX	MRFW	3.43	3.16	8.1
LPM02452	PYX	MRFW	3.40	3.20	5.9
LPM02453	PYX	MRFW	3.34	3.16	5.3
LPM02454	PYX	MRFW	3.28	3.11	5.2
LPM02455	PYX	MRFW	3.33	3.14	6.0
LPM02456	PYX	MRFW	3.41	3.26	4.6
LPM02457	PYX	MRFW	3.00	2.87	4.5
LPM02458	PYX	MRFW	3.13	2.96	5.5
LPM02459	PYX	MRFW	3.36	3.20	4.8
LPM02460	PYX	MRFW	3.41	3.21	6.0
LPM02461	PYX	MRFW	3.41	3.22	5.9
LPM02462	PYX	MRFW	3.37	3.21	5.0
LPM02463	PYX	MRFW	3.36	3.12	7.3
LPM02464	PYX	MRFW	3.38	3.15	7.0
LPM02465	PYX	MRFW	3.37	3.14	7.1
LPM02466	PYX	MRFW	3.35	3.20	4.6
LPM02467	PYX	MRFW	3.41	3.21	5.9
LPM02468	PYX	MRFW	3.38	3.17	6.3
LPM02469	PYX	MRFW	3.41	3.13	8.3
LPM02470	PYX	MRFW	3.18	3.01	5.4
LPM02471	PYX	MRFW	3.25	3.06	5.9
LPM02472	PYX	MRFW	3.24	3.09	4.6
LPM02473	PYX	MRFW	3.19	3.05	4.5
LPM02474	PYX	MRFW	3.05	2.90	5.2
LPM02475	PYX	MRFW	3.00	2.88	4.0
LPM02476	PYX	MRFW	3.02	2.80	7.7
LPM02477	PYX	MRFW	2.99	2.89	3.5
LPM02478	PYX	MRFW	3.00	2.85	5.0
LPM02479	PYX	MRFW	3.05	2.94	3.5
LPM02480	PYX	MRFW	3.20	2.96	7.8
LPM02481	PYX	MRFW	3.30	3.06	7.4
LPM02482	PYX	MRFW	3.33	3.18	4.5
LPM02483	PYX	MRFW	3.34	3.02	9.9
LPM02484	PYX	MRFW	3.49	3.19	8.9
LPM02485	PYX	MRFW	3.41	3.21	6.1
LPM02486	PYX	MRFW	3.39	3.17	6.8
LPM02487	OTHER	MRFW	3.17	3.00	5.6
LPM02488	OTHER	MRFW	3.26	3.07	6.0
LPM02489	OTHER	MRFW	3.24	3.06	5.6
LPM02490	OTHER	MRFW	3.20	2.97	7.6
LPM02491	OTHER	MRFW	3.07	2.91	5.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02492	OTHER	MRFW	3.03	2.87	5.4
LPM02493	OTHER	MRFW	3.03	2.88	4.9
LPM02494	OTHER	MRFW	3.02	2.82	6.9
LPM02495	OTHER	MRFW	3.00	2.84	5.4
LPM02496	OTHER	MRFW	3.11	2.94	5.6
LPM02497	PYX	MRFW	3.42	3.29	3.6
LPM02498	PYX	MRFW	3.46	3.22	7.0
LPM02499	PYX	MRFW	3.30	3.15	4.5
LPM02500	PYX	MRFW	3.23	3.04	5.9
LPM02501	PYX	MRFW	3.26	3.08	5.8
LPM02502	PYX	MRFW	3.19	3.03	5.2
LPM02503	PYX	MRFW	3.24	3.06	5.8
LPM02504	PYX	MRFW	3.39	3.23	5.0
LPM02505	PYX	MRFW	3.39	3.20	5.8
LPM02506	PYX	MRFW	3.40	3.21	5.8
LPM02507	PYX	MRFW	3.36	3.31	1.6
LPM02508	PYX	MRFW	3.37	3.28	2.8
LPM02509	PYX	MRFW	3.25	3.12	4.1
LPM02510	PYX	MRFW	3.25	3.09	5.1
LPM02511	PYX	MRFW	3.31	3.19	3.5
LPM02512	PYX	MRFW	3.20	3.04	5.0
LPM02513	PYX	MRFW	3.32	3.17	4.7
LPM02514	PYX	MRFW	3.32	3.21	3.2
LPM02515	PYX	MRFW	3.31	3.21	3.0
LPM02516	PYX	MRFW	3.31	3.20	3.4
LPM02517	PYX	MRFW	3.38	3.28	3.1
LPM02518	PYX	MRFW	3.37	3.21	4.8
LPM02519	PYX	MRFW	3.26	3.18	2.4
LPM02520	PYX	MRFW	3.42	3.26	4.9
LPM02521	PYX	MRFW	3.37	3.23	4.3
LPM02522	PYX	MRFW	3.40	3.25	4.5
LPM02523	N	MRFW	3.19	3.08	3.7
LPM02524	N	MRFW	3.19	3.07	4.0
LPM02525	N	MRFW	3.11	3.00	3.5
LPM02526	N	MRFW	3.03	2.91	4.2
LPM02527	N	MRFW	3.11	3.01	3.3
LPM02528	PYX	MRFW	3.26	3.12	4.2
LPM02529	PYX	MRFW	3.34	3.20	4.2
LPM02530	PYX	MRFW	3.36	3.22	4.3
LPM02531	PYX	MRFW	3.35	3.15	6.1
LPM02532	PYX	MRFW	3.23	3.13	3.0
LPM02533	PYX	MRFW	3.29	3.18	3.5
LPM02534	PYX	MRFW	3.35	3.19	4.7
LPM02535	PYX	MRFW	3.33	3.23	3.2
LPM02536	N	MRFW	3.18	3.07	3.5
LPM02537	N	MRFW	3.22	3.04	5.7
LPM02538	N	MRFW	3.00	2.95	1.7
LPM02539	N	MRFW	3.14	3.01	4.2
LPM02540	N	MRFW	3.11	2.93	5.8
LPM02541	PYX	MRFW	3.30	3.14	4.9
LPM02542	PYX	MRFW	3.36	3.21	4.7
LPM02543	PYX	MRFW	3.37	3.21	5.0
LPM02544	PYX	MRFW	3.28	2.88	13.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02545	N	MRFW	3.12	3.05	2.4
LPM02546	N	MRFW	3.17	2.98	6.3
LPM02547	N	MRFW	3.20	3.03	5.5
LPM02548	N	MRFW	3.25	3.05	6.5
LPM02549	N	MRFW	3.22	3.02	6.5
LPM02550	N	MRFW	3.26	3.05	6.6
LPM02551	PYX	MRFW	3.39	3.10	8.9
LPM02552	PYX	MRFW	3.42	3.18	7.2
LPM02553	PYX	MRFW	3.43	3.20	6.9
LPM02554	PYX	MRFW	3.40	3.23	5.2
LPM02555	PYX	MRFW	3.37	3.20	5.2
LPM02556	PYX	MRFW	3.39	3.21	5.3
LPM02557	PYX	MRFW	3.39	3.20	5.8
LPM02558	PYX	MRFW	3.38	3.09	9.0
LPM02559	PYX	MRFW	3.35	3.29	1.8
LPM02560	PYX	MRFW	3.39	3.23	5.0
LPM02561	PYX	MRFW	3.29	3.05	7.7
LPM02562	PYX	MRFW	3.41	3.27	4.1
LPM02563	PYX	MRFW	3.41	3.26	4.5
LPM02564	PYX	MRFW	3.36	3.25	3.4
LPM02565	PYX	MRFW	3.35	3.21	4.3
LPM02566	PYX	MRFW	3.37	3.22	4.5
LPM02567	PYX	MRFW	3.38	3.22	4.7
LPM02568	PYX	MRFW	3.34	3.18	4.9
LPM02569	PYX	MRFW	3.31	3.18	3.9
LPM02570	PYX	MRFW	3.32	3.22	2.9
LPM02571	PYX	MRFW	3.29	3.15	4.2
LPM02572	PYX	MRFW	3.35	3.19	4.8
LPM02573	PYX	MRFW	3.34	3.19	4.6
LPM02574	PYX	MRFW	3.36	3.25	3.3
LPM02575	PYX	MRFW	3.35	3.21	4.2
LPM02576	PYX	MRFW	3.35	3.13	6.6
LPM02577	PYX	MRFW	3.35	3.20	4.5
LPM02578	PYX	MRFW	3.37	3.20	5.1
LPM02579	PYX	MRFW	3.33	3.21	3.5
LPM02580	PYX	MRFW	3.33	3.29	1.3
LPM02581	PYX	MRFW	3.36	3.18	5.6
LPM02582	PYX	MRFW	3.34	3.22	3.7
LPM02583	PYX	MRFW	3.35	3.21	4.2
LPM02584	PYX	MRFW	3.24	3.17	2.3
LPM02585	PYX	MRFW	3.23	3.13	3.0
LPM02586	PYX	MRFW	3.32	3.22	3.0
LPM02587	PYX	MRFW	3.31	3.21	2.9
LPM02588	PYX	MRFW	3.36	3.21	4.7
LPM02589	PYX	MRFW	3.38	3.23	4.5
LPM02590	PYX	MRFW	3.41	3.22	5.6
LPM02591	PYX	MRFW	3.41	3.22	5.8
LPM02592	PYX	MRFW	3.44	3.23	6.2
LPM02593	PYX	MRFW	3.39	3.20	5.9
LPM02594	PYX	MRFW	3.42	3.21	6.2
LPM02595	PYX	MRFW	3.45	3.23	6.6
LPM02596	PYX	MRFW	3.47	3.26	6.3
LPM02597	PYX	MRFW	3.46	3.24	6.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02598	PYX	MRFW	3.49	3.25	7.0
LPM02599	PYX	MRFW	3.46	3.28	5.3
LPM02600	PYX	MRFW	3.42	3.18	7.2
LPM02601	PYX	MRFW	3.42	3.19	6.9
LPM02602	PYX	MRFW	3.44	3.25	5.8
LPM02603	PYX	MRFW	3.41	3.24	5.2
LPM02604	PYX	MRFW	3.41	3.22	5.5
LPM02605	PYX	MRFW	3.40	3.24	4.8
LPM02606	PYX	MRFW	3.31	3.23	2.6
LPM02607	PYX	MRFW	3.32	3.18	4.3
LPM02608	PYX	MRFW	3.29	3.16	4.2
LPM02609	PYX	MRFW	3.36	3.10	8.0
LPM02610	PYX	MRFW	3.34	3.24	3.0
LPM02611	PYX	MRFW	3.15	3.21	-1.9
LPM02612	PYX	MRFW	3.16	2.97	6.3
LPM02613	PYX	MRFW	3.09	3.04	1.5
LPM02614	PYX	MRFW	3.15	3.02	4.1
LPM02615	PYX	MRFW	3.17	3.19	-0.5
LPM02616	PYX	MRFW	2.97	3.04	-2.3
LPM02617	N	MRFW	3.02	2.93	2.9
LPM02618	N	MRFW	3.10	2.97	4.0
LPM02619	N	MRFW	3.37	2.92	14.4
LPM02620	N	MRFW	3.40	2.99	12.9
LPM02621	N	MRFW	3.47	3.02	13.8
LPM02622	N	MRFW	3.10	2.95	5.0
LPM02623	N	MRFW	3.24	3.03	6.8
LPM02624	N	MRFW	3.39	3.01	11.8
LPM02625	N	MRFW	3.36	3.01	10.9
LPM02626	N	MRFW	3.35	2.95	12.7
LPM02627	FPYX	MRFW	3.31	3.27	1.3
LPM02628	FPYX	MRFW	3.16	3.17	-0.2
LPM02629	N	MRFW	3.05	3.00	1.5
LPM02630	N	MRFW	3.04	2.99	1.8
LPM02631	N	MRFW	3.08	3.05	0.9
LPM02632	N	MRFW	3.08	3.06	0.5
LPM02633	N	MRFW	3.08	3.09	-0.2
LPM02634	N	MRFW	2.99	2.93	1.9
LPM02635	N	MRFW	3.02	2.96	2.0
LPM02636	N	MRFW	3.02	2.92	3.5
LPM02637	N	MRFW	3.25	3.19	1.8
LPM02638	N	MRFW	3.29	3.22	2.2
LPM02639	FPYX	MRFW	3.37	3.19	5.6
LPM02640	FPYX	MRFW	3.16	3.02	4.7
LPM02641	N	MRFW	3.08	2.98	3.2
LPM02642	N	MRFW	3.03	2.96	2.1
LPM02643	N	MRFW	3.08	3.00	2.8
LPM02644	N	MRFW	3.13	3.04	3.1
LPM02645	N	MRFW	3.15	3.06	2.9
LPM02646	N	MRFW	2.98	2.91	2.1
LPM02647	N	MRFW	3.01	2.89	4.0
LPM02648	N	MRFW	3.00	2.93	2.4
LPM02649	N	MRFW	3.28	3.19	2.9
LPM02650	N	MRFW	3.29	3.21	2.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02651	FPYX	MRFW	3.27	3.26	0.3
LPM02652	N	MRFW	3.05	2.96	3.1
LPM02653	N	MRFW	3.09	2.99	3.3
LPM02654	N	MRFW	3.06	2.97	3.0
LPM02655	N	MRFW	3.11	3.03	2.7
LPM02656	N	MRFW	3.09	2.99	3.3
LPM02657	N	MRFW	3.14	3.03	3.6
LPM02658	N	MRFW	3.00	2.90	3.4
LPM02659	N	MRFW	2.93	2.86	2.4
LPM02660	N	MRFW	3.08	2.92	5.3
LPM02661	N	MRFW	3.32	3.17	4.7
LPM02662	N	MRFW	3.33	3.23	3.2
LPM02663	FPYX	MRFW	3.35	3.21	4.1
LPM02664	FPYX	MRFW	3.41	3.21	6.1
LPM02665	FPYX	MRFW	3.34	3.02	10.0
LPM02666	N	MRFW	3.39	2.94	14.3
LPM02667	N	MRFW	3.24	2.94	9.5
LPM02668	N	MRFW	3.08	3.00	2.5
LPM02669	N	MRFW	3.11	3.08	0.9
LPM02670	N	MRFW	3.14	3.22	-2.5
LPM02671	N	MRFW	3.19	3.14	1.5
LPM02672	N	MRFW	3.37	3.08	9.1
LPM02673	N	MRFW	3.38	3.06	10.0
LPM02674	FPYX	MRFW	3.36	3.19	5.1
LPM02675	FPYX	MRFW	3.38	3.20	5.4
LPM02676	FPYX	MRFW	3.36	3.04	10.0
LPM02677	N	MRFW	3.39	2.97	13.2
LPM02678	N	MRFW	3.26	2.99	8.5
LPM02679	N	MRFW	3.11	3.05	2.1
LPM02680	N	MRFW	3.14	3.03	3.6
LPM02681	N	MRFW	3.19	3.16	0.9
LPM02682	N	MRFW	3.15	3.24	-2.9
LPM02683	N	MRFW	3.37	3.30	2.1
LPM02684	N	MRFW	3.28	3.25	0.7
LPM02685	FPYX	MRFW	3.38	3.07	9.7
LPM02686	FPYX	MRFW	3.33	3.25	2.5
LPM02687	N	MRFW	3.43	2.97	14.4
LPM02688	N	MRFW	3.39	2.95	13.9
LPM02689	N	MRFW	3.13	2.99	4.5
LPM02690	N	MRFW	3.12	3.05	2.4
LPM02691	N	MRFW	3.16	3.04	4.0
LPM02692	N	MRFW	3.18	3.19	-0.3
LPM02693	FPYX	MRFW	3.16	3.21	-1.7
LPM02694	FPYX	MRFW	3.36	3.21	4.6
LPM02695	FPYX	MRFW	3.34	3.21	4.1
LPM02696	N	MRFW	3.10	2.99	3.4
LPM02697	N	MRFW	3.12	2.93	6.3
LPM02698	N	MRFW	3.12	2.94	6.1
LPM02699	N	MRFW	3.14	2.98	5.4
LPM02700	OTHER	MRFW	3.15	2.98	5.7
LPM02701	N	MRFW	3.15	2.95	6.4
LPM02702	N	MRFW	3.08	2.82	8.9
LPM02703	N	MRFW	3.13	2.99	4.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02704	N	MRFW	3.14	2.99	4.9
LPM02705	FPYX	MRFW	3.25	3.09	5.2
LPM02706	FPYX	MRFW	3.25	3.14	3.5
LPM02707	FPYX	MRFW	3.32	3.01	9.9
LPM02708	FPYX	MRFW	3.25	2.95	9.6
LPM02709	FPYX	MRFW	3.19	2.91	9.1
LPM02710	FPYX	MRFW	3.16	2.95	7.0
LPM02711	FPYX	MRFW	3.15	2.94	6.9
LPM02712	FPYX	MRFW	3.15	2.95	6.7
LPM02713	FPYX	MRFW	3.17	2.89	9.2
LPM02714	N	MRFW	3.18	2.95	7.4
LPM02715	N	MRFW	3.17	2.97	6.6
LPM02716	N	MRFW	3.27	3.05	6.9
LPM02717	N	MRFW	3.11	2.94	5.7
LPM02718	N	MRFW	3.13	2.93	6.7
LPM02719	FPYX	MRFW	3.44	3.21	6.8
LPM02720	FPYX	MRFW	3.43	3.18	7.5
LPM02721	FPYX	MRFW	3.47	3.23	7.3
LPM02722	FPYX	MRFW	3.47	3.20	8.2
LPM02723	FPYX	MRFW	3.45	3.25	5.9
LPM02724	FPYX	MRFW	3.38	3.12	7.8
LPM02725	N	MRFW	3.22	2.98	7.7
LPM02726	N	MRFW	3.28	3.11	5.2
LPM02727	FPYX	MRFW	3.51	3.22	8.5
LPM02728	FPYX	MRFW	3.23	2.93	9.6
LPM02729	N	MRFW	3.12	2.88	8.2
LPM02730	N	MRFW	3.12	2.92	6.7
LPM02731	N	MRFW	3.14	2.90	7.8
LPM02732	N	MRFW	2.93	2.70	8.3
LPM02733	N	MRFW	3.12	2.82	10.1
LPM02734	FPYX	MRFW	3.50	3.23	8.2
LPM02735	FPYX	MRFW	3.44	3.14	9.1
LPM02736	FPYX	MRFW	3.50	3.21	8.6
LPM02737	FPYX	MRFW	3.47	3.20	8.2
LPM02738	FPYX	MRFW	3.41	3.13	8.6
LPM02739	N	MRFW	3.27	2.98	9.3
LPM02740	N	MRFW	3.17	2.95	7.3
LPM02741	FPYX	MRFW	3.56	3.14	12.4
LPM02742	FPYX	MRFW	3.50	3.24	7.7
LPM02743	FPYX	MRFW	3.47	3.19	8.3
LPM02744	FPYX	MRFW	3.51	3.11	12.2
LPM02745	FPYX	MRFW	3.48	3.34	4.1
LPM02746	FPYX	MRFW	3.42	3.23	5.8
LPM02747	FPYX	MRFW	3.43	3.16	8.1
LPM02748	FPYX	MRFW	3.42	3.19	7.0
LPM02749	FPYX	MRFW	3.40	3.22	5.4
LPM02750	FPYX	MRFW	3.45	3.31	4.0
LPM02751	FPYX	MRFW	3.46	3.25	6.4
LPM02752	FPYX	MRFW	3.39	3.23	4.9
LPM02753	FPYX	MRFW	3.42	3.21	6.4
LPM02754	FPYX	MRFW	3.49	3.24	7.4
LPM02755	FPYX	MRFW	3.47	3.24	6.9
LPM02756	N	MRFW	3.27	3.22	1.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02757	N	MRFW	3.15	3.01	4.5
LPM02758	OTHER	MRFW	3.22	3.01	6.7
LPM02759	N	MRFW	3.20	2.95	8.3
LPM02760	N	MRFW	3.14	3.02	4.0
LPM02761	N	MRFW	3.03	2.91	3.9
LPM02762	N	MRFW	3.03	2.92	3.5
LPM02763	PYX	MRFW	3.28	3.11	5.3
LPM02764	PYX	MRFW	3.30	3.19	3.4
LPM02765	N	MRFW	3.29	3.22	2.3
LPM02766	N	MRFW	3.15	3.01	4.4
LPM02767	N	MRFW	3.13	3.01	3.8
LPM02768	N	MRFW	3.04	2.95	3.0
LPM02769	N	MRFW	3.09	2.93	5.3
LPM02770	N	MRFW	3.30	3.14	5.0
LPM02771	N	MRFW	3.13	3.00	4.2
LPM02772	N	MRFW	3.27	3.16	3.5
LPM02773	N	MRFW	3.14	2.95	6.4
LPM02774	N	MRFW	3.09	2.97	3.8
LPM02775	OTHER	MRFW	3.09	2.97	3.8
LPM02776	FPYX	MRFW	3.25	3.05	6.4
LPM02777	FPYX	MRFW	3.30	3.16	4.4
LPM02778	FPYX	MRFW	3.30	3.13	5.4
LPM02779	FPYX	MRFW	3.28	3.15	4.1
LPM02780	FPYX	MRFW	3.31	3.19	3.8
LPM02781	FPYX	MRFW	3.29	3.19	3.0
LPM02782	FPYX	MRFW	3.30	3.18	3.9
LPM02783	FPYX	MRFW	3.30	3.14	5.0
LPM02784	FPYX	MRFW	3.28	3.13	4.6
LPM02785	FPYX	MRFW	3.31	3.21	3.0
LPM02786	FPYX	MRFW	3.26	3.09	5.5
LPM02787	FPYX	MRFW	3.32	3.18	4.3
LPM02788	FPYX	MRFW	3.29	3.18	3.4
LPM02789	FPYX	MRFW	3.30	3.21	2.9
LPM02790	FPYX	MRFW	3.31	3.22	2.6
LPM02791	FPYX	MRFW	3.18	3.10	2.5
LPM02792	PYX	MRFW	3.44	3.26	5.3
LPM02793	PYX	MRFW	3.38	3.23	4.6
LPM02794	PYX	MRFW	3.37	3.22	4.5
LPM02795	PYX	MRFW	3.40	3.21	5.9
LPM02796	PYX	MRFW	3.36	3.18	5.5
LPM02797	PYX	MRFW	3.44	3.23	6.2
LPM02798	PYX	MRFW	3.45	3.20	7.4
LPM02799	N	MRFW	3.36	2.93	13.6
LPM02800	N	MRFW	3.05	2.87	6.0
LPM02801	N	MRFW	3.02	2.95	2.4
LPM02802	N	MRFW	3.09	2.96	4.5
LPM02803	N	MRFW	3.15	3.02	4.2
LPM02804	N	MRFW	3.16	3.03	4.1
LPM02805	N	MRFW	3.23	3.13	3.3
LPM02806	PYX	MRFW	3.29	3.07	6.9
LPM02807	PYX	MRFW	3.52	3.17	10.6
LPM02808	PYX	MRFW	3.50	3.29	6.2
LPM02809	PYX	MRFW	3.48	3.27	6.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02810	PYX	MRFW	3.49	3.22	8.0
LPM02811	PYX	MRFW	3.50	3.23	8.1
LPM02812	PYX	MRFW	3.47	3.25	6.5
LPM02813	PYX	MRFW	3.26	3.23	0.9
LPM02814	N	MRFW	3.12	2.92	6.5
LPM02815	N	MRFW	3.17	2.94	7.5
LPM02816	N	MRFW	3.16	2.97	6.1
LPM02817	N	MRFW	3.21	3.02	6.0
LPM02818	N	MRFW	3.22	3.01	6.6
LPM02819	N	MRFW	3.29	3.14	4.8
LPM02820	N	MRFW	3.38	3.12	8.0
LPM02821	N	MRFW	3.37	3.15	6.8
LPM02822	PYX	MRFW	3.36	3.16	6.1
LPM02823	PYX	MRFW	3.40	3.17	7.0
LPM02824	PYX	MRFW	3.34	3.17	5.1
LPM02825	PYX	MRFW	3.44	3.26	5.2
LPM02826	PYX	MRFW	3.41	3.17	7.2
LPM02827	PYX	MRFW	3.40	3.13	8.4
LPM02828	PYX	MRFW	3.40	3.23	5.1
LPM02829	PYX	MRFW	3.42	3.23	5.6
LPM02830	PYX	MRFW	3.43	3.22	6.2
LPM02831	PYX	MRFW	3.45	3.23	6.6
LPM02832	PYX	MRFW	3.42	3.23	5.8
LPM02833	PYX	MRFW	3.43	3.24	5.7
LPM02834	PYX	MRFW	3.42	3.23	5.8
LPM02835	PYX	MRFW	3.42	3.23	5.7
LPM02836	PYX	MRFW	3.42	3.23	5.6
LPM02837	PYX	MRFW	3.40	3.24	4.8
LPM02838	PYX	MRFW	3.41	3.22	5.5
LPM02839	PYX	MRFW	3.38	3.24	4.3
LPM02840	PYX	MRFW	3.39	3.18	6.3
LPM02841	PYX	MRFW	3.39	3.20	5.7
LPM02842	PYX	MRFW	3.39	3.21	5.5
LPM02843	PYX	MRFW	3.39	3.24	4.6
LPM02844	PYX	MRFW	3.39	3.22	5.3
LPM02845	PYX	MRFW	3.40	3.22	5.5
LPM02846	PYX	MRFW	3.41	3.23	5.5
LPM02847	PYX	MRFW	3.42	3.23	5.6
LPM02848	PYX	MRFW	3.42	3.21	6.5
LPM02849	PYX	MRFW	3.42	3.25	5.1
LPM02850	PYX	MRFW	3.42	3.23	5.8
LPM02851	PYX	MRFW	3.43	3.23	6.1
LPM02852	PYX	MRFW	3.43	3.26	4.9
LPM02853	PYX	MRFW	3.40	3.24	4.9
LPM02854	PYX	MRFW	3.39	3.28	3.4
LPM02855	N	MRFW	3.16	2.99	5.4
LPM02856	N	MRFW	3.25	3.09	4.9
LPM02857	PYX	MRFW	3.39	3.48	-2.6
LPM02858	N	MRFW	3.28	3.04	7.6
LPM02859	PYX	MRFW	3.40	3.28	3.7
LPM02860	PYX	MRFW	3.45	3.32	3.7
LPM02861	PYX	MRFW	3.41	3.24	5.2
LPM02862	PYX	MRFW	3.41	3.22	5.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM02863	PYX	MRFW	3.42	3.20	6.6
LPM02864	PYX	MRFW	3.41	3.20	6.3
LPM02865	PYX	MRFW	3.43	3.23	6.0
LPM02866	PYX	MRFW	3.44	3.21	6.9
LPM02867	PYX	MRFW	3.45	3.19	7.7
LPM02868	PYX	MRFW	3.44	3.22	6.7
LPM02869	PYX	MRFW	3.45	3.22	6.9
LPM02870	PYX	MRFW	3.45	3.21	7.1
LPM02871	PYX	MRFW	3.45	3.23	6.7
LPM02872	PYX	MRFW	3.45	3.22	6.9
LPM02873	N	MRHW	3.14	3.01	4.1
LPM02874	N	MRHW	3.09	2.93	5.4
LPM02875	N	MRHW	3.20	2.96	7.6
LPM02876	POIKPYX	MRHW	3.37	3.19	5.6
LPM02877	POIKPYX	MRHW	3.39	3.25	4.1
LPM02878	POIKPYX	MRHW	3.40	3.27	4.0
LPM02879	POIKPYX	MRHW	3.45	3.27	5.5
LPM02880	N	MRHW	3.08	2.92	5.3
LPM02881	N	MRHW	3.07	2.91	5.3
LPM02882	FPYX	MRHW	3.33	3.04	9.1
LPM02883	FPYX	MRHW	3.43	3.22	6.4
LPM02884	FPYX	MRHW	3.43	3.26	5.2
LPM02885	FPYX	MRHW	3.48	3.24	7.1
LPM02886	FPYX	MRHW	3.40	3.24	4.9
LPM02887	FPYX	MRHW	3.42	3.24	5.3
LPM02888	LN	MRHW	3.17	3.12	1.7
LPM02889	LN	MRHW	3.22	3.10	3.6
LPM02890	N	MRHW	3.12	3.01	3.7
LPM02891	N	MRHW	3.19	3.04	4.8
LPM02892	N	MRHW	3.22	3.09	4.1
LPM02893	N	MRHW	3.29	3.14	4.7
LPM02894	POIKPYX	MRHW	3.38	3.24	4.2
LPM02895	POIKPYX	MRHW	3.39	3.26	4.0
LPM02896	N	MRHW	3.14	3.00	4.4
LPM02897	N	MRHW	3.18	3.06	3.9
LPM02898	N	MRHW	3.23	3.10	4.2
LPM02899	N	MRHW	3.27	3.14	4.1
LPM02900	POIKPYX	MRHW	3.40	3.25	4.5
LPM02901	POIKPYX	MRHW	3.38	3.25	4.0
LPM02902	N	MRHW	3.18	2.99	6.2
LPM02903	N	MRHW	3.22	3.02	6.3
LPM02904	PEGFPYX	MRHW	3.24	2.91	10.4
LPM02905	PEGFPYX	MRHW	3.24	3.00	7.6
LPM02906	N	MRHW	3.14	2.95	6.4
LPM02907	N	MRHW	3.17	2.98	6.2
LPM02908	N	MRHW	3.23	3.00	7.3
LPM02909	POIKFPYX	MRHW	3.48	3.25	6.8
LPM02910	POIKFPYX	MRHW	3.47	3.24	6.9
LPM02911	POIKFPYX	MRHW	3.46	3.23	6.8
LPM02912	N	MRHW	3.13	2.95	6.0
LPM02913	N	MRHW	3.17	2.98	6.1
LPM02914	N	MRHW	3.36	3.18	5.5
LPM02915	POIKFPYX	MRHW	3.42	3.23	5.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02916	POIKFPYX	MRHW	3.46	3.25	6.2
LPM02917	POIKFPYX	MRHW	3.47	3.25	6.6
LPM02918	N	MRHW	3.11	2.99	4.0
LPM02919	N	MRHW	3.15	2.97	5.8
LPM02920	N	MRHW	3.20	3.04	5.0
LPM02921	POIKPYX	MRHW	3.39	3.23	4.8
LPM02922	POIKPYX	MRHW	3.42	3.24	5.3
LPM02923	POIKPYX	MRHW	3.41	3.25	4.9
LPM02924	N	MRHW	3.04	2.95	3.0
LPM02925	N	MRHW	3.08	2.97	3.7
LPM02926	N	MRHW	3.10	2.98	4.0
LPM02927	POIKPYX	MRHW	3.20	3.07	4.1
LPM02928	POIKPYX	MRHW	3.42	3.26	4.8
LPM02929	POIKPYX	MRHW	3.41	3.26	4.6
LPM02930	POIKPYX	MRHW	3.38	3.18	6.2
LPM02931	N	MRHW	3.08	2.95	4.2
LPM02932	N	MRHW	3.10	2.99	3.5
LPM02933	N	MRHW	3.15	3.02	4.1
LPM02934	POIKPYX	MRHW	3.30	3.13	5.2
LPM02935	POIKPYX	MRHW	3.30	3.17	3.9
LPM02936	POIKPYX	MRHW	3.37	3.24	3.9
LPM02937	N	MRHW	3.12	2.97	4.9
LPM02938	N	MRHW	3.19	3.01	5.8
LPM02939	POIKPYX	MRHW	3.44	3.12	9.5
LPM02940	POIKPYX	MRHW	3.42	3.25	5.0
LPM02941	POIKPYX	MRHW	3.41	3.19	6.6
LPM02942	N	MRHW	3.09	2.94	4.9
LPM02943	N	MRHW	3.14	2.98	5.1
LPM02944	N PP	MRHW	3.23	3.04	5.9
LPM02945	POIKPYX	MRHW	3.39	3.17	6.5
LPM02946	POIKPYX	MRHW	3.38	3.19	5.9
LPM02947	POIKPYX	MRHW	3.40	3.20	6.1
LPM02948	N	MRHW	3.11	2.93	5.8
LPM02949	N	MRHW	3.15	2.96	6.3
LPM02950	POIKPYX	MRHW	3.31	3.04	8.5
LPM02951	POIKPYX	MRHW	3.37	3.14	7.1
LPM02952	POIKPYX	MRHW	3.41	3.19	6.6
LPM02953	POIKPYX	MRHW	3.42	3.22	6.1
LPM02954	N	MRHW	3.08	2.97	3.7
LPM02955	N	MRHW	3.09	2.98	3.5
LPM02956	N	MRHW	3.35	3.04	9.8
LPM02957	N	MRHW	3.09	3.01	2.7
LPM02958	N	MRHW	3.12	3.00	3.8
LPM02959	N	MRHW	3.16	3.05	3.6
LPM02960	PEGFPYX	MRHW	3.33	3.14	5.8
LPM02961	POIKPYX	MRHW	3.29	3.20	2.8
LPM02962	POIKPYX	MRHW	3.37	3.23	4.4
LPM02963	N	MRHW	3.18	3.01	5.3
LPM02964	N	MRHW	3.18	3.00	5.7
LPM02965	N	MRHW	3.25	3.06	5.9
LPM02966	PP	MRHW	3.27	3.11	4.9
LPM02967	POIKPYX	MRHW	3.33	3.17	5.0
LPM02968	POIKPYX	MRHW	3.42	3.25	5.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM02969	POIKPYX	MRHW	3.40	3.24	4.8
LPM02970	POIKPYX	MRHW	3.12	3.00	3.9
LPM02971	POIKPYX	MRHW	3.18	3.05	4.1
LPM02972	POIKPYX	MRHW	3.21	3.13	2.4
LPM02973	POIKPYX	MRHW	3.26	3.15	3.5
LPM02974	POIKPYX	MRHW	3.35	3.23	3.7
LPM02975	POIKPYX	MRHW	3.36	3.27	2.6
LPM02976	N	MRHW	3.12	3.00	4.1
LPM02977	N	MRHW	3.17	3.03	4.4
LPM02978	N	MRHW	3.31	3.20	3.5
LPM02979	POIKPYX	MRHW	3.37	3.22	4.6
LPM02980	POIKPYX	MRHW	3.34	3.23	3.4
LPM02981	N	MRHW	3.14	2.98	5.3
LPM02982	N	MRHW	3.18	3.00	6.0
LPM02983	N	MRHW	3.22	3.05	5.3
LPM02984	POIKPYX	MRHW	3.43	3.27	4.8
LPM02985	POIKPYX	MRHW	3.44	3.22	6.6
LPM02986	POIKPYX	MRHW	3.42	3.31	3.2
LPM02987	N	MRHW	3.23	3.16	2.2
LPM02988	N	MRHW	3.28	3.06	6.9
LPM02989	N	MRHW	3.32	3.10	7.0
LPM02990	PYX	MRHW	3.30	3.13	5.2
LPM02991	PYX	MRHW	3.35	3.02	10.4
LPM02992	PYX	MRHW	3.48	3.23	7.6
LPM02993	PYX	MRHW	3.48	3.25	7.0
LPM02994	N	MRHW	3.25	3.08	5.2
LPM02995	N	MRHW	3.29	3.18	3.5
LPM02996	PYX	MRHW	3.31	3.15	4.9
LPM02997	PYX	MRHW	3.37	3.20	5.2
LPM02998	PYX	MRHW	3.42	3.25	5.1
LPM02999	PYX	MRHW	3.44	3.24	5.9
LPM03000	N	MRHW	3.29	3.09	6.3
LPM03001	N	MRHW	3.33	3.16	5.2
LPM03002	N	MRHW	3.37	3.15	6.8
LPM03003	PYX	MRHW	3.39	3.18	6.3
LPM03004	PYX	MRHW	3.46	3.24	6.7
LPM03005	PYX	MRHW	3.52	3.26	7.8
LPM03006	N	MRHW	2.95	2.82	4.6
LPM03007	N	MRHW	3.04	2.90	4.7
LPM03008	N	MRHW	3.06	2.91	5.1
LPM03009	PYX	MRHW	3.36	3.14	6.8
LPM03010	PYX	MRHW	3.34	3.23	3.1
LPM03011	PYX	MRHW	3.40	3.19	6.5
LPM03012	PYX	MRHW	3.40	3.21	5.7
LPM03013	PYX	MRHW	3.41	3.03	11.9
LPM03014	PYX	MRHW	3.42	3.20	6.6
LPM03015	N	MRHW	3.04	2.90	4.7
LPM03016	N	MRHW	3.07	2.94	4.3
LPM03017	N	MRHW	3.12	2.94	5.8
LPM03018	PEGFPYX	MRHW	3.39	3.17	6.8
LPM03019	PEGFPYX	MRHW	3.40	3.25	4.6
LPM03020	PEGFPYX	MRHW	3.39	3.22	5.1
LPM03021	PEGFPYX	MRHW	3.40	3.11	8.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03022	N	MRHW	2.92	2.79	4.5
LPM03023	PYX	MRHW	3.37	3.21	4.8
LPM03024	PYX	MRHW	3.40	3.23	5.0
LPM03025	PYX	MRHW	3.40	3.23	5.1
LPM03026	PYX	MRHW	3.40	3.19	6.5
LPM03027	PYX	MRHW	3.41	3.07	10.5
LPM03028	N	MRHW	2.83	2.80	1.1
LPM03029	N	MRHW	3.03	2.93	3.5
LPM03030	N	MRHW	3.06	2.92	4.4
LPM03031	N	MRHW	3.08	2.94	4.7
LPM03032	N	MRHW	3.09	2.98	3.7
LPM03033	PYX	MRHW	3.10	3.00	3.4
LPM03034	PYX	MRHW	3.16	2.86	10.1
LPM03035	PYX	MRHW	3.28	3.18	3.0
LPM03036	PYX	MRHW	3.36	3.23	4.0
LPM03037	PYX	MRHW	3.34	3.28	1.8
LPM03038	PYX	MRHW	3.24	3.20	1.2
LPM03039	N	MRHW	3.11	2.97	4.6
LPM03040	N	MRHW	3.12	2.98	4.6
LPM03041	N	MRHW	3.14	3.00	4.4
LPM03042	N	MRHW	3.19	3.03	5.1
LPM03043	PYX	MRHW	3.37	3.23	4.1
LPM03044	PYX	MRHW	3.40	3.22	5.4
LPM03045	PYX	MRHW	3.40	3.23	5.0
LPM03046	PYX	MRHW	3.40	3.24	4.7
LPM03047	N	MRHW	3.14	2.98	5.4
LPM03048	N	MRHW	3.12	2.97	4.9
LPM03049	N	MRHW	3.17	3.03	4.4
LPM03050	PYX	MRHW	3.31	3.15	4.8
LPM03051	PYX	MRHW	3.42	3.26	4.8
LPM03052	PYX	MRHW	3.40	3.23	5.0
LPM03053	PYX	MRHW	3.31	3.23	2.6
LPM03054	N	MRHW	3.27	2.99	8.9
LPM03055	N	MRHW	3.39	2.96	13.5
LPM03056	N	MRHW	3.25	2.99	8.3
LPM03057	N	MRHW	3.33	3.07	8.3
LPM03058	POIKFPYX	MRHW	3.54	3.23	9.0
LPM03059	N	MRHW	3.23	3.00	7.5
LPM03060	N	MRHW	3.33	3.06	8.5
LPM03061	POIKFPYX	MRHW	3.54	3.24	8.9
LPM03062	POIKFPYX	MRHW	3.53	3.24	8.6
LPM03063	N	MRHW	3.03	2.76	9.3
LPM03064	N	MRHW	3.11	3.03	2.7
LPM03065	PYX	MRHW	3.28	3.20	2.4
LPM03066	PYX	MRHW	3.35	3.25	2.8
LPM03067	PYX	MRHW	3.42	3.22	6.1
LPM03068	N	MRHW	3.32	2.98	10.8
LPM03069	N	MRHW	3.45	3.08	11.4
LPM03070	PYX	MRHW	3.36	3.23	3.8
LPM03071	PYX	MRHW	3.39	3.21	5.6
LPM03072	N	MRHW	3.05	2.90	4.9
LPM03073	N	MRHW	3.07	2.94	4.3
LPM03074	N	MRHW	3.09	3.02	2.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM03075	PYX	MRHW	3.21	3.21	-0.1
LPM03076	PYX	MRHW	3.48	3.33	4.3
LPM03077	PYX	MRHW	3.44	3.31	3.7
LPM03078	N	MRHW	3.04	2.94	3.2
LPM03079	N	MRHW	3.12	3.01	3.6
LPM03080	PYX	MRHW	3.24	3.05	6.0
LPM03081	PYX	MRHW	3.50	3.33	5.1
LPM03082	PYX	MRHW	3.43	3.27	4.8
LPM03083	N	MRHW	3.11	2.97	4.6
LPM03084	N	MRHW	3.13	3.00	4.3
LPM03085	N	MRHW	3.23	3.04	6.0
LPM03086	PYX	MRHW	3.49	3.39	3.0
LPM03087	PYX	MRHW	3.47	3.28	5.6
LPM03088	MN	MRHW	3.19	3.00	6.1
LPM03089	MN	MRHW	3.14	3.04	3.2
LPM03090	MN	MRHW	3.20	3.08	3.7
LPM03091	MN	MRHW	3.26	3.11	4.7
LPM03092	N	MRHW	3.19	2.92	8.8
LPM03093	N	MRHW	3.10	2.90	6.7
LPM03094	N	MRHW	3.12	3.03	3.0
LPM03095	N	MRHW	3.15	3.10	1.5
LPM03096	N	MRHW	3.22	3.10	3.9
LPM03097	LN	MRHW	3.12	2.89	7.7
LPM03098	FPYX	MRHW	3.08	2.79	10.0
LPM03099	FPYX	MRHW	3.38	3.07	9.6
LPM03100	LN	MRHW	3.02	3.00	0.6
LPM03101	LN	MRHW	2.99	2.86	4.5
LPM03102	LN	MRHW	2.90	2.67	8.2
LPM03103	FPYX	MRHW	2.93	2.67	9.2
LPM03104	FPYX	MRHW	3.14	2.93	7.0
LPM03105	N	MRHW	3.07	3.06	0.4
LPM03106	N	MRHW	3.12	3.07	1.6
LPM03107	N	MRHW	3.16	2.96	6.4
LPM03108	FPYX	MRHW	3.23	3.17	1.8
LPM03109	LN	MRHW	3.01	2.97	1.4
LPM03110	LN	MRHW	3.02	3.00	0.7
LPM03111	LN	MRHW	3.08	3.04	1.4
LPM03112	LN	MRHW	3.13	3.08	1.7
LPM03113	LN	MRHW	3.17	3.13	1.2
LPM03114	LN	MRHW	3.08	3.08	0.1
LPM03115	LN	MRHW	3.14	3.19	-1.5
LPM03116	POIKFPYX	MRHW	3.23	3.18	1.7
LPM03117	POIKFPYX	MRHW	3.32	3.24	2.4
LPM03118	POIKFPYX	MRHW	3.09	3.05	1.2
LPM03119	N	MRHW	3.15	3.09	1.8
LPM03120	N	MRHW	3.28	3.22	2.0
LPM03121	POIKFPYX	MRHW	3.32	3.25	2.0
LPM03122	POIKFPYX	MRHW	3.31	3.27	1.3
LPM03123	N	MRHW	3.08	3.07	0.4
LPM03124	N	MRHW	3.13	3.11	0.8
LPM03125	POIKFPYX	MRHW	3.24	3.29	-1.6
LPM03126	POIKFPYX	MRHW	3.32	3.27	1.5
LPM03127	POIKFPYX	MRHW	3.34	3.31	0.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03128	N	MRHW	3.07	2.77	10.2
LPM03129	N	MRHW	3.15	2.84	10.3
LPM03130	POIKFPYX	MRHW	3.23	3.19	1.2
LPM03131	POIKFPYX	MRHW	3.33	3.24	2.6
LPM03132	POIKFPYX	MRHW	3.33	3.26	2.1
LPM03133	PYX	MRHW	3.15	2.87	9.4
LPM03134	PYX	MRHW	3.16	2.98	5.9
LPM03135	PYX	MRHW	3.11	3.02	3.0
LPM03136	PYX	MRHW	3.16	3.01	4.8
LPM03137	PYX	MRHW	3.23	3.11	3.9
LPM03138	PYX	MRHW	3.39	3.23	4.8
LPM03139	PYX	MRHW	3.43	3.24	5.7
LPM03140	PYX	MRHW	3.42	3.26	4.8
LPM03141	PYX	MRHW	3.48	3.25	6.9
LPM03142	N	MRHW	3.18	2.95	7.5
LPM03143	N	MRHW	3.23	2.92	10.0
LPM03144	N	MRHW	3.22	2.91	10.0
LPM03145	N	MRHW	3.37	3.10	8.4
LPM03146	PYX	MRHW	3.57	3.18	11.5
LPM03147	PYX	MRHW	3.57	3.20	10.8
LPM03148	PYX	MRHW	3.56	3.10	14.0
LPM03149	PYX	MRHW	3.52	3.25	7.8
LPM03150	PYX	MRHW	3.52	3.22	8.9
LPM03151	PYX	MRHW	3.55	3.23	9.5
LPM03152	PYX	MRHW	3.13	2.86	9.1
LPM03153	PYX	MRHW	3.25	2.97	9.1
LPM03154	PYX	MRHW	3.20	2.95	8.1
LPM03155	PYX	MRHW	3.25	3.25	-0.1
LPM03156	FPYX	MRHW	3.40	3.21	5.7
LPM03157	FPYX	MRHW	3.41	3.20	6.2
LPM03158	FPYX	MRHW	3.43	3.23	5.9
LPM03159	FPYX	MRHW	3.44	3.24	5.9
LPM03160	N	MRHW	3.24	3.09	4.7
LPM03161	FPYX	MRHW	3.41	3.23	5.4
LPM03162	FPYX	MRHW	3.41	3.20	6.2
LPM03163	FPYX	MRHW	3.41	3.22	5.7
LPM03164	FPYX	MRHW	3.42	3.19	6.8
LPM03165	FPYX	MRHW	3.44	3.24	5.9
LPM03166	FPYX	MRHW	3.44	3.21	7.0
LPM03167	N	MRHW	3.16	2.99	5.7
LPM03168	N	MRHW	3.16	3.00	5.3
LPM03169	N	MRHW	3.23	3.02	6.7
LPM03170	N	MRHW	3.24	3.08	5.0
LPM03171	N	MRHW	3.20	2.99	6.7
LPM03172	N	MRHW	3.15	2.99	5.3
LPM03173	N	MRHW	3.17	3.02	5.0
LPM03174	N	MRHW	3.23	3.02	6.7
LPM03175	N	MRHW	3.18	2.98	6.6
LPM03176	N	MRHW	3.24	3.02	7.2
LPM03177	N	MRHW	3.14	3.01	4.1
LPM03178	N	MRHW	3.25	2.97	9.1
LPM03179	N	MRHW	3.18	3.03	4.8
LPM03180	N	MRHW	3.25	3.09	5.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03181	N	MRHW	3.11	2.97	4.7
LPM03182	N	MRHW	3.18	3.05	4.2
LPM03183	POIKAN	MRHW	2.85	2.70	5.5
LPM03184	POIKAN	MRHW	2.92	2.75	5.9
LPM03185	POIKAN	MRHW	3.01	2.85	5.4
LPM03186	N	MRHW	3.00	2.85	5.3
LPM03187	OTHER	MRHW	2.87	2.75	4.3
LPM03188	OTHER	MRHW	2.85	2.72	4.7
LPM03189	OTHER	MRHW	2.86	2.71	5.4
LPM03190	OTHER	MRHW	2.86	2.71	5.3
LPM03191	PYXAN	MRHW	2.90	2.75	5.3
LPM03192	PYXAN	MRHW	2.92	2.78	4.9
LPM03193	N	MRHW	3.27	3.09	5.8
LPM03194	FPYX	MRHW	3.39	3.21	5.5
LPM03195	FPYX	MRHW	3.42	3.26	4.9
LPM03196	FPYX	MRHW	3.47	3.25	6.5
LPM03197	FPYX	MRHW	3.49	3.29	5.9
LPM03198	N	MRHW	3.12	2.98	4.6
LPM03199	N	MRHW	3.15	3.01	4.6
LPM03200	N	MRHW	3.22	3.03	6.2
LPM03201	N	MRHW	3.36	3.04	10.1
LPM03202	N	MRHW	3.51	3.09	12.7
LPM03203	N	MRHW	3.32	3.12	6.2
LPM03204	N	MRHW	3.20	3.07	4.2
LPM03205	N	MRHW	3.23	2.99	7.9
LPM03206	N	MRHW	3.29	3.11	5.7
LPM03207	N	MRHW	3.26	3.16	3.2
LPM03208	FPYX	MRHW	3.40	3.30	3.0
LPM03209	FPYX	MRHW	3.33	3.09	7.5
LPM03210	FPYX	MRHW	3.39	3.21	5.4
LPM03211	FPYX	MRHW	3.42	3.19	6.9
LPM03212	FPYX	MRHW	3.45	3.25	6.0
LPM03213	FPYX	MRHW	3.48	3.30	5.3
LPM03214	FPYX	MRHW	3.37	3.25	3.5
LPM03215	FPYX	MRHW	3.40	3.25	4.6
LPM03216	FPYX	MRHW	3.39	3.26	3.8
LPM03217	FPYX	MRHW	3.42	3.25	5.0
LPM03218	FPYX	MRHW	3.41	3.31	2.9
LPM03219	FPYX	MRHW	3.26	3.17	2.7
LPM03220	FPYX	MRHW	3.41	3.24	5.0
LPM03221	FPYX	MRHW	3.43	3.27	4.9
LPM03222	FPYX	MRHW	3.41	3.24	5.2
LPM03223	FPYX	MRHW	3.47	3.28	5.6
LPM03224	FPYX	MRHW	3.43	3.26	5.0
LPM03225	FPYX	MRHW	3.41	3.27	4.3
LPM03226	FPYX	MRHW	3.43	3.28	4.5
LPM03227	FPYX	MRHW	3.39	3.27	3.6
LPM03228	FPYX	MRHW	3.42	3.03	12.0
LPM03229	N	MRHW	3.22	3.20	0.7
LPM03230	FPYX	MRHW	3.38	3.25	4.0
LPM03231	FPYX	MRHW	3.37	3.25	3.5
LPM03232	FPYX	MRHW	3.37	3.25	3.7
LPM03233	FPYX	MRHW	3.35	3.26	2.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03234	N	MRHW	3.29	3.11	5.6
LPM03235	FPYX	MRHW	3.43	3.25	5.3
LPM03236	FPYX	MRHW	3.37	3.13	7.5
LPM03237	FPYX	MRHW	3.41	3.25	4.8
LPM03238	FPYX	MRHW	3.42	3.24	5.5
LPM03239	N	MRHW	3.28	3.02	8.2
LPM03240	FPYX	MRHW	3.49	3.21	8.3
LPM03241	FPYX	MRHW	3.47	3.24	6.9
LPM03242	FPYX	MRHW	3.45	3.24	6.0
LPM03243	FPYX	MRHW	3.48	3.26	6.5
LPM03244	FPYX	MRHW	3.40	3.04	11.3
LPM03245	FPYX	MRHW	3.48	3.23	7.4
LPM03246	FPYX	MRHW	3.48	3.23	7.5
LPM03247	FPYX	MRHW	3.48	3.24	7.1
LPM03248	FPYX	MRHW	3.46	3.26	5.8
LPM03249	FPYX	MRHW	3.39	3.28	3.4
LPM03250	FPYX	MRHW	3.40	3.29	3.3
LPM03251	FPYX	MRHW	3.36	3.25	3.2
LPM03252	FPYX	MRHW	3.36	3.06	9.2
LPM03253	FPYX	MRHW	3.36	3.27	2.7
LPM03254	FPYX	MRHW	3.40	3.21	5.8
LPM03255	FPYX	MRHW	3.35	3.20	4.6
LPM03256	FPYX	MRHW	3.41	3.22	5.7
LPM03257	FPYX	MRHW	3.39	3.19	5.9
LPM03258	FPYX	MRHW	3.48	3.34	4.3
LPM03259	FPYX	MRHW	3.42	3.29	4.0
LPM03260	FPYX	MRHW	3.42	3.32	3.0
LPM03261	FPYX	MRHW	3.42	3.25	5.2
LPM03262	FPYX	MRHW	3.45	3.49	-1.3
LPM03263	FPYX	MRHW	3.38	3.13	7.8
LPM03264	FPYX	MRHW	3.41	3.21	6.2
LPM03265	FPYX	MRHW	3.45	3.24	6.3
LPM03266	FPYX	MRHW	3.42	3.21	6.3
LPM03267	FPYX	MRHW	3.47	3.26	6.2
LPM03268	FPYX	MRHW	3.31	3.20	3.4
LPM03269	FPYX	MRHW	3.39	3.27	3.6
LPM03270	FPYX	MRHW	3.43	3.26	5.0
LPM03271	FPYX	MRHW	3.44	3.25	5.6
LPM03272	FPYX	MRHW	3.43	3.25	5.3
LPM03273	FPYX	MRHW	3.32	3.25	2.1
LPM03274	FPYX	MRHW	3.33	3.25	2.3
LPM03275	FPYX	MRHW	3.35	3.26	2.5
LPM03276	FPYX	MRHW	3.33	3.23	3.1
LPM03277	FPYX	MRHW	3.35	3.26	2.9
LPM03278	FPYX	MRHW	3.41	3.27	4.2
LPM03279	FPYX	MRHW	3.40	3.25	4.4
LPM03280	FPYX	MRHW	3.41	3.26	4.6
LPM03281	FPYX	MRHW	3.41	3.26	4.6
LPM03282	FPYX	MRHW	3.48	3.27	6.0
LPM03283	FPYX	MRHW	3.26	3.21	1.7
LPM03284	FPYX	MRHW	3.30	3.27	1.0
LPM03285	FPYX	MRHW	3.29	3.25	1.1
LPM03286	FPYX	MRHW	3.27	3.20	2.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03287	FPYX	MRHW	3.31	3.24	2.0
LPM03288	N	MRHW	3.14	3.03	3.6
LPM03289	N	MRHW	3.20	3.01	6.2
LPM03290	FPYX	MRHW	3.39	3.12	8.2
LPM03291	FPYX	MRHW	3.37	3.24	4.1
LPM03292	FPYX	MRHW	3.37	3.24	3.7
LPM03293	FPYX	MRHW	3.36	2.95	13.2
LPM03294	N	MRHW	3.13	3.03	3.4
LPM03295	N	MRHW	3.21	3.04	5.4
LPM03296	FPYX	MRHW	3.39	3.26	3.9
LPM03297	FPYX	MRHW	3.39	3.23	4.8
LPM03298	FPYX	MRHW	3.36	3.25	3.2
LPM03299	FPYX	MRHW	3.35	3.23	3.6
LPM03300	N	MRHW	3.13	3.02	3.6
LPM03301	N	MRHW	3.20	3.04	5.0
LPM03302	FPYX	MRHW	3.40	3.26	4.2
LPM03303	FPYX	MRHW	3.40	3.24	4.8
LPM03304	FPYX	MRHW	3.40	3.25	4.4
LPM03305	FPYX	MRHW	3.41	3.24	5.0
LPM03306	N	MRHW	3.11	3.07	1.4
LPM03307	N	MRHW	3.23	3.01	7.2
LPM03308	FPYX	MRHW	3.34	3.23	3.3
LPM03309	FPYX	MRHW	3.43	3.26	5.2
LPM03310	FPYX	MRHW	3.43	3.24	5.7
LPM03311	FPYX	MRHW	3.44	3.25	5.7
LPM03312	N	MRHW	3.10	2.96	4.5
LPM03313	N	MRHW	3.12	2.98	4.6
LPM03314	N	MRHW	3.15	2.99	5.1
LPM03315	PYX	MRHW	3.33	3.13	6.3
LPM03316	PYX	MRHW	3.37	3.11	7.9
LPM03317	PYX	MRHW	3.40	3.21	5.8
LPM03318	PYX	MRHW	3.41	3.23	5.3
LPM03319	PYX	MRHW	3.38	3.19	5.7
LPM03320	PYX	MRHW	3.38	3.20	5.4
LPM03321	PYX	MRHW	3.48	3.24	7.0
LPM03322	PYX	MRHW	3.38	3.17	6.3
LPM03323	PYX	MRHW	3.42	3.29	3.9
LPM03324	PYX	MRHW	3.47	3.19	8.4
LPM03325	PYX	MRHW	3.36	3.14	6.8
LPM03326	PYX	MRHW	3.31	3.18	4.1
LPM03327	PYX	MRHW	3.37	3.12	7.8
LPM03328	PYX	MRHW	3.37	3.24	3.9
LPM03329	PYX	MRHW	3.30	3.19	3.4
LPM03330	PYX	MRHW	3.27	3.05	6.8
LPM03331	PYX	MRHW	3.35	3.20	4.7
LPM03332	N	MRHW	3.07	2.96	3.6
LPM03333	N	MRHW	3.03	3.01	0.7
LPM03334	N	MRHW	3.16	3.11	1.6
LPM03335	PYX	MRHW	3.33	3.13	6.1
LPM03336	PYX	MRHW	3.33	3.18	4.7
LPM03337	PYX	MRHW	3.35	3.25	3.0
LPM03338	PYX	MRHW	3.35	3.04	9.6
LPM03339	PYX	MRHW	3.34	3.21	4.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03340	N	MRHW	3.13	2.87	8.8
LPM03341	PYX	MRHW	3.29	2.93	11.7
LPM03342	PYX	MRHW	3.31	3.06	8.0
LPM03343	PYX	MRHW	3.32	3.14	5.7
LPM03344	PYX	MRHW	3.35	3.09	8.0
LPM03345	N	MRHW	3.12	2.98	4.7
LPM03346	N	MRHW	3.13	3.01	4.0
LPM03347	N	MRHW	3.16	3.03	4.3
LPM03348	PYX	MRHW	3.38	3.20	5.4
LPM03349	PYX	MRHW	3.38	3.22	4.9
LPM03350	PYX	MRHW	3.38	3.21	5.3
LPM03351	PYX	MRHW	3.38	3.22	5.0
LPM03352	PYX	MRHW	3.37	3.22	4.7
LPM03353	N	MRHW	3.09	2.98	3.4
LPM03354	N	MRHW	3.11	2.99	3.8
LPM03355	N	MRHW	3.14	3.03	3.5
LPM03356	N	MRHW	3.30	3.11	5.9
LPM03357	PYX	MRHW	3.38	3.23	4.5
LPM03358	PYX	MRHW	3.39	3.24	4.6
LPM03359	PYX	MRHW	3.37	3.20	5.0
LPM03360	N	MRHW	3.16	2.98	5.9
LPM03361	N	MRHW	3.21	2.96	8.2
LPM03362	N	MRHW	3.29	3.02	8.5
LPM03363	PYX	MRHW	3.53	3.18	10.4
LPM03364	PYX	MRHW	3.42	3.36	1.8
LPM03365	PYX	MRHW	3.44	3.24	6.1
LPM03366	PYX	MRHW	3.42	3.22	6.1
LPM03367	PYX	MRHW	3.44	3.18	7.8
LPM03368	N	MRHW	2.89	2.83	2.1
LPM03369	N	MRHW	3.17	3.04	4.1
LPM03370	PYX	MRHW	3.30	3.07	7.1
LPM03371	PYX	MRHW	3.35	3.22	4.0
LPM03372	PYX	MRHW	3.37	3.22	4.5
LPM03373	N	MRHW	3.12	2.99	4.4
LPM03374	N	MRHW	3.14	3.04	3.1
LPM03375	N	MRHW	3.24	3.11	4.0
LPM03376	PYX	MRHW	3.36	3.22	4.2
LPM03377	PYX	MRHW	3.38	3.26	3.7
LPM03378	PYX	MRHW	3.38	3.26	3.7
LPM03379	N	MRHW	3.08	2.99	3.0
LPM03380	N	MRHW	3.12	3.02	3.4
LPM03381	N	MRHW	3.14	3.00	4.6
LPM03382	N	MRHW	3.19	3.04	4.9
LPM03383	PYX	MRHW	3.34	3.25	2.8
LPM03384	PYX	MRHW	3.36	3.27	2.8
LPM03385	PYX	MRHW	3.36	3.28	2.4
LPM03386	N	MRHW	3.09	2.98	3.7
LPM03387	N	MRHW	3.12	3.03	2.9
LPM03388	N	MRHW	3.14	3.10	1.2
LPM03389	PYX	MRHW	3.35	3.27	2.3
LPM03390	PYX	MRHW	3.28	3.24	1.3
LPM03391	PYX	MRHW	3.29	3.24	1.7
LPM03392	PYX	MRHW	3.28	3.24	1.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03393	PYX	MRHW	3.29	3.25	1.4
LPM03394	N	MRHW	3.14	3.02	3.8
LPM03395	N	MRHW	3.17	3.05	3.8
LPM03396	N	MRHW	3.18	3.11	2.2
LPM03397	PYX	MRHW	3.38	3.26	3.5
LPM03398	PYX	MRHW	3.38	3.24	4.2
LPM03399	PYX	MRHW	3.38	3.25	3.9
LPM03400	PYX	MRHW	3.39	3.25	4.3
LPM03401	PYX	MRHW	3.41	3.27	4.2
LPM03402	N	MRHW	3.13	3.02	3.5
LPM03403	N	MRHW	3.15	3.04	3.4
LPM03404	N	MRHW	3.17	3.08	2.8
LPM03405	PYX	MRHW	3.34	3.22	3.6
LPM03406	PYX	MRHW	3.37	3.24	3.8
LPM03407	PYX	MRHW	3.36	3.25	3.3
LPM03408	PYX	MRHW	3.34	3.23	3.4
LPM03409	PYX	MRHW	3.33	3.26	2.0
LPM03410	N	MRHW	3.02	3.01	0.4
LPM03411	N	MRHW	3.03	3.03	0.0
LPM03412	N	MRHW	3.08	2.99	3.0
LPM03413	PYX	MRHW	3.26	3.26	0.0
LPM03414	PYX	MRHW	3.40	3.24	4.9
LPM03415	PYX	MRHW	3.40	3.24	4.7
LPM03416	PYX	MRHW	3.40	3.18	6.8
LPM03417	N	MRHW	3.13	3.02	3.4
LPM03418	N	MRHW	3.11	3.03	2.6
LPM03419	N	MRHW	3.17	3.03	4.4
LPM03420	PYX	MRHW	3.35	3.33	0.5
LPM03421	PYX	MRHW	3.37	3.08	8.9
LPM03422	PYX	MRHW	3.37	3.25	3.5
LPM03423	PYX	MRHW	3.37	3.24	3.9
LPM03424	N	MRHW	3.08	3.03	1.5
LPM03425	N	MRHW	3.11	3.07	1.3
LPM03426	PYX	MRHW	3.28	3.22	1.8
LPM03427	PYX	MRHW	3.30	3.23	2.1
LPM03428	PYX	MRHW	3.30	3.24	1.9
LPM03429	PYX	MRHW	3.31	3.26	1.4
LPM03430	N	MRHW	3.15	3.04	3.5
LPM03431	N	MRHW	3.21	3.07	4.5
LPM03432	N	MRHW	3.28	3.15	4.0
LPM03433	PYX	MRHW	3.29	3.16	4.1
LPM03434	PYX	MRHW	3.42	3.22	5.9
LPM03435	PYX	MRHW	3.44	3.23	6.2
LPM03436	PYX	MRHW	3.39	3.22	5.1
LPM03437	N	MRHW	3.12	3.08	1.4
LPM03438	N	MRHW	3.18	3.14	1.4
LPM03439	N	MRHW	3.21	3.15	1.8
LPM03440	PYX	MRHW	3.33	3.25	2.6
LPM03441	PYX	MRHW	3.31	3.25	2.0
LPM03442	PYX	MRHW	3.31	3.26	1.5
LPM03443	N	MRHW	3.24	3.11	4.2
LPM03444	N	MRHW	3.27	3.14	4.0
LPM03445	N	MRHW	3.31	3.15	4.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03446	PYX	MRHW	3.40	3.22	5.3
LPM03447	PYX	MRHW	3.42	3.37	1.6
LPM03448	N	MRHW	3.23	3.06	5.4
LPM03449	N	MRHW	3.28	3.11	5.3
LPM03450	N	MRHW	3.33	3.18	4.6
LPM03451	PYX	MRHW	3.41	3.25	4.7
LPM03452	PYX	MRHW	3.41	3.25	4.7
LPM03453	PYX	MRHW	3.43	3.27	4.7
LPM03454	PYX	MRHW	3.40	3.27	3.9
LPM03455	N	MRHW	3.16	2.98	5.8
LPM03456	N	MRHW	3.19	3.03	5.0
LPM03457	N	MRHW	3.25	3.09	5.0
LPM03458	PYX	MRHW	3.33	3.17	5.0
LPM03459	PYX	MRHW	3.43	3.24	5.8
LPM03460	PYX	MRHW	3.44	3.28	4.7
LPM03461	PYX	MRHW	3.44	3.22	6.6
LPM03462	PYX	MRHW	3.49	3.26	6.7
LPM03463	N	MRHW	3.17	3.02	5.0
LPM03464	N	MRHW	3.24	3.05	6.2
LPM03465	N	MRHW	3.27	3.10	5.2
LPM03466	PYX	MRHW	3.40	3.20	6.1
LPM03467	PYX	MRHW	3.41	3.23	5.4
LPM03468	PYX	MRHW	3.42	3.24	5.3
LPM03469	PYX	MRHW	3.46	3.25	6.3
LPM03470	FPYX	MRHW	3.27	3.12	4.8
LPM03471	FPYX	MRHW	3.32	3.12	6.2
LPM03472	FPYX	MRHW	3.33	3.27	1.9
LPM03473	FPYX	MRHW	3.36	3.20	4.9
LPM03474	FPYX	MRHW	3.37	3.21	4.8
LPM03475	FPYX	MRHW	3.15	3.07	2.4
LPM03476	FPYX	MRHW	3.27	3.26	0.3
LPM03477	FPYX	MRHW	3.34	3.26	2.5
LPM03478	FPYX	MRHW	3.31	3.21	3.2
LPM03479	FPYX	MRHW	3.33	3.25	2.5
LPM03480	FPYX	MRHW	3.14	3.04	3.4
LPM03481	FPYX	MRHW	3.23	3.09	4.6
LPM03482	FPYX	MRHW	3.34	3.17	5.2
LPM03483	FPYX	MRHW	3.33	3.23	3.2
LPM03484	FPYX	MRHW	3.35	3.23	3.6
LPM03485	N	MRHW	3.10	2.84	8.6
LPM03486	N	MRHW	3.16	3.10	1.8
LPM03487	FPYX	MRHW	3.22	3.33	-3.4
LPM03488	N	MRHW	3.21	3.00	6.8
LPM03489	N	MRHW	3.12	3.02	3.3
LPM03490	N	MRHW	3.20	3.06	4.3
LPM03491	PYX	MRHW	3.30	3.16	4.2
LPM03492	PYX	MRHW	3.36	3.25	3.4
LPM03493	PYX	MRHW	3.36	3.27	2.8
LPM03494	PYX	MRHW	3.34	3.25	2.6
LPM03495	N	MRHW	3.26	2.99	8.5
LPM03496	N	MRHW	3.32	3.02	9.4
LPM03497	N	MRHW	3.48	3.13	10.6
LPM03498	PYX	MRHW	3.52	3.25	7.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03499	PYX	MRHW	3.38	3.24	4.4
LPM03500	N	MRHW	3.26	3.02	7.6
LPM03501	N	MRHW	3.31	3.07	7.6
LPM03502	N	MRHW	3.35	3.06	9.2
LPM03503	PYX	MRHW	3.49	3.20	8.5
LPM03504	PYX	MRHW	3.55	3.26	8.6
LPM03505	PYX	MRHW	3.53	3.21	9.3
LPM03506	N	MRHW	3.13	2.93	6.6
LPM03507	N	MRHW	3.14	2.96	5.9
LPM03508	N	MRHW	3.17	2.96	6.9
LPM03509	N	MRHW	3.18	2.99	6.1
LPM03510	PYX	MRHW	3.23	2.90	10.9
LPM03511	PYX	MRHW	3.34	3.03	9.6
LPM03512	PYX	MRHW	3.42	3.15	8.3
LPM03513	PYX	MRHW	3.50	3.20	9.0
LPM03514	N	MRHW	3.16	2.99	5.7
LPM03515	N	MRHW	3.41	3.12	8.8
LPM03516	PYX	MRHW	3.48	3.21	7.9
LPM03517	PYX	MRHW	3.48	3.21	8.0
LPM03518	PYX	MRHW	3.27	3.05	7.1
LPM03519	PYX	MRHW	3.28	3.06	7.1
LPM03520	PYX	MRHW	3.49	3.26	6.6
LPM03521	N	MRHW	3.18	2.89	9.4
LPM03522	N	MRHW	3.19	3.00	5.9
LPM03523	PYX	MRHW	3.33	3.01	10.3
LPM03524	PYX	MRHW	3.43	3.20	6.8
LPM03525	PYX	MRHW	3.44	3.24	6.0
LPM03526	PYX	MRHW	3.43	3.24	5.6
LPM03527	PYX	MRHW	3.41	3.13	8.7
LPM03528	PYX	MRHW	3.37	3.12	7.6
LPM03529	N	MRHW	3.18	3.01	5.4
LPM03530	N	MRHW	3.23	3.06	5.5
LPM03531	N	MRHW	3.30	3.10	6.1
LPM03532	PYX	MRHW	3.38	3.16	6.6
LPM03533	PYX	MRHW	3.48	3.25	6.8
LPM03534	PYX	MRHW	3.49	3.25	7.1
LPM03535	N	MRHW	3.27	3.02	8.0
LPM03536	N	MRHW	3.31	3.04	8.6
LPM03537	N	MRHW	3.37	3.11	8.0
LPM03538	N	MRHW	3.23	3.03	6.5
LPM03539	N	MRHW	3.30	3.06	7.5
LPM03540	N	MRHW	3.35	3.03	9.9
LPM03541	N	MRHW	3.09	2.96	4.4
LPM03542	N	MRHW	3.12	3.00	4.0
LPM03543	N	MRHW	3.15	3.01	4.4
LPM03544	PYX	MRHW	3.23	3.04	6.0
LPM03545	PYX	MRHW	3.43	3.27	4.7
LPM03546	PYX	MRHW	3.42	3.25	5.2
LPM03547	PYX	MRHW	3.44	3.25	5.6
LPM03548	N	MRHW	3.17	2.96	6.8
LPM03549	N	MRHW	3.26	3.15	3.5
LPM03550	PYX	MRHW	3.42	2.95	14.8
LPM03551	PYX	MRHW	3.45	3.20	7.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03552	PYX	MRHW	3.45	3.27	5.4
LPM03553	N	MRHW	3.13	2.97	5.3
LPM03554	PYX	MRHW	3.37	3.20	5.2
LPM03555	PYX	MRHW	3.42	3.20	6.5
LPM03556	PYX	MRHW	3.42	3.20	6.6
LPM03557	PYX	MRHW	3.46	3.22	7.3
LPM03558	PYX	MRHW	3.47	3.26	6.1
LPM03559	OTHER	MRHW	3.07	2.82	8.6
LPM03560	OTHER	MRHW	3.37	2.97	12.8
LPM03561	PYX	MRHW	3.35	3.24	3.3
LPM03562	OTHER	MRHW	2.83	2.78	1.9
LPM03563	OTHER	MRHW	2.91	2.86	1.7
LPM03564	PYX	MRHW	3.17	3.01	5.3
LPM03565	PYX	MRHW	3.40	3.19	6.5
LPM03566	OTHER	MRHW	2.83	2.73	3.5
LPM03567	OTHER	MRHW	2.84	2.70	5.0
LPM03568	PYX	MRHW	3.34	3.14	6.2
LPM03569	PYX	MRHW	3.28	3.24	1.2
LPM03570	FPYX	MRHW	3.18	3.14	1.4
LPM03571	FPYX	MRHW	3.17	3.11	1.9
LPM03572	FPYX	MRHW	3.24	3.09	4.8
LPM03573	FPYX	MRHW	3.29	3.15	4.3
LPM03574	FPYX	MRHW	3.30	3.18	3.8
LPM03575	FPYX	MRHW	3.32	3.22	3.2
LPM03576	FPYX	MRHW	3.43	3.25	5.4
LPM03577	FPYX	MRHW	3.42	3.27	4.6
LPM03578	FPYX	MRHW	3.39	3.30	2.7
LPM03579	N	MRHW	3.18	2.96	7.0
LPM03580	N	MRHW	3.39	3.24	4.6
LPM03581	FPYX	MRHW	3.43	3.22	6.2
LPM03582	FPYX	MRHW	3.42	3.26	4.9
LPM03583	FPYX	MRHW	3.40	3.30	3.1
LPM03584	N	MRHW	3.44	3.04	12.5
LPM03585	N	MRHW	3.60	3.13	13.8
LPM03586	FPYX	MRHW	3.11	2.99	3.9
LPM03587	FPYX	MRHW	3.19	2.98	6.8
LPM03588	FPYX	MRHW	3.36	3.15	6.6
LPM03589	FPYX	MRHW	3.34	3.18	5.0
LPM03590	FPYX	MRHW	3.50	3.23	8.0
LPM03591	N	MRHW	3.25	3.15	3.2
LPM03592	FPYX	MRHW	3.33	3.19	4.3
LPM03593	FPYX	MRHW	3.38	3.23	4.7
LPM03594	FPYX	MRHW	3.44	3.22	6.7
LPM03595	FPYX	MRHW	3.46	3.25	6.2
LPM03596	N	MRHW	3.06	3.00	2.0
LPM03597	N	MRHW	3.07	3.01	2.0
LPM03598	FPYX	MRHW	3.28	3.23	1.4
LPM03599	FPYX	MRHW	3.32	3.24	2.2
LPM03600	FPYX	MRHW	3.37	3.22	4.6
LPM03601	N	MRHW	3.18	2.96	7.0
LPM03602	N	MRHW	3.25	2.99	8.4
LPM03603	N	MRHW	3.38	3.06	9.9
LPM03604	N	MRHW	3.08	2.94	4.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03605	N	MRHW	3.16	2.94	7.0
LPM03606	N	MRHW	3.27	2.92	11.2
LPM03607	N	MRHW	3.29	2.99	9.4
LPM03608	N	MRHW	3.42	3.06	11.1
LPM03609	N	MRHW	3.57	3.09	14.3
LPM03610	N	MRHW	3.45	2.98	14.5
LPM03611	N	MRHW	3.49	3.03	14.2
LPM03612	N	MRHW	3.25	3.11	4.2
LPM03613	N	MRHW	3.11	2.92	6.0
LPM03614	N	MRHW	3.11	2.97	4.7
LPM03615	N	MRHW	3.16	2.96	6.4
LPM03616	N	MRHW	3.13	2.99	4.7
LPM03617	N	MRHW	3.16	3.09	2.1
LPM03618	N	MRHW	3.11	2.99	4.1
LPM03619	FPYX	MRHW	3.32	3.18	4.2
LPM03620	N	MRHW	3.13	2.97	5.4
LPM03621	N	MRHW	3.21	3.23	-0.5
LPM03622	N	MRHW	3.24	3.10	4.4
LPM03623	FPYX	MRHW	3.30	3.17	4.1
LPM03624	FPYX	MRHW	3.43	3.18	7.4
LPM03625	FPYX	MRHW	3.51	3.26	7.3
LPM03626	FPYX	MRHW	3.57	3.47	2.8
LPM03627	FPYX	MRHW	3.48	3.28	5.9
LPM03628	FPYX	MRHW	3.49	3.25	7.0
LPM03629	N	MRHW	3.43	3.18	7.6
LPM03630	FPYX	MRHW	3.49	3.24	7.4
LPM03631	FPYX	MRHW	3.48	3.21	8.1
LPM03632	FPYX	MRHW	3.40	3.22	5.5
LPM03633	FPYX	MRHW	3.46	3.28	5.5
LPM03634	FPYX	MRHW	3.51	3.27	7.1
LPM03635	FPYX	MRHW	3.54	3.06	14.5
LPM03636	FPYX	MRHW	3.52	3.20	9.3
LPM03637	FPYX	MRHW	3.39	3.16	7.1
LPM03638	FPYX	MRHW	3.34	2.94	12.7
LPM03639	FPYX	MRHW	3.46	3.18	8.3
LPM03640	FPYX	MRHW	3.49	3.30	5.5
LPM03641	FPYX	MRHW	3.50	3.24	7.8
LPM03642	N	MRHW	3.16	2.95	6.9
LPM03643	N	MRHW	3.14	3.03	3.6
LPM03644	N	MRHW	3.13	3.04	3.0
LPM03645	N	MRHW	3.22	3.14	2.6
LPM03646	PYX	MRHW	3.30	3.23	2.2
LPM03647	N	MRHW	2.94	2.87	2.5
LPM03648	N	MRHW	2.98	2.90	2.6
LPM03649	N	MRHW	3.02	2.95	2.5
LPM03650	N	MRHW	2.98	2.86	4.2
LPM03651	N	MRHW	3.04	2.88	5.5
LPM03652	N	MRHW	3.07	2.94	4.3
LPM03653	N	MRHW	3.04	2.97	2.3
LPM03654	N	MRHW	3.09	2.99	3.2
LPM03655	N	MRHW	3.09	2.99	3.3
LPM03656	PYX	MRHW	3.34	3.07	8.3
LPM03657	PYX	MRHW	3.35	3.19	4.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03658	N	MRHW	3.08	2.91	5.6
LPM03659	N	MRHW	3.13	3.01	4.0
LPM03660	N	MRHW	3.14	3.02	3.8
LPM03661	PYX	MRHW	3.19	3.11	2.7
LPM03662	PYX	MRHW	3.41	3.24	5.2
LPM03663	PYX	MRHW	3.43	3.27	4.8
LPM03664	PYX	MRHW	3.42	3.26	4.6
LPM03665	N	MRHW	3.07	2.95	3.8
LPM03666	N	MRHW	3.08	2.95	4.2
LPM03667	N	MRHW	3.11	2.99	3.9
LPM03668	PYX	MRHW	3.18	3.05	4.3
LPM03669	PYX	MRHW	3.35	3.16	5.7
LPM03670	PYX	MRHW	3.39	3.23	4.8
LPM03671	PYX	MRHW	3.39	3.25	4.1
LPM03672	N	MRHW	3.14	3.01	4.2
LPM03673	N	MRHW	3.20	3.06	4.3
LPM03674	PYX	MRHW	3.39	3.22	5.2
LPM03675	PYX	MRHW	3.38	3.23	4.5
LPM03676	PYX	MRHW	3.39	3.25	4.2
LPM03677	N	MRHW	3.13	3.00	4.1
LPM03678	N	MRHW	3.18	3.04	4.4
LPM03679	N	MRHW	3.25	3.11	4.5
LPM03680	PYX	MRHW	3.42	3.18	7.3
LPM03681	PYX	MRHW	3.41	3.23	5.5
LPM03682	PYX	MRHW	3.43	3.27	4.9
LPM03683	N	MRHW	3.17	3.00	5.6
LPM03684	N	MRHW	3.19	3.04	4.9
LPM03685	N	MRHW	3.22	3.07	4.9
LPM03686	PYX	MRHW	3.38	3.23	4.5
LPM03687	PYX	MRHW	3.40	3.25	4.4
LPM03688	PYX	MRHW	3.39	3.26	4.0
LPM03689	N	MRHW	3.12	2.94	5.9
LPM03690	N	MRHW	3.16	2.93	7.5
LPM03691	N	MRHW	3.17	2.95	7.1
LPM03692	N	MRHW	3.22	2.99	7.1
LPM03693	N	MRHW	3.23	2.99	7.7
LPM03694	N	MRHW	3.29	3.05	7.5
LPM03695	PYX	MRHW	3.50	3.31	5.5
LPM03696	PYX	MRHW	3.51	3.23	8.2
LPM03697	N	MRHW	3.07	2.95	4.0
LPM03698	N	MRHW	3.09	2.95	4.6
LPM03699	N	MRHW	3.13	2.99	4.6
LPM03700	N	MRHW	3.15	3.00	5.0
LPM03701	N	MRHW	3.21	3.05	5.0
LPM03702	N	MRHW	3.34	3.22	3.7
LPM03703	PYX	MRHW	3.40	3.26	4.1
LPM03704	PYX	MRHW	3.42	3.12	9.1
LPM03705	N	MRHW	3.06	2.92	4.7
LPM03706	N	MRHW	3.07	2.86	7.0
LPM03707	N	MRHW	3.09	2.94	5.0
LPM03708	N	MRHW	3.13	2.96	5.5
LPM03709	N	MRHW	3.14	2.89	8.3
LPM03710	PYX	MRHW	3.31	3.23	2.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03711	PYX	MRHW	3.45	3.25	6.0
LPM03712	PYX	MRHW	3.44	3.21	6.8
LPM03713	PYX	MRHW	3.43	3.23	6.0
LPM03714	N	MRHW	2.99	2.81	6.3
LPM03715	N	MRHW	3.02	2.85	5.9
LPM03716	N	MRHW	3.02	2.90	4.0
LPM03717	N	MRHW	3.05	2.97	2.7
LPM03718	N	MRHW	3.09	2.92	5.6
LPM03719	PYX	MRHW	3.31	3.07	7.6
LPM03720	PYX	MRHW	3.35	3.24	3.2
LPM03721	PYX	MRHW	3.35	3.14	6.6
LPM03722	PYX	MRHW	3.35	3.32	1.0
LPM03723	OTHER	MRHW	3.09	2.95	4.6
LPM03724	OTHER	MRHW	3.12	2.99	4.4
LPM03725	OTHER	MRHW	3.17	3.03	4.4
LPM03726	PYX	MRHW	3.38	3.23	4.7
LPM03727	PYX	MRHW	3.37	3.24	4.1
LPM03728	OTHER	MRHW	3.10	2.94	5.3
LPM03729	OTHER	MRHW	3.12	2.97	4.9
LPM03730	OTHER	MRHW	3.16	3.00	5.1
LPM03731	PYX	MRHW	3.44	3.21	6.6
LPM03732	PYX	MRHW	3.46	3.24	6.6
LPM03733	PYX	MRHW	3.45	3.24	6.4
LPM03734	N	MRHW	3.09	2.94	4.9
LPM03735	N	MRHW	3.15	2.98	5.4
LPM03736	N	MRHW	3.19	2.99	6.5
LPM03737	PYX	MRHW	3.38	3.18	6.0
LPM03738	PYX	MRHW	3.39	3.18	6.4
LPM03739	PYX	MRHW	3.38	3.22	5.0
LPM03740	N	MRHW	3.14	2.99	5.1
LPM03741	N	MRHW	3.18	3.01	5.4
LPM03742	N	MRHW	3.29	3.05	7.6
LPM03743	PYX	MRHW	3.46	3.24	6.5
LPM03744	PYX	MRHW	3.40	3.22	5.4
LPM03745	N	MRHW	3.05	2.93	4.1
LPM03746	N	MRHW	2.99	2.81	6.2
LPM03747	N	MRHW	3.03	2.84	6.4
LPM03748	PYX	MRHW	3.19	3.01	5.9
LPM03749	PYX	MRHW	3.28	3.06	6.9
LPM03750	PYX	MRHW	3.44	3.17	8.1
LPM03751	PYX	MRHW	3.41	3.24	5.1
LPM03752	PYX	MRHW	3.40	3.20	6.1
LPM03753	PYX	MRHW	3.37	3.15	6.5
LPM03754	N	MRHW	3.10	2.91	6.3
LPM03755	N	MRHW	3.13	2.99	4.6
LPM03756	N	MRHW	3.28	3.10	5.7
LPM03757	PYX	MRHW	3.38	3.17	6.4
LPM03758	PYX	MRHW	3.37	3.18	5.5
LPM03759	PYX	MRHW	3.39	3.21	5.6
LPM03760		MRHW	3.08	2.93	4.9
LPM03761		MRHW	3.08	2.95	4.4
LPM03762		MRHW	3.10	2.95	4.8
LPM03763		MRHW	3.13	2.98	4.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03764		MRHW	3.38	3.15	7.2
LPM03765	PYX	MRHW	3.13	3.01	3.9
LPM03766	PYX	MRHW	3.16	3.03	4.3
LPM03767	PYX	MRHW	3.20	3.05	4.8
LPM03768	PYX	MRHW	3.26	3.10	5.1
LPM03769	PYX	MRHW	3.32	3.14	5.5
LPM03770	PYX	MRHW	3.37	3.20	5.2
LPM03771	PYX	MRHW	3.38	3.21	5.2
LPM03772	PYX	MRHW	3.20	3.04	5.1
LPM03773	PYX	MRHW	3.27	3.07	6.2
LPM03774	PYX	MRHW	3.31	3.12	6.0
LPM03775	PYX	MRHW	3.36	3.17	5.7
LPM03776	PYX	MRHW	3.40	3.19	6.5
LPM03777	PYX	MRHW	3.45	3.26	5.7
LPM03778	N	MRHW	3.23	3.05	5.7
LPM03779	N	MRHW	3.28	3.09	6.0
LPM03780	PYX	MRHW	3.39	3.19	6.1
LPM03781	PYX	MRHW	3.48	3.27	6.2
LPM03782	PYX	MRHW	3.51	3.27	7.2
LPM03783	N	MRHW	3.13	2.99	4.7
LPM03784	N	MRHW	3.18	3.11	2.2
LPM03785	PYX	MRHW	3.45	3.26	5.7
LPM03786	PYX	MRHW	3.49	3.26	6.8
LPM03787	N	MRHW	3.12	2.99	4.2
LPM03788	N	MRHW	3.14	3.02	4.0
LPM03789	N	MRHW	3.21	3.08	4.1
LPM03790	PYX	MRHW	3.31	3.14	5.4
LPM03791	PYX	MRHW	3.40	3.22	5.4
LPM03792	PYX	MRHW	3.41	3.25	4.9
LPM03793	PYX	MRHW	3.12	3.02	3.3
LPM03794	PYX	MRHW	3.19	3.01	5.7
LPM03795	PYX	MRHW	3.24	3.12	3.6
LPM03796	PYX	MRHW	3.36	3.23	3.9
LPM03797	PYX	MRHW	3.38	3.26	3.5
LPM03798	N	MRHW	3.12	2.98	4.7
LPM03799	N	MRHW	3.14	3.02	3.9
LPM03800	N	MRHW	3.11	2.98	4.3
LPM03801	PYX	MRHW	3.40	3.25	4.5
LPM03802	PYX	MRHW	3.45	3.27	5.5
LPM03803	PYX	MRHW	3.43	3.29	4.2
LPM03804	N	MRHW	3.12	2.98	4.7
LPM03805	N	MRHW	3.12	2.99	4.2
LPM03806	N	MRHW	3.17	3.06	3.6
LPM03807	PYX	MRHW	3.38	3.22	4.7
LPM03808	PYX	MRHW	3.41	3.25	4.7
LPM03809	PYX	MRHW	3.41	3.26	4.5
LPM03810	N	MRHW	3.10	2.93	5.6
LPM03811	N	MRHW	3.09	2.89	6.7
LPM03812	N	MRHW	3.10	2.91	6.2
LPM03813	N	MRHW	3.11	2.91	6.7
LPM03814	N	MRHW	3.09	3.00	3.1
LPM03815	N	MRHW	3.16	3.05	3.6
LPM03816	N	MRHW	3.20	3.10	3.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03817	FPYX	MRHW	3.25	3.16	2.8
LPM03818	FPYX	MRHW	3.38	3.24	4.2
LPM03819	N	MRHW	3.14	2.99	4.9
LPM03820	FPYX	MRHW	3.30	3.18	3.8
LPM03821	FPYX	MRHW	3.48	3.25	6.9
LPM03822	N	MRHW	3.05	2.99	2.0
LPM03823	N	MRHW	3.12	3.03	2.8
LPM03824	N	MRHW	3.18	3.13	1.7
LPM03825	FPYX	MRHW	3.24	3.16	2.5
LPM03826	FPYX	MRHW	3.33	3.23	3.0
LPM03827	N	MRHW	3.08	3.00	2.7
LPM03828	N	MRHW	3.13	3.05	2.6
LPM03829	FPYX	MRHW	3.21	2.99	7.1
LPM03830	FPYX	MRHW	3.30	3.09	6.6
LPM03831	FPYX	MRHW	3.32	3.24	2.6
LPM03832	N	MRHW	3.09	2.97	4.0
LPM03833	N	MRHW	3.13	3.01	4.0
LPM03834	N	MRHW	3.20	3.05	4.8
LPM03835	FPYX	MRHW	3.35	3.18	5.2
LPM03836	N	MRHW	3.19	2.92	8.7
LPM03837	N	MRHW	3.05	2.98	2.4
LPM03838	FPYX	MRHW	3.08	3.04	1.5
LPM03839	FPYX	MRHW	3.22	3.23	-0.5
LPM03840	FPYX	MRHW	3.33	3.21	3.6
LPM03841	N	MRHW	3.44	2.97	14.6
LPM03842	N	MRHW	3.44	3.00	13.8
LPM03843	N	MRHW	3.13	3.15	-0.8
LPM03844	FPYX	MRHW	3.26	3.23	0.8
LPM03845	FPYX	MRHW	3.34	3.21	3.9
LPM03846	N	MRHW	3.20	3.06	4.5
LPM03847	N	MRHW	3.25	3.10	4.8
LPM03848	N	MRHW	3.22	3.07	4.6
LPM03849	FPYX	MRHW	3.27	3.09	5.7
LPM03850	FPYX	MRHW	3.32	3.14	5.6
LPM03851	FPYX	MRHW	3.33	3.15	5.6
LPM03852	FPYX	MRHW	3.33	3.17	4.9
LPM03853	FPYX	MRHW	3.37	3.18	5.8
LPM03854	FPYX	MRHW	3.33	3.16	5.2
LPM03855	FPYX	MRHW	3.38	2.96	13.2
LPM03856	FPYX	MRHW	3.37	3.13	7.3
LPM03857	FPYX	MRHW	3.49	3.22	8.0
LPM03858	FPYX	MRHW	3.52	3.26	7.8
LPM03859	FPYX	MRHW	3.53	3.24	8.4
LPM03860	PYX	MRHW	3.38	3.26	3.6
LPM03861	PYX	MRHW	3.40	3.25	4.5
LPM03862	PYX	MRHW	3.36	3.25	3.2
LPM03863	PYX	MRHW	3.36	3.26	3.0
LPM03864	OTHER	MRHW	2.84	2.79	1.9
LPM03865	OTHER	MRHW	2.95	2.83	4.1
LPM03866	N	MRHW	2.95	2.85	3.4
LPM03867	N	MRHW	2.99	2.88	3.8
LPM03868	N	MRHW	3.00	2.90	3.3
LPM03869	N	MRHW	3.02	2.92	3.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03870	N	MRHW	3.07	2.94	4.5
LPM03871	FPYX	MRHW	3.31	3.16	4.8
LPM03872	FPYX	MRHW	3.35	3.23	3.5
LPM03873	FPYX	MRHW	3.37	3.22	4.3
LPM03874	N	MRHW	3.13	2.99	4.4
LPM03875	N	MRHW	3.26	3.01	7.9
LPM03876	PYX	MRHW	3.44	3.23	6.2
LPM03877	PYX	MRHW	3.45	3.21	7.1
LPM03878	PYX	MRHW	3.43	3.25	5.5
LPM03879	PYX	MRHW	3.42	3.26	4.8
LPM03880	PYX	MRHW	3.41	3.21	6.0
LPM03881	N	MRHW	3.20	3.00	6.5
LPM03882	N	MRHW	3.22	2.98	7.7
LPM03883	N	MRHW	3.21	3.01	6.4
LPM03884	PYX	MRHW	3.43	3.23	6.0
LPM03885	PYX	MRHW	3.48	3.23	7.2
LPM03886	PYX	MRHW	3.44	3.22	6.7
LPM03887	PYX	MRHW	3.48	3.27	6.2
LPM03888	N	MRHW	3.04	2.94	3.2
LPM03889	N	MRHW	3.09	2.96	4.3
LPM03890	N	MRHW	3.14	2.97	5.5
LPM03891	PYX	MRHW	3.37	3.29	2.3
LPM03892	PYX	MRHW	3.41	3.24	5.0
LPM03893	PYX	MRHW	3.40	3.27	3.9
LPM03894	N	MRHW	3.09	3.13	-1.4
LPM03895	N	MRHW	3.19	2.96	7.6
LPM03896	N	MRHW	3.14	3.02	3.9
LPM03897	N	MRHW	3.20	3.06	4.3
LPM03898	N	MRHW	3.27	3.10	5.2
LPM03899	PYX	MRHW	3.35	3.23	3.6
LPM03900	PYX	MRHW	3.36	3.19	5.2
LPM03901	PYX	MRHW	3.36	3.17	5.7
LPM03902	CR	UG2	4.06	3.86	5.0
LPM03903	CR	UG2	4.45	4.16	6.7
LPM03904	CR	UG2	4.15	3.91	6.0
LPM03905	CR	UG2	4.40	4.13	6.3
LPM03906	CR	UG2	4.42	4.50	-1.8
LPM03907	CR	UG2	4.17	4.10	1.7
LPM03908	CR	UG2	4.40	4.10	7.0
LPM03909	CR	UG2	4.28	4.04	5.7
LPM03910	CR	UG2	4.38	4.02	8.6
LPM03911	CR	UG2	4.18	4.13	1.1
LPM03912	CR	UG2	4.52	4.65	-2.9
LPM03913	CR	UG2	4.46	4.18	6.6
LPM03914	CR	UG2	4.29	3.96	8.0
LPM03915	CR	UG2	4.17	3.98	4.6
LPM03916	CR	UG2	4.40	4.05	8.3
LPM03917	CR	UG2	4.44	4.09	8.3
LPM03918	CR	UG2	4.46	4.06	9.4
LPM03919	CR	UG2	4.29	4.18	2.7
LPM03920	CR	UG2	3.93	3.42	14.0
LPM03921	CR	UG2	4.50	4.10	9.2
LPM03922	CR	UG2	4.40	4.03	8.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM03923	CR	UG2	4.42	4.23	4.4
LPM03924	CR	UG2	4.23	3.81	10.5
LPM03925	CR	UG2	4.12	4.05	1.7
LPM03926	CR	UG2	4.37	3.99	9.1
LPM03927	CR	UG2	4.18	3.92	6.3
LPM03928	CR	UG2	4.08	3.92	3.9
LPM03929	CR	UG2	4.25	4.02	5.6
LPM03930	CR	UG2	4.20	4.07	3.2
LPM03931	CR	UG2	4.05	3.84	5.4
LPM03932	CR	UG2	4.11	4.13	-0.5
LPM03933	CR	UG2	3.91	3.91	0.0
LPM03934	CR	UG2	4.18	4.03	3.7
LPM03935	CR	UG2	4.29	4.11	4.3
LPM03936	CR	UG2	4.05	3.96	2.2
LPM03937	CR	UG2	3.89	3.88	0.2
LPM03938	PP/CR	UG2	3.57	3.53	1.2
LPM03939	PP/CR	UG2	3.98	4.14	-4.0
LPM03940	CR	UG2	4.29	4.15	3.3
LPM03941	CR	UG2	4.40	4.24	3.8
LPM03942	CR	UG2	4.20	4.37	-3.9
LPM03943	PP/CR	UG2	3.71	3.63	2.1
LPM03944	PP/CR	UG2	3.97	3.81	4.1
LPM03945	CR	UG2	4.35	4.18	3.9
LPM03946	CR	UG2	4.33	4.13	4.7
LPM03947	PP/CR	UG2	4.25	4.35	-2.4
LPM03948	CR	UG2	4.33	4.16	4.1
LPM03949	CR	UG2	4.31	4.07	5.8
LPM03950	CHROMITITE	UG2	4.14	3.96	4.5
LPM03951	CHROMITITE	UG2	4.33	4.02	7.3
LPM03952	CHROMITITE	UG2	4.44	4.17	6.3
LPM03953	CHROMITITE	UG2	4.02	3.89	3.2
LPM03954	CHROMITITE	UG2	3.89	3.54	9.5
LPM03955	CHROMITITE	UG2	4.25	3.81	11.0
LPM03956	CHROMITITE	UG2	4.43	4.10	7.7
LPM03957	CHROMITITE	UG2	4.16	3.94	5.4
LPM03958	CR	UG2	4.06	3.71	8.9
LPM03959	CR	UG2	4.41	4.08	7.7
LPM03960	CR	UG2	4.44	4.14	7.1
LPM03961	CR	UG2	4.46	4.15	7.1
LPM03962	CR	UG2	4.05	3.58	12.3
LPM03963	CR	UG2	3.88	3.52	9.7
LPM03964	CR	UG2	4.23	4.04	4.6
LPM03965	CR	UG2	4.21	4.01	4.8
LPM03966	CR	UG2	4.35	4.03	7.5
LPM03967	CR	UG2	4.28	4.04	5.7
LPM03968	CR	UG2	4.24	4.07	4.1
LPM03969	CR	UG2	4.26	4.05	5.0
LPM03970	CR	UG2	4.10	3.80	7.7
LPM03971	CR	UG2	3.72	3.74	-0.5
LPM03972	CR	UG2	4.20	4.04	3.8
LPM03973	CR	UG2	4.29	4.06	5.4
LPM03974	CR	UG2	4.28	3.96	7.7
LPM03975	CR	UG2	4.21	3.75	11.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM03976	CR	UG2	3.93	3.85	2.1
LPM03977	CR	UG2	4.13	3.82	7.9
LPM03978	CR	UG2	4.31	4.08	5.4
LPM03979	CR	UG2	4.34	4.18	3.7
LPM03980	CR	UG2	4.09	3.83	6.7
LPM03981	CR	UG2	4.29	3.91	9.3
LPM03982	CR	UG2	4.40	4.09	7.3
LPM03983	CR	UG2	4.26	3.93	8.0
LPM03984	CR	UG2	4.02	3.65	9.5
LPM03985	CR	UG2	4.17	3.81	9.1
LPM03986	CR	UG2	4.36	4.10	6.2
LPM03987	CR	UG2	4.37	4.12	6.0
LPM03988	CR	UG2	4.28	4.09	4.6
LPM03989	CR	UG2	3.62	3.49	3.6
LPM03990	CR	UG2	4.28	4.17	2.4
LPM03991	CR	UG2	4.44	4.12	7.4
LPM03992	CR	UG2	4.44	4.17	6.3
LPM03993	CR	UG2	4.17	3.85	8.1
LPM03994	CR	UG2	4.25	4.02	5.6
LPM03995	CR	UG2	4.41	4.07	7.9
LPM03996	CR	UG2	4.48	4.12	8.4
LPM03997	CR	UG2	4.42	4.12	7.0
LPM03998	CR	UG2	3.96	3.76	5.1
LPM03999	CR	UG2	4.24	3.96	6.9
LPM04000	CR	UG2	4.47	4.12	8.2
LPM04001	CR	UG2	4.45	4.07	8.9
LPM04002	CR	UG2	4.17	3.93	6.0
LPM04003	CR	UG2	4.14	4.09	1.3
LPM04004	CR	UG2	4.38	4.11	6.3
LPM04005	CR	UG2	4.40	4.22	4.2
LPM04006	CR	UG2	4.45	4.18	6.3
LPM04007	CR	UG2	4.15	4.30	-3.6
LPM04008	CR	UG2	4.26	4.01	6.1
LPM04009	CR	UG2	4.40	4.11	6.7
LPM04010	CR	UG2	4.38	4.08	7.2
LPM04011	CR	UG2	4.50	4.13	8.6
LPM04012	CR	UG2	4.25	3.85	10.0
LPM04013	CR	UG2	4.20	3.93	6.6
LPM04014	CR	UG2	4.35	4.06	7.0
LPM04015	CR	UG2	4.44	4.11	7.7
LPM04016	CR	UG2	4.45	4.18	6.4
LPM04017	CR	UG2	4.27	4.07	4.7
LPM04018	CR	UG2	4.27	4.04	5.5
LPM04019	CR	UG2	4.34	4.05	6.9
LPM04020	CR	UG2	4.38	4.10	6.6
LPM04021	CR	UG2	4.29	4.12	4.1
LPM04022	CR	UG2	3.99	3.97	0.6
LPM04023	CR	UG2	4.28	4.03	6.0
LPM04024	CR	UG2	4.21	4.09	3.0
LPM04025	CR	UG2	4.32	4.14	4.3
LPM04026	CR	UG2	3.85	3.57	7.6
LPM04027	CR	UG2	4.04	4.04	-0.1
LPM04028	CR	UG2	4.12	4.04	1.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04029	CR	UG2	4.30	4.18	2.8
LPM04030	CR	UG2	4.15	3.86	7.1
LPM04031	CR	UG2	4.21	4.06	3.7
LPM04032	CR	UG2	4.26	4.12	3.3
LPM04033	CR	UG2	4.02	3.89	3.3
LPM04034	CR	UG2	3.92	3.67	6.7
LPM04035	CR	UG2	4.37	3.96	9.9
LPM04036	CR	UG2	4.47	4.08	9.1
LPM04037	CR	UG2	4.53	4.10	10.0
LPM04038	CR	UG2	4.22	3.85	9.2
LPM04039	CR	UG2	4.25	3.95	7.1
LPM04040	CR	UG2	4.47	3.97	11.7
LPM04041	CR	UG2	4.49	4.18	7.1
LPM04042	CR	UG2	4.64	4.13	11.7
LPM04043	CR	UG2	4.62	4.15	10.6
LPM04044	CR	UG2	4.59	4.13	10.4
LPM04045	CR	UG2	4.15	3.67	12.3
LPM04046	CR	UG2	4.28	3.89	9.5
LPM04047	CR	UG2	4.39	4.07	7.6
LPM04048	CR	UG2	4.33	4.04	6.9
LPM04049	CR	UG2	4.62	4.04	13.3
LPM04050	CR	UG2	4.58	4.21	8.4
LPM04051	CR	UG2	4.30	4.14	3.7
LPM04052	CR	UG2	4.32	4.22	2.2
LPM04053	CR	UG2	3.84	3.86	-0.4
LPM04054	CR	UG2	4.63	4.09	12.5
LPM04055	CR	UG2	4.60	4.17	9.8
LPM04056	CR	UG2	4.63	4.10	12.2
LPM04057	CR	UG2	3.96	3.92	0.9
LPM04058	CR	UG2	4.10	3.69	10.6
LPM04059	CR	UG2	4.10	3.69	10.6
LPM04060	CR	UG2	4.22	4.04	4.5
LPM04061	CR	UG2	4.22	4.04	4.5
LPM04062	CR	UG2	4.29	4.10	4.5
LPM04063	CR	UG2	4.29	4.10	4.5
LPM04064	CR	UG2	3.94	3.77	4.5
LPM04065	CR	UG2	3.94	3.77	4.5
LPM04066	CR	UG2	3.68	3.79	-2.8
LPM04067	CR	UG2	3.68	3.79	-2.8
LPM04068	CR	UG2	4.55	4.06	11.4
LPM04069	CR	UG2	4.55	4.06	11.4
LPM04070	CR	UG2	4.36	3.88	11.6
LPM04071	CR	UG2	4.36	3.88	11.6
LPM04072	CR	UG2	4.29	3.94	8.6
LPM04073	CR	UG2	4.29	3.94	8.6
LPM04074	CR	UG2	4.17	4.08	2.1
LPM04075	CR	UG2	4.17	4.08	2.1
LPM04076	CR	UG2	3.90	3.71	4.9
LPM04077	CR	UG2	3.90	3.71	4.9
LPM04078	CR	UG2	4.05	4.01	1.0
LPM04079	CR	UG2	4.07	4.04	0.7
LPM04080	CR	UG2	4.12	4.13	-0.4
LPM04081	CR	UG2	3.86	3.93	-1.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04082	CR	UG2	4.02	4.02	-0.1
LPM04083	CR	UG2	4.06	4.10	-1.0
LPM04084	CR	UG2	3.97	4.06	-2.2
LPM04085	CR	UG2	4.05	4.06	-0.3
LPM04086	CR	UG2	4.06	4.08	-0.6
LPM04087	CR	UG2	4.01	4.12	-2.7
LPM04088	CR	UG2	4.17	4.11	1.5
LPM04089	CR	UG2	4.17	4.11	1.4
LPM04090	CR	UG2	3.54	3.62	-2.2
LPM04091	CR	UG2	3.80	3.65	4.1
LPM04092	CR	UG2	3.87	4.00	-3.3
LPM04093	CR	UG2	4.02	4.16	-3.4
LPM04094	CR	UG2	3.95	4.00	-1.2
LPM04095	CR	UG2	4.54	4.33	4.8
LPM04096	CR	UG2	4.76	4.34	9.2
LPM04097	CR	UG2	4.79	4.34	9.9
LPM04098	CR	UG2	4.49	4.33	3.6
LPM04099	CR	UG2	4.58	4.21	8.5
LPM04100	CR	UG2	4.83	4.35	10.5
LPM04101	CR	UG2	4.77	4.35	9.3
LPM04102	CR	UG2	4.52	4.36	3.6
LPM04103	CR	UG2	4.43	4.15	6.6
LPM04104	CR	UG2	4.78	4.18	13.5
LPM04105	CR	UG2	4.74	4.18	12.6
LPM04106	CR	UG2	4.72	4.37	7.6
LPM04107	CR	UG2	4.32	4.15	3.9
LPM04108	CR	UG2	4.45	4.04	9.6
LPM04109	CR	UG2	4.31	3.80	12.6
LPM04110	CR	UG2	3.77	3.34	12.2
LPM04111	CR	UG2	4.25	4.26	-0.2
LPM04112	CR	UG2	4.47	4.27	4.5
LPM04113	CR	UG2	4.13	3.58	14.2
LPM04114	CR	UG2	3.86	3.97	-2.7
LPM04115	CR	UG2	4.23	4.25	-0.6
LPM04116	CR	UG2	4.42	4.20	5.2
LPM04117	CR	UG2	3.98	4.10	-2.9
LPM04118	CR	UG2	4.41	4.03	8.9
LPM04119	CR	UG2	4.59	4.12	10.7
LPM04120	CR	UG2	4.70	4.21	11.0
LPM04121	CR	UG2	4.62	4.27	7.8
LPM04122	CR	UG2	4.34	3.97	9.0
LPM04123	CR	UG2	4.57	4.11	10.6
LPM04124	CR	UG2	4.60	3.96	15.0
LPM04125	CR	UG2	4.68	4.42	5.6
LPM04126	CR	UG2	4.29	4.03	6.4
LPM04127	CR	UG2	4.68	4.20	10.8
LPM04128	CR	UG2	4.71	4.19	11.8
LPM04129	CR	UG2	4.66	4.41	5.5
LPM04130	CR	UG2	4.35	3.96	9.5
LPM04131	CR	UG2	4.51	4.25	6.0
LPM04132	CR	UG2	4.39	4.10	6.7
LPM04133	CR	UG2	4.43	4.10	7.6
LPM04134	CR	UG2	4.63	4.35	6.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM04135	CR	UG2	4.70	4.24	10.2
LPM04136	CR	UG2	4.70	4.22	10.9
LPM04137	CR	UG2	4.72	4.22	11.3
LPM04138	CR	UG2	4.75	4.11	14.4
LPM04139	CR	UG2	4.74	4.11	14.1
LPM04140	CR	UG2	3.88	4.00	-2.9
LPM04141	CR	UG2	4.61	4.17	10.1
LPM04142	CR	UG2	4.70	4.17	11.9
LPM04143	CR	UG2	4.67	4.35	7.2
LPM04144	CR	UG2	4.53	4.04	11.4
LPM04145	CR	UG2	4.46	4.16	7.0
LPM04146	CR	UG2	4.52	4.16	8.4
LPM04147	CR	UG2	4.36	4.09	6.2
LPM04148	CR	UG2	4.49	4.07	9.8
LPM04149	CR	UG2	4.43	4.00	10.2
LPM04150	CR	UG2	4.53	4.17	8.2
LPM04151	CR	UG2	4.53	4.16	8.5
LPM04152	CR	UG2	4.57	4.16	9.4
LPM04153	CR	UG2	4.47	4.11	8.4
LPM04154	CR	UG2	4.74	4.16	13.0
LPM04155	CR	UG2	4.56	4.08	11.0
LPM04156	CR	UG2	4.31	4.08	5.4
LPM04157	CR	UG2	4.11	3.82	7.4
LPM04158	CR	UG2	4.17	3.95	5.4
LPM04159	CR	UG2	4.20	3.98	5.5
LPM04160	DUPLICATE	UG2	4.18	3.98	5.0
LPM04161	CR	UG2	3.98	3.89	2.3
LPM04162	CR	UG2	4.12	3.92	5.0
LPM04163	CR	UG2	4.15	4.00	3.7
LPM04164	CR	UG2	4.24	3.93	7.6
LPM04165	DUPLICATE	UG2	4.27	3.93	8.3
LPM04166	CR	UG2	4.14	3.93	5.1
LPM04167	CR	UG2	4.07	3.88	4.7
LPM04168	CR	UG2	4.07	3.99	2.1
LPM04169	DUPLICATE	UG2	4.18	3.99	4.8
LPM04170	CR	UG2	4.22	3.95	6.6
LPM04171	CR	UG2	4.13	4.07	1.6
LPM04172	CR	UG2	3.97	3.98	-0.3
LPM04173	CR	UG2	4.25	4.10	3.6
LPM04174	CR	UG2	4.29	4.06	5.5
LPM04175	CR	UG2	4.36	4.09	6.3
LPM04176	CR	UG2	4.11	4.22	-2.7
LPM04177	CR	UG2	4.11	3.64	12.2
LPM04178	CR	UG2	3.89	3.95	-1.6
LPM04179	CR	UG2	3.33	3.26	2.2
LPM04180	CR	UG2	3.33	3.21	3.7
LPM04181	CR	UG2	3.88	3.79	2.2
LPM04182	CR	UG2	4.25	4.07	4.3
LPM04183	CR	UG2	4.24	4.09	3.6
LPM04184	CR	UG2	4.16	3.96	4.9
LPM04185	CR	UG2	3.46	3.53	-2.1
LPM04186	PYX	UG2	3.45	3.28	4.9
LPM04187	PYX	UG2	3.50	3.21	8.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04188	PYX	UG2	3.42	3.22	6.0
LPM04189	PYX	UG2	3.47	3.18	8.6
LPM04190	PYX	UG2	3.48	3.23	7.3
LPM04191	CR	UG2	4.49	3.98	12.1
LPM04192	CR	UG2	4.49	4.03	10.9
LPM04193	CR	UG2	4.28	4.01	6.5
LPM04194	CR	UG2	3.96	3.98	-0.5
LPM04195	CR	UG2	4.32	4.05	6.5
LPM04196	CR	UG2	4.54	4.09	10.3
LPM04197	CR	UG2	4.21	3.90	7.8
LPM04198	CR	UG2	4.28	3.88	9.7
LPM04199	CR	UG2	4.53	4.19	7.8
LPM04200	CR	UG2	4.33	4.18	3.6
LPM04201	CR	UG2	4.32	4.20	2.8
LPM04202	CR	UG2	4.47	4.20	6.3
LPM04203	CR	UG2	4.53	4.33	4.4
LPM04204	OTHER	UG2	4.52	4.33	4.2
LPM04205	CR	UG2	4.09	3.75	8.7
LPM04206	CR	UG2	4.18	4.10	2.0
LPM04207	CR	UG2	4.43	4.18	5.9
LPM04208	CR	UG2	4.56	4.24	7.2
LPM04209	CR	UG2	4.25	4.14	2.7
LPM04210	CR	UG2	4.09	4.06	0.9
LPM04211	OTHER	UG2	4.26	4.06	4.9
LPM04212	CR	UG2	4.18	4.01	4.2
LPM04213	CR	UG2	4.24	4.04	4.7
LPM04214	CR	UG2	3.98	3.82	4.1
LPM04215	CR	UG2	3.99	4.00	-0.3
LPM04216	CR	UG2	4.11	3.98	3.1
LPM04217	CR	UG2	4.20	4.03	4.2
LPM04218	OTHER	UG2	4.18	4.03	3.7
LPM04219	CR	UG2	3.94	3.68	6.7
LPM04220	CR	UG2	4.33	3.90	10.3
LPM04221	CR	UG2	4.45	3.96	11.7
LPM04222	OTHER	UG2	4.51	3.96	13.0
LPM04223	CR	UG2	4.17	3.76	10.2
LPM04224	CR	UG2	4.38	4.01	8.8
LPM04225	CR	UG2	4.25	3.79	11.4
LPM04226	CR	UG2	4.61	4.30	6.9
LPM04227	CR	UG2	4.78	4.34	9.7
LPM04228	OTHER	UG2	4.78	4.21	12.6
LPM04229	CR	UG2	4.41	4.01	9.5
LPM04230	CR	UG2	4.54	4.20	7.7
LPM04231	CR	UG2	4.72	4.17	12.2
LPM04232	CR	UG2	4.42	3.95	11.2
LPM04233	CR	UG2	4.56	4.26	6.9
LPM04234	CR	UG2	4.73	4.17	12.5
LPM04235	CR	UG2	4.35	4.18	4.0
LPM04236	CR	UG2	4.33	4.20	2.9
LPM04237	CR	UG2	4.59	4.34	5.5
LPM04238	CR	UG2	4.48	4.15	7.6
LPM04239	OTHER	UG2	4.49	4.15	7.8
LPM04240	CR	UG2	4.29	4.04	6.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM04241	CR	UG2	4.34	4.07	6.5
LPM04242	OTHER	UG2	4.34	4.07	6.5
LPM04243	CR	UG2	4.07	4.02	1.3
LPM04244	CR	UG2	4.09	3.99	2.5
LPM04245	CR	UG2	4.28	4.06	5.2
LPM04246	CR	UG2	4.45	4.12	7.8
LPM04247	OTHER	UG2	4.49	4.12	8.7
LPM04248	CR	UG2	3.83	3.97	-3.6
LPM04249	CR	UG2	3.99	3.65	8.8
LPM04250	CR	UG2	4.48	4.36	2.8
LPM04251	CR	UG2	4.47	4.17	6.8
LPM04252	OTHER	UG2	4.51	4.17	7.7
LPM04253	CR	UG2	4.32	4.15	3.9
LPM04254	CR	UG2	4.66	4.31	7.8
LPM04255	CR	UG2	4.59	4.28	7.0
LPM04256	CR	UG2	4.44	3.97	11.2
LPM04257	OTHER	UG2	4.54	3.97	13.3
LPM04258	CR	UG2	4.19	3.64	14.0
LPM04259	CR	UG2	3.95	3.77	4.7
LPM04260	CR	UG2	4.47	4.11	8.4
LPM04261	CR	UG2	4.49	4.04	10.5
LPM04262	OTHER	UG2	4.46	4.04	9.7
LPM04263	CR	UG2	4.11	4.02	2.3
LPM04264	CR	UG2	4.17	4.08	2.1
LPM04265	CR	UG2	4.45	4.14	7.3
LPM04266	CR	UG2	4.40	4.09	7.3
LPM04267	OTHER	UG2	4.41	4.09	7.6
LPM04268	CR	UG2	4.17	4.05	3.0
LPM04269	CR	UG2	4.36	4.13	5.3
LPM04270	CR	UG2	4.52	4.21	7.1
LPM04271	CR	UG2	4.40	4.10	6.9
LPM04272	OTHER	UG2	4.41	4.10	7.2
LPM04273	CR	UG2	4.22	3.98	6.0
LPM04274	CR	UG2	4.50	4.21	6.7
LPM04275	CR	UG2	4.48	4.17	7.2
LPM04276	OTHER	UG2	4.53	4.17	8.3
LPM04277	CR	UG2	4.25	3.91	8.2
LPM04278	CR	UG2	4.10	3.86	6.0
LPM04279	CR	UG2	4.42	4.16	6.0
LPM04280	OTHER	UG2	4.44	4.16	6.5
LPM04281	CR	UG2	4.44	4.14	6.9
LPM04282	CR	UG2	4.23	4.08	3.5
LPM04283	CR	UG2	4.21	4.12	2.2
LPM04284	CR	UG2	4.30	4.09	5.1
LPM04285	OTHER	UG2	4.42	4.10	7.6
LPM04286	CR	UG2	4.29	4.12	4.0
LPM04287	CR	UG2	4.13	4.14	-0.2
LPM04288	CR	UG2	4.59	4.14	10.4
LPM04289	OTHER	UG2	4.49	4.14	8.2
LPM04290	CR	UG2	4.59	4.29	6.7
LPM04291	CR	UG2	4.37	3.78	14.4
LPM04292	CR	UG2	4.38	3.97	9.8
LPM04293	CR	UG2	4.50	4.05	10.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04294	OTHER	UG2	4.47	4.05	9.6
LPM04295	CR	UG2	4.37	4.13	5.7
LPM04296	CR	UG2	3.97	3.71	6.8
LPM04297	CR	UG2	4.28	4.13	3.6
LPM04298	CR	UG2	4.27	3.93	8.4
LPM04299	CR	UG2	4.35	4.16	4.6
LPM04300	OTHER	UG2	4.38	4.16	5.3
LPM04301	CR	UG2	3.88	3.52	9.7
LPM04302	CR	UG2	4.06	3.91	3.7
LPM04303	OTHER	UG2	4.49	4.15	7.8
LPM04304	CR	UG2	4.42	4.09	7.7
LPM04305	CR	UG2	4.03	3.73	7.8
LPM04306	CR	UG2	4.53	4.19	7.9
LPM04307	CR	UG2	4.53	4.06	11.0
LPM04308	OTHER	UG2	4.59	4.06	12.3
LPM04309	CR	UG2	4.31	3.86	10.9
LPM04310	CR	UG2	4.27	3.97	7.2
LPM04311	CR	UG2	4.23	4.13	2.4
LPM04312	OTHER	UG2	4.27	4.13	3.4
LPM04313	CR	UG2	4.43	4.01	10.0
LPM04314	CR	UG2	4.46	4.24	5.1
LPM04315	CR	UG2	4.20	3.94	6.3
LPM04316	CR	UG2	4.30	4.02	6.8
LPM04317	OTHER	UG2	4.30	4.02	6.8
LPM04318	CR	UG2	4.44	4.21	5.3
LPM04319	CR	UG2	4.36	4.14	5.1
LPM04320	CR	UG2	4.31	4.12	4.5
LPM04321	OTHER	UG2	4.34	4.12	5.2
LPM04322	CR	UG2	4.46	4.28	4.2
LPM04323	CR	UG2	4.11	4.09	0.5
LPM04324	CR	UG2	4.43	3.97	11.0
LPM04325	OTHER	UG2	4.42	3.96	11.0
LPM04326	CR	UG2	4.20	3.79	10.3
LPM04327	CR	UG2	4.23	4.06	4.2
LPM04328	CR	UG2	4.45	4.18	6.2
LPM04329	CR	UG2	4.26	3.91	8.6
LPM04330	CR	UG2	4.36	4.14	5.1
LPM04331	CR	UG2	4.46	4.24	5.1
LPM04332	CR	UG2	4.14	4.00	3.5
LPM04333	CR	UG2	4.52	4.16	8.4
LPM04334	CR	UG2	4.46	4.09	8.5
LPM04335	CR	UG2	4.17	3.99	4.4
LPM04336	CR	UG2	4.24	4.13	2.7
LPM04337	CR	UG2	3.99	3.74	6.6
LPM04338	CR	UG2	4.16	4.05	2.8
LPM04339	CR	UG2	4.34	4.00	8.1
LPM04340	CR	UG2	3.66	3.65	0.3
LPM04341	CR	UG2	3.67	3.50	4.8
LPM04342	CR	UG2	3.53	3.39	4.1
LPM04343	CR	UG2	3.49	3.29	5.8
LPM04344	CR	UG2	4.37	4.20	4.1
LPM04345	CR	UG2	4.43	4.10	7.8
LPM04346	CR	UG2	4.52	4.19	7.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04347	CR	UG2	3.97	3.96	0.3
LPM04348	CR	UG2	4.52	3.91	14.4
LPM04349	CR	UG2	4.43	4.33	2.3
LPM04350	CR	UG2	4.52	4.17	8.1
LPM04351	CR	UG2	4.28	4.15	3.2
LPM04352	CR	UG2	4.39	4.27	2.9
LPM04353	CR	UG2	4.41	4.30	2.4
LPM04354	CR	UG2	4.43	4.14	6.9
LPM04355	CR	UG2	4.43	4.09	8.0
LPM04356	CR	UG2	3.93	3.64	7.6
LPM04357	CR	UG2	4.33	3.96	8.9
LPM04358	CR	UG2	4.56	4.10	10.6
LPM04359	CR	UG2	4.46	4.12	7.9
LPM04360	CR	UG2	4.14	3.95	4.6
LPM04361	CR	UG2	4.29	4.00	7.1
LPM04362	CR	UG2	4.61	4.27	7.7
LPM04363	CR	UG2	4.59	4.42	3.8
LPM04364	CR	UG2	4.46	4.25	4.7
LPM04365	CR	UG2	3.91	3.57	9.1
LPM04366	CR	UG2	3.79	3.38	11.5
LPM04367	CR	UG2	4.54	4.20	7.8
LPM04368	CR	UG2	4.47	4.17	7.1
LPM04369	CR	UG2	3.96	4.08	-3.1
LPM04370	CR	UG2	4.22	3.86	8.9
LPM04371	CR	UG2	4.45	4.07	8.9
LPM04372	PYX	UG2	3.67	3.39	7.9
LPM04373	PYX	UG2	3.46	3.27	5.5
LPM04374	PYX	UG2	3.72	3.88	-4.1
LPM04375	CR	UG2	4.03	3.77	6.6
LPM04376	CR	UG2	4.35	3.87	11.7
LPM04377	CR	UG2	4.57	4.23	7.8
LPM04378	CR	UG2	4.68	4.33	7.7
LPM04379	CR	UG2	4.13	4.21	-2.0
LPM04380	CR	UG2	4.06	4.23	-4.2
LPM04381	CR	UG2	3.84	3.66	4.8
LPM04382	CR	UG2	4.09	3.79	7.5
LPM04383	CR	UG2	4.59	4.26	7.5
LPM04384	CR	UG2	4.57	4.16	9.4
LPM04385	CR	UG2	4.43	4.03	9.4
LPM04386	CR	UG2	3.70	3.33	10.6
LPM04387	CR	UG2	4.16	3.95	5.2
LPM04388	CR	UG2	4.65	4.21	9.9
LPM04389	CR	UG2	4.63	4.26	8.3
LPM04390	CR	UG2	4.43	4.18	5.7
LPM04391	CR	UG2	3.97	3.69	7.3
LPM04392	CR	UG2	4.18	4.01	4.1
LPM04393	CR	UG2	4.58	4.23	7.9
LPM04394	CR	UG2	4.60	4.44	3.6
LPM04395	CR	UG2	4.49	4.12	8.6
LPM04396	CR	UG2	4.25	3.97	6.8
LPM04397	CR	UG2	4.20	4.09	2.6
LPM04398	OTHER	UG2	4.40	3.94	10.9
LPM04399	CR	UG2	4.15	4.02	3.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04400	CR	UG2	4.22	3.87	8.6
LPM04401	CR	UG2	4.33	4.12	5.0
LPM04402	CR	UG2	4.38	4.04	8.0
LPM04403	OTHER	UG2	4.46	4.04	9.8
LPM04404	CR	UG2	4.15	4.03	2.8
LPM04405	CR	UG2	4.33	4.09	5.6
LPM04406	CR	UG2	4.25	3.89	8.9
LPM04407	OTHER	UG2	4.25	4.01	5.9
LPM04408	CR	UG2	4.30	4.01	7.0
LPM04409	CR	UG2	4.45	4.05	9.5
LPM04410	OTHER	UG2	4.54	4.05	11.5
LPM04411	CR	UG2	4.11	3.69	10.7
LPM04412	CR	UG2	3.95	3.82	3.3
LPM04413	CR	UG2	4.04	3.89	3.8
LPM04414	CR	UG2	4.03	3.92	2.7
LPM04415	CR	UG2	4.10	4.00	2.4
LPM04416	CR	UG2	3.59	3.47	3.4
LPM04417	CR	UG2	3.97	3.81	4.2
LPM04418	CR	UG2	4.00	3.82	4.7
LPM04419	CR	UG2	3.95	4.07	-3.1
LPM04420	CR	UG2	4.16	4.09	1.6
LPM04421	CR	UG2	4.25	4.12	3.0
LPM04422	CR	UG2	3.64	3.45	5.2
LPM04423	CR	UG2	4.11	4.03	2.0
LPM04424	CR	UG2	4.06	4.01	1.2
LPM04425	CR	UG2	4.17	3.94	5.5
LPM04426	CR	UG2	4.28	4.11	3.9
LPM04427	CR	UG2	4.44	4.29	3.5
LPM04428	CR	UG2	4.34	3.82	12.7
LPM04429	CR	UG2	4.34	4.06	6.6
LPM04430	CR	UG2	4.46	4.14	7.4
LPM04431	CR	UG2	4.05	4.05	0.0
LPM04432	CR	UG2	4.02	3.99	0.8
LPM04433	CR	UG2	3.92	3.72	5.3
LPM04434	CR	UG2	3.85	3.72	3.5
LPM04435	CR	UG2	3.95	4.03	-2.0
LPM04436	CR	UG2	4.12	4.00	3.0
LPM04437	CR	UG2	3.96	3.95	0.2
LPM04438	CR	UG2	3.92	3.94	-0.6
LPM04439	CR	UG2	3.89	3.88	0.2
LPM04440	CR	UG2	3.99	4.08	-2.2
LPM04441	CR	UG2	3.90	4.00	-2.6
LPM04442	CR	UG2	3.84	4.01	-4.4
LPM04443	CR	UG2	3.72	3.60	3.2
LPM04444	CR	UG2	4.04	4.08	-1.0
LPM04445	CR	UG2	3.88	3.93	-1.4
LPM04446	CR	UG2	3.88	3.97	-2.4
LPM04447	CR	UG2	3.78	3.93	-3.9
LPM04448	CR	UG2	4.19	4.18	0.1
LPM04449	CR	UG2	4.24	4.20	1.0
LPM04450	CR	UG2	4.08	4.20	-2.9
LPM04451	CR	UG2	4.12	4.23	-2.7
LPM04452	CR	UG2	4.15	4.23	-1.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04453	CR	UG2	4.11	4.12	-0.2
LPM04454	CR	UG2	4.05	4.03	0.4
LPM04455	CR	UG2	4.15	4.19	-1.0
LPM04456	CR	UG2	4.24	4.23	0.2
LPM04457	CR	UG2	4.25	4.20	1.2
LPM04458	CR	UG2	3.98	3.59	10.2
LPM04459	CR	UG2	4.35	4.02	7.9
LPM04460	CR	UG2	4.46	4.21	5.9
LPM04461	CR	UG2	4.43	4.13	7.1
LPM04462	CR	UG2	4.34	3.94	9.6
LPM04463	CR	UG2	4.17	4.23	-1.4
LPM04464	CR	UG2	4.31	4.05	6.2
LPM04465	CR	UG2	4.45	4.21	5.6
LPM04466	CR	UG2	4.56	4.07	11.3
LPM04467	CR	UG2	4.45	4.23	5.0
LPM04468	CR	UG2	4.21	4.11	2.5
LPM04469	CR	UG2	4.21	3.95	6.3
LPM04470	CR	UG2	4.42	4.09	7.8
LPM04471	CR	UG2	4.11	4.04	1.6
LPM04472	CR	UG2	4.11	4.09	0.6
LPM04473	CR	UG2	4.48	4.22	6.0
LPM04474	CR	UG2	4.21	3.91	7.4
LPM04475	CR	UG2	4.17	3.93	5.9
LPM04476	CR	UG2	4.48	3.87	14.7
LPM04477	OTHER	UG2	4.38	3.87	12.4
LPM04478	CR	UG2	4.29	4.16	3.0
LPM04479	CR	UG2	4.16	3.88	7.0
LPM04480	CR	UG2	3.98	3.98	-0.2
LPM04481	CR	UG2	4.29	4.02	6.4
LPM04482	CR	UG2	4.42	4.20	5.1
LPM04483	CR	UG2	4.40	3.97	10.3
LPM04484	CR	UG2	4.51	4.11	9.4
LPM04485	CR	UG2	4.51	4.09	9.8
LPM04486	OTHER	UG2	4.52	4.09	9.9
LPM04487	CR	UG2	4.17	3.84	8.2
LPM04488	CR	UG2	4.34	4.12	5.3
LPM04489	CR	UG2	4.19	3.95	5.9
LPM04490	CR	UG2	4.40	4.15	5.9
LPM04491	CR	UG2	4.49	4.14	8.0
LPM04492	OTHER	UG2	4.41	4.14	6.2
LPM04493	CR	UG2	4.16	4.10	1.4
LPM04494	CR	UG2	4.48	4.04	10.4
LPM04495	CR	UG2	4.46	4.09	8.4
LPM04496	CR	UG2	4.66	4.29	8.2
LPM04497	CR	UG2	4.31	4.15	3.9
LPM04498	OTHER	UG2	4.33	4.15	4.2
LPM04499	CR	UG2	4.23	4.06	4.2
LPM04500	CR	UG2	4.11	3.98	3.1
LPM04501	CR	UG2	4.31	4.07	5.7
LPM04502	CR	UG2	4.30	3.88	10.4
LPM04503	CR	UG2	4.53	4.29	5.4
LPM04504	OTHER	UG2	4.24	3.87	9.1
LPM04505	CR	UG2	4.24	3.87	9.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM04506	CR	UG2	4.27	4.06	5.0
LPM04507	CR	UG2	4.22	3.91	7.7
LPM04508	CR	UG2	4.24	4.09	3.5
LPM04509	CR	UG2	4.41	4.06	8.1
LPM04510	CR	UG2	4.45	4.18	6.2
LPM04511	OTHER	UG2	4.45	4.18	6.2
LPM04512	CR	UG2	4.36	4.15	5.0
LPM04513	CR	UG2	4.16	3.82	8.6
LPM04514	CR	UG2	3.89	3.90	-0.2
LPM04515	CR	UG2	4.11	3.75	9.3
LPM04516	FPYX	UG2	3.51	3.29	6.5
LPM04517	CR	UG2	4.15	3.94	5.1
LPM04518	CR	UG2	4.00	3.89	2.7
LPM04519	FPYX	UG2	3.39	3.53	-4.2
LPM04520	CR	UG2	3.92	3.72	5.2
LPM04521	POIKAN	UG2	3.08	2.93	5.0
LPM04522	CR	UG2	3.82	3.40	11.7
LPM04523	CR	UG2	3.79	3.71	2.2
LPM04524	CR	UG2	3.76	3.75	0.4
LPM04525	CR	UG2	4.60	4.12	10.9
LPM04526	CR	UG2	4.30	3.78	12.7
LPM04527	OTHER	UG2	4.36	3.78	14.2
LPM04528	CR	UG2	4.17	4.19	-0.5
LPM04529	CR	UG2	4.28	4.09	4.4
LPM04530	OTHER	UG2	4.33	4.09	5.6
LPM04531	CR	UG2	4.11	4.18	-1.6
LPM04532	CR	UG2	3.81	3.46	9.5
LPM04533	CR	UG2	3.85	3.61	6.4
LPM04534	CR	UG2	4.14	4.03	2.6
LPM04535	CR	UG2	3.85	3.86	-0.3
LPM04536	CR	UG2	4.22	3.88	8.2
LPM04537	CR	UG2	4.34	4.06	6.7
LPM04538	CR	UG2	4.39	3.99	9.6
LPM04539	CR	UG2	4.53	4.17	8.1
LPM04540	CR	UG2	4.62	4.20	9.6
LPM04541	CR	UG2	4.37	4.11	6.0
LPM04542	CR	UG2	4.32	4.01	7.4
LPM04543	CR	UG2	3.64	3.59	1.3
LPM04544	CR	UG2	4.46	4.06	9.4
LPM04545	CR	UG2	4.49	4.14	8.2
LPM04546	CR	UG2	4.56	4.22	7.7
LPM04547	CR	UG2	4.53	4.19	7.8
LPM04548	CR	UG2	4.35	4.11	5.6
LPM04549	CR	UG2	3.67	3.34	9.5
LPM04550	CR	UG2	4.15	4.02	3.1
LPM04551	CR	UG2	4.30	4.03	6.5
LPM04552	CR	UG2	4.38	4.09	6.8
LPM04553	CR	UG2	4.43	4.12	7.1
LPM04554	CR	UG2	4.77	4.33	9.6
LPM04555	CR	UG2	4.61	4.35	5.8
LPM04556	CR	UG2	4.29	4.10	4.5
LPM04557	CR	UG2	3.75	3.76	-0.2
LPM04558	CR	UG2	4.06	4.01	1.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04559		UG2	4.40	4.16	5.6
LPM04560		UG2	4.45	4.22	5.4
LPM04561		UG2	4.47	4.66	-4.1
LPM04562	CR	UG2	4.19	4.18	0.2
LPM04563	CR	UG2	4.29	4.06	5.4
LPM04564	CR	UG2	4.44	4.14	7.1
LPM04565	CR	UG2	4.46	4.30	3.7
LPM04566	CR	UG2	4.41	4.22	4.5
LPM04567	CR	UG2	4.26	4.06	4.7
LPM04568	CR	UG2	4.41	4.20	4.9
LPM04569	CR	UG2	4.45	4.24	4.8
LPM04570	CR	UG2	4.31	4.17	3.2
LPM04571	CR	UG2	4.34	4.10	5.6
LPM04572	CR	UG2	4.44	4.13	7.3
LPM04573	CR	UG2	4.43	4.25	4.1
LPM04574	CR	UG2	4.24	4.04	4.8
LPM04575	CR	UG2	4.32	4.10	5.2
LPM04576	CR	UG2	4.49	4.15	7.8
LPM04577	CR	UG2	4.44	4.31	2.9
LPM04578	CR	UG2	4.27	4.10	4.0
LPM04579	CR	UG2	3.98	3.90	2.0
LPM04580		UG2	4.26	4.02	5.7
LPM04581		UG2	4.28	4.04	5.9
LPM04582		UG2	4.35	4.10	5.8
LPM04583	CR	UG2	4.23	4.17	1.5
LPM04584	CR	UG2	4.11	3.91	5.1
LPM04585		UG2	4.49	4.18	7.3
LPM04586		UG2	4.36	3.93	10.3
LPM04587	CR	UG2	4.24	4.00	5.9
LPM04588	CR	UG2	3.86	3.91	-1.4
LPM04589		UG2	4.32	4.01	7.3
LPM04590		UG2	4.25	3.96	7.0
LPM04591		UG2	4.03	3.78	6.4
LPM04592		UG2	3.97	4.02	-1.4
LPM04593		UG2	4.51	4.15	8.2
LPM04594		UG2	4.26	4.25	0.3
LPM04595		UG2	4.36	4.09	6.5
LPM04596		UG2	4.12	3.80	8.0
LPM04597		UG2	4.31	4.03	6.8
LPM04598		UG2	4.44	4.15	6.8
LPM04599		UG2	4.44	4.31	2.9
LPM04600		UG2	4.43	4.11	7.4
LPM04601		UG2	4.16	4.04	3.0
LPM04602	CR	UG2	4.26	3.90	8.8
LPM04603	CR	UG2	3.91	3.92	-0.2
LPM04604	PYX	UG2	3.34	3.15	5.9
LPM04605	CR	UG2	4.02	3.72	7.7
LPM04606	CR	UG2	4.44	4.24	4.6
LPM04607	CR	UG2	4.44	4.07	8.6
LPM04608	CR	UG2	4.01	3.77	6.1
LPM04609	CR	UG2	4.20	3.94	6.5
LPM04610	PYX	UG2	3.45	3.40	1.3
LPM04611	PYX	UG2	3.40	3.18	6.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04612	CR	UG2	4.43	4.20	5.2
LPM04613	CR	UG2	4.42	4.24	4.2
LPM04614	CR	UG2	4.27	3.99	6.8
LPM04615	CR	UG2	4.17	4.02	3.8
LPM04616	CR	UG2	4.25	4.02	5.5
LPM04617	CR	UG2	4.18	3.99	4.8
LPM04618	CR	UG2	4.38	4.07	7.3
LPM04619	CR	UG2	3.93	3.83	2.6
LPM04620	CR	UG2	4.23	4.07	3.7
LPM04621	CR	UG2	4.35	4.09	6.1
LPM04622	CR	UG2	4.13	3.75	9.8
LPM04623	CR	UG2	4.37	4.15	5.1
LPM04624	CR	UG2	3.97	3.70	7.0
LPM04625	CR	UG2	4.02	3.79	6.0
LPM04626	CR	UG2	4.10	3.79	7.8
LPM04627	CR	UG2	3.87	3.81	1.6
LPM04628	CR	UG2	4.25	4.03	5.4
LPM04629	CR	UG2	4.33	4.01	7.8
LPM04630	CR	UG2	4.11	3.88	5.7
LPM04631	CR	UG2	3.86	3.61	6.8
LPM04632	CR	UG2	4.24	4.06	4.3
LPM04633	CR	UG2	4.43	4.13	7.1
LPM04634	CR	UG2	4.44	4.12	7.4
LPM04635	CR	UG2	4.39	4.24	3.6
LPM04636	CR	UG2	4.29	4.06	5.5
LPM04637	CR	UG2	4.41	4.08	7.7
LPM04638	CR	UG2	4.50	4.19	7.2
LPM04639	CR	UG2	4.44	4.06	8.9
LPM04640	CR	UG2	3.84	3.85	-0.2
LPM04641	OTHER	UG2	3.38	3.26	3.6
LPM04642	CR	UG2	4.16	3.92	6.0
LPM04643	CR	UG2	4.49	4.27	5.1
LPM04644	CR	UG2	4.25	4.36	-2.7
LPM04645	CR	UG2	4.49	4.05	10.3
LPM04646	CR	UG2	4.22	3.92	7.3
LPM04647	CR	UG2	3.75	3.46	8.1
LPM04648	CR	UG2	4.25	3.98	6.6
LPM04649	CR	UG2	4.31	4.08	5.4
LPM04650	OTHER	UG2	3.94	3.88	1.5
LPM04651	OTHER	UG2	3.52	3.21	9.1
LPM04652	OTHER	UG2	3.46	3.40	1.9
LPM04653	OTHER	UG2	3.59	3.69	-2.8
LPM04654	CR	UG2	4.42	4.03	9.3
LPM04655	CR	UG2	4.46	4.09	8.6
LPM04656	CR	UG2	4.47	4.05	9.8
LPM04657	CR	UG2	4.36	4.10	6.1
LPM04658	CR	UG2	4.39	4.10	6.9
LPM04659	CR	UG2	4.39	3.97	9.9
LPM04660	CR	UG2	4.35	3.93	10.2
LPM04661	CR	UG2	4.02	3.82	5.1
LPM04662	CR	UG2	4.23	3.88	8.7
LPM04663	CR	UG2	4.46	4.18	6.4
LPM04664	CR	UG2	4.44	4.27	3.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM04665	CR	UG2	4.35	4.17	4.3
LPM04666	CR	UG2	4.25	4.22	0.7
LPM04667	CR	UG2	4.46	4.16	6.9
LPM04668	CR	UG2	4.41	4.14	6.4
LPM04669	CR	UG2	4.37	4.04	8.0
LPM04670	CR	UG2	3.03	2.95	2.7
LPM04671	CR	UG2	3.00	2.83	5.7
LPM04672	CR	UG2	2.85	2.74	4.0
LPM04673	CR	UG2	3.70	3.44	7.3
LPM04674	CR	UG2	4.27	3.97	7.2
LPM04675	CR	UG2	4.41	4.14	6.3
LPM04676	CR	UG2	4.44	4.27	3.8
LPM04677	CR	UG2	4.32	4.04	6.7
LPM04678	CR	UG2	4.27	4.14	3.1
LPM04679	CR	UG2	4.43	4.12	7.2
LPM04680	CR	UG2	4.48	4.23	5.8
LPM04681	CR	UG2	4.13	3.84	7.2
LPM04682	CR	UG2	4.17	3.88	7.2
LPM04683	CR	UG2	4.27	3.75	12.8
LPM04684	CR	UG2	4.35	4.12	5.4
LPM04685	CR	UG2	4.11	4.04	1.6
LPM04686	CR	UG2	4.22	4.07	3.6
LPM04687	CR	UG2	4.34	4.10	5.6
LPM04688	CR	UG2	4.47	4.16	7.3
LPM04689	CR	UG2	4.11	4.18	-1.6
LPM04690	CR	UG2	4.19	4.07	2.8
LPM04691		UG2	4.30	4.09	5.0
LPM04692		UG2	4.41	4.14	6.3
LPM04693	CR	UG2	4.15	4.08	1.7
LPM04694		UG2	3.44	3.22	6.6
LPM04695	CR	UG2	4.17	4.09	1.9
LPM04696		UG2	4.37	4.09	6.6
LPM04697		UG2	4.38	4.23	3.4
LPM04698	CR	UG2	4.12	4.14	-0.4
LPM04699	CR	UG2	4.27	4.19	1.9
LPM04700	CR	UG2	4.44	4.20	5.6
LPM04701	CR	UG2	3.95	4.07	-3.1
LPM04702	CR	UG2	4.17	4.13	0.9
LPM04703	CR	UG2	4.33	4.32	0.1
LPM04704	CR	UG2	3.80	3.84	-1.0
LPM04705	PYX	UG2	3.47	3.30	5.1
LPM04706	CR	UG2	4.13	3.93	5.1
LPM04707	CR	UG2	4.31	4.12	4.6
LPM04708	CR	UG2	4.35	4.18	4.0
LPM04709	CR	UG2	4.28	4.05	5.5
LPM04710	PYX	UG2	3.38	3.29	2.8
LPM04711	CR	UG2	4.10	4.11	-0.2
LPM04712	CR	UG2	4.31	4.15	3.8
LPM04713	CR	UG2	4.32	4.03	7.1
LPM04714	CR	UG2	4.15	4.04	2.6
LPM04715	CR	UG2	3.94	3.92	0.4
LPM04716	CR	UG2	4.22	4.06	3.9
LPM04717	CR	UG2	3.84	3.57	7.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04718	CR	UG2	4.12	4.16	-1.0
LPM04719	CR	UG2	4.12	4.15	-0.8
LPM04720	CR	UG2	4.44	4.23	4.8
LPM04721	CR	UG2	4.04	3.76	7.2
LPM04722	CR	UG2	4.12	3.91	5.1
LPM04723	CR	UG2	4.39	4.19	4.7
LPM04724	CR	UG2	4.53	4.30	5.3
LPM04725	CR	UG2	4.45	4.18	6.3
LPM04726	CR	UG2	3.98	3.95	0.8
LPM04727	CR	UG2	4.22	3.89	8.0
LPM04728	CR	UG2	4.49	4.16	7.6
LPM04729	CR	UG2	4.41	4.35	1.3
LPM04730	CR	UG2	4.41	4.20	4.9
LPM04731	CR	UG2	4.50	4.07	10.0
LPM04732	CR	UG2	3.91	3.77	3.7
LPM04733	PYX	UG2	3.61	3.73	-3.3
LPM04734	CR	UG2	4.25	4.19	1.3
LPM04735	CR	UG2	4.46	4.27	4.4
LPM04736	CR	UG2	4.47	4.34	3.0
LPM04737	CR	UG2	4.46	4.15	7.2
LPM04738	CR	UG2	4.17	4.12	1.3
LPM04739	CR	UG2	4.17	4.09	2.0
LPM04740	CR	UG2	4.36	4.09	6.5
LPM04741	CR	UG2	4.24	3.84	9.8
LPM04742	CR	UG2	4.21	3.91	7.5
LPM04743	CR	UG2	4.35	4.17	4.2
LPM04744	CR	UG2	4.44	4.09	8.2
LPM04745	CR	UG2	4.44	4.23	4.8
LPM04746	CR	UG2	4.45	4.24	4.9
LPM04747	CR	UG2	4.41	4.10	7.3
LPM04748	CR	UG2	4.09	3.94	3.7
LPM04749	CR	UG2	4.15	4.13	0.4
LPM04750	CR	UG2	4.21	4.19	0.4
LPM04751	CR	UG2	3.87	3.67	5.2
LPM04752	CR	UG2	4.10	4.08	0.5
LPM04753	CR	UG2	4.11	4.03	2.1
LPM04754	CR	UG2	3.96	3.88	2.1
LPM04755	CR	UG2	3.66	3.64	0.5
LPM04756	CR	UG2	4.29	4.11	4.4
LPM04757	CR	UG2	3.82	3.66	4.3
LPM04758	CR	UG2	4.11	3.94	4.3
LPM04759	CR	UG2	3.97	3.75	5.8
LPM04760	CR	UG2	4.30	4.08	5.2
LPM04761	CR	UG2	4.49	4.08	9.7
LPM04762	CR	UG2	4.34	3.91	10.5
LPM04763	CR	UG2	4.12	3.67	11.4
LPM04764	CR	UG2	4.41	4.05	8.5
LPM04765	CR	UG2	4.39	4.02	8.9
LPM04766	CR	UG2	4.30	4.08	5.3
LPM04767	CR	UG2	4.14	4.01	3.2
LPM04768	CR	UG2	4.09	4.02	1.6
LPM04769	CR	UG2	3.98	4.09	-2.7
LPM04770	CR	UG2	3.88	4.01	-3.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04771	CR	UG2	4.11	4.05	1.5
LPM04772	CR	UG2	3.73	3.59	3.8
LPM04773	CR	UG2	3.97	4.11	-3.6
LPM04774	CR	UG2	4.22	3.97	6.1
LPM04775	CR	UG2	4.27	4.05	5.2
LPM04776	CR	UG2	4.39	4.10	6.8
LPM04777	FPYX	UG2	3.63	3.30	9.7
LPM04778	CR	UG2	4.33	3.98	8.5
LPM04779	CR	UG2	4.05	3.76	7.3
LPM04780	CR	UG2	4.35	4.08	6.3
LPM04781	OTHER	UG2	4.58	4.08	11.5
LPM04782	CR	UG2	4.35	4.10	5.8
LPM04783	CR	UG2	4.32	4.09	5.5
LPM04784	CR	UG2	4.09	3.86	5.9
LPM04785	CR	UG2	4.20	4.02	4.3
LPM04786	CR	UG2	4.47	3.99	11.3
LPM04787	CR	UG2	4.33	4.02	7.3
LPM04788	CR	UG2	4.03	3.66	9.5
LPM04789	CR	UG2	4.20	4.02	4.5
LPM04790	CR	UG2	4.41	4.17	5.7
LPM04791	CR	UG2	4.43	4.17	6.0
LPM04792	CR	UG2	4.39	4.00	9.2
LPM04793	CR	UG2	3.93	3.48	12.2
LPM04794	CR	UG2	4.21	4.05	4.0
LPM04795	CR	UG2	4.37	4.06	7.3
LPM04796	CR	UG2	4.37	4.09	6.5
LPM04797	CR	UG2	4.36	4.03	7.9
LPM04798	CR	UG2	3.62	3.35	7.8
LPM04799	CR	UG2	4.14	3.97	4.1
LPM04800	CR	UG2	4.41	4.12	6.9
LPM04801	CR	UG2	4.54	4.16	8.8
LPM04802	CR	UG2	4.57	4.13	10.1
LPM04803	CR	UG2	4.29	3.95	8.3
LPM04804	CR	UG2	3.88	3.56	8.5
LPM04805	CR	UG2	4.18	3.84	8.5
LPM04806	CR	UG2	4.45	4.01	10.4
LPM04807	CR	UG2	4.36	4.14	5.2
LPM04808	CR	UG2	4.47	4.18	6.6
LPM04809	CR	UG2	4.13	4.01	3.1
LPM04810	CR	UG2	4.42	4.08	8.1
LPM04811	CR	UG2	4.49	4.12	8.6
LPM04812	CR	UG2	4.46	4.10	8.4
LPM04813	CR	UG2	3.98	3.78	5.1
LPM04814	CR	UG2	3.97	3.74	6.0
LPM04815	CR	UG2	4.25	4.13	2.9
LPM04816	CR	UG2	3.69	3.44	6.9
LPM04817	CR	UG2	4.06	4.13	-1.7
LPM04818	CR	UG2	4.10	4.03	1.8
LPM04819	CR	UG2	4.26	4.06	4.9
LPM04820	CR	UG2	4.01	3.78	5.8
LPM04821	CR	UG2	3.61	3.69	-2.1
LPM04822	CR	UG2	4.04	3.77	6.9
LPM04823	CR	UG2	4.07	4.02	1.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04824	CR	UG2	4.24	4.00	5.9
LPM04825	CR	UG2	4.34	4.15	4.4
LPM04826	CR	UG2	4.45	4.19	6.1
LPM04827	CR	UG2	4.38	4.18	4.8
LPM04828	CR	UG2	4.25	4.14	2.5
LPM04829	CR	UG2	4.30	4.10	4.8
LPM04830	CR	UG2	4.40	4.23	4.0
LPM04831	CR	UG2	4.38	4.22	3.8
LPM04832	CR	UG2	3.98	4.13	-3.7
LPM04833	CR	UG2	4.16	3.90	6.4
LPM04834	CR	UG2	4.27	4.12	3.6
LPM04835	CR	UG2	4.49	4.28	4.9
LPM04836	CR	UG2	4.47	4.17	6.9
LPM04837	CR	UG2	4.49	4.14	8.1
LPM04838	CR	UG2	4.08	3.90	4.4
LPM04839	CR	UG2	3.43	3.58	-4.2
LPM04840	CR	UG2	4.27	3.96	7.5
LPM04841	CR	UG2	4.41	3.90	12.4
LPM04842	CR	UG2	4.32	4.08	5.8
LPM04843	CR	UG2	4.46	4.24	5.0
LPM04844	CR	UG2	4.51	4.09	9.8
LPM04845	CR	UG2	3.97	3.64	8.8
LPM04846	CR	UG2	3.99	4.02	-0.9
LPM04847	CR	UG2	4.40	3.94	10.9
LPM04848	CR	UG2	4.48	4.01	11.0
LPM04849	CR	UG2	4.52	4.17	8.2
LPM04850	CR	UG2	4.49	4.11	8.8
LPM04851	CR	UG2	4.49	4.08	9.6
LPM04852	CR	UG2	3.76	3.76	-0.1
LPM04853	CR	UG2	3.79	3.76	0.7
LPM04854	CR	UG2	3.70	3.53	4.6
LPM04855	CR	UG2	3.96	3.81	3.8
LPM04856	CR	UG2	4.34	3.92	10.1
LPM04857	CR	UG2	4.34	4.17	3.9
LPM04858	CR	UG2	3.89	3.74	4.0
LPM04859	CR	UG2	3.80	3.69	3.1
LPM04860	CR	UG2	3.80	3.97	-4.4
LPM04861	CR	UG2	3.77	3.58	5.1
LPM04862	CR	UG2	3.82	3.75	1.9
LPM04863	CR	UG2	4.23	3.95	6.8
LPM04864	CR	UG2	4.27	4.13	3.5
LPM04865	CR	UG2	4.34	4.16	4.3
LPM04866	CR	UG2	3.86	3.72	3.8
LPM04867	CR	UG2	3.64	3.55	2.5
LPM04868	CR	UG2	3.50	3.48	0.7
LPM04869	CR	UG2	4.16	4.04	2.9
LPM04870	CR	UG2	3.26	3.02	7.6
LPM04871	CR	UG2	4.20	4.03	4.1
LPM04872	CR	UG2	4.10	4.00	2.3
LPM04873	CR	UG2	3.38	3.29	2.7
LPM04874	CR	UG2	4.09	4.18	-2.3
LPM04875	CR	UG2	4.11	4.07	0.9
LPM04876	CR	UG2	3.51	3.41	2.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04877	CR	UG2	4.18	4.06	2.8
LPM04878	CR	UG2	4.41	4.22	4.4
LPM04879	CR	UG2	3.39	3.44	-1.5
LPM04880	CR	UG2	3.99	3.92	1.7
LPM04881	CR	UG2	3.96	3.57	10.3
LPM04882	CR	UG2	4.34	4.04	7.2
LPM04883	CR	UG2	4.38	4.13	6.0
LPM04884	CR	UG2	4.39	4.13	6.1
LPM04885	CR	UG2	4.28	4.09	4.7
LPM04886	CR	UG2	3.70	3.72	-0.5
LPM04887	CR	UG2	4.02	3.77	6.4
LPM04888	CR	UG2	4.16	4.08	2.0
LPM04889	CR	UG2	4.16	4.05	2.6
LPM04890	CR	UG2	4.16	4.09	1.6
LPM04891	CR	UG2	4.25	4.12	3.2
LPM04892	CR	UG2	4.13	3.96	4.1
LPM04893	CR	UG2	3.90	3.51	10.6
LPM04894	CR	UG2	3.45	3.41	1.3
LPM04895	CR	UG2	3.02	2.94	2.7
LPM04896	CR	UG2	3.67	3.58	2.3
LPM04897	CR	UG2	4.15	3.91	6.0
LPM04898	CR	UG2	4.34	3.98	8.6
LPM04899	CR	UG2	4.26	3.73	13.3
LPM04900	CR	UG2	3.66	3.54	3.3
LPM04901	CR	UG2	3.54	3.35	5.5
LPM04902	CR	UG2	2.98	2.84	4.9
LPM04903	CR	UG2	4.19	3.97	5.4
LPM04904	CR	UG2	4.49	4.18	7.3
LPM04905	CR	UG2	4.35	4.10	5.9
LPM04906	CR	UG2	4.12	3.94	4.4
LPM04907	CR	UG2	3.69	3.63	1.5
LPM04908	CR	UG2	3.60	3.35	7.1
LPM04909	CR	UG2	3.51	3.24	7.9
LPM04910	CR	UG2	3.48	3.32	4.6
LPM04911	CR	UG2	4.29	3.84	11.0
LPM04912	CR	UG2	4.03	3.70	8.6
LPM04913	CR	UG2	4.67	4.19	10.9
LPM04914	CR	UG2	4.54	4.15	9.0
LPM04915	CR	UG2	4.33	4.01	7.6
LPM04916	CR	UG2	3.66	3.56	2.7
LPM04917	CR	UG2	4.11	3.68	11.1
LPM04918	CR	UG2	3.96	3.65	8.1
LPM04919	CR	UG2	4.38	4.47	-2.0
LPM04920	CR	UG2	4.38	3.98	9.6
LPM04921	CR	UG2	4.52	4.13	9.1
LPM04922	CR	UG2	4.40	3.98	10.1
LPM04923	CR	UG2	3.62	3.36	7.4
LPM04924	CR	UG2	4.01	3.47	14.4
LPM04925	CR	UG2	3.71	3.56	4.2
LPM04926	CR	UG2	4.40	4.17	5.3
LPM04927	CR	UG2	4.28	4.08	4.8
LPM04928	CR	UG2	4.34	4.06	6.6
LPM04929	CR	UG2	4.13	3.88	6.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM04930	CR	UG2	4.18	3.82	9.0
LPM04931	CR	UG2	4.47	4.18	6.7
LPM04932	CR	UG2	4.38	4.05	7.9
LPM04933	CR	UG2	4.40	4.11	6.9
LPM04934	CR	UG2	4.13	4.12	0.2
LPM04935	CR	UG2	3.57	3.37	5.9
LPM04936	CR	UG2	4.01	3.78	5.9
LPM04937	CR	UG2	3.82	3.59	6.1
LPM04938	CR	UG2	3.99	3.68	8.1
LPM04939	CR	UG2	3.57	3.28	8.4
LPM04940	CR	UG2	4.10	4.06	0.9
LPM04941	CR	UG2	4.00	3.99	0.1
LPM04942	CR	UG2	4.26	4.06	4.8
LPM04943	CR	UG2	4.55	4.21	7.8
LPM04944	CR	UG2	4.45	4.14	7.2
LPM04945	CR	UG2	4.00	3.89	2.8
LPM04946	CR	UG2	4.09	3.87	5.5
LPM04947	CR	UG2	4.37	4.19	4.2
LPM04948	CR	UG2	4.32	4.15	3.8
LPM04949	CR	UG2	4.00	4.04	-1.0
LPM04950	CR	UG2	4.14	3.67	11.9
LPM04951	CR	UG2	4.20	4.02	4.4
LPM04952	CR	UG2	4.26	4.03	5.5
LPM04953	CR	UG2	4.28	4.19	2.2
LPM04954	CR	UG2	3.45	3.37	2.3
LPM04955	CR	UG2	4.12	4.10	0.6
LPM04956	CR	UG2	4.25	4.07	4.4
LPM04957	CR	UG2	4.29	4.08	4.8
LPM04958	CR	UG2	4.39	4.19	4.6
LPM04959	CR	UG2	3.56	3.39	5.0
LPM04960	CR	UG2	4.09	4.03	1.6
LPM04961	CR	UG2	4.11	4.01	2.4
LPM04962	CR	UG2	3.78	3.93	-3.8
LPM04963	CR	UG2	4.22	3.74	12.1
LPM04964	CR	UG2	4.38	4.05	7.9
LPM04965	CR	UG2	4.38	4.02	8.6
LPM04966	CR	UG2	4.06	4.03	0.7
LPM04967	CR	UG2	4.14	3.73	10.3
LPM04968	CR	UG2	4.39	4.01	9.1
LPM04969	CR	UG2	3.92	3.55	9.9
LPM04970	OTHER	UG2	2.92	2.88	1.4
LPM04971	CR	UG2	4.24	3.93	7.6
LPM04972	CR	UG2	4.41	4.08	7.8
LPM04973	CR	UG2	4.37	4.11	6.1
LPM04974	CR	UG2	3.66	3.32	9.8
LPM04975	CR	UG2	3.42	3.21	6.3
LPM04976	CR	UG2	4.30	4.15	3.6
LPM04977	CR	UG2	4.44	4.17	6.3
LPM04978	CR	UG2	4.41	4.12	6.7
LPM04979	CR	UG2	4.37	4.13	5.6
LPM04980	CR	UG2	3.53	3.23	8.9
LPM04981	CR	UG2	4.51	4.05	10.7
LPM04982	CR	UG2	4.43	4.07	8.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM04983	CR	UG2	4.45	4.00	10.7
LPM04984	CR	UG2	4.22	3.74	12.0
LPM04985	CR	UG2	3.82	3.49	9.0
LPM04986	CR	UG2	4.17	3.73	11.2
LPM04987	CR	UG2	4.40	4.04	8.5
LPM04988	CR	UG2	4.43	4.08	8.2
LPM04989	CR	UG2	4.37	4.02	8.4
LPM04990	CR	UG2	3.89	3.38	13.9
LPM04991	CR	UG2	3.83	3.50	9.1
LPM04992	CR	UG2	3.52	3.32	5.9
LPM04993	CR	UG2	4.20	3.92	7.0
LPM04994	CR	UG2	4.14	3.91	5.8
LPM04995	CR	UG2	4.37	4.00	8.9
LPM04996	CR	UG2	4.16	3.85	7.6
LPM04997	CR	UG2	4.27	3.81	11.3
LPM04998	CR	UG2	4.17	3.76	10.3
LPM04999	CR	UG2	4.02	3.53	12.9
LPM05000	CR	UG2	4.04	3.94	2.4
LPM05001	PYX	UG2	3.41	3.25	4.8
LPM05002	PYX	UG2	3.67	3.36	8.9
LPM05003	PYX	UG2	3.63	3.41	6.2
LPM05004	CR	UG2	3.70	3.35	9.9
LPM05005	CR	UG2	4.25	4.00	5.9
LPM05006	CR	UG2	4.37	4.06	7.3
LPM05007	CR	UG2	4.28	4.02	6.2
LPM05008	CR	UG2	4.13	3.87	6.5
LPM05009	CR	UG2	3.99	3.81	4.5
LPM05010	PYX	UG2	3.48	3.19	8.5
LPM05011	PYX	UG2	3.52	3.29	6.8
LPM05012	PYX	UG2	3.63	3.36	7.6
LPM05013	CR	UG2	3.57	3.37	5.6
LPM05014	CR	UG2	4.32	4.00	7.6
LPM05015	CR	UG2	4.17	3.96	5.1
LPM05016	CR	UG2	4.00	3.71	7.6
LPM05017	CR	UG2	3.97	3.60	9.8
LPM05018	CR	UG2	4.03	4.00	0.7
LPM05019	CR	UG2	3.64	3.31	9.5
LPM05020	CR	UG2	3.75	3.46	8.2
LPM05021	CR	UG2	3.42	3.22	6.0
LPM05022	CR	UG2	3.84	3.59	6.8
LPM05023	CR	UG2	4.21	3.91	7.3
LPM05024	CR	UG2	4.65	4.35	6.6
LPM05025	CR	UG2	4.64	4.32	7.1
LPM05026	CR	UG2	4.46	4.17	6.6
LPM05027	CR	UG2	4.15	4.15	0.1
LPM05028	CR	UG2	3.92	3.84	2.1
LPM05029	CR	UG2	4.56	4.11	10.5
LPM05030	CR	UG2	4.68	4.23	10.0
LPM05031	CR	UG2	4.63	4.19	9.9
LPM05032	CR	UG2	3.61	3.75	-3.9
LPM05033	CR	UG2	4.39	4.01	9.1
LPM05034	CR	UG2	3.65	3.37	8.1
LPM05035	CR	UG2	3.86	3.50	9.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05036	CR	UG2	4.53	4.07	10.8
LPM05037	CR	UG2	4.76	4.36	8.8
LPM05038	CR	UG2	4.63	4.17	10.3
LPM05039	CR	UG2	4.10	3.98	3.1
LPM05040	CR	UG2	4.16	3.60	14.6
LPM05041	PYX	UG2	3.64	3.38	7.4
LPM05042	CR	UG2	3.71	3.56	4.2
LPM05043	PYX	UG2	3.35	3.26	2.8
LPM05044	PYX	UG2	3.37	3.28	2.6
LPM05045	PYX	UG2	3.38	3.28	2.9
LPM05046	PYX	UG2	3.37	3.27	3.0
LPM05047	PYX	UG2	3.43	3.55	-3.5
LPM05048	PYX	UG2	3.36	3.15	6.3
LPM05049	PYX	UG2	3.32	3.15	5.2
LPM05050	PYX	UG2	3.37	3.16	6.4
LPM05051	PYX	UG2	3.36	3.19	5.1
LPM05052	PYX	UG2	3.41	3.21	5.9
LPM05053	CR	UG2	3.83	3.60	6.3
LPM05054	CR	UG2	3.64	3.54	2.9
LPM05055	PYX	UG2	3.55	3.35	5.9
LPM05056	PYX	UG2	3.51	3.37	4.2
LPM05057	PYX	UG2	3.47	3.32	4.5
LPM05058	PYX	UG2	3.38	3.24	4.4
LPM05059	CR	UG2	3.54	3.41	3.7
LPM05060	PYX	UG2	3.42	3.22	6.1
LPM05061	PYX	UG2	3.44	3.23	6.4
LPM05062	CR	UG2	3.70	3.52	5.1
LPM05063	PYX	UG2	3.47	3.26	6.1
LPM05064	PYX	UG2	3.42	3.20	6.5
LPM05065	CR	UG2	3.80	3.84	-1.1
LPM05066	CR	UG2	3.77	3.57	5.3
LPM05067	PYX	UG2	3.31	3.24	2.1
LPM05068	CR	UG2	3.72	3.31	11.7
LPM05069	CR	UG2	4.00	3.88	3.1
LPM05070	CR	UG2	4.19	4.02	4.1
LPM05071	CR	UG2	3.99	3.87	3.0
LPM05072	CR	UG2	4.01	3.94	1.6
LPM05073	CR	UG2	3.52	3.59	-1.9
LPM05074	PYX	UG2	3.50	3.18	9.5
LPM05075	PYX	UG2	3.49	3.16	10.0
LPM05076	CR	UG2	4.00	3.61	10.1
LPM05077	CR	UG2	4.23	3.79	11.1
LPM05078	CR	UG2	4.26	3.98	6.8
LPM05079	CR	UG2	4.34	4.10	5.6
LPM05080	CR	UG2	4.30	4.06	5.8
LPM05081	CR	UG2	4.05	3.90	3.9
LPM05082	CR	UG2	4.00	3.58	11.0
LPM05083	CR	UG2	4.20	4.05	3.6
LPM05084	CR	UG2	4.39	4.32	1.5
LPM05085	CR	UG2	4.01	3.77	6.1
LPM05086	CR	UG2	4.07	3.77	7.7
LPM05087	CR	UG2	3.79	3.71	2.2
LPM05088	CR	UG2	4.24	4.00	5.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05089	CR	UG2	4.38	4.15	5.3
LPM05090	CR	UG2	4.03	3.75	7.1
LPM05091	CR	UG2	4.04	3.85	4.8
LPM05092	CR	UG2	3.98	3.48	13.5
LPM05093	CR	UG2	4.63	4.13	11.3
LPM05094	CR	UG2	4.56	4.09	10.9
LPM05095	CR	UG2	4.32	4.15	4.1
LPM05096	CR	UG2	3.56	3.24	9.5
LPM05097	CR	UG2	4.21	3.82	9.8
LPM05098	CR	UG2	3.92	3.61	8.1
LPM05099	PYX	UG2	3.55	3.24	9.2
LPM05100	PYX	UG2	3.62	3.45	4.9
LPM05101	CR	UG2	3.88	3.61	7.3
LPM05102	CR	UG2	3.71	3.40	8.6
LPM05103	CR	UG2	4.29	3.81	12.0
LPM05104	CR	UG2	4.64	4.07	13.0
LPM05105	CR	UG2	4.56	4.03	12.3
LPM05106	CR	UG2	4.34	3.97	8.9
LPM05107	CR	UG2	3.76	3.50	7.2
LPM05108	PYX	UG2	3.53	3.32	6.2
LPM05109	CR	UG2	4.02	3.57	12.0
LPM05110	CR	UG2	3.85	3.87	-0.4
LPM05111	PYX	UG2	3.36	3.08	8.6
LPM05112	PYX	UG2	3.33	3.03	9.3
LPM05113	CR	UG2	4.39	3.88	12.4
LPM05114	CR	UG2	4.59	4.39	4.6
LPM05115	CR	UG2	3.77	3.75	0.4
LPM05116	CR	UG2	4.11	4.14	-0.8
LPM05117	CR	UG2	4.16	3.88	6.9
LPM05118	CR	UG2	4.15	3.90	6.3
LPM05119	CR	UG2	4.27	3.73	13.6
LPM05120	CR	UG2	4.16	4.00	3.9
LPM05121	PYX	UG2	3.41	3.39	0.5
LPM05122	CR	UG2	3.86	3.82	1.0
LPM05123	CR	UG2	4.06	4.12	-1.5
LPM05124	CR	UG2	4.32	4.07	5.9
LPM05125	CR	UG2	4.31	4.10	5.0
LPM05126	CR	UG2	4.23	3.94	7.1
LPM05127	CR	UG2	4.08	3.98	2.5
LPM05128	CR	UG2	4.35	3.95	9.7
LPM05129	CR	UG2	4.37	4.17	4.7
LPM05130	CR	UG2	4.40	4.14	6.2
LPM05131	CR	UG2	4.18	4.01	4.1
LPM05132	CR	UG2	4.05	3.92	3.2
LPM05133	CR	UG2	4.08	4.12	-1.0
LPM05134	CR	UG2	4.39	4.22	4.0
LPM05135	CR	UG2	4.39	4.24	3.4
LPM05136	CR	UG2	4.36	4.02	8.0
LPM05137	CR	UG2	4.18	3.98	4.9
LPM05138	CR	UG2	3.95	3.86	2.2
LPM05139	CR	UG2	3.46	3.22	7.2
LPM05140	CR	UG2	4.25	3.98	6.4
LPM05141	CR	UG2	4.29	4.00	6.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM05142	CR	UG2	4.36	4.07	6.8
LPM05143	CR	UG2	4.11	4.01	2.4
LPM05144	CR	UG2	4.17	4.06	2.7
LPM05145	CR	UG2	4.41	3.89	12.6
LPM05146	CR	UG2	4.40	3.99	9.8
LPM05147	CR	UG2	4.46	4.06	9.3
LPM05148	CR	UG2	4.19	3.92	6.7
LPM05149	CR	UG2	4.29	3.87	10.3
LPM05150	CR	UG2	4.38	3.97	9.7
LPM05151	CR	UG2	4.42	3.88	13.1
LPM05152	CR	UG2	4.48	4.02	10.7
LPM05153	CR	UG2	4.18	4.01	4.1
LPM05154	CR	UG2	4.32	3.79	13.1
LPM05155	CR	UG2	4.52	4.15	8.4
LPM05156	PYX	UG2	3.45	3.30	4.5
LPM05157	CR	UG2	4.18	3.75	10.8
LPM05158	CR	UG2	4.23	3.87	8.8
LPM05159	CR	UG2	4.42	4.16	6.0
LPM05160	PYX	UG2	3.48	3.29	5.5
LPM05161	CR	UG2	3.68	3.61	1.9
LPM05162	CR	UG2	4.37	4.29	1.7
LPM05163	CR	UG2	4.14	3.84	7.6
LPM05164	CR	UG2	4.20	4.12	2.0
LPM05165	CR	UG2	4.21	4.17	0.9
LPM05166	CR	UG2	4.40	4.09	7.3
LPM05167	CR	UG2	4.35	4.09	6.1
LPM05168	OTHER	UG2	4.43	4.09	7.9
LPM05169	CR	UG2	4.40	4.07	7.9
LPM05170	CR	UG2	4.09	4.00	2.3
LPM05171	CR	UG2	4.29	4.06	5.4
LPM05172	CR	UG2	4.34	4.05	7.0
LPM05173	CR	UG2	3.86	3.57	7.8
LPM05174	CR	UG2	4.10	4.10	0.0
LPM05175	CR	UG2	4.10	3.85	6.3
LPM05176	CR	UG2	4.22	3.96	6.4
LPM05177	CR	UG2	4.34	4.08	6.3
LPM05178	CR	UG2	4.10	4.16	-1.5
LPM05179	FPYX	UG2FW	3.74	3.49	6.7
LPM05180	PP	UG2FW	3.54	3.34	5.7
LPM05181	PP	UG2FW	3.47	3.29	5.4
LPM05182	PP	UG2FW	3.49	3.31	5.3
LPM05183	PP	UG2FW	3.47	3.29	5.5
LPM05184	PP	UG2FW	3.50	3.32	5.2
LPM05185	PP	UG2FW	3.46	3.29	5.2
LPM05186	PP	UG2FW	3.50	3.33	4.9
LPM05187	PP	UG2FW	3.54	3.32	6.4
LPM05188	PP	UG2FW	3.44	3.26	5.3
LPM05189	FPYX	UG2FW	3.62	3.45	5.0
LPM05190	FPYX	UG2FW	3.57	3.40	4.8
LPM05191	PP	UG2FW	3.46	3.31	4.5
LPM05192	PP	UG2FW	3.49	3.36	3.7
LPM05193	PP	UG2FW	3.48	3.29	5.7
LPM05194	PP	UG2FW	3.45	3.36	2.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM05195	PP	UG2FW	3.45	3.31	4.2
LPM05196	PP	UG2FW	3.47	3.30	5.0
LPM05197	PP	UG2FW	3.48	3.27	6.1
LPM05198	PP	UG2FW	3.45	3.26	5.5
LPM05199	CR	UG2FW	3.78	3.46	8.7
LPM05200	CR	UG2FW	3.60	3.43	4.8
LPM05201	CR	UG2FW	3.96	4.13	-4.2
LPM05202	CR	UG2FW	3.76	3.31	12.8
LPM05203	PEGFPYX	UG2FW	3.51	3.30	6.1
LPM05204	PEGFPYX	UG2FW	3.39	3.20	5.7
LPM05205	PEGFPYX	UG2FW	3.38	3.23	4.6
LPM05206	POIKPYX	UG2FW	3.47	3.19	8.2
LPM05207	POIKPYX	UG2FW	3.43	3.29	4.0
LPM05208	POIKFPYX	UG2FW	3.45	3.27	5.4
LPM05209	SERP	UG2FW	3.14	3.15	-0.4
LPM05210	SERP	UG2FW	3.18	3.06	3.7
LPM05211	SERP	UG2FW	3.21	3.04	5.6
LPM05212	POIKPYX	UG2FW	3.42	3.29	3.9
LPM05213	POIKPYX	UG2FW	3.49	3.32	5.0
LPM05214	POIKPYX	UG2FW	3.47	3.29	5.4
LPM05215	PP	UG2FW	3.39	3.25	4.2
LPM05216	PP	UG2FW	3.39	3.21	5.5
LPM05217	PP	UG2FW	3.46	3.29	5.0
LPM05218	PP	UG2FW	3.39	3.22	5.2
LPM05219	PEGFPYX	UG2FW	3.60	3.43	4.7
LPM05220	PEGFPYX	UG2FW	3.56	3.44	3.5
LPM05221	PEGFPYX	UG2FW	3.40	3.28	3.5
LPM05222	PEGFPYX	UG2FW	3.37	3.28	2.6
LPM05223	PEGFPYX	UG2FW	3.40	3.31	2.7
LPM05224	POIKFPYX	UG2FW	3.38	3.25	4.0
LPM05225	POIKFPYX	UG2FW	3.42	3.34	2.5
LPM05226	POIKFPYX	UG2FW	3.41	3.29	3.5
LPM05227	POIKFPYX	UG2FW	3.42	3.26	4.8
LPM05228	POIKFPYX	UG2FW	3.40	3.29	3.4
LPM05229	CR	UG2FW	3.49	3.29	5.9
LPM05230	PEGPYX	UG2FW	3.43	3.31	3.7
LPM05231	CR	UG2FW	3.51	3.31	5.9
LPM05232	CR	UG2FW	3.40	3.27	4.0
LPM05233	PEGPYX	UG2FW	3.41	3.26	4.6
LPM05234	POIKPYX	UG2FW	3.40	3.26	4.2
LPM05235	POIKPYX	UG2FW	3.39	3.25	4.2
LPM05236	POIKPYX	UG2FW	3.41	3.25	4.8
LPM05237	POIKPYX	UG2FW	3.36	3.15	6.5
LPM05238	POIKFPYX	UG2FW	3.34	3.21	3.9
LPM05239	PEGPYX	UG2FW	3.47	3.29	5.4
LPM05240	PEGPYX	UG2FW	3.45	3.26	5.7
LPM05241	PEGPYX	UG2FW	3.53	3.35	5.2
LPM05242	PEGPYX	UG2FW	3.40	3.17	7.1
LPM05243	PP	UG2FW	3.41	3.25	4.8
LPM05244	PP	UG2FW	3.41	3.27	4.2
LPM05245	PP	UG2FW	3.42	3.26	4.7
LPM05246	PP	UG2FW	3.42	3.25	5.0
LPM05247	POIKFPYX	UG2FW	3.40	3.24	4.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05248	POIKFPYX	UG2FW	3.40	3.24	4.9
LPM05249	PEGFPYX	UG2FW	3.60	3.40	5.7
LPM05250	PEGFPYX	UG2FW	3.55	3.36	5.6
LPM05251	PEGFPYX	UG2FW	3.53	3.38	4.3
LPM05252	POIKPYX	UG2FW	3.42	3.26	4.7
LPM05253	POIKPYX	UG2FW	3.39	3.23	4.9
LPM05254	POIKPYX	UG2FW	3.47	3.28	5.6
LPM05255	POIKPYX	UG2FW	3.42	3.25	5.0
LPM05256	PEGFPYX	UG2FW	3.38	3.32	1.6
LPM05257	PEGFPYX	UG2FW	3.43	3.26	5.0
LPM05258	PEGFPYX	UG2FW	3.65	3.42	6.5
LPM05259	PEGFPYX	UG2FW	3.50	3.28	6.4
LPM05260	PEGFPYX	UG2FW	3.53	3.33	5.8
LPM05261	POIKFPYX	UG2FW	3.44	3.27	5.2
LPM05262	POIKFPYX	UG2FW	3.39	3.22	5.2
LPM05263	POIKFPYX	UG2FW	3.46	3.23	6.8
LPM05264	PP	UG2FW	3.43	3.27	4.9
LPM05265	PP	UG2FW	3.43	3.26	5.1
LPM05266	PP	UG2FW	3.43	3.25	5.4
LPM05267	PP	UG2FW	3.41	3.22	5.7
LPM05268	PEGFPYX	UG2FW	3.49	3.30	5.7
LPM05269	PEGFPYX	UG2FW	3.49	3.28	6.3
LPM05270	PEGFPYX	UG2FW	3.45	3.27	5.4
LPM05271	PEGFPYX	UG2FW	3.47	3.28	5.5
LPM05272	PEGFPYX	UG2FW	3.47	3.26	6.1
LPM05273	PEGFPYX	UG2FW	3.47	3.26	6.2
LPM05274	PEGFPYX	UG2FW	3.54	3.31	6.6
LPM05275	PEGFPYX	UG2FW	3.49	3.29	5.9
LPM05276	PEGFPYX	UG2FW	3.50	3.29	6.2
LPM05277	PEGFPYX	UG2FW	3.48	3.26	6.5
LPM05278	PEGFPYX	UG2FW	3.49	3.29	5.8
LPM05279	PEGFPYX	UG2FW	3.48	3.29	5.6
LPM05280	PEGFPYX	UG2FW	3.49	3.28	6.1
LPM05281	PEGFPYX	UG2FW	3.46	3.28	5.2
LPM05282	PEGFPYX	UG2FW	3.47	3.27	5.9
LPM05283	PEGFPYX	UG2FW	3.49	3.27	6.5
LPM05284	PEGFPYX	UG2FW	3.52	3.28	7.0
LPM05285	PEGFPYX	UG2FW	3.51	3.27	7.1
LPM05286	PEGFPYX	UG2FW	3.50	3.27	6.7
LPM05287	PEGFPYX	UG2FW	3.50	3.29	6.3
LPM05288	PEGFPYX	UG2FW	3.62	3.39	6.4
LPM05289	PEGFPYX	UG2FW	3.49	3.34	4.4
LPM05290	PEGFPYX	UG2FW	3.38	3.13	7.7
LPM05291	PEGFPYX	UG2FW	3.46	3.10	10.8
LPM05292	PEGFPYX	UG2FW	3.42	3.21	6.2
LPM05293	PEGFPYX	UG2FW	3.44	3.22	6.5
LPM05294	PEGFPYX	UG2FW	3.37	3.15	6.8
LPM05295	PEGFPYX	UG2FW	3.42	3.20	6.6
LPM05296	POIKFPYX	UG2FW	3.45	3.22	6.8
LPM05297	POIKFPYX	UG2FW	3.42	3.20	6.5
LPM05298	PEGFPYX	UG2FW	3.53	3.26	8.1
LPM05299	PEGFPYX	UG2FW	3.53	3.29	7.0
LPM05300	PEGFPYX	UG2FW	3.54	3.32	6.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05301	PEGFPYX	UG2FW	3.56	3.36	5.7
LPM05302	PEGFPYX	UG2FW	3.47	3.25	6.6
LPM05303	PEGFPYX	UG2FW	3.47	3.25	6.6
LPM05304	PEGFPYX	UG2FW	3.45	3.23	6.6
LPM05305	PEGFPYX	UG2FW	3.46	3.24	6.6
LPM05306	PEGFPYX	UG2FW	3.51	3.27	7.2
LPM05307	PEGFPYX	UG2FW	3.44	3.24	5.7
LPM05308	PEGFPYX	UG2FW	3.39	3.14	7.8
LPM05309	PEGFPYX	UG2FW	3.54	3.28	7.7
LPM05310	PEGFPYX	UG2FW	3.58	3.40	5.1
LPM05311	POIKFPYX	UG2FW	3.46	3.25	6.2
LPM05312	PEGFPYX	UG2FW	3.47	3.20	8.2
LPM05313	PEGFPYX	UG2FW	3.43	3.20	6.9
LPM05314	PEGFPYX	UG2FW	3.48	3.22	7.7
LPM05315	PEGFPYX	UG2FW	3.49	3.26	6.9
LPM05316	PEGFPYX	UG2FW	3.50	3.24	7.6
LPM05317	PEGFPYX	UG2FW	3.60	3.33	7.9
LPM05318	PEGFPYX	UG2FW	3.46	3.20	7.8
LPM05319	PEGFPYX	UG2FW	3.34	3.23	3.2
LPM05320	PEGFPYX	UG2FW	3.55	3.29	7.7
LPM05321	PEGFPYX	UG2FW	3.61	3.30	8.8
LPM05322	PEGFPYX	UG2FW	3.46	3.21	7.4
LPM05323	PEGFPYX	UG2FW	3.44	3.22	6.8
LPM05324	PEGFPYX	UG2FW	3.45	3.23	6.7
LPM05325	PEGFPYX	UG2FW	3.47	3.23	7.3
LPM05326	PEGFPYX	UG2FW	3.43	3.22	6.4
LPM05327	PEGFPYX	UG2FW	3.44	3.21	6.8
LPM05328	PEGFPYX	UG2FW	3.45	3.22	6.9
LPM05329	PEGFPYX	UG2FW	3.57	3.37	5.7
LPM05330	PEGFPYX	UG2FW	3.52	3.22	9.0
LPM05331	PEGFPYX	UG2FW	3.41	3.23	5.4
LPM05332	PEGFPYX	UG2FW	3.42	3.23	5.7
LPM05333	PEGFPYX	UG2FW	3.43	3.24	5.7
LPM05334	PEGFPYX	UG2FW	3.42	3.22	6.1
LPM05335	PEGFPYX	UG2FW	3.44	3.22	6.5
LPM05336	PEGFPYX	UG2FW	3.44	3.21	7.0
LPM05337	PEGFPYX	UG2FW	3.59	3.36	6.7
LPM05338	PEGFPYX	UG2FW	3.56	3.34	6.2
LPM05339	PEGFPYX	UG2FW	3.46	3.24	6.5
LPM05340	PEGFPYX	UG2FW	3.38	3.17	6.5
LPM05341	PEGFPYX	UG2FW	3.32	3.08	7.5
LPM05342	PEGFPYX	UG2FW	3.38	3.21	5.0
LPM05343	PEGFPYX	UG2FW	3.37	3.21	4.8
LPM05344	PEGFPYX	UG2FW	3.55	3.24	9.0
LPM05345	PEGFPYX	UG2FW	3.40	3.29	3.3
LPM05346	PEGFPYX	UG2FW	3.39	3.17	6.7
LPM05347	PEGFPYX	UG2FW	3.55	3.33	6.3
LPM05348	PEGFPYX	UG2FW	3.51	3.35	4.7
LPM05349	PEGFPYX	UG2FW	3.37	3.26	3.2
LPM05350	PEGFPYX	UG2FW	3.37	3.19	5.3
LPM05351	PEGFPYX	UG2FW	3.32	3.04	8.7
LPM05352	PEGFPYX	UG2FW	3.09	2.99	3.3
LPM05353	PEGFPYX	UG2FW	3.25	3.25	0.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05354	PEGFPYX	UG2FW	3.34	3.16	5.5
LPM05355	PEGFPYX	UG2FW	3.39	3.28	3.4
LPM05356	PEGFPYX	UG2FW	3.27	3.11	5.1
LPM05357	PEGFPYX	UG2FW	3.45	3.25	5.8
LPM05358	PEGFPYX	UG2FW	3.54	3.40	3.9
LPM05359	PEGFPYX	UG2FW	3.48	3.36	3.6
LPM05360	PEGFPYX	UG2FW	3.40	3.24	4.7
LPM05361	PEGFPYX	UG2FW	3.39	3.23	4.7
LPM05362	PEGFPYX	UG2FW	3.40	3.25	4.6
LPM05363	PEGFPYX	UG2FW	3.32	3.18	4.2
LPM05364	PEGFPYX	UG2FW	3.40	3.24	4.7
LPM05365	PEGFPYX	UG2FW	3.43	3.28	4.6
LPM05366	PEGFPYX	UG2FW	3.40	3.27	3.8
LPM05367	PEGFPYX	UG2FW	3.45	3.29	4.7
LPM05368	PEGFPYX	UG2FW	3.46	3.34	3.5
LPM05369	PEGFPYX	UG2FW	3.48	3.32	4.7
LPM05370	PEGFPYX	UG2FW	3.38	3.23	4.5
LPM05371	PEGFPYX	UG2FW	3.40	3.24	4.9
LPM05372	PEGFPYX	UG2FW	3.40	3.25	4.6
LPM05373	PEGFPYX	UG2FW	3.37	3.23	4.4
LPM05374	PEGFPYX	UG2FW	3.41	3.27	4.2
LPM05375	PEGFPYX	UG2FW	3.43	3.27	4.9
LPM05376	PEGFPYX	UG2FW	3.40	3.25	4.6
LPM05377	PEGFPYX	UG2FW	3.49	3.25	7.2
LPM05378	PEGFPYX	UG2FW	3.48	3.24	7.2
LPM05379	PEGFPYX	UG2FW	3.56	3.35	6.1
LPM05380	PEGFPYX	UG2FW	3.36	3.22	4.3
LPM05381	PEGFPYX	UG2FW	3.41	3.23	5.4
LPM05382	PEGFPYX	UG2FW	3.44	3.23	6.2
LPM05383	PEGFPYX	UG2FW	3.45	3.31	4.2
LPM05384	PEGFPYX	UG2FW	3.44	3.29	4.5
LPM05385	PEGFPYX	UG2FW	3.44	3.32	3.5
LPM05386	PEGFPYX	UG2FW	3.39	3.22	5.2
LPM05387	PEGFPYX	UG2FW	3.52	3.25	7.9
LPM05388	PEGFPYX	UG2FW	3.61	3.31	8.5
LPM05389	PEGFPYX	UG2FW	3.61	3.44	4.9
LPM05390	PEGFPYX	UG2FW	3.46	3.21	7.6
LPM05391	PEGFPYX	UG2FW	3.41	3.27	4.3
LPM05392	PEGFPYX	UG2FW	3.44	3.18	7.9
LPM05393	PEGFPYX	UG2FW	3.43	3.24	5.8
LPM05394	PEGFPYX	UG2FW	3.43	3.25	5.3
LPM05395	PEGFPYX	UG2FW	3.47	3.33	4.0
LPM05396	PEGFPYX	UG2FW	3.48	3.26	6.6
LPM05397	PEGFPYX	UG2FW	3.48	3.34	4.1
LPM05398	PEGFPYX	UG2FW	3.64	3.51	3.7
LPM05399	PYX	UG2FW	3.63	3.41	6.4
LPM05400	PYX	UG2FW	3.47	3.21	7.7
LPM05401	PYX	UG2FW	3.44	3.40	1.2
LPM05402	PYX	UG2FW	3.40	3.25	4.5
LPM05403	PYX	UG2FW	3.40	3.23	5.2
LPM05404	PYX	UG2FW	3.47	3.23	7.3
LPM05405	PYX	UG2FW	3.48	3.25	6.7
LPM05406	PEGFPYX	UG2FW	3.47	3.27	6.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05407	PEGFPYX	UG2FW	3.48	3.21	8.0
LPM05408	PEGFPYX	UG2FW	3.47	3.25	6.6
LPM05409	PEGFPYX	UG2FW	3.46	3.23	6.8
LPM05410	PEGFPYX	UG2FW	3.61	3.46	4.3
LPM05411	PEGFPYX	UG2FW	3.62	3.45	4.9
LPM05412	PEGFPYX	UG2FW	3.51	3.33	5.1
LPM05413	PYX	UG2FW	3.45	3.24	6.2
LPM05414	PYX	UG2FW	3.44	3.44	0.1
LPM05415	PYX	UG2FW	3.45	3.30	4.6
LPM05416	PYX	UG2FW	3.46	3.32	4.0
LPM05417	PYX	UG2FW	3.44	3.31	3.8
LPM05418	PYX	UG2FW	3.48	3.31	4.9
LPM05419	PEGFPYX	UG2FW	3.46	3.27	5.8
LPM05420	PEGFPYX	UG2FW	3.48	3.33	4.3
LPM05421	PYX	UG2FW	3.46	3.56	-2.9
LPM05422	PEGFPYX	UG2FW	3.61	3.37	6.9
LPM05423	PYX	UG2FW	3.63	3.34	8.4
LPM05424	PYX	UG2FW	3.64	3.41	6.5
LPM05425	PYX	UG2FW	3.46	3.28	5.4
LPM05426	PYX	UG2FW	3.44	3.21	6.8
LPM05427	PYX	UG2FW	3.48	3.25	6.8
LPM05428	PYX	UG2FW	3.47	3.25	6.6
LPM05429	PYX	UG2FW	3.43	3.26	5.1
LPM05430	PEGFPYX	UG2FW	3.44	3.21	7.0
LPM05431	PEGFPYX	UG2FW	3.44	3.21	6.8
LPM05432	PEGFPYX	UG2FW	3.48	3.23	7.5
LPM05433	PEGFPYX	UG2FW	3.47	3.26	6.2
LPM05434	PEGFPYX	UG2FW	3.43	3.32	3.4
LPM05435	PEGFPYX	UG2FW	3.38	3.32	1.9
LPM05436	PEGFPYX	UG2FW	3.46	3.59	-3.6
LPM05437	FPYX	UG2FW	3.39	3.01	11.7
LPM05438	FPYX	UG2FW	3.39	3.39	0.0
LPM05439	PYX	UG2FW	3.41	3.27	3.9
LPM05440	PYX	UG2FW	3.37	3.24	4.0
LPM05441	PYX	UG2FW	3.39	3.20	5.9
LPM05442	PYX	UG2FW	3.36	3.21	4.7
LPM05443	PYX	UG2FW	3.38	3.18	5.8
LPM05444	PYX	UG2FW	3.42	3.27	4.4
LPM05445	PYX	UG2FW	3.36	3.13	6.9
LPM05446	PYX	UG2FW	3.36	3.23	3.9
LPM05447	PYX	UG2FW	3.36	3.19	5.1
LPM05448	PEGFPYX	UG2FW	3.58	3.37	6.2
LPM05449	PEGFPYX	UG2FW	3.41	3.25	4.8
LPM05450	PEGFPYX	UG2FW	3.39	3.24	4.6
LPM05451	PEGFPYX	UG2FW	3.37	3.22	4.4
LPM05452	PEGFPYX	UG2FW	3.36	3.23	3.9
LPM05453	PEGFPYX	UG2FW	3.35	3.22	3.7
LPM05454	PEGFPYX	UG2FW	3.35	3.22	3.8
LPM05455	PEGFPYX	UG2FW	3.27	3.17	3.1
LPM05456	PEGFPYX	UG2FW	3.34	3.20	4.3
LPM05457	PYX	UG2FW	3.31	3.23	2.4
LPM05458	PYX	UG2FW	3.36	3.24	3.7
LPM05459	PYX	UG2FW	3.33	3.23	3.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05460	PEGFPYX	UG2FW	3.51	3.34	4.9
LPM05461	PEGFPYX	UG2FW	3.46	3.28	5.5
LPM05462	PEGFPYX	UG2FW	3.38	3.41	-0.8
LPM05463	PEGFPYX	UG2FW	3.40	3.24	4.9
LPM05464	PEGFPYX	UG2FW	3.37	3.25	3.7
LPM05465	PEGFPYX	UG2FW	3.31	3.21	2.9
LPM05466	PEGFPYX	UG2FW	3.35	3.31	1.3
LPM05467	PEGFPYX	UG2FW	3.29	3.19	2.9
LPM05468	PEGFPYX	UG2FW	3.34	3.23	3.4
LPM05469	PEGFPYX	UG2FW	3.37	3.17	6.0
LPM05470	PEGFPYX	UG2FW	3.37	3.21	5.0
LPM05471	PEGFPYX	UG2FW	3.35	3.17	5.6
LPM05472	PEGFPYX	UG2FW	3.37	3.25	3.7
LPM05473	PEGFPYX	UG2FW	3.34	3.21	4.0
LPM05474	PYX	UG2FW	3.36	3.22	4.4
LPM05475	PEGFPYX	UG2FW	3.26	3.23	0.9
LPM05476	PEGFPYX	UG2FW	3.37	3.39	-0.5
LPM05477	PYX	UG2FW	3.40	3.23	5.3
LPM05478	PYX	UG2FW	3.42	3.24	5.4
LPM05479	PYX	UG2FW	3.22	3.19	1.1
LPM05480	PYX	UG2FW	3.22	3.03	6.1
LPM05481	PYX	UG2FW	3.23	3.19	1.2
LPM05482	PYX	UG2FW	3.24	3.21	1.0
LPM05483	PYX	UG2FW	3.30	3.25	1.6
LPM05484	PEGFPYX	UG2FW	3.88	3.53	9.3
LPM05485	PEGFPYX	UG2FW	3.46	3.22	7.1
LPM05486	PEGFPYX	UG2FW	3.44	3.16	8.3
LPM05487	PEGFPYX	UG2FW	3.38	3.25	3.8
LPM05488	PEGFPYX	UG2FW	3.40	3.27	3.8
LPM05489	PEGFPYX	UG2FW	3.43	3.30	4.0
LPM05490	PEGFPYX	UG2FW	3.38	3.25	3.8
LPM05491	PEGFPYX	UG2FW	3.41	3.25	4.8
LPM05492	PEGFPYX	UG2FW	3.43	3.26	5.0
LPM05493	PEGFPYX	UG2FW	3.42	3.24	5.5
LPM05494	PEGFPYX	UG2FW	3.34	3.23	3.4
LPM05495	PEGFPYX	UG2FW	3.22	3.20	0.8
LPM05496	PEGFPYX	UG2FW	3.36	3.13	7.1
LPM05497	PEGFPYX	UG2FW	3.43	3.25	5.3
LPM05498	PEGFPYX	UG2FW	3.41	3.25	4.9
LPM05499	PEGFPYX	UG2FW	4.35	3.94	10.0
LPM05500	PEGFPYX	UG2FW	3.60	3.59	0.3
LPM05501	PYX	UG2FW	3.45	3.26	5.7
LPM05502	PYX	UG2FW	3.41	3.23	5.5
LPM05503	PYX	UG2FW	3.45	3.18	8.3
LPM05504	PYX	UG2FW	3.46	3.28	5.3
LPM05505	PYX	UG2FW	3.41	3.21	6.1
LPM05506	PEGFPYX	UG2FW	3.42	3.23	5.8
LPM05507	PEGFPYX	UG2FW	3.41	3.22	5.9
LPM05508	PEGFPYX	UG2FW	3.42	3.26	4.7
LPM05509	PYX	UG2FW	3.47	3.28	5.5
LPM05510	PYX	UG2FW	3.47	3.28	5.5
LPM05511	PYX	UG2FW	3.32	3.18	4.4
LPM05512	PYX	UG2FW	3.32	3.18	4.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM05513	PYX	UG2FW	3.34	3.21	4.0
LPM05514	PYX	UG2FW	3.34	3.21	4.0
LPM05515	PYX	UG2FW	3.31	3.15	4.9
LPM05516	PYX	UG2FW	3.31	3.15	4.9
LPM05517	PYX	UG2FW	3.36	3.22	4.2
LPM05518	PYX	UG2FW	3.36	3.22	4.2
LPM05519	PYX	UG2FW	3.34	3.22	3.5
LPM05520	PYX	UG2FW	3.34	3.22	3.5
LPM05521	PYX	UG2FW	3.33	3.13	6.2
LPM05522	PYX	UG2FW	3.33	3.11	6.9
LPM05523	PYX	UG2FW	3.34	3.22	3.6
LPM05524	PYX	UG2FW	3.34	3.22	3.6
LPM05525	PYX	UG2FW	3.32	3.21	3.3
LPM05526	PYX	UG2FW	3.32	3.21	3.3
LPM05527	PYX	UG2FW	3.34	3.22	3.6
LPM05528	PYX	UG2FW	3.34	3.22	3.6
LPM05529	PYX	UG2FW	3.38	3.22	4.9
LPM05530	PYX	UG2FW	3.38	3.22	4.9
LPM05531	PYX	UG2FW	3.33	3.24	2.6
LPM05532	PYX	UG2FW	3.33	3.24	2.6
LPM05533	PYX	UG2FW	3.39	3.24	4.4
LPM05534	PYX	UG2FW	3.45	3.39	1.8
LPM05535	PYX	UG2FW	3.45	3.39	1.8
LPM05536	PYX	UG2FW	3.32	3.30	0.7
LPM05537	PYX	UG2FW	3.32	3.30	0.7
LPM05538	PYX	UG2FW	3.28	3.24	1.3
LPM05539	PYX	UG2FW	3.28	3.24	1.3
LPM05540	PYX	UG2FW	3.28	3.23	1.4
LPM05541	PYX	UG2FW	3.28	3.23	1.4
LPM05542	PYX	UG2FW	3.26	3.19	2.3
LPM05543	PYX	UG2FW	3.26	3.19	2.3
LPM05544	PYX	UG2FW	3.29	3.25	1.3
LPM05545	PYX	UG2FW	3.29	3.25	1.3
LPM05546	PYX	UG2FW	3.31	3.26	1.4
LPM05547	PYX	UG2FW	3.31	3.26	1.4
LPM05548	PYX	UG2FW	3.26	3.21	1.5
LPM05549	PYX	UG2FW	3.26	3.21	1.5
LPM05550	PYX	UG2FW	3.25	3.20	1.5
LPM05551	PYX	UG2FW	3.25	3.20	1.5
LPM05552	PYX	UG2FW	3.25	3.20	1.5
LPM05553	PYX	UG2FW	3.25	3.20	1.5
LPM05554	PYX	UG2FW	3.13	3.09	1.3
LPM05555	PYX	UG2FW	3.23	3.06	5.5
LPM05556	PYX	UG2FW	3.30	3.33	-0.8
LPM05557	PYX	UG2FW	3.26	3.22	1.3
LPM05558	PYX	UG2FW	3.27	3.23	1.4
LPM05559	PYX	UG2FW	3.25	3.19	2.0
LPM05560	PYX	UG2FW	3.28	3.21	2.2
LPM05561	PYX	UG2FW	3.25	3.20	1.7
LPM05562	PYX	UG2FW	3.26	3.20	2.0
LPM05563	PYX	UG2FW	3.12	2.98	4.6
LPM05564	PYX	UG2FW	3.31	3.11	6.4
LPM05565	PYX	UG2FW	3.19	3.21	-0.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM05566	PYX	UG2FW	3.28	3.23	1.6
LPM05567	PYX	UG2FW	3.28	3.20	2.4
LPM05568	PYX	UG2FW	3.31	3.19	3.6
LPM05569	PYX	UG2FW	3.25	3.20	1.4
LPM05570	PYX	UG2FW	3.26	3.21	1.6
LPM05571	PYX	UG2FW	3.29	3.21	2.2
LPM05572	PYX	UG2FW	3.28	3.21	2.1
LPM05573	PYX	UG2FW	3.09	3.03	1.8
LPM05574	PYX	UG2FW	3.15	2.94	6.9
LPM05575	PYX	UG2FW	3.29	3.24	1.5
LPM05576	PYX	UG2FW	3.25	3.20	1.5
LPM05577	PYX	UG2FW	3.28	3.22	1.8
LPM05578	PYX	UG2FW	3.26	3.18	2.4
LPM05579	PYX	UG2FW	3.27	3.18	2.7
LPM05580	POIKAN	UG2FW	2.85	2.86	-0.4
LPM05581	POIKAN	UG2FW	2.83	2.78	1.8
LPM05582	POIKAN	UG2FW	2.82	2.75	2.4
LPM05583	POIKAN	UG2FW	2.85	2.79	2.1
LPM05584	POIKAN	UG2FW	2.78	2.73	1.9
LPM05585	N	UG2FW	2.90	2.84	2.0
LPM05586	N	UG2FW	2.89	2.84	1.6
LPM05587	N	UG2FW	2.93	2.88	1.6
LPM05588	N	UG2FW	2.94	2.88	2.0
LPM05589	POIKAN	UG2FW	2.87	2.90	-1.1
LPM05590	POIKAN	UG2FW	2.84	2.75	3.1
LPM05591	POIKAN	UG2FW	2.78	2.75	1.2
LPM05592	POIKAN	UG2FW	2.79	2.74	1.7
LPM05593	POIKAN	UG2FW	2.84	2.88	-1.5
LPM05594	N	UG2FW	2.88	2.85	1.1
LPM05595	N	UG2FW	2.87	2.85	0.8
LPM05596	N	UG2FW	2.89	2.87	0.7
LPM05597	N	UG2FW	2.91	2.87	1.4
LPM05598	POIKAN	UG2FW	2.86	2.76	3.4
LPM05599	POIKAN	UG2FW	2.75	2.73	0.8
LPM05600	POIKAN	UG2FW	2.80	2.79	0.4
LPM05601	POIKAN	UG2FW	2.76	2.73	0.9
LPM05602	POIKAN	UG2FW	2.80	2.73	2.3
LPM05603	N	UG2FW	2.86	2.85	0.4
LPM05604	N	UG2FW	2.87	2.87	0.1
LPM05605	N	UG2FW	2.88	2.88	-0.1
LPM05606	N	UG2FW	2.89	2.88	0.2
LPM05607	PEGFPYX	UG2FW	3.66	3.24	12.3
LPM05608	PEGFPYX	UG2FW	3.77	3.26	14.6
LPM05609	PEGFPYX	UG2FW	3.72	3.30	12.0
LPM05610	POIKFPYX	UG2FW	3.75	3.31	12.5
LPM05611	POIKFPYX	UG2FW	3.77	3.33	12.5
LPM05612	POIKFPYX	UG2FW	3.71	3.32	11.1
LPM05613	POIKFPYX	UG2FW	3.68	3.27	11.8
LPM05614	POIKFPYX	UG2FW	3.70	3.30	11.5
LPM05615	POIKFPYX	UG2FW	3.67	3.29	11.0
LPM05616	POIKFPYX	UG2FW	3.72	3.29	12.3
LPM05617	POIKFPYX	UG2FW	3.72	3.28	12.5
LPM05618	POIKFPYX	UG2FW	3.76	3.35	11.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05619	POIKFPYX	UG2FW	3.73	3.27	13.1
LPM05620	POIKFPYX	UG2FW	3.68	3.29	11.1
LPM05621	POIKFPYX	UG2FW	3.71	3.28	12.2
LPM05622	POIKFPYX	UG2FW	3.69	3.27	12.1
LPM05623	POIKFPYX	UG2FW	3.66	3.28	10.9
LPM05624	POIKFPYX	UG2FW	3.72	3.31	11.6
LPM05625	POIKFPYX	UG2FW	3.75	3.31	12.4
LPM05626	POIKFPYX	UG2FW	3.72	3.31	11.6
LPM05627	POIKFPYX	UG2FW	3.72	3.28	12.4
LPM05628	PYX	UG2FW	3.58	3.36	6.3
LPM05629	PYX	UG2FW	3.45	3.50	-1.6
LPM05630	PYX	UG2FW	3.41	3.25	4.9
LPM05631	PYX	UG2FW	3.42	3.33	2.4
LPM05632	PYX	UG2FW	3.42	3.38	0.9
LPM05633	PYX	UG2FW	3.40	3.25	4.5
LPM05634	PYX	UG2FW	3.42	3.27	4.5
LPM05635	PYX	UG2FW	3.32	3.22	3.1
LPM05636	PYX	UG2FW	3.36	3.27	2.8
LPM05637	PYX	UG2FW	3.36	3.29	2.2
LPM05638	PYX	UG2FW	3.56	3.44	3.4
LPM05639	PYX	UG2FW	3.36	3.19	5.2
LPM05640	PYX	UG2FW	3.49	3.33	4.6
LPM05641	PYX	UG2FW	3.40	3.30	3.1
LPM05642	PYX	UG2FW	3.44	3.35	2.8
LPM05643	PYX	UG2FW	3.41	3.34	2.1
LPM05644	PYX	UG2FW	3.41	3.30	3.3
LPM05645	PYX	UG2FW	3.35	3.28	2.0
LPM05646	PYX	UG2FW	3.34	3.27	2.0
LPM05647	PYX	UG2FW	3.64	3.42	6.2
LPM05648	PYX	UG2FW	3.48	3.43	1.6
LPM05649	PYX	UG2FW	3.39	3.29	2.9
LPM05650	PYX	UG2FW	3.42	3.34	2.2
LPM05651	PYX	UG2FW	3.41	3.25	4.8
LPM05652	PYX	UG2FW	3.37	3.32	1.4
LPM05653	PYX	UG2FW	3.42	3.26	4.8
LPM05654	PYX	UG2FW	3.38	3.23	4.5
LPM05655	PYX	UG2FW	3.56	3.26	8.9
LPM05656	PYX	UG2FW	3.61	3.26	10.3
LPM05657	PYX	UG2FW	3.88	3.53	9.3
LPM05658	PYX	UG2FW	3.76	3.45	8.6
LPM05659	PYX	UG2FW	3.55	3.34	6.0
LPM05660	PYX	UG2FW	3.58	3.33	7.2
LPM05661	PYX	UG2FW	3.51	3.31	5.7
LPM05662	PYX	UG2FW	3.42	3.14	8.4
LPM05663	PYX	UG2FW	3.52	3.28	7.0
LPM05664	DUPLICATE	UG2FW	3.51	3.28	6.7
LPM05665	PYX	UG2FW	3.69	3.54	4.3
LPM05666	PYX	UG2FW	3.62	3.48	4.1
LPM05667	PYX	UG2FW	3.53	3.37	4.7
LPM05668	PYX	UG2FW	3.51	3.34	5.1
LPM05669	PYX	UG2FW	3.42	3.25	5.1
LPM05670	PYX	UG2FW	3.43	3.29	4.2
LPM05671	DUPLICATE	UG2FW	3.38	3.29	2.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05672	PYX	UG2FW	3.43	3.49	-1.7
LPM05673	PYX	UG2FW	3.71	3.53	4.9
LPM05674	PYX	UG2FW	3.61	3.35	7.6
LPM05675	PYX	UG2FW	3.32	3.40	-2.3
LPM05676	PYX	UG2FW	3.50	3.30	5.8
LPM05677	DUPLICATE	UG2FW	3.51	3.30	6.1
LPM05678	FPYX	UG2FW	3.53	3.22	9.3
LPM05679	FPYX	UG2FW	3.56	3.26	8.6
LPM05680	FPYX	UG2FW	3.46	3.21	7.5
LPM05681	FPYX	UG2FW	3.46	3.12	10.2
LPM05682	FPYX	UG2FW	3.26	3.16	3.2
LPM05683	FPYX	UG2FW	3.44	3.19	7.4
LPM05684	FPYX	UG2FW	3.37	3.07	9.5
LPM05685	FPYX	UG2FW	3.35	3.14	6.4
LPM05686	FPYX	UG2FW	3.37	2.99	12.0
LPM05687	FPYX	UG2FW	3.35	3.07	8.8
LPM05688	FPYX	UG2FW	3.57	3.38	5.5
LPM05689	FPYX	UG2FW	3.49	3.21	8.3
LPM05690	FPYX	UG2FW	3.45	3.21	7.1
LPM05691	FPYX	UG2FW	3.42	3.25	5.2
LPM05692	FPYX	UG2FW	3.53	3.25	8.3
LPM05693	FPYX	UG2FW	3.58	3.27	8.9
LPM05694	FPYX	UG2FW	3.51	3.27	7.0
LPM05695	FPYX	UG2FW	3.49	3.29	6.0
LPM05696	FPYX	UG2FW	3.43	3.26	5.0
LPM05697	FPYX	UG2FW	3.44	3.20	7.3
LPM05698	FPYX	UG2FW	3.46	3.23	6.9
LPM05699	PEGFPYX	UG2FW	3.70	3.44	7.3
LPM05700	PEGFPYX	UG2FW	3.68	3.44	6.9
LPM05701	PEGFPYX	UG2FW	3.55	3.28	7.8
LPM05702	PEGFPYX	UG2FW	3.53	3.21	9.6
LPM05703	PEGFPYX	UG2FW	3.55	3.26	8.6
LPM05704	PEGFPYX	UG2FW	3.52	3.31	6.2
LPM05705	PEGFPYX	UG2FW	3.52	3.33	5.7
LPM05706	PEGFPYX	UG2FW	3.47	3.28	5.6
LPM05707	PEGFPYX	UG2FW	3.45	3.23	6.5
LPM05708	PEGFPYX	UG2FW	3.43	3.20	6.8
LPM05709	PEGFPYX	UG2FW	3.44	3.25	5.8
LPM05710	PEGFPYX	UG2FW	3.44	3.26	5.4
LPM05711	PEGFPYX	UG2FW	3.69	3.43	7.2
LPM05712	PEGFPYX	UG2FW	3.71	3.41	8.4
LPM05713	PEGFPYX	UG2FW	3.52	3.31	6.2
LPM05714	FPYX	UG2FW	3.52	3.31	6.0
LPM05715	FPYX	UG2FW	3.52	3.17	10.5
LPM05716	FPYX	UG2FW	3.51	3.29	6.4
LPM05717	FPYX	UG2FW	3.51	3.27	7.0
LPM05718	FPYX	UG2FW	3.51	3.29	6.4
LPM05719	FPYX	UG2FW	3.45	3.25	6.0
LPM05720	FPYX	UG2FW	3.43	3.20	7.0
LPM05721	FPYX	UG2FW	3.44	3.26	5.5
LPM05722	PEGFPYX	UG2FW	3.30	3.37	-2.2
LPM05723	PEGFPYX	UG2FW	3.37	3.01	11.3
LPM05724	PEGFPYX	UG2FW	3.30	3.33	-1.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05725	PEGFPYX	UG2FW	3.27	3.32	-1.4
LPM05726	PEGFPYX	UG2FW	3.29	3.35	-1.9
LPM05727	PEGFPYX	UG2FW	3.25	3.33	-2.5
LPM05728	PEGFPYX	UG2FW	3.30	3.31	-0.2
LPM05729	PEGFPYX	UG2FW	3.28	3.32	-1.2
LPM05730	PEGFPYX	UG2FW	3.19	3.27	-2.5
LPM05731	PEGFPYX	UG2FW	3.16	2.99	5.6
LPM05732	PEGFPYX	UG2FW	3.22	3.23	-0.4
LPM05733	PEGFPYX	UG2FW	3.25	3.27	-0.7
LPM05734	OTHER	UG2FW	2.93	2.72	7.6
LPM05735	OTHER	UG2FW	3.03	2.85	6.1
LPM05736	OTHER	UG2FW	3.03	2.80	7.7
LPM05737	OTHER	UG2FW	2.97	2.88	3.2
LPM05738	POIKPYX	UG2FW	3.46	3.16	9.0
LPM05739	POIKPYX	UG2FW	3.44	3.20	7.2
LPM05740	POIKPYX	UG2FW	3.43	3.19	7.1
LPM05741	OTHER	UG2FW	2.95	2.73	7.7
LPM05742	OTHER	UG2FW	3.11	3.04	2.4
LPM05743	OTHER	UG2FW	3.02	2.78	8.4
LPM05744	OTHER	UG2FW	3.46	3.18	8.5
LPM05745	OTHER	UG2FW	2.97	2.83	4.7
LPM05746	OTHER	UG2FW	2.90	2.65	9.2
LPM05747	OTHER	UG2FW	2.93	2.72	7.5
LPM05748	OTHER	UG2FW	3.00	2.82	6.1
LPM05749	OTHER	UG2FW	3.30	3.12	5.5
LPM05750	OTHER	UG2FW	2.86	2.73	4.6
LPM05751	PEGFPYX	UG2FW	3.35	3.26	2.9
LPM05752	PEGFPYX	UG2FW	3.24	3.25	-0.4
LPM05753	PEGFPYX	UG2FW	3.49	3.33	4.7
LPM05754	PEGFPYX	UG2FW	3.45	3.32	4.0
LPM05755	PEGFPYX	UG2FW	3.41	3.27	4.1
LPM05756	PEGFPYX	UG2FW	3.36	3.23	3.9
LPM05757	POIKFPYX	UG2FW	3.35	3.22	3.9
LPM05758	POIKFPYX	UG2FW	3.35	3.23	3.8
LPM05759	POIKFPYX	UG2FW	3.36	3.22	4.2
LPM05760	POIKFPYX	UG2FW	3.36	3.22	4.2
LPM05761	POIKFPYX	UG2FW	3.35	3.23	3.7
LPM05762	POIKFPYX	UG2FW	3.35	3.24	3.3
LPM05763	PEGFPYX	UG2FW	3.41	3.31	2.8
LPM05764	PEGFPYX	UG2FW	3.33	2.93	12.6
LPM05765	PEGFPYX	UG2FW	3.44	3.17	8.3
LPM05766	PEGFPYX	UG2FW	3.48	3.13	10.6
LPM05767	PEGFPYX	UG2FW	3.53	3.04	14.8
LPM05768	PEGFPYX	UG2FW	3.51	3.17	10.2
LPM05769	PEGFPYX	UG2FW	3.38	3.14	7.5
LPM05770	POIKFPYX	UG2FW	3.49	3.20	8.8
LPM05771	POIKFPYX	UG2FW	3.56	3.29	7.8
LPM05772	POIKFPYX	UG2FW	3.58	3.18	11.7
LPM05773	POIKFPYX	UG2FW	3.47	3.25	6.5
LPM05774	POIKFPYX	UG2FW	3.48	3.15	10.0
LPM05775	PEGFPYX	UG2FW	3.25	3.22	1.0
LPM05776	PEGFPYX	UG2FW	3.33	3.18	4.7
LPM05777	PEGFPYX	UG2FW	3.36	3.26	3.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05778	PEGFPYX	UG2FW	3.38	3.31	2.1
LPM05779	POIKFPYX	UG2FW	3.29	3.18	3.4
LPM05780	POIKFPYX	UG2FW	3.29	3.25	1.3
LPM05781	POIKFPYX	UG2FW	3.31	3.21	3.1
LPM05782	POIKFPYX	UG2FW	3.33	3.25	2.2
LPM05783	POIKFPYX	UG2FW	3.31	3.19	3.6
LPM05784	POIKFPYX	UG2FW	3.32	3.23	2.6
LPM05785	POIKAN	UG2FW	2.89	2.74	5.3
LPM05786	POIKAN	UG2FW	2.88	2.72	5.6
LPM05787	POIKAN	UG2FW	2.90	2.72	6.3
LPM05788	POIKAN	UG2FW	2.89	2.72	5.9
LPM05789	POIKAN	UG2FW	2.88	2.67	7.7
LPM05790	POIKAN	UG2FW	2.87	2.73	4.9
LPM05791	POIKAN	UG2FW	2.90	2.73	6.0
LPM05792	POIKAN	UG2FW	2.88	2.71	5.9
LPM05793	POIKAN	UG2FW	2.89	2.70	6.8
LPM05794	POIKAN	UG2FW	2.91	2.75	5.7
LPM05795	POIKAN	UG2FW	2.91	2.76	5.4
LPM05796	POIKAN	UG2FW	3.39	3.07	10.0
LPM05797	POIKAN	UG2FW	3.19	2.90	9.7
LPM05798	POIKAN	UG2FW	2.94	2.73	7.5
LPM05799	PYX	UG2FW	3.08	3.09	-0.3
LPM05800	PYX	UG2FW	3.13	3.23	-3.1
LPM05801	PYX	UG2FW	3.35	3.16	5.8
LPM05802	PYX	UG2FW	3.36	3.19	5.2
LPM05803	PYX	UG2FW	3.36	3.05	9.7
LPM05804	PYX	UG2FW	3.26	3.08	5.7
LPM05805	PYX	UG2FW	3.55	3.22	9.7
LPM05806	PYX	UG2FW	3.10	3.07	1.0
LPM05807	PYX	UG2FW	3.58	3.22	10.5
LPM05808	PYX	UG2FW	3.55	3.25	8.7
LPM05809	PYX	UG2FW	3.47	3.21	7.7
LPM05810	PYX	UG2FW	3.49	3.20	8.4
LPM05811	PYX	UG2FW	3.51	3.26	7.4
LPM05812	PYX	UG2FW	3.50	3.24	7.6
LPM05813	PYX	UG2FW	3.44	3.21	6.8
LPM05814	PYX	UG2FW	3.54	3.22	9.2
LPM05815	PYX	UG2FW	3.53	3.20	9.9
LPM05816	PYX	UG2FW	3.65	3.19	13.6
LPM05817	PYX	UG2FW	3.45	3.18	8.1
LPM05818	PYX	UG2FW	3.39	2.99	12.5
LPM05819	PYX	UG2FW	3.52	3.27	7.5
LPM05820	PYX	UG2FW	3.60	3.25	10.4
LPM05821	PYX	UG2FW	3.46	3.15	9.5
LPM05822	PYX	UG2FW	3.49	3.17	9.5
LPM05823	PYX	UG2FW	3.61	3.24	10.8
LPM05824	PYX	UG2FW	3.55	3.18	10.9
LPM05825	PYX	UG2FW	3.45	3.10	10.5
LPM05826	PYX	UG2FW	3.54	3.19	10.3
LPM05827	PYX	UG2FW	3.41	3.04	11.3
LPM05828	PYX	UG2FW	3.48	3.09	11.9
LPM05829	PYX	UG2FW	3.51	3.16	10.4
LPM05830	PYX	UG2FW	3.43	3.17	7.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05831	PYX	UG2FW	3.52	3.18	10.2
LPM05832	FPYX	UG2FW	3.32	3.17	4.5
LPM05833	FPYX	UG2FW	3.32	3.15	5.3
LPM05834	FPYX	UG2FW	3.35	3.16	6.0
LPM05835	FPYX	UG2FW	3.36	3.19	4.9
LPM05836	FPYX	UG2FW	3.33	3.17	4.8
LPM05837	FPYX	UG2FW	3.15	2.94	6.8
LPM05838	FPYX	UG2FW	3.06	3.05	0.3
LPM05839	FPYX	UG2FW	3.16	3.15	0.2
LPM05840	FPYX	UG2FW	3.36	3.24	3.6
LPM05841	FPYX	UG2FW	3.35	3.19	4.8
LPM05842	FPYX	UG2FW	3.32	3.22	3.2
LPM05843	FPYX	UG2FW	3.33	3.20	4.0
LPM05844	FPYX	UG2FW	3.31	3.11	6.3
LPM05845	FPYX	UG2FW	3.31	3.13	5.6
LPM05846	FPYX	UG2FW	3.30	3.21	2.9
LPM05847	FPYX	UG2FW	3.27	3.20	2.1
LPM05848	FPYX	UG2FW	3.24	3.21	1.0
LPM05849	FPYX	UG2FW	3.30	3.21	2.6
LPM05850	FPYX	UG2FW	3.39	3.32	2.2
LPM05851	FPYX	UG2FW	3.38	3.24	4.3
LPM05852	FPYX	UG2FW	3.30	3.19	3.4
LPM05853	FPYX	UG2FW	3.27	3.15	3.7
LPM05854	FPYX	UG2FW	3.19	3.12	2.1
LPM05855	FPYX	UG2FW	3.30	3.06	7.5
LPM05856	FPYX	UG2FW	3.88	3.51	10.1
LPM05857	FPYX	UG2FW	3.37	3.24	3.9
LPM05858	FPYX	UG2FW	3.54	3.52	0.6
LPM05859	FPYX	UG2FW	3.51	3.41	2.8
LPM05860	FPYX	UG2FW	3.39	3.43	-1.2
LPM05861	FPYX	UG2FW	3.29	3.11	5.5
LPM05862	FPYX	UG2FW	3.15	2.96	6.1
LPM05863	FPYX	UG2FW	3.13	2.95	5.9
LPM05864	FPYX	UG2FW	3.22	3.06	5.1
LPM05865	FPYX	UG2FW	3.28	3.17	3.3
LPM05866	FPYX	UG2FW	3.26	3.17	2.6
LPM05867	FPYX	UG2FW	3.27	3.17	3.2
LPM05868	FPYX	UG2FW	3.25	2.94	10.0
LPM05869	FPYX	UG2FW	3.12	3.22	-3.0
LPM05870	FPYX	UG2FW	3.16	3.12	1.3
LPM05871	FPYX	UG2FW	3.20	3.02	5.8
LPM05872	FPYX	UG2FW	3.31	3.15	5.0
LPM05873	FPYX	UG2FW	3.28	3.20	2.5
LPM05874	FPYX	UG2FW	3.28	3.21	2.0
LPM05875	FPYX	UG2FW	3.23	3.14	2.8
LPM05876	FPYX	UG2FW	3.23	3.14	3.0
LPM05877	FPYX	UG2FW	3.23	3.18	1.7
LPM05878	FPYX	UG2FW	3.23	3.23	-0.1
LPM05879	FPYX	UG2FW	3.24	3.20	1.4
LPM05880	FPYX	UG2FW	3.24	3.18	2.0
LPM05881	FPYX	UG2FW	3.22	3.16	2.0
LPM05882	FPYX	UG2FW	3.21	3.13	2.7
LPM05883	FPYX	UG2FW	3.14	3.15	-0.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05884	FPYX	UG2FW	3.21	3.22	-0.2
LPM05885	FPYX	UG2FW	3.20	3.22	-0.7
LPM05886	FPYX	UG2FW	3.34	3.19	4.5
LPM05887	FPYX	UG2FW	3.34	3.18	5.0
LPM05888	FPYX	UG2FW	3.32	3.14	5.5
LPM05889	FPYX	UG2FW	3.32	3.17	4.5
LPM05890	FPYX	UG2FW	3.31	3.13	5.5
LPM05891	FPYX	UG2FW	3.12	3.06	2.0
LPM05892	FPYX	UG2FW	3.33	3.21	3.8
LPM05893	FPYX	UG2FW	3.17	3.13	1.2
LPM05894	FPYX	UG2FW	3.17	3.04	4.3
LPM05895	FPYX	UG2FW	3.34	3.15	6.0
LPM05896	FPYX	UG2FW	3.30	3.15	4.7
LPM05897	FPYX	UG2FW	3.39	3.17	6.6
LPM05898	FPYX	UG2FW	3.41	3.16	7.7
LPM05899	FPYX	UG2FW	3.39	3.12	8.2
LPM05900	FPYX	UG2FW	3.37	3.10	8.4
LPM05901	FPYX	UG2FW	3.38	3.10	8.5
LPM05902	FPYX	UG2FW	3.43	3.18	7.5
LPM05903	FPYX	UG2FW	3.47	3.22	7.6
LPM05904	FPYX	UG2FW	3.38	3.12	8.0
LPM05905	FPYX	UG2FW	3.44	3.14	9.0
LPM05906	FPYX	UG2FW	3.41	3.19	6.6
LPM05907	FPYX	UG2FW	3.44	3.16	8.4
LPM05908	FPYX	UG2FW	3.73	3.21	14.9
LPM05909	FPYX	UG2FW	3.53	3.20	9.8
LPM05910	FPYX	UG2FW	3.51	3.22	8.6
LPM05911	FPYX	UG2FW	3.48	3.11	11.1
LPM05912	FPYX	UG2FW	3.48	3.15	9.8
LPM05913	FPYX	UG2FW	3.47	3.18	8.7
LPM05914	FPYX	UG2FW	3.49	3.15	10.4
LPM05915	FPYX	UG2FW	3.48	3.16	9.5
LPM05916	FPYX	UG2FW	3.50	3.22	8.3
LPM05917	FPYX	UG2FW	3.51	3.22	8.7
LPM05918	FPYX	UG2FW	3.46	3.16	9.0
LPM05919	FPYX	UG2FW	3.43	3.14	8.6
LPM05920	FPYX	UG2FW	3.75	3.42	9.1
LPM05921	FPYX	UG2FW	3.83	3.46	10.2
LPM05922	FPYX	UG2FW	3.58	3.24	9.9
LPM05923	FPYX	UG2FW	3.51	3.22	8.6
LPM05924	FPYX	UG2FW	3.52	3.23	8.5
LPM05925	FPYX	UG2FW	3.52	3.23	8.5
LPM05926	FPYX	UG2FW	3.48	3.21	8.1
LPM05927	FPYX	UG2FW	3.49	3.09	12.1
LPM05928	FPYX	UG2FW	3.50	3.23	8.0
LPM05929	FPYX	UG2FW	3.51	3.22	8.7
LPM05930	FPYX	UG2FW	3.47	3.15	9.5
LPM05931	FPYX	UG2FW	3.51	3.25	7.8
LPM05932	FPYX	UG2FW	3.74	3.47	7.4
LPM05933	FPYX	UG2FW	3.77	3.44	9.1
LPM05934	FPYX	UG2FW	3.51	3.16	10.5
LPM05935	FPYX	UG2FW	3.51	3.15	10.7
LPM05936	FPYX	UG2FW	3.50	3.22	8.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM05937	FPYX	UG2FW	3.51	3.24	7.9
LPM05938	FPYX	UG2FW	3.49	3.23	7.7
LPM05939	FPYX	UG2FW	3.48	3.20	8.5
LPM05940	FPYX	UG2FW	3.52	3.22	9.0
LPM05941	FPYX	UG2FW	3.53	3.23	8.9
LPM05942	FPYX	UG2FW	3.47	3.10	11.1
LPM05943	FPYX	UG2FW	3.49	3.23	7.7
LPM05944	FPYX	UG2FW	3.78	3.64	3.7
LPM05945	FPYX	UG2FW	3.67	3.42	7.0
LPM05946	FPYX	UG2FW	3.48	3.24	7.2
LPM05947	FPYX	UG2FW	3.49	3.21	8.5
LPM05948	FPYX	UG2FW	3.49	3.23	7.8
LPM05949	FPYX	UG2FW	3.51	3.24	8.1
LPM05950	FPYX	UG2FW	3.48	3.20	8.5
LPM05951	FPYX	UG2FW	3.37	3.20	5.2
LPM05952	FPYX	UG2FW	3.38	3.19	5.8
LPM05953	FPYX	UG2FW	3.42	3.18	7.3
LPM05954	FPYX	UG2FW	3.37	3.14	6.9
LPM05955	FPYX	UG2FW	3.36	3.16	6.0
LPM05956	FPYX	UG2FW	3.70	3.56	3.7
LPM05957	FPYX	UG2FW	3.55	3.37	5.1
LPM05958	FPYX	UG2FW	3.38	3.23	4.4
LPM05959	FPYX	UG2FW	3.38	3.22	4.8
LPM05960	FPYX	UG2FW	3.40	3.21	5.6
LPM05961	FPYX	UG2FW	3.38	3.21	5.0
LPM05962	FPYX	UG2FW	3.40	3.22	5.5
LPM05963	FPYX	UG2FW	3.41	3.25	4.8
LPM05964	FPYX	UG2FW	3.39	3.24	4.5
LPM05965	FPYX	UG2FW	3.36	3.23	3.9
LPM05966	FPYX	UG2FW	3.39	3.25	4.3
LPM05967	FPYX	UG2FW	3.40	3.23	5.1
LPM05968	FPYX	UG2FW	3.34	3.17	5.1
LPM05969	FPYX	UG2FW	3.32	3.08	7.5
LPM05970	FPYX	UG2FW	3.30	2.99	10.0
LPM05971	FPYX	UG2FW	3.25	3.00	7.9
LPM05972	FPYX	UG2FW	3.31	3.18	4.0
LPM05973	FPYX	UG2FW	3.37	3.24	3.8
LPM05974	FPYX	UG2FW	3.34	3.12	6.7
LPM05975	FPYX	UG2FW	3.30	3.19	3.4
LPM05976	FPYX	UG2FW	3.31	3.19	3.8
LPM05977	FPYX	UG2FW	3.34	3.08	8.0
LPM05978	FPYX	UG2FW	3.68	3.42	7.4
LPM05979	FPYX	UG2FW	3.32	3.25	2.3
LPM05980	FPYX	UG2FW	3.35	3.16	5.8
LPM05981	FPYX	UG2FW	3.23	3.09	4.6
LPM05982	FPYX	UG2FW	3.36	3.10	8.2
LPM05983	FPYX	UG2FW	3.37	3.19	5.6
LPM05984	FPYX	UG2FW	3.37	3.19	5.5
LPM05985	FPYX	UG2FW	3.39	3.23	5.0
LPM05986	FPYX	UG2FW	3.37	3.21	4.7
LPM05987	FPYX	UG2FW	3.34	3.14	6.0
LPM05988	FPYX	UG2FW	3.37	3.21	5.0
LPM05989	FPYX	UG2FW	3.78	3.59	5.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM05990	FPYX	UG2FW	3.67	3.44	6.5
LPM05991	FPYX	UG2FW	3.76	3.67	2.4
LPM05992	FPYX	UG2FW	3.56	3.39	4.8
LPM05993	FPYX	UG2FW	3.59	3.38	6.0
LPM05994	FPYX	UG2FW	3.41	3.28	4.0
LPM05995	FPYX	UG2FW	3.41	3.24	5.1
LPM05996	FPYX	UG2FW	3.42	3.25	5.2
LPM05997	FPYX	UG2FW	3.35	3.03	10.0
LPM05998	FPYX	UG2FW	3.40	3.21	5.6
LPM05999	FPYX	UG2FW	3.69	3.50	5.2
LPM06000	FPYX	UG2FW	3.82	3.54	7.6
LPM06001	FPYX	UG2FW	3.81	3.49	8.8
LPM06002	FPYX	UG2FW	3.39	3.29	2.9
LPM06003	FPYX	UG2FW	3.46	3.34	3.6
LPM06004	FPYX	UG2FW	3.40	3.29	3.4
LPM06005	FPYX	UG2FW	3.40	3.26	4.0
LPM06006	FPYX	UG2FW	3.58	3.30	8.1
LPM06007	FPYX	UG2FW	3.51	3.18	9.9
LPM06008	FPYX	UG2FW	3.39	3.23	4.7
LPM06009	FPYX	UG2FW	3.38	3.23	4.7
LPM06010	FPYX	UG2FW	3.38	3.22	4.8
LPM06011	FPYX	UG2FW	3.37	3.19	5.4
LPM06012	FPYX	UG2FW	3.40	3.22	5.3
LPM06013	FPYX	UG2FW	3.36	3.22	4.3
LPM06014	FPYX	UG2FW	3.42	3.26	4.8
LPM06015	FPYX	UG2FW	3.39	3.25	4.3
LPM06016	FPYX	UG2FW	3.37	3.24	4.1
LPM06017	FPYX	UG2FW	3.43	3.26	5.1
LPM06018	FPYX	UG2FW	3.54	3.40	3.9
LPM06019	FPYX	UG2FW	3.44	3.25	5.7
LPM06020	FPYX	UG2FW	3.40	3.24	4.9
LPM06021	FPYX	UG2FW	3.39	3.24	4.5
LPM06022	FPYX	UG2FW	3.37	3.21	4.9
LPM06023	FPYX	UG2FW	3.37	3.21	4.8
LPM06024	FPYX	UG2FW	3.40	3.16	7.2
LPM06025	FPYX	UG2FW	3.36	3.25	3.2
LPM06026	FPYX	UG2FW	3.40	3.27	3.9
LPM06027	FPYX	UG2FW	3.43	3.28	4.4
LPM06028	FPYX	UG2FW	3.31	3.18	4.0
LPM06029	FPYX	UG2FW	3.45	3.33	3.5
LPM06030	FPYX	UG2FW	3.51	3.40	3.1
LPM06031	FPYX	UG2FW	3.50	3.21	8.5
LPM06032	FPYX	UG2FW	3.33	3.22	3.3
LPM06033	FPYX	UG2FW	3.33	3.21	3.7
LPM06034	FPYX	UG2FW	3.33	3.06	8.5
LPM06035	FPYX	UG2FW	3.34	3.10	7.5
LPM06036	FPYX	UG2FW	3.38	3.15	6.9
LPM06037	FPYX	UG2FW	3.34	3.19	4.4
LPM06038	FPYX	UG2FW	3.41	3.26	4.6
LPM06039	FPYX	UG2FW	3.40	3.27	3.9
LPM06040	FPYX	UG2FW	3.26	3.12	4.3
LPM06041	FPYX	UG2FW	3.37	3.11	8.0
LPM06042	FPYX	UG2FW	3.52	3.36	4.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06043	FPYX	UG2FW	3.53	3.23	8.8
LPM06044	FPYX	UG2FW	3.49	3.17	9.5
LPM06045	FPYX	UG2FW	3.49	3.23	7.8
LPM06046	FPYX	UG2FW	3.55	3.23	9.5
LPM06047	FPYX	UG2FW	3.61	3.25	10.4
LPM06048	FPYX	UG2FW	3.64	3.25	11.4
LPM06049	FPYX	UG2FW	3.52	3.23	8.5
LPM06050	FPYX	UG2FW	3.51	3.26	7.5
LPM06051	FPYX	UG2FW	3.43	3.24	5.5
LPM06052	FPYX	UG2FW	3.41	3.13	8.4
LPM06053	FPYX	UG2FW	3.45	3.32	3.9
LPM06054	FPYX	UG2FW	3.56	3.36	5.6
LPM06055	FPYX	UG2FW	3.59	3.44	4.3
LPM06056	FPYX	UG2FW	3.40	3.22	5.3
LPM06057	FPYX	UG2FW	3.41	3.22	5.7
LPM06058	FPYX	UG2FW	3.40	3.22	5.4
LPM06059	FPYX	UG2FW	3.39	3.25	3.9
LPM06060	FPYX	UG2FW	3.40	3.24	4.8
LPM06061	FPYX	UG2FW	3.39	3.22	5.2
LPM06062	FPYX	UG2FW	3.40	3.20	6.1
LPM06063	FPYX	UG2FW	3.46	3.25	6.2
LPM06064	FPYX	UG2FW	3.64	3.42	6.2
LPM06065	FPYX	UG2FW	3.35	3.50	-4.4
LPM06066	FPYX	UG2FW	3.41	3.21	5.9
LPM06067	FPYX	UG2FW	3.40	3.24	4.9
LPM06068	FPYX	UG2FW	3.41	3.17	7.4
LPM06069	FPYX	UG2FW	3.44	3.08	11.1
LPM06070	FPYX	UG2FW	3.37	3.18	5.9
LPM06071	FPYX	UG2FW	3.40	3.09	9.5
LPM06072	FPYX	UG2FW	3.39	3.20	5.9
LPM06073	FPYX	UG2FW	3.34	3.12	6.9
LPM06074	FPYX	UG2FW	3.36	3.02	10.5
LPM06075	FPYX	UG2FW	3.41	3.06	10.7
LPM06076	FPYX	UG2FW	3.65	3.28	10.7
LPM06077	FPYX	UG2FW	3.62	3.12	15.0
LPM06078	FPYX	UG2FW	3.44	3.08	11.1
LPM06079	FPYX	UG2FW	3.45	3.06	12.1
LPM06080	FPYX	UG2FW	3.44	3.03	12.8
LPM06081	FPYX	UG2FW	3.44	3.21	6.9
LPM06082	FPYX	UG2FW	3.47	3.23	7.1
LPM06083	FPYX	UG2FW	3.49	3.13	11.0
LPM06084	FPYX	UG2FW	3.46	3.11	10.7
LPM06085	FPYX	UG2FW	3.47	3.22	7.3
LPM06086	FPYX	UG2FW	3.60	3.29	9.0
LPM06087	FPYX	UG2FW	3.47	3.26	6.1
LPM06088	FPYX	UG2FW	3.49	3.20	8.8
LPM06089	FPYX	UG2FW	3.43	3.22	6.4
LPM06090	FPYX	UG2FW	3.44	3.23	6.2
LPM06091	FPYX	UG2FW	3.43	3.22	6.4
LPM06092	FPYX	UG2FW	3.44	3.17	8.2
LPM06093	FPYX	UG2FW	3.45	3.22	6.9
LPM06094	FPYX	UG2FW	3.46	3.38	2.4
LPM06095	FPYX	UG2FW	3.48	3.24	7.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06096	FPYX	UG2FW	3.51	3.28	6.6
LPM06097	FPYX	UG2FW	3.50	3.30	6.0
LPM06098	FPYX	UG2FW	3.50	3.37	3.7
LPM06099	FPYX	UG2FW	3.54	3.43	3.1
LPM06100	FPYX	UG2FW	3.59	3.24	10.3
LPM06101	FPYX	UG2FW	3.40	3.29	3.3
LPM06102	FPYX	UG2FW	3.33	3.15	5.5
LPM06103	FPYX	UG2FW	3.27	3.09	5.6
LPM06104	FPYX	UG2FW	3.32	3.13	5.8
LPM06105	FPYX	UG2FW	3.35	3.18	5.2
LPM06106	FPYX	UG2FW	3.24	3.05	6.0
LPM06107	FPYX	UG2FW	3.24	3.14	2.9
LPM06108	FPYX	UG2FW	3.52	3.32	5.9
LPM06109	FPYX	UG2FW	3.57	3.27	8.8
LPM06110	FPYX	UG2FW	3.64	3.42	6.2
LPM06111	FPYX	UG2FW	3.28	3.25	1.1
LPM06112	FPYX	UG2FW	3.32	3.26	1.9
LPM06113	FPYX	UG2FW	3.46	3.20	7.8
LPM06114	FPYX	UG2FW	3.44	3.23	6.3
LPM06115	FPYX	UG2FW	3.46	3.15	9.4
LPM06116	FPYX	UG2FW	3.41	3.23	5.3
LPM06117	FPYX	UG2FW	3.42	3.18	7.3
LPM06118	FPYX	UG2FW	3.42	3.19	7.1
LPM06119	FPYX	UG2FW	3.51	3.15	10.8
LPM06120	FPYX	UG2FW	3.47	3.20	8.0
LPM06121	FPYX	UG2FW	3.52	3.27	7.3
LPM06122	FPYX	UG2FW	3.58	3.33	7.3
LPM06123	FPYX	UG2FW	3.53	3.27	7.7
LPM06124	FPYX	UG2FW	3.48	3.22	7.8
LPM06125	FPYX	UG2FW	3.42	3.09	10.1
LPM06126	FPYX	UG2FW	3.44	3.13	9.3
LPM06127	FPYX	UG2FW	3.39	3.19	6.2
LPM06128	FPYX	UG2FW	3.44	3.12	9.8
LPM06129	FPYX	UG2FW	3.39	3.08	9.7
LPM06130	FPYX	UG2FW	3.46	3.24	6.5
LPM06131	FPYX	UG2FW	3.38	3.31	2.1
LPM06132	FPYX	UG2FW	3.44	3.37	2.1
LPM06133	FPYX	UG2FW	3.46	3.35	3.2
LPM06134	FPYX	UG2FW	3.34	3.23	3.1
LPM06135	FPYX	UG2FW	3.36	3.15	6.5
LPM06136	FPYX	UG2FW	3.36	3.18	5.5
LPM06137	FPYX	UG2FW	3.36	3.19	5.0
LPM06138	FPYX	UG2FW	3.35	3.22	4.0
LPM06139	FPYX	UG2FW	3.38	3.21	5.3
LPM06140	FPYX	UG2FW	3.31	3.18	4.1
LPM06141	FPYX	UG2FW	3.24	3.10	4.5
LPM06142	FPYX	UG2FW	3.37	3.22	4.6
LPM06143	FPYX	UG2FW	3.32	3.12	6.2
LPM06144	FPYX	UG2FW	3.31	3.18	4.0
LPM06145	FPYX	UG2FW	3.34	3.18	5.1
LPM06146	FPYX	UG2FW	3.43	3.27	4.9
LPM06147	FPYX	UG2FW	3.46	3.24	6.6
LPM06148	FPYX	UG2FW	3.48	3.38	2.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM06149	FPYX	UG2FW	3.37	3.24	3.9
LPM06150	FPYX	UG2FW	3.35	3.21	4.2
LPM06151	FPYX	UG2FW	3.35	3.13	6.8
LPM06152	FPYX	UG2FW	3.34	3.23	3.3
LPM06153	FPYX	UG2FW	3.34	3.22	3.6
LPM06154	FPYX	UG2FW	3.35	3.24	3.4
LPM06155	FPYX	UG2FW	3.35	3.21	4.3
LPM06156	FPYX	UG2FW	3.35	3.27	2.5
LPM06157	FPYX	UG2FW	3.32	3.20	3.8
LPM06158	FPYX	UG2FW	3.32	3.24	2.5
LPM06159	FPYX	UG2FW	3.37	3.35	0.6
LPM06160	FPYX	UG2FW	3.47	3.39	2.3
LPM06161	FPYX	UG2FW	3.46	3.34	3.6
LPM06162	FPYX	UG2FW	3.34	3.23	3.4
LPM06163	FPYX	UG2FW	3.34	3.24	3.1
LPM06164	FPYX	UG2FW	3.34	3.23	3.4
LPM06165	FPYX	UG2FW	3.34	3.23	3.5
LPM06166	FPYX	UG2FW	3.32	3.22	3.1
LPM06167	FPYX	UG2FW	3.34	3.22	3.6
LPM06168	FPYX	UG2FW	3.36	3.00	11.5
LPM06169	FPYX	UG2FW	3.42	3.25	5.2
LPM06170	FPYX	UG2FW	3.49	3.31	5.4
LPM06171	FPYX	UG2FW	3.41	3.27	4.3
LPM06172	FPYX	UG2FW	3.46	3.31	4.5
LPM06173	FPYX	UG2FW	3.38	3.24	4.3
LPM06174	FPYX	UG2FW	3.36	3.23	4.0
LPM06175	FPYX	UG2FW	3.40	3.21	5.7
LPM06176	FPYX	UG2FW	3.38	3.13	7.6
LPM06177	FPYX	UG2FW	3.37	3.09	8.8
LPM06178	FPYX	UG2FW	3.39	3.24	4.7
LPM06179	FPYX	UG2FW	3.35	3.25	3.1
LPM06180	PYX	UG2FW	3.40	3.28	3.7
LPM06181	PYX	UG2FW	3.41	3.26	4.4
LPM06182	PYX	UG2FW	3.41	3.18	7.0
LPM06183	OTHER	UG2FW	3.26	3.04	6.9
LPM06184	OTHER	UG2FW	3.09	2.95	4.6
LPM06185	OTHER	UG2FW	2.81	2.84	-1.3
LPM06186	OTHER	UG2FW	2.79	2.68	4.0
LPM06187	PYX	UG2FW	3.32	3.05	8.5
LPM06188	PYX	UG2FW	3.33	3.18	4.7
LPM06189	PYX	UG2FW	3.32	3.21	3.3
LPM06190	PYX	UG2FW	3.40	3.30	3.1
LPM06191	PYX	UG2FW	3.40	3.09	9.4
LPM06192	PYX	UG2FW	3.35	3.25	2.9
LPM06193	PYX	UG2FW	3.44	3.27	4.9
LPM06194	PYX	UG2FW	3.39	3.25	4.1
LPM06195	PYX	UG2FW	3.37	3.26	3.5
LPM06196	PYX	UG2FW	3.33	3.24	2.7
LPM06197	PYX	UG2FW	3.32	3.34	-0.7
LPM06198	PYX	UG2FW	3.31	3.12	5.8
LPM06199	PYX	UG2FW	3.32	3.17	4.7
LPM06200	PYX	UG2FW	3.21	3.07	4.4
LPM06201	PYX	UG2FW	3.26	2.98	8.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM06202	PYX	UG2FW	3.12	3.01	3.4
LPM06203	PYX	UG2FW	3.23	3.09	4.6
LPM06204	PYX	UG2FW	3.24	2.96	9.0
LPM06205	PYX	UG2FW	3.31	3.19	3.6
LPM06206	PYX	UG2FW	3.41	3.14	8.3
LPM06207	PYX	UG2FW	3.55	3.31	7.1
LPM06208	PYX	UG2FW	3.38	3.26	3.7
LPM06209	PYX	UG2FW	3.37	3.25	3.7
LPM06210	PYX	UG2FW	3.34	3.19	4.6
LPM06211	PYX	UG2FW	3.35	3.23	3.7
LPM06212	PYX	UG2FW	3.40	3.18	6.7
LPM06213	PYX	UG2FW	3.35	3.24	3.5
LPM06214	PYX	UG2FW	3.32	3.22	3.2
LPM06215	PYX	UG2FW	3.32	3.17	4.6
LPM06216	PYX	UG2FW	3.31	3.08	7.1
LPM06217	PYX	UG2FW	3.33	3.16	5.2
LPM06218	PYX	UG2FW	3.35	3.22	4.0
LPM06219	OTHER	UG2FW	3.36	3.22	4.1
LPM06220	PYX	UG2FW	3.33	3.20	3.9
LPM06221	PYX	UG2FW	3.45	3.30	4.4
LPM06222	PYX	UG2FW	3.33	3.29	1.2
LPM06223	PYX	UG2FW	3.40	3.35	1.4
LPM06224	PYX	UG2FW	3.38	3.29	2.8
LPM06225	PYX	UG2FW	3.36	3.24	3.7
LPM06226	PYX	UG2FW	3.35	3.24	3.5
LPM06227	PYX	UG2FW	3.30	3.19	3.1
LPM06228	PYX	UG2FW	3.31	3.17	4.4
LPM06229	PYX	UG2FW	3.23	3.17	2.0
LPM06230	PYX	UG2FW	3.27	3.14	4.0
LPM06231	OTHER	UG2FW	3.28	3.14	4.3
LPM06232	PYX	UG2FW	3.36	3.22	4.1
LPM06233	PYX	UG2FW	3.33	3.12	6.5
LPM06234	PYX	UG2FW	3.34	3.20	4.4
LPM06235	PYX	UG2FW	3.34	3.14	6.2
LPM06236	PYX	UG2FW	3.31	3.15	4.9
LPM06237	PYX	UG2FW	3.33	3.19	4.4
LPM06238	PYX	UG2FW	3.34	3.12	6.9
LPM06239	PYX	UG2FW	3.35	3.19	5.0
LPM06240	PYX	UG2FW	3.35	3.24	3.2
LPM06241	PYX	UG2FW	3.37	3.23	4.4
LPM06242	OTHER	UG2FW	3.36	3.23	4.1
LPM06243	PYX	UG2FW	3.37	3.09	8.8
LPM06244	PYX	UG2FW	3.46	3.27	5.8
LPM06245	PYX	UG2FW	3.50	3.33	5.1
LPM06246	PYX	UG2FW	3.47	3.26	6.2
LPM06247	PYX	UG2FW	3.49	3.29	5.8
LPM06248	PYX	UG2FW	3.42	3.25	5.2
LPM06249	PYX	UG2FW	3.47	3.30	4.9
LPM06250	PYX	UG2FW	3.50	3.32	5.3
LPM06251	PYX	UG2FW	3.51	3.30	6.1
LPM06252	PYX	UG2FW	3.50	3.35	4.3
LPM06253	OTHER	UG2FW	3.39	3.16	6.9
LPM06254	OTHER	UG2FW	3.36	3.09	8.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06255	OTHER	UG2FW	3.39	3.14	7.7
LPM06256	PYX	UG2FW	3.47	3.25	6.5
LPM06257	PYX	UG2FW	3.47	3.28	5.6
LPM06258	PYX	UG2FW	3.46	3.20	7.8
LPM06259	PYX	UG2FW	3.31	3.20	3.4
LPM06260	PYX	UG2FW	3.28	3.07	6.5
LPM06261	PYX	UG2FW	3.44	3.27	5.0
LPM06262	OTHER	UG2FW	3.47	3.26	6.2
LPM06263	PYX	UG2FW	3.49	3.38	3.0
LPM06264	PYX	UG2FW	3.47	3.24	6.9
LPM06265	PYX	UG2FW	3.46	3.27	5.6
LPM06266	PYX	UG2FW	3.46	3.32	4.2
LPM06267	PYX	UG2FW	3.36	3.26	3.1
LPM06268	PYX	UG2FW	3.41	3.29	3.5
LPM06269	PYX	UG2FW	3.46	3.28	5.3
LPM06270	PYX	UG2FW	3.46	3.24	6.6
LPM06271	PYX	UG2FW	3.28	3.21	2.0
LPM06272	OTHER	UG2FW	3.34	3.16	5.6
LPM06273	PYX	UG2FW	3.33	3.19	4.3
LPM06274	PYX	UG2FW	3.24	2.98	8.5
LPM06275	PYX	UG2FW	3.34	3.09	7.6
LPM06276	PYX	UG2FW	3.32	3.17	4.8
LPM06277	PYX	UG2FW	3.31	3.21	3.0
LPM06278	PYX	UG2FW	3.37	3.13	7.3
LPM06279	PYX	UG2FW	3.34	3.18	5.0
LPM06280	PYX	UG2FW	3.35	3.21	4.2
LPM06281	PYX	UG2FW	3.38	3.18	6.2
LPM06282	OTHER	UG2FW	3.52	3.26	7.6
LPM06283	OTHER	UG2FW	3.26	3.12	4.4
LPM06284	PYX	UG2FW	3.36	3.14	6.7
LPM06285	PYX	UG2FW	3.30	3.28	0.5
LPM06286	PYX	UG2FW	3.27	3.16	3.3
LPM06287	PYX	UG2FW	3.24	3.12	3.7
LPM06288	PYX	UG2FW	3.18	3.23	-1.4
LPM06289	PYX	UG2FW	3.19	3.11	2.5
LPM06290	PYX	UG2FW	3.05	2.93	4.1
LPM06291	PYX	UG2FW	3.26	3.13	4.1
LPM06292	OTHER	UG2FW	3.53	3.22	9.3
LPM06293	PYX	UG2FW	3.37	3.20	5.2
LPM06294	PYX	UG2FW	3.36	3.27	2.8
LPM06295	PYX	UG2FW	3.54	3.32	6.4
LPM06296	PYX	UG2FW	3.43	3.28	4.4
LPM06297	PYX	UG2FW	3.47	3.30	5.0
LPM06298	PYX	UG2FW	3.42	3.28	4.1
LPM06299	PYX	UG2FW	3.34	3.25	2.7
LPM06300	PYX	UG2FW	3.38	3.21	5.1
LPM06301	PYX	UG2FW	3.34	3.22	3.6
LPM06302	PYX	UG2FW	3.23	3.19	1.4
LPM06303	PYX	UG2FW	3.29	3.23	1.7
LPM06304	PYX	UG2FW	3.27	3.29	-0.5
LPM06305	PYX	UG2FW	3.07	3.12	-1.5
LPM06306	PYX	UG2FW	3.29	3.29	0.1
LPM06307	PYX	UG2FW	3.35	3.33	0.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06308	PYX	UG2FW	3.34	3.29	1.4
LPM06309	PYX	UG2FW	3.28	3.26	0.5
LPM06310	PYX	UG2FW	3.27	3.25	0.7
LPM06311	PYX	UG2FW	3.20	3.11	3.0
LPM06312	PYX	UG2FW	3.28	3.29	-0.2
LPM06313	PYX	UG2FW	3.28	3.25	1.0
LPM06314	PYX	UG2FW	3.24	3.20	1.4
LPM06315	PYX	UG2FW	3.23	3.19	1.4
LPM06316	PYX	UG2FW	3.23	3.19	1.4
LPM06317	PYX	UG2FW	3.25	3.35	-2.9
LPM06318	PYX	UG2FW	3.26	3.18	2.5
LPM06319	PYX	UG2FW	3.31	3.25	1.8
LPM06320	PYX	UG2FW	3.25	3.20	1.5
LPM06321	PYX	UG2FW	3.24	3.22	0.7
LPM06322	PYX	UG2FW	3.49	3.31	5.2
LPM06323	PYX	UG2FW	3.31	3.12	5.8
LPM06324	PYX	UG2FW	3.38	3.28	3.0
LPM06325	PYX	UG2FW	3.38	3.26	3.5
LPM06326	PYX	UG2FW	3.41	3.25	4.7
LPM06327	PYX	UG2FW	3.50	3.31	5.5
LPM06328	PYX	UG2FW	3.48	3.31	5.1
LPM06329	PYX	UG2FW	3.38	3.13	7.7
LPM06330	PYX	UG2FW	3.31	3.13	5.6
LPM06331	PYX	UG2FW	3.35	3.21	4.4
LPM06332	PYX	UG2FW	3.49	3.35	4.2
LPM06333	PYX	UG2FW	3.41	3.23	5.3
LPM06334	PYX	UG2FW	3.41	3.28	3.9
LPM06335	PYX	UG2FW	3.37	3.07	9.4
LPM06336	PYX	UG2FW	3.45	3.27	5.5
LPM06337	PYX	UG2FW	3.47	3.31	4.6
LPM06338	PYX	UG2FW	3.48	3.31	5.1
LPM06339	PYX	UG2FW	3.36	3.18	5.5
LPM06340	PYX	UG2FW	3.34	3.20	4.3
LPM06341	PYX	UG2FW	3.38	3.21	5.1
LPM06342	PYX	UG2FW	3.38	3.17	6.4
LPM06343	PYX	UG2FW	3.42	3.13	9.0
LPM06344	PYX	UG2FW	3.36	3.33	1.0
LPM06345	PYX	UG2FW	3.37	3.17	6.1
LPM06346	PYX	UG2FW	3.39	3.19	6.2
LPM06347	PYX	UG2FW	3.39	3.19	6.0
LPM06348	PYX	UG2FW	3.40	3.16	7.3
LPM06349	PYX	UG2FW	3.39	3.19	6.2
LPM06350	PYX	UG2FW	3.43	3.25	5.5
LPM06351	PYX	UG2FW	3.40	3.21	5.7
LPM06352	FPYX	UG2FW	3.43	3.27	4.8
LPM06353	FPYX	UG2FW	3.53	3.36	5.0
LPM06354	FPYX	UG2FW	3.56	3.39	4.8
LPM06355	FPYX	UG2FW	3.52	3.08	13.3
LPM06356	FPYX	UG2FW	3.38	3.21	5.2
LPM06357	FPYX	UG2FW	3.37	3.14	7.0
LPM06358	FPYX	UG2FW	3.39	3.25	4.1
LPM06359	FPYX	UG2FW	3.38	3.20	5.6
LPM06360	FPYX	UG2FW	3.33	3.19	4.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM06361	FPYX	UG2FW	3.41	3.22	5.7
LPM06362	FPYX	UG2FW	3.40	3.08	9.9
LPM06363	FPYX	UG2FW	3.41	3.21	5.9
LPM06364	FPYX	UG2FW	3.33	3.08	7.9
LPM06365	FPYX	UG2FW	3.55	3.34	6.2
LPM06366	FPYX	UG2FW	3.49	3.34	4.3
LPM06367	FPYX	UG2FW	3.43	3.28	4.3
LPM06368	FPYX	UG2FW	3.36	3.19	5.3
LPM06369	FPYX	UG2FW	3.37	3.12	7.7
LPM06370	FPYX	UG2FW	3.39	3.21	5.4
LPM06371	FPYX	UG2FW	3.39	3.23	4.9
LPM06372	FPYX	UG2FW	3.38	3.19	5.7
LPM06373	FPYX	UG2FW	3.30	3.13	5.4
LPM06374	FPYX	UG2FW	3.39	3.22	5.2
LPM06375	FPYX	UG2FW	3.60	3.27	9.7
LPM06376	FPYX	UG2FW	3.36	3.37	-0.3
LPM06377	FPYX	UG2FW	3.57	3.34	6.7
LPM06378	FPYX	UG2FW	3.60	3.39	5.9
LPM06379	FPYX	UG2FW	3.48	3.10	11.6
LPM06380	FPYX	UG2FW	3.57	3.11	13.7
LPM06381	FPYX	UG2FW	3.41	3.19	6.7
LPM06382	FPYX	UG2FW	3.40	3.17	6.9
LPM06383	FPYX	UG2FW	3.35	3.07	8.6
LPM06384	FPYX	UG2FW	3.31	3.20	3.4
LPM06385	FPYX	UG2FW	3.33	3.26	2.1
LPM06386	FPYX	UG2FW	3.37	3.22	4.7
LPM06387	FPYX	UG2FW	3.40	3.21	5.8
LPM06388	FPYX	UG2FW	3.30	3.22	2.5
LPM06389	FPYX	UG2FW	3.29	3.23	2.0
LPM06390	FPYX	UG2FW	3.29	3.18	3.3
LPM06391	FPYX	UG2FW	3.30	3.18	3.7
LPM06392	FPYX	UG2FW	3.29	3.22	2.2
LPM06393	FPYX	UG2FW	3.30	3.10	6.3
LPM06394	PYX	UG2FW	3.46	3.31	4.3
LPM06395	PYX	UG2FW	3.24	3.27	-0.9
LPM06396	PYX	UG2FW	3.57	3.35	6.4
LPM06397	PYX	UG2FW	3.38	3.24	4.3
LPM06398	PYX	UG2FW	3.42	3.26	4.7
LPM06399	PYX	UG2FW	3.39	3.22	5.1
LPM06400	PYX	UG2FW	3.39	3.23	4.7
LPM06401	PYX	UG2FW	3.40	3.24	4.7
LPM06402	PYX	UG2FW	3.44	3.27	5.0
LPM06403	PYX	UG2FW	3.39	3.23	4.9
LPM06404	PYX	UG2FW	3.57	3.28	8.6
LPM06405	PYX	UG2FW	3.56	3.28	8.3
LPM06406	PYX	UG2FW	3.46	3.24	6.4
LPM06407	PYX	UG2FW	3.43	3.18	7.6
LPM06408	PYX	UG2FW	3.51	3.25	7.6
LPM06409	PYX	UG2FW	3.48	3.25	6.9
LPM06410	PYX	UG2FW	3.40	3.17	7.2
LPM06411	PYX	UG2FW	3.36	3.14	6.7
LPM06412	PYX	UG2FW	3.39	3.17	6.8
LPM06413	PYX	UG2FW	3.32	3.09	7.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM06414	PYX	UG2FW	3.53	3.25	8.2
LPM06415	PYX	UG2FW	3.45	3.16	8.6
LPM06416	PYX	UG2FW	3.56	3.21	10.4
LPM06417	PYX	UG2FW	3.62	3.29	9.6
LPM06418	PYX	UG2FW	3.64	3.37	7.8
LPM06419	PYX	UG2FW	3.53	3.22	9.0
LPM06420	PYX	UG2FW	3.51	3.23	8.3
LPM06421	PYX	UG2FW	3.54	3.06	14.4
LPM06422	PYX	UG2FW	3.48	3.29	5.5
LPM06423	CR	UG2FW	3.72	3.55	4.6
LPM06424	PYX	UG2FW	3.68	3.42	7.2
LPM06425	PYX	UG2FW	3.67	3.24	12.4
LPM06426	PYX	UG2FW	3.73	3.32	11.7
LPM06427	PYX	UG2FW	3.44	3.16	8.4
LPM06428	PYX	UG2FW	3.76	3.25	14.6
LPM06429	PYX	UG2FW	3.50	3.31	5.7
LPM06430	PYX	UG2FW	3.55	3.26	8.5
LPM06431	PYX	UG2FW	3.44	3.35	2.6
LPM06432	PYX	UG2FW	3.51	3.34	4.9
LPM06433	PYX	UG2FW	3.10	3.05	1.5
LPM06434	PYX	UG2FW	3.32	3.23	2.8
LPM06435	PYX	UG2FW	3.39	3.24	4.3
LPM06436	PYX	UG2FW	3.38	3.22	5.0
LPM06437	PYX	UG2FW	3.38	2.99	12.3
LPM06438	PYX	UG2FW	3.40	2.99	12.9
LPM06439	PYX	UG2FW	3.42	3.23	5.8
LPM06440	PYX	UG2FW	3.69	3.39	8.6
LPM06441	PYX	UG2FW	3.50	3.26	7.2
LPM06442	PYX	UG2FW	3.51	3.27	7.1
LPM06443	PYX	UG2FW	3.48	3.24	7.3
LPM06444	PYX	UG2FW	3.49	3.29	5.8
LPM06445	PYX	UG2FW	3.52	3.29	6.5
LPM06446	PYX	UG2FW	3.52	3.32	6.0
LPM06447	PYX	UG2FW	3.40	3.20	5.9
LPM06448	PYX	UG2FW	3.60	3.35	7.3
LPM06449	PYX	UG2FW	3.62	3.33	8.2
LPM06450	PYX	UG2FW	3.42	3.21	6.2
LPM06451	PYX	UG2FW	3.48	3.15	9.9
LPM06452	PYX	UG2FW	3.55	3.24	9.2
LPM06453	PYX	UG2FW	3.46	3.29	5.1
LPM06454	PYX	UG2FW	3.54	3.17	10.9
LPM06455	PYX	UG2FW	3.48	3.17	9.2
LPM06456	PYX	UG2FW	3.59	3.24	10.3
LPM06457	PYX	UG2FW	3.57	3.18	11.4
LPM06458	PYX	UG2FW	3.67	3.36	8.7
LPM06459	PYX	UG2FW	3.71	3.31	11.5
LPM06460	PYX	UG2FW	3.55	3.26	8.5
LPM06461	PYX	UG2FW	3.54	3.25	8.5
LPM06462	PYX	UG2FW	3.54	3.25	8.4
LPM06463	PYX	UG2FW	3.54	3.24	8.7
LPM06464	PYX	UG2FW	3.55	3.24	9.0
LPM06465	PYX	UG2FW	3.46	3.31	4.2
LPM06466	PYX	UG2FW	3.50	3.32	5.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06467	PYX	UG2FW	3.48	3.34	3.8
LPM06468	PYX	UG2FW	3.48	3.41	2.0
LPM06469	PYX	UG2FW	3.35	3.22	4.1
LPM06470	PYX	UG2FW	3.34	3.23	3.3
LPM06471	PYX	UG2FW	3.34	3.23	3.3
LPM06472	PYX	UG2FW	3.34	3.25	2.9
LPM06473	PYX	UG2FW	3.34	3.22	3.7
LPM06474	PYX	UG2FW	3.35	3.22	4.1
LPM06475	PYX	UG2FW	3.43	3.36	2.0
LPM06476	PYX	UG2FW	3.43	3.27	4.7
LPM06477	PYX	UG2FW	3.49	3.51	-0.6
LPM06478	PYX	UG2FW	3.50	3.40	2.7
LPM06479	PYX	UG2FW	3.38	3.30	2.5
LPM06480	PYX	UG2FW	3.37	3.24	4.0
LPM06481	PYX	UG2FW	3.39	3.31	2.1
LPM06482	PYX	UG2FW	3.39	3.24	4.7
LPM06483	PYX	UG2FW	3.36	3.24	3.5
LPM06484	PYX	UG2FW	3.36	3.23	3.9
LPM06485	PYX	UG2FW	3.43	3.30	3.8
LPM06486	PYX	UG2FW	3.46	3.35	3.1
LPM06487	PYX	UG2FW	3.58	3.37	5.9
LPM06488	PYX	UG2FW	3.56	3.33	6.6
LPM06489	PYX	UG2FW	3.42	3.27	4.4
LPM06490	PYX	UG2FW	3.39	3.24	4.6
LPM06491	PYX	UG2FW	3.40	3.19	6.2
LPM06492	PYX	UG2FW	3.40	3.55	-4.4
LPM06493	PYX	UG2FW	3.37	3.23	4.3
LPM06494	PYX	UG2FW	3.37	3.19	5.5
LPM06495	PYX	UG2FW	3.39	3.22	5.0
LPM06496	PYX	UG2FW	3.40	3.19	6.4
LPM06497	PYX	UG2FW	3.42	3.30	3.6
LPM06498	PYX	UG2FW	3.49	3.26	6.9
LPM06499	PYX	UG2FW	3.45	3.36	2.8
LPM06500	PYX	UG2FW	3.32	3.19	3.9
LPM06501	PYX	UG2FW	3.37	3.25	3.5
LPM06502	PYX	UG2FW	3.40	3.26	4.1
LPM06503	PYX	UG2FW	3.37	3.33	1.3
LPM06504	PYX	UG2FW	3.35	3.20	4.7
LPM06505	PYX	UG2FW	3.40	3.35	1.6
LPM06506	PYX	UG2FW	3.33	3.14	6.0
LPM06507	PYX	UG2FW	3.40	3.21	5.7
LPM06508	PYX	UG2FW	3.54	3.40	4.0
LPM06509	PYX	UG2FW	3.35	3.41	-1.8
LPM06510	PYX	UG2FW	3.39	3.29	2.9
LPM06511	PYX	UG2FW	3.33	3.18	4.7
LPM06512	PYX	UG2FW	3.36	3.22	4.2
LPM06513	PYX	UG2FW	3.38	3.26	3.6
LPM06514	PYX	UG2FW	3.29	3.33	-1.3
LPM06515	PYX	UG2FW	3.42	3.17	7.6
LPM06516	PYX	UG2FW	3.45	3.50	-1.4
LPM06517	PYX	UG2FW	3.52	3.33	5.6
LPM06518	PYX	UG2FW	3.33	3.17	4.8
LPM06519	PYX	UG2FW	3.31	3.17	4.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM06520	PYX	UG2FW	3.35	3.21	4.2
LPM06521	PYX	UG2FW	3.39	3.22	5.2
LPM06522	PYX	UG2FW	3.40	3.32	2.4
LPM06523	FPYX	UG2FW	3.40	3.18	6.6
LPM06524	FPYX	UG2FW	3.35	3.26	2.8
LPM06525	FPYX	UG2FW	3.46	3.37	2.6
LPM06526	FPYX	UG2FW	3.47	3.36	3.1
LPM06527	FPYX	UG2FW	3.34	3.21	3.9
LPM06528	FPYX	UG2FW	3.30	3.21	2.7
LPM06529	FPYX	UG2FW	3.31	3.20	3.3
LPM06530	FPYX	UG2FW	3.31	3.22	2.6
LPM06531	FPYX	UG2FW	3.42	3.22	6.0
LPM06532	FPYX	UG2FW	3.52	3.41	3.1
LPM06533	FPYX	UG2FW	3.50	3.38	3.6
LPM06534	FPYX	UG2FW	3.47	3.33	4.3
LPM06535	FPYX	UG2FW	3.32	3.20	3.7
LPM06536	FPYX	UG2FW	3.13	2.92	6.9
LPM06537	FPYX	UG2FW	3.13	3.15	-0.7
LPM06538	FPYX	UG2FW	3.31	3.21	3.1
LPM06539	FPYX	UG2FW	3.30	3.17	4.2
LPM06540	FPYX	UG2FW	3.28	3.05	7.2
LPM06541	FPYX	UG2FW	3.28	3.15	4.1
LPM06542	FPYX	UG2FW	3.27	3.20	2.3
LPM06543	FPYX	UG2FW	3.45	3.31	4.0
LPM06544	FPYX	UG2FW	3.65	3.36	8.3
LPM06545	FPYX	UG2FW	3.70	3.37	9.4
LPM06546	FPYX	UG2FW	3.68	3.32	10.2
LPM06547	FPYX	UG2FW	3.36	3.22	4.3
LPM06548	FPYX	UG2FW	3.37	3.20	5.1
LPM06549	FPYX	UG2FW	3.39	3.21	5.4
LPM06550	FPYX	UG2FW	3.41	3.19	6.6
LPM06551	FPYX	UG2FW	3.40	3.07	10.3
LPM06552	FPYX	UG2FW	3.49	3.42	2.0
LPM06553	FPYX	UG2FW	3.37	3.21	4.8
LPM06554	FPYX	UG2FW	3.37	3.23	4.2
LPM06555	FPYX	UG2FW	3.39	3.19	6.1
LPM06556	FPYX	UG2FW	3.42	3.21	6.5
LPM06557	FPYX	UG2FW	3.35	3.23	3.7
LPM06558	FPYX	UG2FW	3.46	3.21	7.6
LPM06559	FPYX	UG2FW	3.39	3.21	5.4
LPM06560	FPYX	UG2FW	3.39	3.17	6.6
LPM06561	FPYX	UG2FW	3.41	3.20	6.5
LPM06562	FPYX	UG2FW	3.41	3.18	6.9
LPM06563	FPYX	UG2FW	3.34	3.18	5.1
LPM06564	FPYX	UG2FW	3.41	3.00	12.7
LPM06565	FPYX	UG2FW	3.59	3.50	2.5
LPM06566	FPYX	UG2FW	3.38	3.22	4.9
LPM06567	FPYX	UG2FW	3.39	3.23	4.7
LPM06568	FPYX	UG2FW	3.41	3.20	6.4
LPM06569	FPYX	UG2FW	3.44	3.23	6.3
LPM06570	FPYX	UG2FW	3.42	3.24	5.4
LPM06571	FPYX	UG2FW	3.35	3.20	4.7
LPM06572	FPYX	UG2FW	3.36	3.24	3.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM06573	FPYX	UG2FW	3.35	3.23	3.8
LPM06574	FPYX	UG2FW	3.37	3.22	4.7
LPM06575	FPYX	UG2FW	3.49	3.31	5.0
LPM06576	FPYX	UG2FW	3.45	3.15	9.2
LPM06577	FPYX	UG2FW	3.49	3.24	7.3
LPM06578	FPYX	UG2FW	3.34	3.22	3.8
LPM06579	FPYX	UG2FW	3.37	3.25	3.7
LPM06580	FPYX	UG2FW	3.41	3.27	4.3
LPM06581	FPYX	UG2FW	3.36	3.23	3.9
LPM06582	FPYX	UG2FW	3.11	3.13	-0.7
LPM06583	FPYX	UG2FW	3.42	2.99	13.3
LPM06584	FPYX	UG2FW	3.59	3.45	3.9
LPM06585	FPYX	UG2FW	3.50	3.47	0.7
LPM06586	FPYX	UG2FW	3.34	3.24	3.1
LPM06587	FPYX	UG2FW	3.23	3.17	1.8
LPM06588	FPYX	UG2FW	3.29	3.20	2.8
LPM06589	FPYX	UG2FW	3.31	3.20	3.4
LPM06590	FPYX	UG2FW	3.34	3.19	4.7
LPM06591	FPYX	UG2FW	3.35	3.20	4.7
LPM06592	FPYX	UG2FW	3.35	3.20	4.6
LPM06593	FPYX	UG2FW	3.43	3.22	6.2
LPM06594	FPYX	UG2FW	3.44	3.20	7.3
LPM06595	FPYX	UG2FW	3.44	3.19	7.5
LPM06596	FPYX	UG2FW	3.34	3.26	2.4
LPM06597	FPYX	UG2FW	3.29	3.13	5.1
LPM06598	FPYX	UG2FW	3.33	3.19	4.2
LPM06599	FPYX	UG2FW	3.34	3.20	4.2
LPM06600	FPYX	UG2FW	3.33	3.21	3.6
LPM06601	FPYX	UG2FW	3.32	3.22	3.1
LPM06602	FPYX	UG2FW	3.28	3.16	3.8
LPM06603	FPYX	UG2FW	3.29	3.20	2.9
LPM06604	FPYX	UG2FW	3.63	3.24	11.3
LPM06605	FPYX	UG2FW	3.70	3.42	7.6
LPM06606	FPYX	UG2FW	3.48	3.29	5.6
LPM06607	FPYX	UG2FW	3.64	3.39	7.1
LPM06608	FPYX	UG2FW	3.63	3.26	10.6
LPM06609	FPYX	UG2FW	3.71	3.46	6.9
LPM06610	FPYX	UG2FW	3.86	3.48	10.5
LPM06611	FPYX	UG2FW	3.99	3.61	10.1
LPM06612	N	UG2FW	3.28	2.97	10.0
LPM06613	N	UG2FW	3.26	3.22	1.1
LPM06614	N	UG2FW	2.96	2.89	2.3
LPM06615	N	UG2FW	3.00	3.13	-4.3
LPM06616	FPYX	UG2FW	3.30	3.20	3.2
LPM06617	FPYX	UG2FW	3.28	3.18	3.2
LPM06618	FPYX	UG2FW	3.34	3.26	2.3
LPM06619	FPYX	UG2FW	3.35	3.27	2.4
LPM06620	FPYX	UG2FW	3.20	3.08	3.8
LPM06621	FPYX	UG2FW	3.34	3.25	2.7
LPM06622	FPYX	UG2FW	3.36	3.27	2.7
LPM06623	FPYX	UG2FW	3.27	3.17	3.1
LPM06624	FPYX	UG2FW	3.41	3.22	5.8
LPM06625	FPYX	UG2FW	3.42	3.22	5.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06626	FPYX	UG2FW	3.37	3.20	5.3
LPM06627	FPYX	UG2FW	3.39	3.26	3.9
LPM06628	FPYX	UG2FW	3.43	3.25	5.5
LPM06629	FPYX	UG2FW	3.46	3.23	7.0
LPM06630	FPYX	UG2FW	3.37	3.28	2.7
LPM06631	FPYX	UG2FW	3.42	3.27	4.6
LPM06632	FPYX	UG2FW	3.39	3.28	3.2
LPM06633	FPYX	UG2FW	3.44	3.26	5.3
LPM06634	FPYX	UG2FW	3.43	3.24	5.6
LPM06635	PYX	UG2FW	3.38	3.37	0.3
LPM06636	PYX	UG2FW	3.29	3.23	1.8
LPM06637	PYX	UG2FW	3.34	3.29	1.7
LPM06638	PYX	UG2FW	3.27	3.21	1.8
LPM06639	PYX	UG2FW	3.31	3.25	2.0
LPM06640	PYX	UG2FW	3.39	3.36	0.8
LPM06641	PYX	UG2FW	3.28	3.16	3.8
LPM06642	PYX	UG2FW	3.30	3.20	3.0
LPM06643	PYX	UG2FW	3.31	3.22	2.6
LPM06644	OTHER	UG2FW	3.32	3.22	2.9
LPM06645	PYX	UG2FW	3.32	3.21	3.2
LPM06646	PYX	UG2FW	3.39	3.26	3.8
LPM06647	PYX	UG2FW	3.36	3.32	1.1
LPM06648	PYX	UG2FW	3.36	3.28	2.5
LPM06649	PYX	UG2FW	3.34	3.26	2.3
LPM06650	PYX	UG2FW	3.45	3.34	3.2
LPM06651	PYX	UG2FW	3.36	3.39	-1.0
LPM06652	PYX	UG2FW	3.30	3.22	2.4
LPM06653	PYX	UG2FW	3.33	3.20	4.1
LPM06654	OTHER	UG2FW	3.32	3.20	3.8
LPM06655	PYX	UG2FW	3.30	3.22	2.4
LPM06656	PYX	UG2FW	3.33	3.22	3.4
LPM06657	PYX	UG2FW	3.44	3.33	3.2
LPM06658	PYX	UG2FW	3.36	3.29	1.9
LPM06659	PYX	UG2FW	3.35	3.26	2.7
LPM06660	PYX	UG2FW	3.43	3.33	2.8
LPM06661	PYX	UG2FW	3.30	3.23	2.3
LPM06662	PYX	UG2FW	3.31	3.22	2.6
LPM06663	PYX	UG2FW	3.30	3.21	2.6
LPM06664	PYX	UG2FW	3.30	3.23	2.1
LPM06665	PYX	UG2FW	3.30	3.23	2.0
LPM06666		UG2FW	3.44	3.27	5.1
LPM06667		UG2FW	3.63	3.43	5.8
LPM06668		UG2FW	3.53	3.37	4.7
LPM06669		UG2FW	3.39	3.23	4.9
LPM06670		UG2FW	3.39	3.24	4.6
LPM06671		UG2FW	3.48	3.30	5.4
LPM06672		UG2FW	3.47	3.39	2.3
LPM06673		UG2FW	3.43	3.27	4.7
LPM06674		UG2FW	3.47	3.31	4.8
LPM06675		UG2FW	3.46	3.32	4.3
LPM06676	PYX	UG2FW	3.42	3.30	3.5
LPM06677	PYX	UG2FW	3.59	3.43	4.6
LPM06678	PYX	UG2FW	3.52	3.38	3.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06679	PYX	UG2FW	3.42	3.32	3.0
LPM06680	PYX	UG2FW	3.39	3.24	4.5
LPM06681	PYX	UG2FW	3.38	3.23	4.5
LPM06682	PYX	UG2FW	3.40	3.26	4.1
LPM06683	PYX	UG2FW	3.39	3.23	4.8
LPM06684	PYX	UG2FW	3.39	3.27	3.6
LPM06685	PYX	UG2FW	3.38	3.24	4.1
LPM06686	PYX	UG2FW	3.41	3.35	1.9
LPM06687	PYX	UG2FW	3.44	3.36	2.2
LPM06688	PYX	UG2FW	3.49	3.30	5.4
LPM06689	PYX	UG2FW	3.40	3.25	4.6
LPM06690	PYX	UG2FW	3.40	3.52	-3.6
LPM06691	PYX	UG2FW	3.41	3.25	4.7
LPM06692	PYX	UG2FW	3.42	3.26	4.8
LPM06693	PYX	UG2FW	3.40	3.21	5.8
LPM06694	PYX	UG2FW	3.41	3.23	5.3
LPM06695	PYX	UG2FW	3.40	3.22	5.5
LPM06696	PYX	UG2FW	3.44	3.35	2.6
LPM06697	PYX	UG2FW	3.44	3.33	3.3
LPM06698	PYX	UG2FW	3.61	3.46	4.3
LPM06699	PYX	UG2FW	3.50	3.43	1.9
LPM06700	PYX	UG2FW	3.42	3.27	4.4
LPM06701	PYX	UG2FW	3.44	3.30	4.3
LPM06702	PYX	UG2FW	3.38	3.25	3.9
LPM06703	PYX	UG2FW	3.40	3.20	6.2
LPM06704	PYX	UG2FW	3.40	3.24	4.7
LPM06705	PYX	UG2FW	3.43	3.27	4.5
LPM06706	PYX	UG2FW	3.45	3.36	2.8
LPM06707	PYX	UG2FW	3.51	3.37	4.0
LPM06708	PYX	UG2FW	3.62	3.43	5.4
LPM06709	PYX	UG2FW	3.39	3.24	4.4
LPM06710	PYX	UG2FW	3.36	3.22	4.1
LPM06711	PYX	UG2FW	3.42	3.17	7.5
LPM06712	PYX	UG2FW	3.43	3.22	6.4
LPM06713	PYX	UG2FW	3.40	3.26	4.2
LPM06714	PYX	UG2FW	3.45	3.29	4.8
LPM06715	PYX	UG2FW	3.26	3.13	4.2
LPM06716	PYX	UG2FW	3.35	3.22	4.1
LPM06717	PYX	UG2FW	3.36	3.24	3.6
LPM06718		UG2FW	3.51	3.38	3.9
LPM06719		UG2FW	3.38	3.25	4.1
LPM06720		UG2FW	3.38	3.23	4.6
LPM06721		UG2FW	3.35	3.20	4.7
LPM06722		UG2FW	3.38	3.27	3.3
LPM06723		UG2FW	3.36	3.24	3.6
LPM06724		UG2FW	3.37	3.23	4.3
LPM06725		UG2FW	3.40	3.27	4.0
LPM06726		UG2FW	3.47	3.36	3.2
LPM06727		UG2FW	3.40	3.32	2.3
LPM06728		UG2FW	3.49	3.35	4.1
LPM06729		UG2FW	3.36	3.30	1.9
LPM06730		UG2FW	3.36	3.19	5.1
LPM06731		UG2FW	3.36	3.19	5.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM06732		UG2FW	3.35	3.18	5.1
LPM06733		UG2FW	3.34	3.21	4.0
LPM06734		UG2FW	3.33	3.20	4.1
LPM06735		UG2FW	3.36	3.14	6.6
LPM06736	CR	UG2FW	3.55	3.30	7.3
LPM06737		UG2FW	3.54	3.44	3.0
LPM06738		UG2FW	3.47	3.41	1.8
LPM06739		UG2FW	3.34	3.23	3.2
LPM06740		UG2FW	3.37	3.25	3.8
LPM06741		UG2FW	3.37	3.26	3.5
LPM06742		UG2FW	3.38	3.25	4.0
LPM06743		UG2FW	3.35	3.24	3.5
LPM06744		UG2FW	3.35	3.26	2.7
LPM06745		UG2FW	3.37	3.23	4.3
LPM06746		UG2FW	3.50	3.30	5.9
LPM06747		UG2FW	3.58	3.35	6.6
LPM06748		UG2FW	3.54	3.36	5.1
LPM06749		UG2FW	3.39	3.20	5.9
LPM06750		UG2FW	3.41	3.20	6.3
LPM06751		UG2FW	3.43	3.22	6.1
LPM06752		UG2FW	3.43	3.21	6.5
LPM06753		UG2FW	3.42	3.22	6.1
LPM06754		UG2FW	3.43	3.21	6.3
LPM06755		UG2FW	3.43	3.22	6.3
LPM06756		UG2FW	3.50	3.27	6.9
LPM06757		UG2FW	3.74	3.49	6.8
LPM06758		UG2FW	3.60	3.36	6.8
LPM06759		UG2FW	3.44	3.22	6.5
LPM06760	PYX	UG2FW	3.54	3.28	7.5
LPM06761	PYX	UG2FW	3.62	3.40	6.3
LPM06762	PYX	UG2FW	3.62	3.39	6.4
LPM06763	PYX	UG2FW	3.54	3.38	4.6
LPM06764	PYX	UG2FW	3.42	3.22	6.1
LPM06765	PYX	UG2FW	3.42	3.20	6.6
LPM06766	PYX	UG2FW	3.47	3.24	6.8
LPM06767	PYX	UG2FW	3.45	3.27	5.2
LPM06768	PYX	UG2FW	3.45	3.24	6.4
LPM06769	PYX	UG2FW	3.46	3.24	6.6
LPM06770	PYX	UG2FW	3.54	3.29	7.3
LPM06771	PYX	UG2FW	3.60	3.35	7.1
LPM06772	PYX	UG2FW	3.64	3.38	7.4
LPM06773	PYX	UG2FW	3.62	3.36	7.3
LPM06774	PYX	UG2FW	3.51	3.26	7.3
LPM06775	PYX	UG2FW	3.49	3.25	7.0
LPM06776	PYX	UG2FW	3.49	3.24	7.4
LPM06777	PYX	UG2FW	3.51	3.25	7.6
LPM06778	PYX	UG2FW	3.46	3.22	7.3
LPM06779	PYX	UG2FW	3.50	3.31	5.7
LPM06780	PYX	UG2FW	3.47	3.24	6.9
LPM06781	PYX	UG2FW	3.51	3.29	6.4
LPM06782	PYX	UG2FW	3.40	3.20	6.0
LPM06783	PYX	UG2FW	3.37	3.22	4.7
LPM06784	PYX	UG2FW	3.39	3.19	5.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06785	PYX	UG2FW	3.42	3.24	5.3
LPM06786	PYX	UG2FW	3.65	3.58	2.0
LPM06787	PYX	UG2FW	3.50	3.30	5.8
LPM06788	PYX	UG2FW	3.36	3.20	4.9
LPM06789	PYX	UG2FW	3.38	3.22	4.7
LPM06790	PYX	UG2FW	3.39	3.22	5.1
LPM06791	PYX	UG2FW	3.39	3.22	5.0
LPM06792	PYX	UG2FW	3.39	3.23	4.7
LPM06793	PYX	UG2FW	3.39	3.21	5.6
LPM06794	PYX	UG2FW	3.40	3.21	5.7
LPM06795	PYX	UG2FW	3.47	3.27	5.9
LPM06796	PYX	UG2FW	3.59	3.42	4.9
LPM06797	PYX	UG2FW	3.55	3.36	5.6
LPM06798	PYX	UG2FW	3.35	3.19	5.0
LPM06799	PYX	UG2FW	3.48	3.27	6.1
LPM06800	PYX	UG2FW	3.43	3.23	6.1
LPM06801	PYX	UG2FW	3.24	3.14	3.3
LPM06802	PYX	UG2FW	3.38	3.18	6.1
LPM06803	PYX	UG2FW	3.37	3.16	6.3
LPM06804	PYX	UG2FW	3.43	3.46	-1.0
LPM06805	PYX	UG2FW	3.60	3.45	4.3
LPM06806	PYX	UG2FW	3.59	3.41	5.0
LPM06807	PYX	UG2FW	3.37	3.27	3.0
LPM06808	PYX	UG2FW	3.39	3.26	4.0
LPM06809	PYX	UG2FW	3.43	3.29	4.3
LPM06810	PYX	UG2FW	3.38	3.23	4.6
LPM06811	PYX	UG2FW	3.30	3.18	3.8
LPM06812	PYX	UG2FW	3.43	3.26	5.0
LPM06813	PYX	UG2FW	3.39	3.22	5.2
LPM06814	PYX	UG2FW	3.48	3.36	3.6
LPM06815	PYX	UG2FW	3.63	3.40	6.5
LPM06816	PYX	UG2FW	3.70	3.47	6.3
LPM06817	PYX	UG2FW	3.38	3.28	3.0
LPM06818	PYX	UG2FW	3.30	3.16	4.3
LPM06819	PYX	UG2FW	3.49	3.27	6.4
LPM06820	PYX	UG2FW	3.41	3.26	4.6
LPM06821	PYX	UG2FW	3.47	3.23	7.1
LPM06822	PYX	UG2FW	3.48	3.28	5.8
LPM06823	PYX	UG2FW	3.43	3.28	4.6
LPM06824	OTHER	UG2FW	3.75	3.54	5.6
LPM06825	PYX	UG2FW	3.36	3.20	4.9
LPM06826	PYX	UG2FW	3.42	3.26	4.9
LPM06827	PYX	UG2FW	3.43	3.26	5.2
LPM06828	PYX	UG2FW	3.44	3.22	6.6
LPM06829	PYX	UG2FW	3.42	3.26	4.9
LPM06830	PYX	UG2FW	3.44	3.24	6.0
LPM06831	PYX	UG2FW	3.17	3.00	5.4
LPM06832	PYX	UG2FW	3.05	2.80	8.4
LPM06833	PYX	UG2FW	3.40	3.18	6.8
LPM06834	PYX	UG2FW	3.08	3.14	-2.0
LPM06835	PYX	UG2FW	3.37	2.93	13.9
LPM06836	PYX	UG2FW	3.40	3.24	5.0
LPM06837	PYX	UG2FW	3.40	3.22	5.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06838	PYX	UG2FW	3.45	3.28	4.9
LPM06839	PYX	UG2FW	3.42	3.25	5.0
LPM06840	PYX	UG2FW	3.52	3.36	4.7
LPM06841	PYX	UG2FW	3.54	3.30	6.9
LPM06842	PYX	UG2FW	3.27	3.11	4.9
LPM06843	PYX	UG2FW	3.44	3.26	5.3
LPM06844	PYX	UG2FW	3.50	3.36	3.9
LPM06845	PYX	UG2FW	3.39	3.18	6.3
LPM06846	PYX	UG2FW	3.33	3.07	8.2
LPM06847	PYX	UG2FW	3.40	3.20	5.9
LPM06848	PYX	UG2FW	3.42	3.15	8.2
LPM06849	PYX	UG2FW	2.83	2.72	4.0
LPM06850	PYX	UG2FW	2.96	2.97	-0.2
LPM06851	PYX	UG2FW	2.84	2.76	2.7
LPM06852	PYX	UG2FW	3.16	3.12	1.3
LPM06853	PYX	UG2FW	3.34	3.25	2.8
LPM06854	PYX	UG2FW	3.39	3.29	3.1
LPM06855	PYX	UG2FW	3.43	3.27	4.9
LPM06856	OTHER	UG2FW	3.25	3.09	5.2
LPM06857	PYX	UG2FW	3.31	3.22	2.8
LPM06858	PYX	UG2FW	3.35	3.23	3.8
LPM06859	PYX	UG2FW	3.37	3.26	3.2
LPM06860	PYX	UG2FW	3.37	3.28	2.8
LPM06861	PYX	UG2FW	3.37	3.25	3.6
LPM06862	PYX	UG2FW	3.37	3.28	2.7
LPM06863	PYX	UG2FW	3.35	3.26	2.8
LPM06864	PYX	UG2FW	3.39	3.22	5.0
LPM06865	PYX	UG2FW	3.36	3.15	6.3
LPM06866	PYX	UG2FW	3.46	3.36	3.0
LPM06867	PYX	UG2FW	3.25	3.26	-0.3
LPM06868	CR	UG2FW	3.18	3.10	2.6
LPM06869	CR	UG2FW	2.85	2.75	3.5
LPM06870	CR	UG2FW	2.84	2.74	3.4
LPM06871	CR	UG2FW	3.41	3.21	6.0
LPM06872	PYX	UG2FW	3.51	3.30	6.1
LPM06873	PYX	UG2FW	3.47	3.31	4.7
LPM06874	PYX	UG2FW	3.50	3.38	3.6
LPM06875	PYX	UG2FW	3.53	3.24	8.7
LPM06876	PYX	UG2FW	3.42	3.23	5.8
LPM06877	PYX	UG2FW	3.37	3.19	5.4
LPM06878	PYX	UG2FW	3.40	3.26	4.2
LPM06879	PYX	UG2FW	3.42	3.25	5.2
LPM06880	PYX	UG2FW	3.39	3.25	4.2
LPM06881	PYX	UG2FW	3.44	3.25	5.8
LPM06882	PYX	UG2FW	3.38	3.16	6.8
LPM06883	PYX	UG2FW	3.46	3.31	4.4
LPM06884	PYX	UG2FW	3.49	3.30	5.5
LPM06885	PYX	UG2FW	3.48	3.20	8.4
LPM06886	PYX	UG2FW	3.14	3.00	4.5
LPM06887	PYX	UG2FW	3.26	3.04	7.0
LPM06888	PYX	UG2FW	3.45	3.22	6.8
LPM06889	PYX	UG2FW	3.48	3.25	6.7
LPM06890	PYX	UG2FW	3.43	3.24	5.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM06891	PYX	UG2FW	3.32	3.17	4.7
LPM06892	PYX	UG2FW	3.51	3.29	6.4
LPM06893	PYX	UG2FW	3.55	3.35	5.9
LPM06894	PYX	UG2FW	3.52	3.39	3.7
LPM06895	PYX	UG2FW	3.43	3.23	6.0
LPM06896	PYX	UG2FW	3.41	3.23	5.4
LPM06897	PYX	UG2FW	3.42	3.23	5.7
LPM06898	PYX	UG2FW	3.41	3.23	5.4
LPM06899	PYX	UG2FW	3.52	3.29	6.7
LPM06900	PYX	UG2FW	3.46	3.25	6.2
LPM06901	PYX	UG2FW	3.49	3.20	8.8
LPM06902	PYX	UG2FW	3.51	3.33	5.2
LPM06903	PYX	UG2FW	3.44	3.24	6.1
LPM06904	PYX	UG2FW	3.42	3.24	5.6
LPM06905	PYX	UG2FW	3.43	3.22	6.2
LPM06906	PYX	UG2FW	3.45	3.24	6.4
LPM06907	PYX	UG2FW	3.42	3.25	5.0
LPM06908	PYX	UG2FW	3.44	3.33	3.2
LPM06909	PYX	UG2FW	3.38	3.22	4.8
LPM06910	PYX	UG2FW	3.40	3.30	3.0
LPM06911	PYX	UG2FW	3.57	3.37	5.9
LPM06912	PYX	UG2FW	3.43	3.29	4.2
LPM06913	PYX	UG2FW	3.40	3.21	5.9
LPM06914	PYX	UG2FW	3.41	3.11	9.3
LPM06915	PYX	UG2FW	3.42	3.15	8.1
LPM06916	PYX	UG2FW	3.39	3.25	4.1
LPM06917	PYX	UG2FW	3.41	3.26	4.5
LPM06918	PYX	UG2FW	3.44	3.30	4.3
LPM06919	PYX	UG2FW	3.82	3.49	9.0
LPM06920	PYX	UG2FW	3.70	3.37	9.4
LPM06921	PYX	UG2FW	3.28	3.17	3.5
LPM06922	PYX	UG2FW	3.48	3.02	14.0
LPM06923	PYX	UG2FW	3.40	3.07	10.3
LPM06924	PYX	UG2FW	3.42	3.22	6.0
LPM06925	PYX	UG2FW	3.41	3.23	5.3
LPM06926	PYX	UG2FW	3.43	3.32	3.4
LPM06927		UG2FW	3.53	3.31	6.4
LPM06928		UG2FW	3.59	3.40	5.6
LPM06929		UG2FW	3.44	3.30	4.1
LPM06930		UG2FW	3.46	3.24	6.6
LPM06931		UG2FW	3.50	3.26	7.0
LPM06932		UG2FW	3.50	3.25	7.5
LPM06933		UG2FW	3.41	3.18	7.1
LPM06934		UG2FW	3.48	3.17	9.4
LPM06935		UG2FW	3.47	3.19	8.4
LPM06936		UG2FW	3.39	3.23	4.8
LPM06937		UG2FW	3.48	3.23	7.4
LPM06938		UG2FW	3.49	3.30	5.6
LPM06939		UG2FW	3.56	3.34	6.4
LPM06940		UG2FW	3.56	3.31	7.2
LPM06941		UG2FW	3.47	3.28	5.5
LPM06942		UG2FW	3.46	3.27	5.5
LPM06943		UG2FW	3.49	3.27	6.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06944		UG2FW	3.49	3.27	6.5
LPM06945		UG2FW	3.48	3.27	6.2
LPM06946	POIKAN	UG2FW	2.91	2.72	6.6
LPM06947	POIKAN	UG2FW	2.89	2.75	4.8
LPM06948	POIKAN	UG2FW	2.93	2.83	3.3
LPM06949	POIKAN	UG2FW	2.87	2.74	4.7
LPM06950	POIKAN	UG2FW	2.88	2.73	5.3
LPM06951	POIKAN	UG2FW	2.84	2.73	4.0
LPM06952	POIKAN	UG2FW	2.84	2.73	4.1
LPM06953	POIKAN	UG2FW	2.86	2.65	7.5
LPM06954	POIKAN	UG2FW	2.99	2.88	3.8
LPM06955	POIKAN	UG2FW	2.87	2.77	3.6
LPM06956	POIKAN	UG2FW	2.85	2.70	5.3
LPM06957	POIKAN	UG2FW	2.85	2.74	3.9
LPM06958	POIKAN	UG2FW	2.91	2.82	3.3
LPM06959	POIKAN	UG2FW	2.84	2.70	5.0
LPM06960	POIKAN	UG2FW	2.86	2.72	4.8
LPM06961	POIKAN	UG2FW	2.86	2.73	4.5
LPM06962	POIKAN	UG2FW	2.85	2.73	4.4
LPM06963	POIKAN	UG2FW	3.06	3.13	-2.3
LPM06964	CR	UG2FW	3.71	3.53	4.9
LPM06965	PYX	UG2FW	3.49	3.24	7.6
LPM06966	PYX	UG2FW	3.37	3.19	5.5
LPM06967	PYX	UG2FW	3.37	3.18	5.8
LPM06968	PYX	UG2FW	3.38	3.18	6.1
LPM06969	PYX	UG2FW	3.41	3.21	6.1
LPM06970	PYX	UG2FW	3.39	3.20	5.6
LPM06971	PYX	UG2FW	2.84	2.71	4.8
LPM06972	PYX	UG2FW	2.86	2.71	5.4
LPM06973	PYX	UG2FW	2.90	2.76	4.9
LPM06974	PYX	UG2FW	3.46	3.30	4.8
LPM06975	PYX	UG2FW	3.33	3.12	6.4
LPM06976	PYX	UG2FW	3.52	3.33	5.5
LPM06977	PYX	UG2FW	3.42	3.27	4.5
LPM06978	PYX	UG2FW	3.46	3.30	4.7
LPM06979	PYX	UG2FW	3.35	3.05	9.3
LPM06980	PYX	UG2FW	3.47	3.33	4.1
LPM06981	PYX	UG2FW	3.50	3.34	4.7
LPM06982	PYX	UG2FW	3.44	3.28	4.6
LPM06983	PYX	UG2FW	3.25	3.28	-1.0
LPM06984	PYX	UG2FW	3.09	2.92	5.6
LPM06985	PYX	UG2FW	3.25	2.96	9.5
LPM06986	PYX	UG2FW	3.29	3.07	6.9
LPM06987	PYX	UG2FW	3.39	3.32	1.9
LPM06988	PYX	UG2FW	3.43	3.29	4.2
LPM06989	PYX	UG2FW	3.42	3.32	2.9
LPM06990	PYX	UG2FW	3.42	3.30	3.7
LPM06991	PYX	UG2FW	3.41	3.28	4.0
LPM06992	PYX	UG2FW	3.51	3.30	6.2
LPM06993	PYX	UG2FW	3.59	3.40	5.5
LPM06994	PYX	UG2FW	3.53	3.40	3.7
LPM06995	PYX	UG2FW	3.45	3.31	4.0
LPM06996	PYX	UG2FW	3.43	3.24	5.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM06997	PYX	UG2FW	3.44	3.26	5.5
LPM06998	PYX	UG2FW	3.43	3.26	5.2
LPM06999	PYX	UG2FW	3.41	3.24	5.1
LPM07000	PYX	UG2FW	3.35	3.19	4.7
LPM07001	PYX	UG2FW	3.42	3.28	4.2
LPM07002	PYX	UG2FW	3.47	3.39	2.3
LPM07003	PYX	UG2FW	3.49	3.36	3.7
LPM07004	PYX	UG2FW	3.46	3.39	2.1
LPM07005	PYX	UG2FW	3.47	3.30	5.1
LPM07006	PYX	UG2FW	3.40	3.28	3.6
LPM07007	PYX	UG2FW	3.35	3.21	4.1
LPM07008	PYX	UG2FW	3.37	3.24	3.7
LPM07009	PYX	UG2FW	3.37	3.12	7.6
LPM07010	PYX	UG2FW	3.33	2.95	12.0
LPM07011	PYX	UG2FW	3.39	3.25	4.1
LPM07012	PYX	UG2FW	3.44	3.28	4.9
LPM07013	PYX	UG2FW	3.48	3.30	5.3
LPM07014	PYX	UG2FW	3.55	3.32	6.8
LPM07015	PYX	UG2FW	3.64	3.39	7.0
LPM07016	PYX	UG2FW	3.45	3.35	2.8
LPM07017	PYX	UG2FW	3.37	3.23	4.3
LPM07018	PYX	UG2FW	3.38	3.22	4.9
LPM07019	PYX	UG2FW	3.42	3.27	4.5
LPM07020	PYX	UG2FW	3.37	3.22	4.6
LPM07021	PYX	UG2FW	3.41	3.25	4.8
LPM07022	PYX	UG2FW	3.43	3.18	7.5
LPM07023	PYX	UG2FW	3.50	3.22	8.4
LPM07024	PYX	UG2FW	3.60	3.16	12.9
LPM07025	PYX	UG2FW	3.60	3.18	12.2
LPM07026	PYX	UG2FW	3.43	3.21	6.5
LPM07027	PYX	UG2FW	3.51	3.22	8.7
LPM07028	PYX	UG2FW	3.55	3.27	8.3
LPM07029	PYX	UG2FW	3.62	3.28	9.9
LPM07030	PYX	UG2FW	3.77	3.31	12.9
LPM07031	PYX	UG2FW	3.58	3.18	11.9
LPM07032	PYX	UG2FW	3.55	3.35	5.7
LPM07033	PYX	UG2FW	3.66	3.39	7.5
LPM07034	PYX	UG2FW	3.62	3.22	11.6
LPM07035	PYX	UG2FW	3.62	3.32	8.7
LPM07036	PYX	UG2FW	3.64	3.31	9.4
LPM07037	PYX	UG2FW	3.59	3.30	8.5
LPM07038	PYX	UG2FW	3.59	3.32	7.8
LPM07039	PYX	UG2FW	3.58	3.29	8.6
LPM07040	PYX	UG2FW	3.42	3.27	4.6
LPM07041	PYX	UG2FW	3.42	3.24	5.5
LPM07042	PYX	UG2FW	3.47	3.23	7.1
LPM07043	PYX	UG2FW	3.41	3.27	4.3
LPM07044	PYX	UG2FW	3.40	3.23	5.3
LPM07045	PYX	UG2FW	3.40	3.24	5.0
LPM07046	PYX	UG2FW	3.38	3.13	7.8
LPM07047	PYX	UG2FW	3.37	3.23	4.2
LPM07048	PYX	UG2FW	3.39	3.23	4.7
LPM07049	PYX	UG2FW	3.42	3.27	4.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07050	PYX	UG2FW	3.49	3.29	6.0
LPM07051	PYX	UG2FW	3.50	3.20	9.0
LPM07052	PYX	UG2FW	3.45	3.30	4.4
LPM07053	PYX	UG2FW	3.48	3.28	5.9
LPM07054	PYX	UG2FW	3.40	3.23	5.1
LPM07055	PYX	UG2FW	3.41	3.21	6.1
LPM07056	PYX	UG2FW	3.40	3.19	6.4
LPM07057	PYX	UG2FW	3.42	3.23	5.6
LPM07058	PYX	UG2FW	3.43	3.23	5.9
LPM07059	PYX	UG2FW	3.47	3.25	6.7
LPM07060	FPYX	UG2FW	3.56	3.57	-0.3
LPM07061	FPYX	UG2FW	3.46	3.29	5.1
LPM07062	FPYX	UG2FW	3.40	3.24	4.9
LPM07063	FPYX	UG2FW	3.42	3.34	2.3
LPM07064	FPYX	UG2FW	3.34	3.25	2.8
LPM07065	FPYX	UG2FW	3.33	3.25	2.4
LPM07066	FPYX	UG2FW	3.33	3.23	3.1
LPM07067	FPYX	UG2FW	3.31	3.10	6.5
LPM07068	FPYX	UG2FW	3.30	3.20	3.1
LPM07069	FPYX	UG2FW	3.38	3.24	4.3
LPM07070	FPYX	UG2FW	3.36	3.25	3.3
LPM07071	FPYX	UG2FW	3.34	3.24	3.0
LPM07072	FPYX	UG2FW	3.32	3.28	1.1
LPM07073	FPYX	UG2FW	3.35	3.30	1.6
LPM07074	FPYX	UG2FW	3.28	3.18	3.0
LPM07075	FPYX	UG2FW	3.26	3.22	1.3
LPM07076	FPYX	UG2FW	3.28	3.23	1.4
LPM07077	FPYX	UG2FW	3.29	3.21	2.5
LPM07078	FPYX	UG2FW	3.27	3.17	3.1
LPM07079	FPYX	UG2FW	3.24	3.16	2.5
LPM07080	FPYX	UG2FW	3.31	3.24	2.1
LPM07081	FPYX	UG2FW	3.36	3.23	3.9
LPM07082	FPYX	UG2FW	3.32	3.25	2.2
LPM07083	PEGFPYX	UG2FW	3.43	3.24	5.8
LPM07084	PEGFPYX	UG2FW	3.48	3.29	5.7
LPM07085	PEGFPYX	UG2FW	3.51	3.39	3.6
LPM07086	FPYX	UG2FW	3.47	3.15	9.7
LPM07087	FPYX	UG2FW	3.42	3.23	5.8
LPM07088	FPYX	UG2FW	3.36	3.25	3.3
LPM07089	FPYX	UG2FW	3.29	3.19	3.2
LPM07090	FPYX	UG2FW	3.34	3.24	3.0
LPM07091	PEGFPYX	UG2FW	3.36	3.16	6.2
LPM07092	PEGFPYX	UG2FW	3.28	3.14	4.3
LPM07093	PEGFPYX	UG2FW	3.34	3.15	5.9
LPM07094	FPYX	UG2FW	3.42	3.14	8.5
LPM07095	FPYX	UG2FW	3.64	3.35	8.3
LPM07096	FPYX	UG2FW	3.62	3.31	8.8
LPM07097	FPYX	UG2FW	3.44	3.26	5.5
LPM07098	FPYX	UG2FW	3.41	3.23	5.3
LPM07099	FPYX	UG2FW	3.38	3.18	6.2
LPM07100	FPYX	UG2FW	3.39	3.22	5.3
LPM07101	FPYX	UG2FW	3.35	3.22	4.0
LPM07102	FPYX	UG2FW	3.45	3.26	5.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM07103	FPYX	UG2FW	3.55	3.30	7.4
LPM07104	FPYX	UG2FW	3.50	3.25	7.4
LPM07105	FPYX	UG2FW	3.45	3.22	6.8
LPM07106	FPYX	UG2FW	3.27	3.09	5.5
LPM07107	FPYX	UG2FW	3.37	3.15	6.8
LPM07108	FPYX	UG2FW	3.30	3.17	4.1
LPM07109	FPYX	UG2FW	3.35	3.20	4.4
LPM07110	FPYX	UG2FW	3.36	3.17	5.7
LPM07111	FPYX	UG2FW	3.31	3.18	3.9
LPM07112	FPYX	UG2FW	3.39	3.20	5.7
LPM07113	FPYX	UG2FW	3.26	3.20	2.0
LPM07114	FPYX	UG2FW	3.41	3.34	2.1
LPM07115	FPYX	UG2FW	3.35	3.33	0.7
LPM07116	FPYX	UG2FW	3.29	3.22	2.2
LPM07117	FPYX	UG2FW	3.26	3.23	0.9
LPM07118	FPYX	UG2FW	3.27	3.19	2.5
LPM07119	FPYX	UG2FW	3.28	3.24	1.3
LPM07120	FPYX	UG2FW	3.23	3.15	2.6
LPM07121	FPYX	UG2FW	3.28	3.17	3.4
LPM07122	FPYX	UG2FW	3.31	3.27	1.3
LPM07123	FPYX	UG2FW	3.23	3.19	1.4
LPM07124	FPYX	UG2FW	3.24	3.20	1.2
LPM07125	FPYX	UG2FW	3.25	3.21	1.2
LPM07126	FPYX	UG2FW	3.28	3.23	1.5
LPM07127	FPYX	UG2FW	3.30	3.29	0.4
LPM07128	FPYX	UG2FW	3.35	3.30	1.6
LPM07129	FPYX	UG2FW	3.29	3.25	1.4
LPM07130	FPYX	UG2FW	3.30	3.23	2.1
LPM07131	FPYX	UG2FW	3.31	3.21	3.1
LPM07132	FPYX	UG2FW	3.28	3.25	0.9
LPM07133	FPYX	UG2FW	3.25	3.22	0.9
LPM07134	FPYX	UG2FW	3.24	3.26	-0.7
LPM07135	FPYX	UG2FW	3.26	3.30	-1.1
LPM07136	FPYX	UG2FW	3.20	3.20	0.1
LPM07137	FPYX	UG2FW	3.25	3.24	0.3
LPM07138	FPYX	UG2FW	3.26	3.23	0.9
LPM07139	FPYX	UG2FW	3.55	3.24	9.0
LPM07140	FPYX	UG2FW	3.53	3.19	10.1
LPM07141	FPYX	UG2FW	3.52	3.20	9.4
LPM07142	FPYX	UG2FW	3.58	3.28	8.7
LPM07143	FPYX	UG2FW	3.55	3.24	9.1
LPM07144	FPYX	UG2FW	3.56	3.24	9.3
LPM07145	FPYX	UG2FW	3.45	3.28	5.0
LPM07146	FPYX	UG2FW	3.43	3.20	7.0
LPM07147	FPYX	UG2FW	3.40	3.23	5.1
LPM07148	FPYX	UG2FW	3.41	3.22	5.7
LPM07149	FPYX	UG2FW	3.39	3.21	5.5
LPM07150	FPYX	UG2FW	3.56	3.34	6.4
LPM07151	FPYX	UG2FW	3.61	3.38	6.5
LPM07152	FPYX	UG2FW	3.52	3.31	6.1
LPM07153	FPYX	UG2FW	3.41	3.24	5.2
LPM07154	FPYX	UG2FW	3.46	3.26	5.8
LPM07155	FPYX	UG2FW	3.45	3.27	5.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM07156	FPYX	UG2FW	3.48	3.25	6.8
LPM07157	FPYX	UG2FW	3.50	3.22	8.3
LPM07158	FPYX	UG2FW	3.43	3.29	4.2
LPM07159	FPYX	UG2FW	3.10	3.16	-1.9
LPM07160	PYX	UG2FW	3.30	3.14	5.0
LPM07161	PYX	UG2FW	3.38	3.35	1.0
LPM07162	PYX	UG2FW	3.50	3.36	4.1
LPM07163	PYX	UG2FW	3.50	3.30	5.9
LPM07164	PYX	UG2FW	3.37	3.11	8.1
LPM07165	PYX	UG2FW	3.37	3.26	3.4
LPM07166	PYX	UG2FW	3.36	3.13	7.1
LPM07167	PYX	UG2FW	3.36	3.24	3.8
LPM07168	PYX	UG2FW	3.35	3.24	3.2
LPM07169	PYX	UG2FW	3.35	3.12	7.2
LPM07170	OTHER	UG2FW	3.33	3.12	6.6
LPM07171	PYX	UG2FW	3.38	3.30	2.5
LPM07172	PYX	UG2FW	3.40	3.28	3.5
LPM07173	PYX	UG2FW	3.44	3.28	4.7
LPM07174	PYX	UG2FW	3.41	3.31	2.9
LPM07175	PYX	UG2FW	3.34	3.19	4.6
LPM07176	PYX	UG2FW	3.33	3.22	3.3
LPM07177	PYX	UG2FW	3.34	3.24	3.0
LPM07178	PYX	UG2FW	3.32	3.20	3.7
LPM07179	PYX	UG2FW	3.35	3.24	3.3
LPM07180	OTHER	UG2FW	3.35	3.24	3.3
LPM07181	PYX	UG2FW	3.36	3.29	2.2
LPM07182	PYX	UG2FW	3.42	3.30	3.7
LPM07183	PYX	UG2FW	3.41	3.24	5.1
LPM07184	PYX	UG2FW	3.40	3.22	5.3
LPM07185	PYX	UG2FW	3.34	3.21	4.1
LPM07186	PYX	UG2FW	3.33	3.22	3.4
LPM07187	PYX	UG2FW	3.34	3.22	3.7
LPM07188	PYX	UG2FW	3.34	3.22	3.8
LPM07189	PYX	UG2FW	3.35	3.23	3.5
LPM07190	PYX	UG2FW	3.34	3.22	3.6
LPM07191	OTHER	UG2FW	3.32	3.22	3.0
LPM07192	FPYX	UG2FW	3.29	3.16	4.1
LPM07193	FPYX	UG2FW	3.41	3.29	3.6
LPM07194	FPYX	UG2FW	3.36	3.22	4.3
LPM07195	FPYX	UG2FW	3.31	3.21	3.0
LPM07196	FPYX	UG2FW	3.30	3.15	4.7
LPM07197	FPYX	UG2FW	3.15	3.02	4.2
LPM07198	FPYX	UG2FW	3.31	3.21	3.1
LPM07199	FPYX	UG2FW	3.41	3.27	4.3
LPM07200	FPYX	UG2FW	3.37	3.26	3.3
LPM07201	FPYX	UG2FW	3.36	3.20	4.8
LPM07202	FPYX	UG2FW	3.37	3.20	5.1
LPM07203	FPYX	UG2FW	3.46	3.22	7.1
LPM07204	FPYX	UG2FW	3.42	3.26	4.9
LPM07205	FPYX	UG2FW	3.45	3.28	5.2
LPM07206	FPYX	UG2FW	3.32	3.16	5.1
LPM07207	FPYX	UG2FW	3.34	3.14	6.2
LPM07208	FPYX	UG2FW	3.36	3.19	5.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07209	FPYX	UG2FW	3.30	3.18	3.8
LPM07210	FPYX	UG2FW	3.33	3.23	3.0
LPM07211	FPYX	UG2FW	3.42	3.18	7.2
LPM07212	FPYX	UG2FW	3.44	3.18	7.8
LPM07213	FPYX	UG2FW	3.41	3.23	5.5
LPM07214	FPYX	UG2FW	3.42	3.23	5.7
LPM07215	FPYX	UG2FW	3.52	3.33	5.4
LPM07216	FPYX	UG2FW	3.43	3.30	3.8
LPM07217	FPYX	UG2FW	3.45	3.34	3.1
LPM07218	FPYX	UG2FW	3.48	3.34	4.0
LPM07219	FPYX	UG2FW	3.36	3.21	4.7
LPM07220	FPYX	UG2FW	3.40	3.25	4.4
LPM07221	FPYX	UG2FW	3.31	3.16	4.6
LPM07222	FPYX	UG2FW	3.31	3.17	4.2
LPM07223	FPYX	UG2FW	3.28	3.15	4.1
LPM07224	FPYX	UG2FW	3.30	3.19	3.4
LPM07225	PYX	UG2FW	3.37	3.21	4.7
LPM07226	PYX	UG2FW	3.54	3.38	4.5
LPM07227	PYX	UG2FW	3.43	3.24	5.7
LPM07228	PYX	UG2FW	3.42	3.24	5.4
LPM07229	PYX	UG2FW	3.46	3.25	6.2
LPM07230	PYX	UG2FW	3.45	3.21	7.1
LPM07231	PYX	UG2FW	3.42	3.18	7.3
LPM07232	PYX	UG2FW	3.49	3.26	6.8
LPM07233	PYX	UG2FW	3.51	3.27	7.2
LPM07234	PYX	UG2FW	3.51	3.26	7.4
LPM07235	PYX	UG2FW	3.55	3.35	5.9
LPM07236	PYX	UG2FW	3.53	3.22	9.1
LPM07237	PYX	UG2FW	3.42	3.23	5.8
LPM07238	PYX	UG2FW	3.42	3.24	5.3
LPM07239	PYX	UG2FW	3.42	3.23	5.6
LPM07240	PYX	UG2FW	3.39	3.19	6.1
LPM07241	PYX	UG2FW	3.34	3.05	9.0
LPM07242	PYX	UG2FW	3.37	3.18	5.7
LPM07243	PYX	UG2FW	3.37	3.14	6.9
LPM07244	PYX	UG2FW	3.43	2.98	13.9
LPM07245	PYX	UG2FW	3.45	3.17	8.5
LPM07246	PYX	UG2FW	3.48	3.24	7.0
LPM07247	PYX	UG2FW	3.47	3.24	6.9
LPM07248	PYX	UG2FW	3.38	3.29	2.8
LPM07249	PYX	UG2FW	3.38	3.12	8.0
LPM07250	PYX	UG2FW	3.45	3.32	4.0
LPM07251	PYX	UG2FW	3.48	3.26	6.5
LPM07252	PYX	UG2FW	3.37	3.24	4.1
LPM07253	PYX	UG2FW	3.38	3.24	4.1
LPM07254	PYX	UG2FW	3.38	3.24	4.2
LPM07255	PYX	UG2FW	3.36	3.23	4.1
LPM07256	PYX	UG2FW	3.59	3.37	6.2
LPM07257	PYX	UG2FW	3.66	3.29	10.6
LPM07258	PYX	UG2FW	3.52	3.27	7.5
LPM07259	PYX	UG2FW	3.47	3.22	7.3
LPM07260	PYX	UG2FW	3.42	3.20	6.7
LPM07261	PYX	UG2FW	3.43	3.23	6.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07262	PYX	UG2FW	3.38	3.18	6.2
LPM07263	CR	UG2FW	3.51	3.32	5.5
LPM07264	CR	UG2FW	3.49	3.33	4.7
LPM07265	PYX	UG2FW	3.45	3.38	2.1
LPM07266	PYX	UG2FW	3.38	3.20	5.5
LPM07267	PYX	UG2FW	3.42	3.26	4.8
LPM07268	PYX	UG2FW	3.45	3.25	6.1
LPM07269	PYX	UG2FW	3.45	3.27	5.4
LPM07270	PYX	UG2FW	3.44	3.26	5.3
LPM07271	PYX	UG2FW	3.46	3.26	5.8
LPM07272	PYX	UG2FW	3.48	3.29	5.5
LPM07273	PYX	UG2FW	3.50	3.28	6.5
LPM07274	PYX	UG2FW	3.67	3.36	8.7
LPM07275	PYX	UG2FW	3.48	3.28	5.8
LPM07276	PYX	UG2FW	3.47	3.27	5.9
LPM07277	PYX	UG2FW	3.48	3.29	5.6
LPM07278	PYX	UG2FW	3.50	3.26	7.2
LPM07279	PYX	UG2FW	3.53	3.29	6.9
LPM07280	PYX	UG2FW	3.52	3.31	6.0
LPM07281	PYX	UG2FW	3.53	3.31	6.3
LPM07282	PYX	UG2FW	3.52	3.29	6.9
LPM07283	PYX	UG2FW	3.51	3.38	3.8
LPM07284	PYX	UG2FW	3.54	3.31	6.6
LPM07285	PYX	UG2FW	3.52	3.46	1.6
LPM07286	PYX	UG2FW	3.38	3.19	5.8
LPM07287	PYX	UG2FW	3.37	3.21	4.9
LPM07288	PYX	UG2FW	3.37	3.18	5.8
LPM07289	PYX	UG2FW	3.36	3.18	5.4
LPM07290	PYX	UG2FW	3.34	3.13	6.3
LPM07291	PYX	UG2FW	3.36	3.16	5.9
LPM07292	PYX	UG2FW	3.39	3.20	5.6
LPM07293	PYX	UG2FW	3.62	3.51	2.9
LPM07294	PYX	UG2FW	3.53	3.36	5.1
LPM07295	PYX	UG2FW	3.40	3.23	5.0
LPM07296	PYX	UG2FW	3.41	3.22	5.9
LPM07297	PYX	UG2FW	3.44	3.20	7.2
LPM07298	PYX	UG2FW	3.40	3.17	7.0
LPM07299	PYX	UG2FW	3.39	3.15	7.3
LPM07300	PYX	UG2FW	3.45	3.19	7.9
LPM07301	PYX	UG2FW	3.41	3.13	8.5
LPM07302	PYX	UG2FW	3.44	3.19	7.5
LPM07303	PYX	UG2FW	3.61	3.26	10.1
LPM07304	PYX	UG2FW	3.52	3.34	5.2
LPM07305	PYX	UG2FW	3.56	3.10	13.7
LPM07306	PYX	UG2FW	3.54	3.26	8.1
LPM07307	PYX	UG2FW	3.58	3.27	9.2
LPM07308	PYX	UG2FW	3.61	3.27	9.8
LPM07309	PYX	UG2FW	3.63	3.31	9.3
LPM07310	PYX	UG2FW	3.55	3.27	8.1
LPM07311	PYX	UG2FW	3.56	3.31	7.2
LPM07312	PYX	UG2FW	3.55	3.30	7.2
LPM07313	PYX	UG2FW	3.56	3.32	7.1
LPM07314	PYX	UG2FW	3.53	3.25	8.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07315	PYX	UG2FW	3.45	3.22	6.9
LPM07316	PYX	UG2FW	3.47	3.23	7.0
LPM07317	PYX	UG2FW	3.51	3.33	5.4
LPM07318	PYX	UG2FW	3.56	3.45	2.9
LPM07319	PYX	UG2FW	3.70	3.25	12.8
LPM07320	PYX	UG2FW	3.66	3.27	11.1
LPM07321	PYX	UG2FW	3.55	3.31	7.0
LPM07322	PYX	UG2FW	3.47	3.26	6.1
LPM07323	PYX	UG2FW	3.45	3.28	5.0
LPM07324	PYX	UG2FW	3.52	3.28	7.0
LPM07325	PYX	UG2FW	3.52	3.22	8.9
LPM07326	PYX	UG2FW	3.49	3.26	6.9
LPM07327	PYX	UG2FW	3.54	3.31	6.8
LPM07328	PYX	UG2FW	3.57	3.24	9.8
LPM07329	PYX	UG2FW	3.58	3.35	6.7
LPM07330	PYX	UG2FW	3.59	3.30	8.6
LPM07331	PYX	UG2FW	3.59	3.27	9.3
LPM07332	PYX	UG2FW	3.63	3.41	6.3
LPM07333	PYX	UG2FW	3.47	3.20	8.0
LPM07334	PYX	UG2FW	3.47	3.23	7.1
LPM07335	PYX	UG2FW	3.46	3.18	8.3
LPM07336	PYX	UG2FW	3.48	3.24	7.0
LPM07337	PYX	UG2FW	3.46	3.26	6.0
LPM07338	PYX	UG2FW	3.41	3.24	5.2
LPM07339	PYX	UG2FW	3.39	3.22	5.0
LPM07340	PYX	UG2FW	3.41	3.23	5.5
LPM07341	PYX	UG2FW	3.43	3.21	6.5
LPM07342	PYX	UG2FW	3.40	3.26	4.0
LPM07343	PYX	UG2FW	3.53	3.30	6.7
LPM07344	PYX	UG2FW	3.46	3.25	6.4
LPM07345	PYX	UG2FW	3.42	3.25	5.0
LPM07346	PYX	UG2FW	3.39	3.16	7.0
LPM07347	PYX	UG2FW	3.08	3.09	-0.2
LPM07348	PYX	UG2FW	3.35	3.13	6.7
LPM07349	PYX	UG2FW	3.47	3.31	4.7
LPM07350	PYX	UG2FW	3.17	3.22	-1.5
LPM07351	PYX	UG2FW	3.42	3.19	7.0
LPM07352	PYX	UG2FW	3.46	3.23	7.0
LPM07353	PYX	UG2FW	3.41	3.20	6.4
LPM07354	PYX	UG2FW	3.39	3.17	6.6
LPM07355	PYX	UG2FW	3.38	3.14	7.5
LPM07356	PYX	UG2FW	3.54	3.19	10.3
LPM07357	PYX	UG2FW	3.45	3.18	8.1
LPM07358	PYX	UG2FW	3.41	3.15	8.0
LPM07359	PYX	UG2FW	3.44	3.25	5.7
LPM07360	PYX	UG2FW	3.45	3.20	7.5
LPM07361	PYX	UG2FW	3.42	3.18	7.2
LPM07362	PYX	UG2FW	3.35	3.08	8.4
LPM07363	PYX	UG2FW	3.39	3.13	7.9
LPM07364	PYX	UG2FW	3.34	3.12	6.7
LPM07365	PYX	UG2FW	3.38	3.05	10.4
LPM07366	PYX	UG2FW	3.44	3.17	8.3
LPM07367	PYX	UG2FW	3.39	3.20	5.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07368	PYX	UG2FW	3.39	3.15	7.4
LPM07369	PYX	UG2FW	3.38	3.11	8.3
LPM07370	PYX	UG2FW	3.41	3.21	6.1
LPM07371	PYX	UG2FW	3.46	3.20	7.7
LPM07372	PYX	UG2FW	3.41	3.21	6.0
LPM07373	PYX	UG2FW	3.43	3.25	5.5
LPM07374	PYX	UG2FW	3.31	3.13	5.5
LPM07375	PYX	UG2FW	3.35	3.16	5.8
LPM07376	PYX	UG2FW	3.37	3.20	5.2
LPM07377	PYX	UG2FW	3.29	3.15	4.3
LPM07378	PYX	UG2FW	3.32	3.24	2.6
LPM07379	PYX	UG2FW	3.33	3.24	2.7
LPM07380	PYX	UG2FW	3.29	3.25	1.4
LPM07381	PYX	UG2FW	3.30	3.20	3.2
LPM07382	PYX	UG2FW	3.29	3.17	3.7
LPM07383	PYX	UG2FW	3.29	3.23	1.9
LPM07384	PYX	UG2FW	3.32	3.28	1.2
LPM07385	PYX	UG2FW	3.37	3.21	4.8
LPM07386	PYX	UG2FW	3.32	3.24	2.5
LPM07387	PYX	UG2FW	3.37	3.18	5.9
LPM07388	PYX	UG2FW	3.30	3.17	3.9
LPM07389	PYX	UG2FW	3.39	3.23	4.5
LPM07390	PYX	UG2FW	3.32	3.21	3.4
LPM07391	CR	UG2FW	3.66	3.23	12.4
LPM07392	CR	UG2FW	3.57	3.25	9.5
LPM07393	CR	UG2FW	3.75	3.26	14.1
LPM07394	CR	UG2FW	3.62	3.21	12.1
LPM07395	PYX	UG2FW	3.37	3.25	3.6
LPM07396	PYX	UG2FW	3.29	3.25	1.1
LPM07397	PYX	UG2FW	3.28	3.32	-1.2
LPM07398	PYX	UG2FW	3.27	3.27	0.0
LPM07399	PYX	UG2FW	3.28	3.17	3.5
LPM07400	PYX	UG2FW	3.28	3.19	2.7
LPM07401	PYX	UG2FW	3.29	3.21	2.4
LPM07402	PYX	UG2FW	3.35	3.08	8.5
LPM07403	PYX	UG2FW	3.32	3.18	4.2
LPM07404	PYX	UG2FW	3.29	3.22	2.1
LPM07405	PYX	UG2FW	3.30	3.27	1.0
LPM07406	PYX	UG2FW	3.46	3.41	1.4
LPM07407	PYX	UG2FW	3.45	3.35	2.8
LPM07408	PYX	UG2FW	3.31	3.22	2.7
LPM07409	PYX	UG2FW	3.32	3.23	2.8
LPM07410	PYX	UG2FW	3.32	3.24	2.6
LPM07411	PYX	UG2FW	3.30	3.21	2.7
LPM07412	PYX	UG2FW	3.31	3.23	2.4
LPM07413	PYX	UG2FW	3.31	3.23	2.3
LPM07414	PYX	UG2FW	3.32	3.27	1.7
LPM07415	PYX	UG2FW	3.40	3.29	3.3
LPM07416	PYX	UG2FW	3.35	3.21	4.3
LPM07417	PYX	UG2FW	3.35	3.19	4.9
LPM07418	PYX	UG2FW	3.32	3.28	1.2
LPM07419	PYX	UG2FW	3.27	3.18	2.9
LPM07420	PYX	UG2FW	3.32	3.20	3.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07421	PYX	UG2FW	3.38	3.18	6.0
LPM07422	PYX	UG2FW	3.35	3.25	3.1
LPM07423	PYX	UG2FW	3.52	3.25	8.0
LPM07424	PYX	UG2FW	3.56	3.42	4.1
LPM07425	PYX	UG2FW	3.41	3.22	5.6
LPM07426	PYX	UG2FW	3.43	3.22	6.1
LPM07427	PYX	UG2FW	3.41	3.23	5.4
LPM07428	PYX	UG2FW	3.41	3.23	5.4
LPM07429	PYX	UG2FW	3.41	3.22	5.7
LPM07430	PYX	UG2FW	3.41	3.24	5.2
LPM07431	PYX	UG2FW	3.45	3.27	5.3
LPM07432	PYX	UG2FW	3.47	3.24	7.0
LPM07433	PYX	UG2FW	3.45	3.24	6.2
LPM07434	PYX	UG2FW	3.44	3.22	6.6
LPM07435	PYX	UG2FW	3.39	3.19	6.1
LPM07436	PYX	UG2FW	3.41	3.18	7.1
LPM07437	PYX	UG2FW	3.45	3.23	6.6
LPM07438	PYX	UG2FW	3.43	3.21	6.7
LPM07439	OTHER	UG2FW	2.80	2.83	-1.0
LPM07440	PYX	UG2FW	3.12	3.22	-3.1
LPM07441	PYX	UG2FW	3.31	2.93	12.0
LPM07442	PYX	UG2FW	3.34	3.25	2.5
LPM07443	PYX	UG2FW	3.32	3.36	-1.1
LPM07444	PYX	UG2FW	3.19	3.03	5.0
LPM07445	PYX	UG2FW	3.55	3.22	9.7
LPM07446	PYX	UG2FW	3.51	3.30	6.3
LPM07447	PYX	UG2FW	3.26	3.15	3.5
LPM07448	PYX	UG2FW	3.29	3.18	3.4
LPM07449	PYX	UG2FW	3.33	3.30	1.0
LPM07450	PYX	UG2FW	3.17	3.07	3.3
LPM07451	PYX	UG2FW	3.25	3.18	2.3
LPM07452	PYX	UG2FW	3.35	3.18	4.9
LPM07453	PYX	UG2FW	3.28	3.13	4.8
LPM07454	PYX	UG2FW	3.31	3.20	3.3
LPM07455	PYX	UG2FW	3.32	3.17	4.6
LPM07456	PYX	UG2FW	3.40	3.24	4.9
LPM07457	PYX	UG2FW	3.36	3.10	8.0
LPM07458	PYX	UG2FW	3.38	3.25	3.9
LPM07459	PYX	UG2FW	3.33	3.22	3.3
LPM07460	PYX	UG2FW	3.26	3.16	2.8
LPM07461	PYX	UG2FW	3.26	3.20	1.8
LPM07462	PYX	UG2FW	3.21	3.13	2.6
LPM07463	PYX	UG2FW	3.18	3.14	1.3
LPM07464	PYX	UG2FW	3.26	3.13	4.1
LPM07465	PYX	UG2FW	3.35	3.24	3.4
LPM07466	PYX	UG2FW	3.36	3.20	4.8
LPM07467	PYX	UG2FW	3.34	3.16	5.4
LPM07468	PYX	UG2FW	3.38	3.22	4.7
LPM07469	PYX	UG2FW	3.53	3.38	4.5
LPM07470	PYX	UG2FW	3.51	3.19	9.5
LPM07471	PYX	UG2FW	3.48	3.23	7.5
LPM07472	PYX	UG2FW	3.46	3.23	6.8
LPM07473	PYX	UG2FW	3.46	3.22	7.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM07474	PYX	UG2FW	3.46	3.20	7.7
LPM07475	PYX	UG2FW	3.43	3.21	6.7
LPM07476	PYX	UG2FW	3.45	3.16	8.9
LPM07477	PYX	UG2FW	3.41	3.23	5.5
LPM07478	PYX	UG2FW	3.44	3.25	5.5
LPM07479	PYX	UG2FW	3.49	3.22	7.9
LPM07480	PYX	UG2FW	3.45	3.23	6.6
LPM07481	PYX	UG2FW	3.45	3.23	6.7
LPM07482	PYX	UG2FW	3.45	3.23	6.5
LPM07483	PYX	UG2FW	3.43	3.19	7.2
LPM07484	PYX	UG2FW	3.44	3.22	6.7
LPM07485	PYX	UG2FW	3.43	3.20	7.0
LPM07486	PYX	UG2FW	3.44	3.20	7.2
LPM07487	PYX	UG2FW	3.45	3.20	7.4
LPM07488	PYX	UG2FW	3.44	3.23	6.3
LPM07489	PYX	UG2FW	3.64	3.42	6.2
LPM07490	PYX	UG2FW	3.80	3.49	8.4
LPM07491	PYX	UG2FW	3.44	3.06	11.6
LPM07492	PYX	UG2FW	3.50	3.16	10.1
LPM07493	PYX	UG2FW	3.46	3.10	11.0
LPM07494	PYX	UG2FW	3.53	3.13	11.9
LPM07495	PYX	UG2FW	3.50	3.23	8.0
LPM07496	PYX	UG2FW	3.53	3.24	8.7
LPM07497	PYX	UG2FW	3.57	3.20	10.8
LPM07498	PYX	UG2FW	3.52	3.12	11.9
LPM07499	PYX	UG2FW	3.49	3.17	9.5
LPM07500	OTHER	UG2FW	2.97	2.85	4.0
LPM07501	PYX	UG2FW	3.29	3.22	2.2
LPM07502	PYX	UG2FW	3.83	3.54	7.9
LPM07503	PYX	UG2FW	3.28	3.23	1.5
LPM07504	PYX	UG2FW	3.29	3.24	1.5
LPM07505	PYX	UG2FW	3.31	3.26	1.5
LPM07506	PYX	UG2FW	3.61	3.40	6.0
LPM07507	OTHER	UG2FW	2.87	2.81	2.2
LPM07508	OTHER	UG2FW	2.88	2.84	1.4
LPM07509	OTHER	UG2FW	2.87	2.83	1.6
LPM07510	PYX	UG2FW	3.77	3.35	11.7
LPM07511	PYX	UG2FW	3.66	3.36	8.5
LPM07512	PYX	UG2FW	3.31	3.22	2.8
LPM07513	PYX	UG2FW	3.25	3.22	0.8
LPM07514	PYX	UG2FW	3.29	3.24	1.7
LPM07515	PYX	UG2FW	3.24	3.23	0.3
LPM07516	PYX	UG2FW	3.22	3.24	-0.7
LPM07517	PYX	UG2FW	3.28	3.25	0.8
LPM07518	PYX	UG2FW	3.33	3.05	8.7
LPM07519	PYX	UG2FW	3.34	3.12	6.9
LPM07520	PYX	UG2FW	3.15	3.07	2.5
LPM07521	PYX	UG2FW	3.34	3.13	6.5
LPM07522	PYX	UG2FW	3.29	2.97	10.3
LPM07523	OTHER	UG2FW	3.37	3.30	2.1
LPM07524	OTHER	UG2FW	3.52	3.33	5.5
LPM07525	OTHER	UG2FW	3.46	3.25	6.2
LPM07526	PYX	UG2FW	3.28	3.10	5.8

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07527	PYX	UG2FW	3.21	3.02	5.9
LPM07528	PYX	UG2FW	3.23	3.01	6.9
LPM07529	PYX	UG2FW	3.34	3.12	6.9
LPM07530	PYX	UG2FW	3.32	3.22	3.1
LPM07531	PYX	UG2FW	3.22	3.19	0.9
LPM07532	PYX	UG2FW	3.40	3.20	6.0
LPM07533	PYX	UG2FW	3.39	3.11	8.7
LPM07534	PYX	UG2FW	3.28	3.15	4.0
LPM07535	PYX	UG2FW	3.44	3.37	2.1
LPM07536	PYX	UG2FW	3.37	3.47	-3.0
LPM07537	PYX	UG2FW	3.25	3.24	0.2
LPM07538	PYX	UG2FW	3.17	2.96	6.9
LPM07539	PYX	UG2FW	3.21	3.19	0.7
LPM07540	PYX	UG2FW	3.24	3.22	0.7
LPM07541	PYX	UG2FW	3.18	3.16	0.6
LPM07542	PYX	UG2FW	3.18	3.20	-0.5
LPM07543	PYX	UG2FW	3.12	2.97	4.9
LPM07544	PYX	UG2FW	3.04	3.01	1.1
LPM07545	PYX	UG2FW	3.14	3.13	0.4
LPM07546	PYX	UG2FW	3.12	3.14	-0.6
LPM07547	PYX	UG2FW	3.22	3.22	-0.1
LPM07548	PYX	UG2FW	3.18	3.13	1.7
LPM07549	PYX	UG2FW	3.15	3.21	-1.8
LPM07550	PYX	UG2FW	3.11	3.20	-2.7
LPM07551	PYX	UG2FW	3.11	3.14	-1.0
LPM07552	PYX	UG2FW	3.06	3.13	-2.4
LPM07553	PYX	UG2FW	3.13	3.18	-1.4
LPM07554	PYX	UG2FW	3.35	3.21	4.2
LPM07555	PYX	UG2FW	3.37	3.22	4.6
LPM07556	PYX	UG2FW	3.36	3.23	4.1
LPM07557	PYX	UG2FW	3.33	3.16	5.1
LPM07558	PYX	UG2FW	3.33	3.22	3.3
LPM07559	PYX	UG2FW	3.30	3.18	3.6
LPM07560	PYX	UG2FW	3.31	3.22	2.8
LPM07561	PYX	UG2FW	3.31	3.20	3.5
LPM07562	PYX	UG2FW	3.35	3.23	3.8
LPM07563	PYX	UG2FW	3.30	3.18	3.7
LPM07564	PYX	UG2FW	3.41	3.21	5.9
LPM07565	PYX	UG2FW	3.42	3.20	6.6
LPM07566	PYX	UG2FW	3.41	3.23	5.4
LPM07567	PYX	UG2FW	3.42	3.19	6.9
LPM07568	PYX	UG2FW	3.42	3.24	5.4
LPM07569	PYX	UG2FW	3.42	3.23	5.6
LPM07570	PYX	UG2FW	3.53	3.25	8.2
LPM07571	PYX	UG2FW	3.39	3.20	5.6
LPM07572	PYX	UG2FW	3.39	3.22	5.3
LPM07573	PYX	UG2FW	3.47	3.24	7.0
LPM07574	PYX	UG2FW	3.43	3.22	6.3
LPM07575	PYX	UG2FW	3.40	3.22	5.4
LPM07576	PYX	UG2FW	3.44	3.23	6.4
LPM07577	PYX	UG2FW	3.43	3.15	8.3
LPM07578	PYX	UG2FW	3.51	3.41	2.7
LPM07579	PYX	UG2FW	3.48	3.24	7.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07580	PYX	UG2FW	3.42	3.24	5.4
LPM07581	PYX	UG2FW	3.34	3.14	6.2
LPM07582	PYX	UG2FW	3.40	3.29	3.4
LPM07583	PYX	UG2FW	3.46	3.32	4.2
LPM07584	PYX	UG2FW	3.45	3.23	6.4
LPM07585	PYX	UG2FW	3.47	3.34	3.7
LPM07586	PYX	UG2FW	3.45	3.30	4.4
LPM07587	PYX	UG2FW	3.25	3.02	7.4
LPM07588	PYX	UG2FW	3.36	3.44	-2.5
LPM07589	PYX	UG2FW	3.52	3.22	8.9
LPM07590	PYX	UG2FW	3.57	3.29	8.1
LPM07591	PYX	UG2FW	3.41	3.12	9.0
LPM07592	PYX	UG2FW	3.45	3.23	6.5
LPM07593	PYX	UG2FW	3.45	3.22	6.8
LPM07594	PYX	UG2FW	3.50	3.28	6.6
LPM07595	PYX	UG2FW	3.48	3.07	12.4
LPM07596	PYX	UG2FW	3.60	3.41	5.3
LPM07597	PYX	UG2FW	3.45	3.22	6.9
LPM07598	PYX	UG2FW	3.38	3.24	4.1
LPM07599	PYX	UG2FW	3.37	3.22	4.5
LPM07600	PYX	UG2FW	3.38	3.22	4.8
LPM07601	PYX	UG2FW	3.37	3.24	3.8
LPM07602	PYX	UG2FW	3.40	3.26	4.3
LPM07603	PYX	UG2FW	3.36	3.21	4.7
LPM07604	PYX	UG2FW	3.37	3.23	4.2
LPM07605	PYX	UG2FW	3.36	3.18	5.6
LPM07606	PYX	UG2FW	3.37	3.24	3.8
LPM07607	PYX	UG2FW	3.54	3.25	8.4
LPM07608	PYX	UG2FW	3.36	3.24	3.8
LPM07609	PYX	UG2FW	3.37	3.20	5.1
LPM07610	PYX	UG2FW	3.37	3.19	5.4
LPM07611	PYX	UG2FW	3.37	3.17	5.9
LPM07612	PYX	UG2FW	3.36	3.20	4.8
LPM07613	PYX	UG2FW	3.37	3.21	4.8
LPM07614	PYX	UG2FW	3.35	3.19	4.7
LPM07615	PYX	UG2FW	3.36	3.19	5.3
LPM07616	PYX	UG2FW	3.38	3.19	5.7
LPM07617	PYX	UG2FW	3.36	3.18	5.5
LPM07618	PYX	UG2FW	3.31	3.20	3.3
LPM07619	PYX	UG2FW	3.38	3.20	5.4
LPM07620	PYX	UG2FW	3.39	3.21	5.4
LPM07621	PYX	UG2FW	3.52	3.29	6.9
LPM07622	PYX	UG2FW	3.49	3.24	7.6
LPM07623	PYX	UG2FW	3.37	3.26	3.4
LPM07624	PYX	UG2FW	3.36	3.20	5.0
LPM07625	PYX	UG2FW	3.37	3.20	5.2
LPM07626	PYX	UG2FW	3.37	3.10	8.2
LPM07627	PYX	UG2FW	3.37	3.21	4.8
LPM07628	PYX	UG2FW	3.35	3.19	5.0
LPM07629	PYX	UG2FW	3.33	3.21	3.7
LPM07630	PYX	UG2FW	3.35	3.32	0.8
LPM07631	PYX	UG2FW	3.32	3.16	5.0
LPM07632	PYX	UG2FW	3.39	3.30	2.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM07633	PYX	UG2FW	3.55	3.30	7.4
LPM07634	PYX	UG2FW	3.43	3.23	5.9
LPM07635	PYX	UG2FW	3.41	3.19	6.7
LPM07636	PYX	UG2FW	3.43	3.24	5.6
LPM07637	PYX	UG2FW	3.42	3.18	7.2
LPM07638	PYX	UG2FW	3.39	3.21	5.4
LPM07639	PYX	UG2FW	3.42	3.18	7.2
LPM07640	PYX	UG2FW	3.42	3.22	5.9
LPM07641	PYX	UG2FW	3.33	3.14	5.8
LPM07642	PYX	UG2FW	3.37	3.11	8.0
LPM07643	PYX	UG2FW	3.36	3.23	3.9
LPM07644	PYX	UG2FW	3.45	3.25	6.0
LPM07645	PYX	UG2FW	3.43	3.23	6.1
LPM07646	PYX	UG2FW	3.42	3.23	5.7
LPM07647	PYX	UG2FW	3.48	3.29	5.7
LPM07648	PYX	UG2FW	3.33	3.17	4.7
LPM07649	PYX	UG2FW	3.36	3.11	7.6
LPM07650	PYX	UG2FW	3.39	3.19	6.0
LPM07651	PYX	UG2FW	3.47	3.24	6.7
LPM07652	PYX	UG2FW	3.63	3.41	6.2
LPM07653	PYX	UG2FW	3.48	3.28	5.6
LPM07654	PYX	UG2FW	3.43	3.21	6.3
LPM07655	PYX	UG2FW	3.44	3.25	5.6
LPM07656	PYX	UG2FW	3.45	3.05	12.4
LPM07657	PYX	UG2FW	3.45	3.18	8.2
LPM07658	PYX	UG2FW	3.44	3.20	7.2
LPM07659	PYX	UG2FW	3.42	3.19	6.9
LPM07660	PYX	UG2FW	3.46	3.06	12.4
LPM07661	PYX	UG2FW	3.58	3.37	6.0
LPM07662	PYX	UG2FW	3.70	3.37	9.4
LPM07663	PYX	UG2FW	3.60	3.21	11.4
LPM07664	PYX	UG2FW	3.52	3.16	10.7
LPM07665	PYX	UG2FW	3.42	3.22	6.1
LPM07666	PYX	UG2FW	3.44	3.21	6.9
LPM07667	PYX	UG2FW	3.43	3.21	6.4
LPM07668	PYX	UG2FW	3.42	3.22	6.1
LPM07669	PYX	UG2FW	3.48	3.31	4.9
LPM07670	PYX	UG2FW	3.45	3.30	4.4
LPM07671	PYX	UG2FW	3.33	3.17	4.9
LPM07672	PYX	UG2FW	3.38	3.30	2.5
LPM07673	PYX	UG2FW	3.39	3.44	-1.6
LPM07674	PYX	UG2FW	3.34	3.24	3.1
LPM07675	PYX	UG2FW	3.37	3.30	2.0
LPM07676	PYX	UG2FW	3.35	3.23	3.7
LPM07677	PYX	UG2FW	3.37	3.24	3.9
LPM07678	PYX	UG2FW	3.40	3.22	5.3
LPM07679	PYX	UG2FW	3.44	3.12	9.8
LPM07680	PYX	UG2FW	3.28	3.19	2.8
LPM07681	PYX	UG2FW	3.42	3.21	6.2
LPM07682	PYX	UG2FW	3.32	3.22	3.2
LPM07683	PYX	UG2FW	3.35	2.99	11.3
LPM07684	PYX	UG2FW	3.29	3.20	2.7
LPM07685	PYX	UG2FW	3.34	3.21	3.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07686	PYX	UG2FW	3.33	3.32	0.3
LPM07687	PYX	UG2FW	3.30	3.23	2.3
LPM07688	PYX	UG2FW	3.35	3.25	3.2
LPM07689	PYX	UG2FW	3.52	3.31	6.3
LPM07690	PYX	UG2FW	3.36	3.21	4.4
LPM07691	PYX	UG2FW	3.36	3.23	4.1
LPM07692	PYX	UG2FW	3.37	3.22	4.5
LPM07693	PYX	UG2FW	3.37	3.21	4.7
LPM07694	PYX	UG2FW	3.34	3.19	4.5
LPM07695	PYX	UG2FW	3.35	3.19	4.7
LPM07696	PYX	UG2FW	3.36	3.19	5.1
LPM07697	PYX	UG2FW	3.57	3.36	6.0
LPM07698	PYX	UG2FW	3.50	3.33	4.9
LPM07699	PYX	UG2FW	3.37	3.23	4.3
LPM07700	PYX	UG2FW	3.38	3.23	4.5
LPM07701	PYX	UG2FW	3.38	3.24	4.3
LPM07702	PYX	UG2FW	3.39	3.25	4.3
LPM07703	PYX	UG2FW	3.34	3.20	4.4
LPM07704	PYX	UG2FW	3.35	3.21	4.2
LPM07705	PYX	UG2FW	3.36	3.22	4.4
LPM07706	PYX	UG2FW	3.30	3.14	4.9
LPM07707	PYX	UG2FW	3.33	3.22	3.5
LPM07708	PYX	UG2FW	3.34	3.24	3.0
LPM07709	PYX	UG2FW	3.40	3.29	3.4
LPM07710	PYX	UG2FW	3.43	3.29	4.2
LPM07711	PYX	UG2FW	3.38	3.28	3.1
LPM07712	PYX	UG2FW	3.33	3.19	4.3
LPM07713	PYX	UG2FW	3.41	3.25	4.7
LPM07714	PYX	UG2FW	3.39	3.22	5.2
LPM07715	PYX	UG2FW	3.39	3.21	5.3
LPM07716	PYX	UG2FW	3.69	3.20	14.3
LPM07717	PYX	UG2FW	3.40	3.19	6.2
LPM07718	PYX	UG2FW	3.49	3.29	5.9
LPM07719	PYX	UG2FW	3.41	3.24	5.0
LPM07720	PYX	UG2FW	3.49	3.32	4.9
LPM07721	PYX	UG2FW	3.45	3.24	6.2
LPM07722	PYX	UG2FW	3.43	3.19	7.2
LPM07723	PYX	UG2FW	3.44	3.09	10.6
LPM07724	PYX	UG2FW	3.40	3.20	6.2
LPM07725	PYX	UG2FW	3.45	3.24	6.4
LPM07726	PYX	UG2FW	3.52	3.39	3.9
LPM07727	PYX	UG2FW	3.34	3.17	5.3
LPM07728	PYX	UG2FW	3.46	3.48	-0.5
LPM07729	PYX	UG2FW	3.47	3.32	4.5
LPM07730	PYX	UG2FW	3.38	3.23	4.4
LPM07731	PYX	UG2FW	3.34	3.42	-2.4
LPM07732	PYX	UG2FW	3.40	3.23	5.2
LPM07733	PYX	UG2FW	3.37	3.22	4.7
LPM07734	PYX	UG2FW	3.25	3.18	2.3
LPM07735	PYX	UG2FW	3.37	3.17	6.2
LPM07736	PYX	UG2FW	3.47	3.21	7.7
LPM07737	PYX	UG2FW	3.63	3.27	10.4
LPM07738	PYX	UG2FW	3.56	3.19	10.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07739	PYX	UG2FW	3.60	3.19	12.2
LPM07740	PYX	UG2FW	3.64	3.24	11.6
LPM07741	PYX	UG2FW	3.73	3.22	14.7
LPM07742	PYX	UG2FW	3.34	3.32	0.7
LPM07743	PYX	UG2FW	3.72	3.28	12.6
LPM07744	PYX	UG2FW	3.38	3.41	-1.0
LPM07745	PYX	UG2FW	3.52	3.30	6.5
LPM07746	PYX	UG2FW	3.60	3.30	8.5
LPM07747	PYX	UG2FW	3.68	3.22	13.2
LPM07748	PYX	UG2FW	3.41	3.35	1.7
LPM07749	PYX	UG2FW	3.53	3.42	3.1
LPM07750	PYX	UG2FW	3.50	3.35	4.5
LPM07751	PYX	UG2FW	3.34	3.23	3.4
LPM07752	PYX	UG2FW	3.35	3.26	2.6
LPM07753	PYX	UG2FW	3.34	3.26	2.5
LPM07754	PYX	UG2FW	3.36	3.25	3.2
LPM07755	PYX	UG2FW	3.33	3.29	1.1
LPM07756	PYX	UG2FW	3.36	3.22	4.2
LPM07757	PYX	UG2FW	3.47	3.26	6.3
LPM07758	PYX	UG2FW	3.52	3.28	7.1
LPM07759	PYX	UG2FW	3.57	3.35	6.2
LPM07760	PYX	UG2FW	3.41	3.15	7.9
LPM07761	PYX	UG2FW	3.42	3.22	5.9
LPM07762	PYX	UG2FW	3.43	3.22	6.3
LPM07763	PYX	UG2FW	3.42	3.21	6.4
LPM07764	PYX	UG2FW	3.39	3.18	6.3
LPM07765	PYX	UG2FW	3.39	3.21	5.4
LPM07766	PYX	UG2FW	3.42	3.27	4.6
LPM07767	PYX	UG2FW	3.41	3.22	5.9
LPM07768	PYX	UG2FW	3.42	3.21	6.1
LPM07769	PYX	UG2FW	3.27	3.16	3.6
LPM07770	PYX	UG2FW	3.27	3.07	6.3
LPM07771	PYX	UG2FW	3.49	3.24	7.5
LPM07772	PYX	UG2FW	3.59	3.29	8.7
LPM07773	PYX	UG2FW	3.54	3.33	6.2
LPM07774	PYX	UG2FW	3.39	3.20	5.8
LPM07775	PYX	UG2FW	3.40	3.23	5.2
LPM07776	PYX	UG2FW	3.41	3.21	5.9
LPM07777	PYX	UG2FW	3.40	3.22	5.4
LPM07778	PYX	UG2FW	3.39	3.21	5.6
LPM07779	PYX	UG2FW	3.39	3.21	5.5
LPM07780	PYX	UG2FW	3.40	3.18	6.6
LPM07781	PYX	UG2FW	3.33	3.14	5.9
LPM07782	PYX	UG2FW	3.39	3.20	5.9
LPM07783	PYX	UG2FW	3.36	3.18	5.4
LPM07784	PYX	UG2FW	3.38	3.21	5.2
LPM07785	PYX	UG2FW	3.70	3.61	2.6
LPM07786	PYX	UG2FW	3.41	3.22	5.8
LPM07787	PYX	UG2FW	3.40	3.22	5.4
LPM07788	PYX	UG2FW	3.40	3.24	4.8
LPM07789	PYX	UG2FW	3.36	3.21	4.7
LPM07790	PYX	UG2FW	3.37	3.19	5.3
LPM07791	PYX	UG2FW	3.38	3.23	4.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM07792	PYX	UG2FW	3.36	3.19	5.3
LPM07793	PYX	UG2FW	3.39	3.21	5.6
LPM07794	PYX	UG2FW	3.46	3.21	7.5
LPM07795	PYX	UG2FW	3.44	3.21	7.0
LPM07796	PYX	UG2FW	3.71	3.60	2.9
LPM07797	PYX	UG2FW	3.41	3.20	6.4
LPM07798	PYX	UG2FW	3.42	3.20	6.6
LPM07799	PYX	UG2FW	3.42	3.22	6.0
LPM07800	PYX	UG2FW	3.39	3.18	6.4
LPM07801	PYX	UG2FW	3.39	3.20	5.7
LPM07802	PYX	UG2FW	3.38	3.20	5.4
LPM07803	PYX	UG2FW	3.42	3.23	5.6
LPM07804	PYX	UG2FW	3.42	3.19	7.0
LPM07805	PYX	UG2FW	3.39	3.20	5.7
LPM07806	PYX	UG2FW	3.39	3.20	5.7
LPM07807	PYX	UG2FW	3.43	3.28	4.6
LPM07808	PYX	UG2FW	3.63	3.52	3.0
LPM07809	PYX	UG2FW	3.36	3.21	4.7
LPM07810	PYX	UG2FW	3.36	3.22	4.2
LPM07811	PYX	UG2FW	3.38	3.18	6.0
LPM07812	PYX	UG2FW	3.36	3.24	3.7
LPM07813	PYX	UG2FW	3.38	3.13	7.7
LPM07814	PYX	UG2FW	3.38	3.22	5.0
LPM07815	PYX	UG2FW	3.41	3.20	6.4
LPM07816	PYX	UG2FW	3.37	3.21	5.0
LPM07817	PYX	UG2FW	3.38	3.21	5.2
LPM07818	FHARZ	UG2FW	3.36	2.99	11.8
LPM07819	FHARZ	UG2FW	3.12	3.14	-0.8
LPM07820	FHARZ	UG2FW	3.17	3.13	1.1
LPM07821	FHARZ	UG2FW	3.37	3.24	4.0
LPM07822	FPYX	UG2FW	3.31	3.11	6.3
LPM07823	FPYX	UG2FW	3.32	3.21	3.4
LPM07824	FPYX	UG2FW	3.29	3.20	2.8
LPM07825	PYX	UG2FW	3.44	3.33	3.2
LPM07826	PYX	UG2FW	3.44	3.38	1.7
LPM07827	PYX	UG2FW	3.48	3.33	4.3
LPM07828	PYX	UG2FW	3.33	3.24	2.7
LPM07829	PYX	UG2FW	3.34	3.24	3.0
LPM07830	PYX	UG2FW	3.35	3.24	3.3
LPM07831	PYX	UG2FW	3.35	3.24	3.2
LPM07832	PYX	UG2FW	3.34	3.26	2.4
LPM07833	PYX	UG2FW	3.33	3.23	3.1
LPM07834	PYX	UG2FW	3.34	3.23	3.2
LPM07835	PYX	UG2FW	3.43	3.30	3.9
LPM07836	PYX	UG2FW	3.41	3.21	6.0
LPM07837	PYX	UG2FW	3.39	3.19	6.1
LPM07838	PYX	UG2FW	3.40	3.19	6.4
LPM07839	PYX	UG2FW	3.39	3.20	5.9
LPM07840	PYX	UG2FW	3.40	3.05	10.8
LPM07841	PYX	UG2FW	3.41	3.17	7.4
LPM07842	PYX	UG2FW	3.41	3.15	7.9
LPM07843	PYX	UG2FW	3.41	3.07	10.6
LPM07844	PYX	UG2FW	3.42	3.19	6.9

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07845	FPYX	UG2HW	3.49	3.27	6.4
LPM07846	FPYX	UG2HW	3.44	3.30	4.2
LPM07847	FPYX	UG2HW	3.48	3.30	5.3
LPM07848	FPYX	UG2HW	3.40	3.22	5.4
LPM07849	FPYX	UG2HW	3.47	3.29	5.3
LPM07850	FPYX	UG2HW	3.47	3.30	4.9
LPM07851	FPYX	UG2HW	3.49	3.31	5.4
LPM07852	FPYX	UG2HW	3.49	3.29	5.9
LPM07853	FPYX	UG2HW	3.45	3.25	6.0
LPM07854	FPYX	UG2HW	3.46	3.35	3.2
LPM07855	POIKPYX	UG2HW	3.48	3.30	5.4
LPM07856	POIKPYX	UG2HW	3.48	3.29	5.6
LPM07857	FPYX	UG2HW	3.45	3.24	6.2
LPM07858	FPYX	UG2HW	3.47	3.28	5.6
LPM07859	FPYX	UG2HW	3.47	3.29	5.3
LPM07860	PP	UG2HW	3.38	3.29	2.6
LPM07861	PP	UG2HW	3.38	3.28	3.1
LPM07862	PP	UG2HW	3.39	3.27	3.6
LPM07863	PP	UG2HW	3.39	3.28	3.3
LPM07864	PP	UG2HW	3.41	3.31	2.9
LPM07865	POIKFPYX	UG2HW	3.43	3.27	4.9
LPM07866	POIKFPYX	UG2HW	3.40	3.29	3.3
LPM07867	POIKFPYX	UG2HW	3.31	3.23	2.6
LPM07868	POIKFPYX	UG2HW	3.07	3.00	2.3
LPM07869	ANCR	UG2HW	2.94	2.85	3.3
LPM07870	POIKFPYX	UG2HW	3.42	3.27	4.6
LPM07871	POIKPYX	UG2HW	3.44	3.26	5.3
LPM07872	POIKPYX	UG2HW	3.43	3.28	4.5
LPM07873	POIKPYX	UG2HW	3.44	3.26	5.3
LPM07874	POIKPYX	UG2HW	3.41	3.24	5.0
LPM07875	POIKFPYX	UG2HW	3.44	3.29	4.4
LPM07876	POIKFPYX	UG2HW	3.44	3.30	4.1
LPM07877	POIKFPYX	UG2HW	3.44	3.29	4.5
LPM07878	POIKPYX	UG2HW	3.43	3.30	4.0
LPM07879	POIKPYX	UG2HW	3.42	3.26	4.9
LPM07880	POIKFPYX	UG2HW	3.42	3.33	2.7
LPM07881	POIKFPYX	UG2HW	3.43	3.30	3.9
LPM07882	POIKFPYX	UG2HW	3.41	3.29	3.5
LPM07883	POIKFPYX	UG2HW	3.44	3.28	4.7
LPM07884	POIKFPYX	UG2HW	3.41	3.28	4.0
LPM07885	POIKFPYX	UG2HW	3.49	3.34	4.4
LPM07886	POIKPYX	UG2HW	3.48	3.29	5.5
LPM07887	POIKPYX	UG2HW	3.47	3.30	5.0
LPM07888	POIKPYX	UG2HW	3.46	3.30	4.8
LPM07889	POIKPYX	UG2HW	3.48	3.41	2.2
LPM07890	POIKPYX	UG2HW	3.50	3.26	7.1
LPM07891	POIKPYX	UG2HW	3.50	3.32	5.0
LPM07892	POIKPYX	UG2HW	3.51	3.31	6.0
LPM07893	POIKPYX	UG2HW	3.50	3.31	5.5
LPM07894	POIKPYX	UG2HW	3.51	3.31	5.7
LPM07895	POIKPYX	UG2HW	3.52	3.31	6.0
LPM07896	POIKFPYX	UG2HW	3.52	3.29	6.6
LPM07897	POIKFPYX	UG2HW	3.51	3.26	7.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07898	POIKFPYX	UG2HW	3.47	3.26	6.4
LPM07899	POIKFPYX	UG2HW	3.48	3.27	6.2
LPM07900	POIKFPYX	UG2HW	3.48	3.36	3.5
LPM07901	POIKPYX	UG2HW	3.48	3.27	6.1
LPM07902	POIKPYX	UG2HW	3.50	3.27	6.9
LPM07903	POIKPYX	UG2HW	3.50	3.28	6.5
LPM07904	POIKPYX	UG2HW	3.51	3.28	6.7
LPM07905	POIKPYX	UG2HW	3.51	3.28	6.9
LPM07906	POIKPYX	UG2HW	3.50	3.25	7.4
LPM07907	POIKPYX	UG2HW	3.44	3.24	5.9
LPM07908	POIKFPYX	UG2HW	3.40	3.29	3.3
LPM07909	POIKFPYX	UG2HW	3.40	3.28	3.6
LPM07910	POIKFPYX	UG2HW	3.41	3.28	4.0
LPM07911	POIKFPYX	UG2HW	3.39	3.29	3.1
LPM07912	POIKFPYX	UG2HW	3.41	3.26	4.5
LPM07913	POIKFPYX	UG2HW	3.37	3.05	10.0
LPM07914	POIKFPYX	UG2HW	3.32	3.27	1.5
LPM07915	POIKFPYX	UG2HW	3.38	3.24	4.3
LPM07916	POIKFPYX	UG2HW	3.51	3.23	8.3
LPM07917	POIKFPYX	UG2HW	3.50	3.29	6.3
LPM07918	POIKFPYX	UG2HW	3.48	3.28	5.9
LPM07919	POIKFPYX	UG2HW	3.48	3.23	7.6
LPM07920	POIKFPYX	UG2HW	3.46	3.26	5.8
LPM07921	POIKFPYX	UG2HW	3.47	3.32	4.5
LPM07922	POIKFPYX	UG2HW	3.48	3.28	5.9
LPM07923	POIKFPYX	UG2HW	3.45	3.24	6.3
LPM07924	POIKFPYX	UG2HW	3.46	3.25	6.1
LPM07925	POIKFPYX	UG2HW	3.49	3.30	5.6
LPM07926	POIKFPYX	UG2HW	3.53	3.30	6.8
LPM07927	POIKFPYX	UG2HW	3.50	3.30	5.9
LPM07928	POIKFPYX	UG2HW	3.48	3.29	5.7
LPM07929	POIKFPYX	UG2HW	3.50	3.28	6.4
LPM07930	POIKFPYX	UG2HW	3.50	3.27	6.8
LPM07931	POIKFPYX	UG2HW	3.49	3.27	6.6
LPM07932	POIKFPYX	UG2HW	3.50	3.27	6.7
LPM07933	POIKFPYX	UG2HW	3.49	3.28	6.3
LPM07934	POIKFPYX	UG2HW	3.46	3.26	6.0
LPM07935	POIKFPYX	UG2HW	3.44	3.28	4.6
LPM07936	POIKFPYX	UG2HW	3.43	3.28	4.6
LPM07937	POIKFPYX	UG2HW	3.44	3.26	5.2
LPM07938	POIKFPYX	UG2HW	3.42	3.25	5.0
LPM07939	POIKFPYX	UG2HW	3.44	3.30	4.1
LPM07940	POIKFPYX	UG2HW	3.46	3.29	5.0
LPM07941	POIKFPYX	UG2HW	3.41	3.27	4.1
LPM07942	POIKFPYX	UG2HW	3.43	3.32	3.3
LPM07943	POIKFPYX	UG2HW	3.39	3.27	3.7
LPM07944	POIKPYX	UG2HW	3.40	3.27	4.0
LPM07945	POIKPYX	UG2HW	3.40	3.28	3.6
LPM07946	POIKPYX	UG2HW	3.38	3.26	3.7
LPM07947	POIKPYX	UG2HW	3.42	3.30	3.6
LPM07948	POIKPYX	UG2HW	3.32	3.20	3.5
LPM07949	POIKFPYX	UG2HW	3.48	3.28	6.0
LPM07950	POIKFPYX	UG2HW	3.46	3.26	6.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM07951	POIKFPYX	UG2HW	3.48	3.28	5.9
LPM07952	POIKFPYX	UG2HW	3.47	3.29	5.3
LPM07953	POIKFPYX	UG2HW	3.46	3.28	5.4
LPM07954	POIKFPYX	UG2HW	3.47	3.31	4.7
LPM07955	POIKFPYX	UG2HW	3.47	3.28	5.6
LPM07956	POIKFPYX	UG2HW	3.48	3.28	5.8
LPM07957	POIKFPYX	UG2HW	3.48	3.29	5.5
LPM07958	POIKFPYX	UG2HW	3.47	3.29	5.2
LPM07959	PYX	UG2HW	3.47	3.28	5.6
LPM07960	PYX	UG2HW	3.46	3.31	4.4
LPM07961	PYX	UG2HW	3.46	3.46	0.0
LPM07962	PYX	UG2HW	3.49	3.28	6.1
LPM07963	PYX	UG2HW	3.48	3.31	5.0
LPM07964	PYX	UG2HW	3.50	3.30	6.0
LPM07965	PYX	UG2HW	3.50	3.28	6.6
LPM07966	PYX	UG2HW	3.51	3.31	5.9
LPM07967	PYX	UG2HW	3.49	3.29	5.9
LPM07968	FPYX	UG2HW	3.45	3.08	11.5
LPM07969	FPYX	UG2HW	3.45	3.27	5.2
LPM07970	FPYX	UG2HW	3.46	3.33	3.8
LPM07971	FPYX	UG2HW	3.46	3.34	3.5
LPM07972	FPYX	UG2HW	3.44	3.29	4.3
LPM07973	FPYX	UG2HW	3.43	3.27	4.7
LPM07974	FPYX	UG2HW	3.41	3.20	6.2
LPM07975	FPYX	UG2HW	3.42	3.29	4.0
LPM07976	FPYX	UG2HW	3.41	3.33	2.3
LPM07977	FPYX	UG2HW	3.41	3.26	4.6
LPM07978	FPYX	UG2HW	3.41	3.06	10.9
LPM07979	FPYX	UG2HW	3.41	3.30	3.3
LPM07980	FPYX	UG2HW	3.13	3.26	-4.1
LPM07981	FPYX	UG2HW	3.26	3.27	-0.2
LPM07982	FPYX	UG2HW	3.28	3.03	7.8
LPM07983	FPYX	UG2HW	3.24	3.26	-0.7
LPM07984	PYX	UG2HW	3.41	3.22	5.6
LPM07985	PYX	UG2HW	3.41	3.30	3.2
LPM07986	PYX	UG2HW	3.44	3.30	4.1
LPM07987	PYX	UG2HW	3.45	3.31	4.1
LPM07988	PYX	UG2HW	3.46	3.31	4.6
LPM07989	PYX	UG2HW	3.45	3.24	6.2
LPM07990	PYX	UG2HW	3.46	3.28	5.2
LPM07991	PYX	UG2HW	3.46	3.30	4.7
LPM07992	PYX	UG2HW	3.45	3.30	4.4
LPM07993	PYX	UG2HW	3.44	3.28	4.6
LPM07994	PYX	UG2HW	3.45	3.28	4.9
LPM07995	PYX	UG2HW	3.45	3.30	4.6
LPM07996	PYX	UG2HW	3.46	3.29	5.0
LPM07997	PYX	UG2HW	3.45	3.29	4.8
LPM07998	PYX	UG2HW	3.39	3.28	3.4
LPM07999	PYX	UG2HW	3.39	3.31	2.4
LPM08000	PYX	UG2HW	3.39	3.31	2.4
LPM08001	PYX	UG2HW	3.42	3.26	4.7
LPM08002	PYX	UG2HW	3.42	3.26	4.7
LPM08003	PYX	UG2HW	3.43	3.25	5.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM08004	PYX	UG2HW	3.43	3.25	5.3
LPM08005	PYX	UG2HW	3.33	3.25	2.6
LPM08006	PYX	UG2HW	3.33	3.25	2.6
LPM08007	PYX	UG2HW	3.44	3.26	5.3
LPM08008	PYX	UG2HW	3.44	3.26	5.3
LPM08009	PYX	UG2HW	3.58	3.25	9.7
LPM08010	PYX	UG2HW	3.58	3.25	9.7
LPM08011	PYX	UG2HW	3.46	3.25	6.3
LPM08012	PYX	UG2HW	3.46	3.25	6.3
LPM08013	PYX	UG2HW	3.50	3.25	7.3
LPM08014	PYX	UG2HW	3.50	3.25	7.3
LPM08015	PYX	UG2HW	3.58	3.24	9.8
LPM08016	PYX	UG2HW	3.58	3.24	9.8
LPM08017	PYX	UG2HW	3.28	3.20	2.6
LPM08018	PYX	UG2HW	3.24	3.20	1.1
LPM08019	PYX	UG2HW	3.17	3.09	2.6
LPM08020	PYX	UG2HW	3.22	3.12	3.2
LPM08021	PYX	UG2HW	3.20	3.19	0.2
LPM08022	PYX	UG2HW	3.18	3.18	-0.1
LPM08023	PYX	UG2HW	3.18	2.95	7.4
LPM08024	PYX	UG2HW	3.06	3.10	-1.2
LPM08025	PYX	UG2HW	3.02	2.73	10.2
LPM08026	PYX	UG2HW	3.36	3.29	2.1
LPM08027	PYX	UG2HW	3.31	3.28	0.8
LPM08028	PYX	UG2HW	3.36	3.30	1.9
LPM08029	PYX	UG2HW	3.34	3.31	0.8
LPM08030	PYX	UG2HW	3.28	3.27	0.2
LPM08031	PYX	UG2HW	3.29	3.17	3.8
LPM08032	PYX	UG2HW	3.25	3.29	-1.1
LPM08033	PYX	UG2HW	3.25	3.28	-0.8
LPM08034	PYX	UG2HW	3.25	3.27	-0.7
LPM08035	POIKFPYX	UG2HW	3.69	3.28	11.7
LPM08036	POIKFPYX	UG2HW	3.71	3.79	-2.1
LPM08037	POIKFPYX	UG2HW	3.67	3.19	14.0
LPM08038	PYX	UG2HW	3.38	3.28	3.0
LPM08039	PYX	UG2HW	3.38	3.29	2.8
LPM08040	PYX	UG2HW	3.37	3.25	3.7
LPM08041	PYX	UG2HW	3.37	3.28	2.6
LPM08042	PYX	UG2HW	3.38	3.24	4.1
LPM08043	PYX	UG2HW	3.37	3.30	2.0
LPM08044	PYX	UG2HW	3.35	3.25	3.1
LPM08045	PYX	UG2HW	3.37	3.25	3.6
LPM08046	PYX	UG2HW	3.36	3.34	0.5
LPM08047	PYX	UG2HW	3.50	3.28	6.5
LPM08048	PYX	UG2HW	3.53	3.29	7.1
LPM08049	PYX	UG2HW	3.60	3.30	8.6
LPM08050	PYX	UG2HW	3.48	3.51	-0.9
LPM08051	PYX	UG2HW	3.43	3.43	0.1
LPM08052	PYX	UG2HW	3.43	3.28	4.5
LPM08053	PYX	UG2HW	3.44	3.27	5.1
LPM08054	PYX	UG2HW	3.45	3.26	5.8
LPM08055	PYX	UG2HW	3.45	3.29	4.5
LPM08056	FPYX	UG2HW	3.48	3.26	6.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM08057	FPYX	UG2HW	3.76	3.48	7.7
LPM08058	FPYX	UG2HW	3.38	3.18	6.0
LPM08059	FPYX	UG2HW	3.31	3.36	-1.6
LPM08060	FPYX	UG2HW	3.62	3.18	12.9
LPM08061	FPYX	UG2HW	3.40	3.28	3.7
LPM08062	FPYX	UG2HW	3.53	3.30	6.7
LPM08063	FPYX	UG2HW	3.53	3.31	6.3
LPM08064	FPYX	UG2HW	3.54	3.31	6.7
LPM08065	FPYX	UG2HW	3.52	3.31	6.1
LPM08066	FPYX	UG2HW	3.53	3.32	6.2
LPM08067	FPYX	UG2HW	3.48	3.28	5.8
LPM08068	FPYX	UG2HW	3.50	3.31	5.4
LPM08069	FPYX	UG2HW	3.25	3.31	-1.9
LPM08070	FPYX	UG2HW	3.24	3.31	-2.0
LPM08071	FPYX	UG2HW	3.55	3.31	6.9
LPM08072	FPYX	UG2HW	3.55	3.27	8.1
LPM08073	FPYX	UG2HW	3.57	3.28	8.3
LPM08074	FPYX	UG2HW	3.56	3.29	8.0
LPM08075	FPYX	UG2HW	3.56	3.27	8.6
LPM08076	FPYX	UG2HW	3.54	3.29	7.2
LPM08077	FPYX	UG2HW	3.49	3.25	7.1
LPM08078	FPYX	UG2HW	3.55	3.17	11.3
LPM08079	POIKFPYX	UG2HW	3.40	3.26	4.2
LPM08080	POIKFPYX	UG2HW	3.41	3.27	4.1
LPM08081	POIKFPYX	UG2HW	3.42	3.27	4.4
LPM08082	POIKFPYX	UG2HW	3.41	3.27	4.2
LPM08083	POIKFPYX	UG2HW	3.41	3.27	4.2
LPM08084	POIKFPYX	UG2HW	3.34	3.25	2.6
LPM08085	POIKFPYX	UG2HW	3.34	3.28	2.0
LPM08086	PYX	UG2HW	3.39	3.05	10.6
LPM08087	PYX	UG2HW	3.11	3.16	-1.6
LPM08088	PYX	UG2HW	3.41	3.09	9.9
LPM08089	PYX	UG2HW	3.20	3.05	4.6
LPM08090	PYX	UG2HW	3.11	3.02	2.8
LPM08091	PYX	UG2HW	3.47	3.31	4.9
LPM08092	PYX	UG2HW	3.44	3.27	5.0
LPM08093	PYX	UG2HW	3.54	3.21	9.8
LPM08094	PYX	UG2HW	3.54	3.17	11.0
LPM08095	PYX	UG2HW	3.59	3.26	9.6
LPM08096	PYX	UG2HW	3.56	3.25	9.1
LPM08097	PYX	UG2HW	3.50	3.06	13.4
LPM08098	PYX	UG2HW	3.59	3.23	10.4
LPM08099	FPYX	UG2HW	3.41	3.18	6.9
LPM08100	FPYX	UG2HW	3.38	3.25	3.8
LPM08101	FPYX	UG2HW	3.44	3.27	4.9
LPM08102	FPYX	UG2HW	3.40	3.25	4.4
LPM08103	FPYX	UG2HW	3.14	3.24	-3.2
LPM08104	FPYX	UG2HW	3.39	3.28	3.4
LPM08105	FPYX	UG2HW	3.43	3.36	2.1
LPM08106	FPYX	UG2HW	3.30	3.14	4.9
LPM08107	FPYX	UG2HW	3.31	3.19	3.7
LPM08108	FPYX	UG2HW	3.32	3.27	1.5
LPM08109	FPYX	UG2HW	3.30	3.19	3.5

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08110	FPYX	UG2HW	3.30	3.18	3.8
LPM08111	FPYX	UG2HW	3.18	3.23	-1.5
LPM08112	FPYX	UG2HW	3.18	3.11	2.2
LPM08113	FPYX	UG2HW	3.45	3.27	5.2
LPM08114	FPYX	UG2HW	3.44	3.21	6.8
LPM08115	FPYX	UG2HW	3.52	3.23	8.6
LPM08116	FPYX	UG2HW	3.50	3.20	8.9
LPM08117	FPYX	UG2HW	3.48	3.19	8.6
LPM08118	FPYX	UG2HW	3.48	3.18	8.9
LPM08119	FPYX	UG2HW	3.52	3.24	8.4
LPM08120	FPYX	UG2HW	3.58	3.38	5.8
LPM08121	FPYX	UG2HW	3.54	3.24	8.8
LPM08122	FPYX	UG2HW	3.52	3.23	8.5
LPM08123	FPYX	UG2HW	3.56	3.27	8.6
LPM08124	FPYX	UG2HW	3.49	3.16	9.9
LPM08125	FPYX	UG2HW	3.54	3.28	7.7
LPM08126	FPYX	UG2HW	3.47	3.25	6.7
LPM08127	FPYX	UG2HW	3.37	3.20	5.1
LPM08128	FPYX	UG2HW	3.43	3.25	5.3
LPM08129	FPYX	UG2HW	3.44	3.29	4.5
LPM08130	FPYX	UG2HW	3.41	3.27	4.0
LPM08131	FPYX	UG2HW	3.41	3.28	3.8
LPM08132	FPYX	UG2HW	3.41	3.30	3.3
LPM08133	FPYX	UG2HW	3.40	3.28	3.6
LPM08134	FPYX	UG2HW	3.42	3.28	4.0
LPM08135	FPYX	UG2HW	3.43	3.28	4.4
LPM08136	FPYX	UG2HW	3.40	3.28	3.5
LPM08137	FPYX	UG2HW	3.45	3.42	0.9
LPM08138	FPYX	UG2HW	3.56	3.30	7.5
LPM08139	FPYX	UG2HW	3.45	3.25	5.8
LPM08140	FPYX	UG2HW	3.42	3.31	3.2
LPM08141	FPYX	UG2HW	3.45	3.25	6.1
LPM08142	FPYX	UG2HW	3.42	3.26	4.7
LPM08143	FPYX	UG2HW	3.44	3.27	5.1
LPM08144	FPYX	UG2HW	3.41	3.32	2.7
LPM08145	FPYX	UG2HW	3.65	3.31	9.6
LPM08146	FPYX	UG2HW	3.38	3.29	2.8
LPM08147	FPYX	UG2HW	3.43	3.29	4.3
LPM08148	FPYX	UG2HW	3.52	3.49	0.9
LPM08149	FPYX	UG2HW	3.42	3.28	4.2
LPM08150	FPYX	UG2HW	3.42	3.29	3.9
LPM08151	FPYX	UG2HW	3.74	3.51	6.3
LPM08152	FPYX	UG2HW	3.41	3.24	5.1
LPM08153	FPYX	UG2HW	3.42	3.22	5.9
LPM08154	FPYX	UG2HW	3.42	3.27	4.6
LPM08155	FPYX	UG2HW	3.43	3.28	4.4
LPM08156	FPYX	UG2HW	3.42	3.28	4.3
LPM08157	FPYX	UG2HW	3.45	3.23	6.5
LPM08158	FPYX	UG2HW	3.41	3.27	4.3
LPM08159	FPYX	UG2HW	3.47	3.27	6.0
LPM08160	FPYX	UG2HW	3.40	3.24	4.8
LPM08161	FPYX	UG2HW	3.41	3.24	5.3
LPM08162	FPYX	UG2HW	3.38	3.28	3.0

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08163	FPYX	UG2HW	3.35	3.26	2.8
LPM08164	FPYX	UG2HW	3.41	3.29	3.5
LPM08165	FPYX	UG2HW	3.51	3.26	7.5
LPM08166	FPYX	UG2HW	3.47	3.30	5.1
LPM08167	FPYX	UG2HW	3.41	3.26	4.5
LPM08168	FPYX	UG2HW	3.47	3.14	9.9
LPM08169	FPYX	UG2HW	3.28	3.27	0.2
LPM08170	FPYX	UG2HW	3.38	3.23	4.5
LPM08171	FPYX	UG2HW	3.42	3.24	5.6
LPM08172	FPYX	UG2HW	3.45	3.29	4.8
LPM08173	FPYX	UG2HW	3.35	3.34	0.4
LPM08174	FPYX	UG2HW	3.40	3.30	2.9
LPM08175	FPYX	UG2HW	3.37	3.33	1.2
LPM08176	FPYX	UG2HW	3.47	3.49	-0.7
LPM08177	FPYX	UG2HW	3.37	3.19	5.4
LPM08178	FPYX	UG2HW	3.42	3.32	3.1
LPM08179	FPYX	UG2HW	3.38	3.27	3.3
LPM08180	PYX	UG2HW	3.16	2.91	8.2
LPM08181	PYX	UG2HW	3.43	3.28	4.4
LPM08182	PYX	UG2HW	3.44	3.29	4.4
LPM08183	CR	UG2HW	4.55	4.26	6.6
LPM08184	PYX	UG2HW	3.44	3.22	6.6
LPM08185	PYX	UG2HW	3.40	3.23	5.1
LPM08186	PYX	UG2HW	3.37	3.26	3.5
LPM08187	PYX	UG2HW	3.37	3.24	3.9
LPM08188	PYX	UG2HW	3.38	3.28	3.1
LPM08189	PYX	UG2HW	3.36	3.29	2.0
LPM08190	PYX	UG2HW	3.39	3.39	-0.1
LPM08191	PYX	UG2HW	3.38	3.22	4.9
LPM08192	PYX	UG2HW	3.34	3.26	2.4
LPM08193	PYX	UG2HW	3.38	3.26	3.6
LPM08194	PYX	UG2HW	3.37	3.25	3.6
LPM08195	PYX	UG2HW	3.36	3.30	1.8
LPM08196	PYX	UG2HW	3.41	3.20	6.2
LPM08197	PYX	UG2HW	3.38	3.21	5.1
LPM08198	PYX	UG2HW	3.36	3.22	4.2
LPM08199	PYX	UG2HW	3.42	3.24	5.3
LPM08200	PYX	UG2HW	3.50	3.22	8.2
LPM08201	PYX	UG2HW	3.45	3.25	5.9
LPM08202	PYX	UG2HW	3.41	3.21	5.9
LPM08203	PYX	UG2HW	3.41	3.21	6.1
LPM08204	PYX	UG2HW	3.49	3.21	8.4
LPM08205	PYX	UG2HW	3.42	3.36	1.7
LPM08206	PYX	UG2HW	3.40	3.23	5.0
LPM08207	PYX	UG2HW	3.44	3.25	5.6
LPM08208	PYX	UG2HW	3.46	3.29	5.1
LPM08209	PYX	UG2HW	3.46	3.30	4.7
LPM08210	PYX	UG2HW	3.46	3.29	5.1
LPM08211	PYX	UG2HW	3.35	3.28	2.2
LPM08212	PYX	UG2HW	3.44	3.19	7.5
LPM08213	PYX	UG2HW	3.47	3.29	5.4
LPM08214	PYX	UG2HW	3.44	3.29	4.5
LPM08215	PYX	UG2HW	3.45	3.30	4.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08216	PYX	UG2HW	3.47	3.28	5.8
LPM08217	PYX	UG2HW	3.26	3.06	6.3
LPM08218	PYX	UG2HW	3.23	3.14	2.7
LPM08219	PYX	UG2HW	3.21	3.04	5.4
LPM08220	PYX	UG2HW	3.22	2.99	7.4
LPM08221	PYX	UG2HW	3.23	3.25	-0.7
LPM08222	PYX	UG2HW	3.27	3.07	6.4
LPM08223	PYX	UG2HW	3.28	3.16	3.6
LPM08224	PYX	UG2HW	3.31	3.13	5.6
LPM08225	PYX	UG2HW	3.34	3.25	2.8
LPM08226	PYX	UG2HW	3.34	3.22	3.7
LPM08227	PYX	UG2HW	3.38	3.31	2.1
LPM08228	PYX	UG2HW	3.40	3.17	7.0
LPM08229	PYX	UG2HW	3.35	3.17	5.4
LPM08230	PYX	UG2HW	3.39	3.10	8.8
LPM08231	PYX	UG2HW	3.42	3.12	9.2
LPM08232	PYX	UG2HW	3.38	3.22	4.9
LPM08233	PYX	UG2HW	3.40	3.17	7.1
LPM08234	PYX	UG2HW	3.36	3.19	5.2
LPM08235	PYX	UG2HW	3.35	3.15	6.2
LPM08236	PYX	UG2HW	3.36	3.24	3.6
LPM08237	PYX	UG2HW	3.36	3.15	6.3
LPM08238	PYX	UG2HW	3.38	3.19	5.9
LPM08239	PYX	UG2HW	3.36	3.12	7.5
LPM08240	PYX	UG2HW	3.40	3.10	9.1
LPM08241	PYX	UG2HW	3.42	3.16	7.7
LPM08242	FPYX	UG2HW	3.41	3.19	6.6
LPM08243	FPYX	UG2HW	3.41	3.25	4.7
LPM08244	FPYX	UG2HW	3.42	3.24	5.5
LPM08245	FPYX	UG2HW	3.37	3.17	6.2
LPM08246	FPYX	UG2HW	3.40	3.16	7.3
LPM08247	FPYX	UG2HW	3.43	3.21	6.7
LPM08248	FPYX	UG2HW	3.44	3.26	5.2
LPM08249	FPYX	UG2HW	3.44	3.27	5.1
LPM08250	FPYX	UG2HW	3.45	3.25	5.8
LPM08251	FPYX	UG2HW	3.54	3.27	8.0
LPM08252	FPYX	UG2HW	3.65	3.23	12.1
LPM08253	PYX	UG2HW	3.38	3.29	2.9
LPM08254	PYX	UG2HW	3.39	3.25	4.0
LPM08255	PYX	UG2HW	3.37	3.20	5.1
LPM08256	PYX	UG2HW	3.38	3.25	3.9
LPM08257	PYX	UG2HW	3.38	3.27	3.5
LPM08258	PYX	UG2HW	3.47	3.24	6.7
LPM08259	PYX	UG2HW	3.48	3.27	6.4
LPM08260	PYX	UG2HW	3.49	3.18	9.3
LPM08261	PYX	UG2HW	3.51	3.07	13.5
LPM08262	PYX	UG2HW	3.49	3.22	7.9
LPM08263	PYX	UG2HW	3.49	3.25	7.0
LPM08264	PYX	UG2HW	3.60	3.31	8.3
LPM08265	PYX	UG2HW	3.68	3.27	11.8
LPM08266	PYX	UG2HW	3.51	3.25	7.8
LPM08267	PYX	UG2HW	3.55	3.29	7.7
LPM08268	PYX	UG2HW	3.48	3.26	6.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08269	PYX	UG2HW	3.51	3.28	6.7
LPM08270	PYX	UG2HW	3.44	3.29	4.5
LPM08271	PYX	UG2HW	3.44	3.24	5.8
LPM08272	PYX	UG2HW	3.49	3.26	6.9
LPM08273	PYX	UG2HW	3.54	3.29	7.2
LPM08274	PYX	UG2HW	3.50	3.21	8.7
LPM08275	PYX	UG2HW	3.48	3.15	9.8
LPM08276	PYX	UG2HW	3.54	3.28	7.5
LPM08277	PYX	UG2HW	3.54	3.26	8.1
LPM08278	PYX	UG2HW	3.41	3.28	3.8
LPM08279	PYX	UG2HW	3.40	3.26	4.2
LPM08280	PYX	UG2HW	3.40	3.40	0.0
LPM08281	PYX	UG2HW	3.41	3.30	3.1
LPM08282	PYX	UG2HW	3.41	3.26	4.6
LPM08283	PYX	UG2HW	3.38	3.26	3.7
LPM08284	PYX	UG2HW	3.39	3.28	3.2
LPM08285	PYX	UG2HW	3.43	3.32	3.4
LPM08286	PYX	UG2HW	3.43	3.36	2.2
LPM08287	PYX	UG2HW	3.41	3.25	4.7
LPM08288	PYX	UG2HW	3.43	3.27	4.7
LPM08289	PYX	UG2HW	3.42	3.27	4.5
LPM08290	PYX	UG2HW	3.41	3.27	4.3
LPM08291	PYX	UG2HW	3.37	3.16	6.4
LPM08292	PYX	UG2HW	3.40	3.20	6.2
LPM08293	PYX	UG2HW	3.39	3.29	3.1
LPM08294	PYX	UG2HW	3.38	3.34	1.1
LPM08295	PYX	UG2HW	3.43	3.32	3.2
LPM08296	PYX	UG2HW	3.38	3.21	5.0
LPM08297	PYX	UG2HW	3.40	3.27	3.9
LPM08298	PYX	UG2HW	3.41	3.29	3.6
LPM08299	PYX	UG2HW	3.45	3.34	3.3
LPM08300	PYX	UG2HW	3.39	3.20	5.7
LPM08301	PYX	UG2HW	3.41	3.30	3.2
LPM08302	PYX	UG2HW	3.43	3.20	7.1
LPM08303	FPYX	UG2HW	3.28	3.19	2.7
LPM08304	FPYX	UG2HW	3.34	3.26	2.4
LPM08305	FPYX	UG2HW	3.35	3.28	2.3
LPM08306	FPYX	UG2HW	3.30	3.26	1.3
LPM08307	FPYX	UG2HW	3.33	3.21	3.5
LPM08308	FPYX	UG2HW	3.34	3.25	2.6
LPM08309	FPYX	UG2HW	3.28	3.16	3.6
LPM08310	FPYX	UG2HW	3.42	3.24	5.4
LPM08311	FPYX	UG2HW	3.46	3.26	6.1
LPM08312	FPYX	UG2HW	3.49	3.26	6.8
LPM08313	FPYX	UG2HW	3.49	3.25	7.1
LPM08314	FPYX	UG2HW	3.53	3.25	8.4
LPM08315	FPYX	UG2HW	3.42	3.27	4.4
LPM08316	FPYX	UG2HW	3.43	3.25	5.5
LPM08317	FPYX	UG2HW	3.42	3.27	4.6
LPM08318	FPYX	UG2HW	3.45	3.26	5.6
LPM08319	FPYX	UG2HW	3.48	3.28	6.0
LPM08320	FPYX	UG2HW	3.41	3.28	4.0
LPM08321	FPYX	UG2HW	3.41	3.29	3.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08322	FPYX	UG2HW	3.44	3.25	5.5
LPM08323	POIKAN	UG2HW	2.98	2.72	9.3
LPM08324	POIKAN	UG2HW	2.82	2.71	4.2
LPM08325	POIKAN	UG2HW	3.06	2.92	4.8
LPM08326	POIKAN	UG2HW	2.84	2.71	4.6
LPM08327	POIKAN	UG2HW	2.92	2.71	7.6
LPM08328	FPYX	UG2HW	3.32	3.21	3.4
LPM08329	FPYX	UG2HW	3.36	3.22	4.3
LPM08330	FPYX	UG2HW	3.06	2.79	9.2
LPM08331	FPYX	UG2HW	3.46	3.24	6.4
LPM08332	FPYX	UG2HW	3.48	3.26	6.6
LPM08333	FPYX	UG2HW	3.48	3.30	5.2
LPM08334	FPYX	UG2HW	3.36	3.24	3.5
LPM08335	FPYX	UG2HW	3.36	3.24	3.6
LPM08336	FPYX	UG2HW	3.34	3.25	2.6
LPM08337	OTHER	UG2HW	3.22	3.07	4.7
LPM08338	OTHER	UG2HW	3.19	3.10	2.9
LPM08339	OTHER	UG2HW	3.49	3.28	6.2
LPM08340	PYX	UG2HW	3.37	3.19	5.6
LPM08341	PYX	UG2HW	3.41	3.28	4.0
LPM08342	PYX	UG2HW	3.32	3.24	2.6
LPM08343	PYX	UG2HW	3.32	3.29	1.0
LPM08344	PYX	UG2HW	3.34	3.27	2.2
LPM08345	PYX	UG2HW	3.35	3.16	5.6
LPM08346	PYX	UG2HW	3.35	3.33	0.7
LPM08347	PYX	UG2HW	3.34	3.24	3.0
LPM08348	OTHER	UG2HW	3.33	3.24	2.7
LPM08349	PYX	UG2HW	3.34	3.28	1.8
LPM08350		UG2HW	3.40	3.27	3.8
LPM08351		UG2HW	3.42	3.23	5.6
LPM08352		UG2HW	3.40	3.26	4.2
LPM08353		UG2HW	3.40	3.25	4.6
LPM08354		UG2HW	3.41	3.26	4.5
LPM08355	PYX	UG2HW	3.45	3.27	5.3
LPM08356	PYX	UG2HW	3.42	3.35	2.2
LPM08357	PYX	UG2HW	3.44	3.28	4.7
LPM08358	PYX	UG2HW	3.40	3.28	3.7
LPM08359	PYX	UG2HW	3.42	3.30	3.5
LPM08360	PYX	UG2HW	3.44	3.30	4.3
LPM08361	PYX	UG2HW	3.43	3.32	3.4
LPM08362	PYX	UG2HW	3.44	3.08	10.8
LPM08363	PYX	UG2HW	3.42	3.28	4.2
LPM08364	PYX	UG2HW	3.44	3.29	4.6
LPM08365	PYX	UG2HW	3.41	3.32	2.6
LPM08366	PYX	UG2HW	3.41	3.34	2.1
LPM08367	PYX	UG2HW	3.41	3.31	2.9
LPM08368	PYX	UG2HW	3.41	3.29	3.6
LPM08369	PYX	UG2HW	3.40	3.29	3.3
LPM08370	PYX	UG2HW	3.44	3.28	4.9
LPM08371	PYX	UG2HW	3.46	3.31	4.4
LPM08372	PYX	UG2HW	3.45	3.30	4.4
LPM08373	PYX	UG2HW	3.43	3.31	3.5
LPM08374	PYX	UG2HW	3.43	3.35	2.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08375		UG2HW	3.41	3.27	4.2
LPM08376		UG2HW	3.43	3.29	4.1
LPM08377		UG2HW	3.41	3.26	4.5
LPM08378		UG2HW	3.35	3.19	4.8
LPM08379		UG2HW	3.41	3.26	4.4
LPM08380		UG2HW	3.39	3.24	4.4
LPM08381		UG2HW	3.40	3.25	4.6
LPM08382		UG2HW	3.39	3.25	4.2
LPM08383		UG2HW	3.37	3.25	3.8
LPM08384		UG2HW	3.46	3.36	3.0
LPM08385	PYX	UG2HW	3.49	3.29	5.8
LPM08386	PYX	UG2HW	3.48	3.33	4.5
LPM08387	PYX	UG2HW	3.48	3.29	5.5
LPM08388	PYX	UG2HW	3.47	3.28	5.5
LPM08389	PYX	UG2HW	3.48	3.29	5.6
LPM08390	PYX	UG2HW	3.53	3.31	6.4
LPM08391	PYX	UG2HW	3.52	3.31	6.3
LPM08392	PYX	UG2HW	3.53	3.30	6.5
LPM08393	PYX	UG2HW	3.51	3.28	6.7
LPM08394	PYX	UG2HW	3.52	3.29	6.7
LPM08395	PYX	UG2HW	3.43	3.24	5.6
LPM08396	PYX	UG2HW	3.44	3.25	5.6
LPM08397	PYX	UG2HW	3.45	3.29	4.9
LPM08398	PYX	UG2HW	3.46	3.26	6.0
LPM08399	PYX	UG2HW	3.46	3.28	5.3
LPM08400	PYX	UG2HW	3.43	3.26	5.0
LPM08401	PYX	UG2HW	3.42	3.27	4.4
LPM08402	PYX	UG2HW	3.44	3.28	4.9
LPM08403	PYX	UG2HW	3.24	3.32	-2.5
LPM08404	PYX	UG2HW	3.42	3.30	3.6
LPM08405	PYX	UG2HW	3.41	3.31	3.0
LPM08406	PYX	UG2HW	3.41	3.31	2.9
LPM08407	PYX	UG2HW	3.40	3.28	3.7
LPM08408	PYX	UG2HW	3.34	3.31	0.8
LPM08409	PYX	UG2HW	3.46	3.31	4.4
LPM08410	PYX	UG2HW	3.48	3.30	5.4
LPM08411	PYX	UG2HW	3.45	3.29	4.7
LPM08412	PYX	UG2HW	3.42	3.26	4.7
LPM08413	PYX	UG2HW	3.40	3.24	4.8
LPM08414	PYX	UG2HW	3.39	3.02	11.5
LPM08415	PYX	UG2HW	3.41	3.17	7.2
LPM08416	PYX	UG2HW	3.40	3.24	4.7
LPM08417	PYX	UG2HW	3.39	3.27	3.5
LPM08418	PYX	UG2HW	3.37	3.25	3.7
LPM08419	PYX	UG2HW	3.37	3.27	3.0
LPM08420	PYX	UG2HW	3.38	3.28	3.1
LPM08421	PYX	UG2HW	3.43	3.26	5.0
LPM08422	PYX	UG2HW	3.44	3.25	5.7
LPM08423	PYX	UG2HW	3.44	3.28	4.8
LPM08424	PYX	UG2HW	3.44	3.28	4.9
LPM08425	PYX	UG2HW	3.40	3.29	3.2
LPM08426	PYX	UG2HW	3.47	3.28	5.7
LPM08427	PYX	UG2HW	3.44	3.26	5.2

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08428	PYX	UG2HW	3.42	3.28	4.2
LPM08429	PYX	UG2HW	3.45	3.28	5.2
LPM08430	PYX	UG2HW	3.49	3.30	5.7
LPM08431	PYX	UG2HW	3.49	3.30	5.6
LPM08432	PYX	UG2HW	3.48	3.30	5.3
LPM08433	PYX	UG2HW	3.48	3.29	5.6
LPM08434	PYX	UG2HW	3.46	3.27	5.8
LPM08435	PYX	UG2HW	3.49	3.30	5.7
LPM08436	PYX	UG2HW	3.49	3.30	5.5
LPM08437	PYX	UG2HW	3.50	3.29	6.3
LPM08438	PYX	UG2HW	3.48	3.29	5.7
LPM08439	PYX	UG2HW	3.47	3.29	5.5
LPM08440	PYX	UG2HW	3.45	3.29	4.7
LPM08441	PYX	UG2HW	3.45	3.29	4.8
LPM08442	PYX	UG2HW	3.45	3.27	5.4
LPM08443	PYX	UG2HW	3.44	3.27	5.0
LPM08444	PYX	UG2HW	3.44	3.02	12.9
LPM08445	PYX	UG2HW	3.44	3.27	5.0
LPM08446	PYX	UG2HW	3.45	3.27	5.4
LPM08447	PYX	UG2HW	3.47	3.27	6.0
LPM08448	PYX	UG2HW	3.46	3.24	6.6
LPM08449	PYX	UG2HW	3.43	3.27	4.7
LPM08450		UG2HW	3.44	3.27	5.0
LPM08451		UG2HW	3.46	3.30	4.9
LPM08452		UG2HW	3.46	3.29	5.0
LPM08453		UG2HW	3.45	3.27	5.5
LPM08454		UG2HW	3.47	3.25	6.4
LPM08455		UG2HW	3.48	3.28	5.8
LPM08456		UG2HW	3.48	3.28	5.9
LPM08457		UG2HW	3.44	3.31	3.9
LPM08458		UG2HW	3.46	3.24	6.7
LPM08459		UG2HW	3.46	3.23	6.8
LPM08460	PYX	UG2HW	3.41	3.22	5.8
LPM08461	PYX	UG2HW	3.42	3.24	5.4
LPM08462	PYX	UG2HW	3.43	3.21	6.7
LPM08463	PYX	UG2HW	3.45	3.27	5.5
LPM08464	PYX	UG2HW	3.46	3.29	5.2
LPM08465	PYX	UG2HW	3.46	3.29	5.2
LPM08466	PYX	UG2HW	3.42	3.24	5.5
LPM08467	PYX	UG2HW	3.41	3.22	5.6
LPM08468	PYX	UG2HW	3.45	3.25	5.9
LPM08469	PYX	UG2HW	3.45	3.26	5.8
LPM08470	PYX	UG2HW	3.47	3.24	6.8
LPM08471	PYX	UG2HW	3.41	3.24	5.2
LPM08472	PYX	UG2HW	3.44	3.31	3.7
LPM08473	PYX	UG2HW	3.43	3.11	9.8
LPM08474	PYX	UG2HW	3.46	3.28	5.5
LPM08475	PYX	UG2HW	3.38	3.30	2.5
LPM08476	PYX	UG2HW	3.38	3.30	2.3
LPM08477	PYX	UG2HW	3.37	3.28	2.6
LPM08478	PYX	UG2HW	3.38	3.29	2.8
LPM08479	PYX	UG2HW	3.48	3.29	5.8
LPM08480	PYX	UG2HW	3.49	3.30	5.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM08481	PYX	UG2HW	3.42	3.27	4.5
LPM08482	PYX	UG2HW	3.33	3.17	5.0
LPM08483	PYX	UG2HW	3.44	3.25	5.6
LPM08484	PYX	UG2HW	3.43	3.23	5.9
LPM08485	PYX	UG2HW	3.43	3.12	9.3
LPM08486	PYX	UG2HW	3.44	3.31	4.0
LPM08487	PYX	UG2HW	3.43	3.27	4.7
LPM08488	PYX	UG2HW	3.42	3.25	5.0
LPM08489	PYX	UG2HW	3.43	3.30	3.9
LPM08490	PYX	UG2HW	3.40	3.43	-0.8
LPM08491	PYX	UG2HW	3.35	3.17	5.5
LPM08492	PYX	UG2HW	3.28	3.18	3.2
LPM08493	PYX	UG2HW	3.34	3.21	3.9
LPM08494	PYX	UG2HW	3.28	3.19	2.7
LPM08495	PYX	UG2HW	3.57	3.24	9.6
LPM08496	PYX	UG2HW	3.58	3.29	8.5
LPM08497	PYX	UG2HW	3.58	3.30	8.2
LPM08498	PYX	UG2HW	3.40	3.27	3.9
LPM08499	PYX	UG2HW	3.43	3.29	4.1
LPM08500	PYX	UG2HW	3.41	3.25	4.8
LPM08501	PYX	UG2HW	3.45	3.27	5.3
LPM08502	PYX	UG2HW	3.49	3.33	4.7
LPM08503	PYX	UG2HW	3.43	3.25	5.5
LPM08504	PYX	UG2HW	3.43	3.27	4.9
LPM08505	PYX	UG2HW	3.45	3.27	5.4
LPM08506	FPYX	UG2HW	3.34	3.26	2.6
LPM08507	FPYX	UG2HW	3.35	3.26	2.6
LPM08508	FPYX	UG2HW	3.39	3.28	3.3
LPM08509	FPYX	UG2HW	3.35	3.24	3.3
LPM08510	FPYX	UG2HW	3.34	3.28	1.8
LPM08511	FPYX	UG2HW	3.33	3.25	2.5
LPM08512	FPYX	UG2HW	3.34	3.25	2.6
LPM08513	FPYX	UG2HW	3.54	3.20	10.0
LPM08514	FPYX	UG2HW	3.57	3.27	8.8
LPM08515	FPYX	UG2HW	3.46	3.29	5.2
LPM08516	FPYX	UG2HW	3.46	3.27	5.8
LPM08517	FPYX	UG2HW	3.51	3.27	7.0
LPM08518	FPYX	UG2HW	3.48	3.26	6.5
LPM08519	FPYX	UG2HW	3.39	3.26	4.0
LPM08520	FPYX	UG2HW	3.31	3.27	1.0
LPM08521	FPYX	UG2HW	3.30	3.27	0.9
LPM08522	FPYX	UG2HW	3.55	3.26	8.4
LPM08523	FPYX	UG2HW	3.55	3.24	9.0
LPM08524	FPYX	UG2HW	3.53	3.20	9.8
LPM08525	FPYX	UG2HW	3.45	3.26	5.7
LPM08526	FPYX	UG2HW	3.45	3.25	5.8
LPM08527	FPYX	UG2HW	3.43	3.23	6.1
LPM08528	FPYX	UG2HW	3.46	3.24	6.5
LPM08529	FPYX	UG2HW	3.48	3.25	6.9
LPM08530	PYX	UG2HW	3.41	3.30	3.4
LPM08531	PYX	UG2HW	3.42	3.28	4.2
LPM08532	PYX	UG2HW	3.38	3.27	3.3
LPM08533	PYX	UG2HW	3.39	3.24	4.4

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08534	PYX	UG2HW	3.37	3.26	3.2
LPM08535	PYX	UG2HW	3.37	3.26	3.3
LPM08536	FPYX	UG2HW	3.41	3.27	3.9
LPM08537	FPYX	UG2HW	3.37	3.21	4.9
LPM08538	FPYX	UG2HW	3.37	3.29	2.3
LPM08539	FPYX	UG2HW	3.33	3.15	5.6
LPM08540	FPYX	UG2HW	3.44	3.27	5.1
LPM08541	FPYX	UG2HW	3.34	3.27	2.2
LPM08542	PYX	UG2HW	3.47	3.26	6.2
LPM08543	PYX	UG2HW	3.45	3.26	5.7
LPM08544	PYX	UG2HW	3.46	3.27	5.7
LPM08545	PYX	UG2HW	3.42	3.25	5.2
LPM08546	PYX	UG2HW	3.46	3.24	6.6
LPM08547	PYX	UG2HW	3.47	3.27	5.9
LPM08548	PYX	UG2HW	3.46	3.20	7.7
LPM08549	PYX	UG2HW	3.47	3.25	6.5
LPM08550	PYX	UG2HW	3.42	3.25	5.2
LPM08551	PYX	UG2HW	3.46	3.29	5.1
LPM08552	PYX	UG2HW	3.44	3.28	4.8
LPM08553	PYX	UG2HW	3.44	3.28	4.8
LPM08554	PYX	UG2HW	3.46	3.28	5.3
LPM08555	PYX	UG2HW	3.44	3.29	4.3
LPM08556	PYX	UG2HW	3.42	3.30	3.5
LPM08557	PYX	UG2HW	3.45	3.29	4.9
LPM08558	PYX	UG2HW	3.42	3.15	8.3
LPM08559	PYX	UG2HW	3.47	3.12	10.8
LPM08560	PYX	UG2HW	3.43	3.19	7.3
LPM08561	PYX	UG2HW	3.40	3.22	5.6
LPM08562	PYX	UG2HW	3.45	3.24	6.3
LPM08563	PYX	UG2HW	3.51	3.27	7.1
LPM08564	PYX	UG2HW	3.46	3.21	7.6
LPM08565	PYX	UG2HW	3.48	3.20	8.3
LPM08566	PYX	UG2HW	3.44	3.20	7.2
LPM08567	PYX	UG2HW	3.44	3.24	5.9
LPM08568	PYX	UG2HW	3.44	3.24	6.0
LPM08569	PYX	UG2HW	3.44	3.28	4.9
LPM08570	PYX	UG2HW	3.43	3.18	7.7
LPM08571	PYX	UG2HW	3.46	3.27	5.7
LPM08572	PYX	UG2HW	3.44	3.26	5.2
LPM08573	PYX	UG2HW	3.49	3.26	7.0
LPM08574	PYX	UG2HW	3.50	3.28	6.5
LPM08575	PYX	UG2HW	3.49	3.29	6.0
LPM08576	PYX	UG2HW	3.49	3.13	10.9
LPM08577	PYX	UG2HW	3.36	3.20	5.0
LPM08578	PYX	UG2HW	3.29	3.06	7.3
LPM08579	PYX	UG2HW	3.57	3.29	8.2
LPM08580	PYX	UG2HW	3.58	3.29	8.4
LPM08581	PYX	UG2HW	3.59	3.29	8.6
LPM08582	PYX	UG2HW	3.56	3.27	8.4
LPM08583	PYX	UG2HW	3.56	3.27	8.5
LPM08584	PYX	UG2HW	3.52	3.29	6.7
LPM08585	PYX	UG2HW	3.49	3.30	5.7
LPM08586	PYX	UG2HW	3.51	3.32	5.6

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM08587	PYX	UG2HW	3.52	3.28	7.2
LPM08588	PYX	UG2HW	3.51	3.25	7.7
LPM08589	PYX	UG2HW	3.42	3.22	6.0
LPM08590	PYX	UG2HW	3.44	3.19	7.5
LPM08591	PYX	UG2HW	3.40	3.17	6.8
LPM08592	PYX	UG2HW	3.42	3.19	6.9
LPM08593	PYX	UG2HW	3.45	3.21	7.3
LPM08594	PYX	UG2HW	3.41	3.18	7.1
LPM08595	PYX	UG2HW	3.41	3.17	7.4
LPM08596	PYX	UG2HW	3.40	3.19	6.5
LPM08597	PYX	UG2HW	3.34	3.16	5.7
LPM08598	PYX	UG2HW	3.34	3.21	3.9
LPM08599	PYX	UG2HW	3.35	3.21	4.4
LPM08600	PYX	UG2HW	3.37	3.16	6.3
LPM08601	PYX	UG2HW	3.36	3.22	4.3
LPM08602	PYX	UG2HW	3.36	3.22	4.3
LPM08603	PYX	UG2HW	3.29	3.18	3.3
LPM08604	PYX	UG2HW	3.29	3.18	3.4
LPM08605	PYX	UG2HW	3.37	3.25	3.6
LPM08606	PYX	UG2HW	3.37	3.25	3.6
LPM08607	PYX	UG2HW	3.33	3.39	-1.8
LPM08608	PYX	UG2HW	3.33	3.39	-1.8
LPM08609	PYX	UG2HW	3.41	3.28	3.7
LPM08610	PYX	UG2HW	3.41	3.27	3.9
LPM08611	PYX	UG2HW	3.43	3.16	8.1
LPM08612	PYX	UG2HW	3.43	3.26	5.1
LPM08613	PYX	UG2HW	3.37	3.26	3.2
LPM08614	PYX	UG2HW	3.25	3.11	4.5
LPM08615	PYX	UG2HW	3.23	3.14	2.8
LPM08616	PYX	UG2HW	3.30	3.22	2.4
LPM08617	PYX	UG2HW	3.06	3.00	2.0
LPM08618	CR	UG2HW	3.69	3.32	10.7
LPM08619	OTHER	UG2HW	2.84	2.77	2.5
LPM08620	PYX	UG2HW	3.39	3.20	5.6
LPM08621	PYX	UG2HW	3.38	3.17	6.4
LPM08622	PYX	UG2HW	3.39	3.27	3.5
LPM08623	PYX	UG2HW	3.40	3.26	4.2
LPM08624	PYX	UG2HW	3.38	3.20	5.4
LPM08625	PYX	UG2HW	3.36	3.22	4.1
LPM08626	PYX	UG2HW	3.37	3.23	4.1
LPM08627	PYX	UG2HW	3.45	3.20	7.3
LPM08628	PYX	UG2HW	3.45	3.23	6.7
LPM08629	PYX	UG2HW	3.52	3.26	7.6
LPM08630	PYX	UG2HW	3.56	3.28	8.2
LPM08631	PYX	UG2HW	3.56	3.25	9.0
LPM08632	PYX	UG2HW	3.48	3.20	8.3
LPM08633	PYX	UG2HW	3.51	3.25	7.6
LPM08634	PYX	UG2HW	3.49	3.26	6.7
LPM08635	PYX	UG2HW	3.50	3.25	7.3
LPM08636	PYX	UG2HW	3.54	3.21	9.9
LPM08637	PYX	UG2HW	3.50	3.23	8.2
LPM08638	PYX	UG2HW	3.53	3.22	9.3
LPM08639	PYX	UG2HW	3.54	3.21	9.7

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08640	PYX	UG2HW	3.50	3.18	9.5
LPM08641	CR	UG2HW	3.64	3.14	14.7
LPM08642	PYX	UG2HW	3.27	3.12	4.8
LPM08643	PYX	UG2HW	3.38	3.23	4.6
LPM08644	PYX	UG2HW	3.38	3.24	4.2
LPM08645	PYX	UG2HW	3.41	3.26	4.6
LPM08646	PYX	UG2HW	3.41	3.27	4.3
LPM08647	PYX	UG2HW	3.20	3.06	4.4
LPM08648	PYX	UG2HW	3.28	3.11	5.2
LPM08649	PYX	UG2HW	3.35	3.28	2.1
LPM08650	PYX	UG2HW	3.34	3.27	2.2
LPM08651	PYX	UG2HW	3.17	3.06	3.4
LPM08652	PYX	UG2HW	3.46	3.29	5.1
LPM08653	PYX	UG2HW	3.44	3.28	4.9
LPM08654	PYX	UG2HW	3.45	3.25	6.1
LPM08655	PYX	UG2HW	3.36	3.19	5.1
LPM08656	PYX	UG2HW	3.49	3.30	5.7
LPM08657	PYX	UG2HW	3.44	3.22	6.6
LPM08658	PYX	UG2HW	3.27	3.24	0.6
LPM08659	PYX	UG2HW	3.40	3.26	4.1
LPM08660	PYX	UG2HW	3.27	3.25	0.7
LPM08661	PYX	UG2HW	3.27	3.26	0.3
LPM08662	PYX	UG2HW	3.28	3.26	0.6
LPM08663	PYX	UG2HW	3.26	3.16	3.1
LPM08664	PYX	UG2HW	3.13	3.13	0.1
LPM08665	PYX	UG2HW	3.21	3.27	-1.7
LPM08666	PYX	UG2HW	3.16	3.21	-1.7
LPM08667	PYX	UG2HW	3.17	3.26	-2.9
LPM08668	PYX	UG2HW	3.18	3.22	-1.2
LPM08669	PYX	UG2HW	3.13	3.22	-2.8
LPM08670	N	UG2HW	3.10	2.94	5.2
LPM08671	PYX	UG2HW	3.42	3.20	6.7
LPM08672	PYX	UG2HW	3.29	3.09	6.2
LPM08673	PYX	UG2HW	3.46	3.27	5.5
LPM08674	PYX	UG2HW	3.42	3.21	6.3
LPM08675	PYX	UG2HW	3.44	3.22	6.5
LPM08676	PYX	UG2HW	3.45	3.24	6.1
LPM08677	PYX	UG2HW	3.43	3.22	6.2
LPM08678	PYX	UG2HW	3.43	3.27	4.9
LPM08679	PYX	UG2HW	3.41	3.24	5.0
LPM08680	PYX	UG2HW	3.41	3.38	0.8
LPM08681	PYX	UG2HW	3.41	3.39	0.5
LPM08682	PYX	UG2HW	3.40	3.23	5.2
LPM08683	PYX	UG2HW	3.45	3.25	6.1
LPM08684	PYX	UG2HW	3.41	3.20	6.5
LPM08685	PYX	UG2HW	3.42	3.23	5.7
LPM08686	PYX	UG2HW	3.32	3.13	5.8
LPM08687	PYX	UG2HW	3.28	3.06	7.0
LPM08688	PYX	UG2HW	3.52	3.27	7.3
LPM08689	PYX	UG2HW	3.44	3.21	6.9
LPM08690	PYX	UG2HW	3.41	3.15	7.9
LPM08691	PYX	UG2HW	3.42	3.18	7.3
LPM08692	PYX	UG2HW	3.42	3.19	7.1

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Grabner Millled density	Driekop Density	AVRD
LPM08693	PYX	UG2HW	3.58	3.35	6.6
LPM08694	PYX	UG2HW	3.46	3.28	5.3
LPM08695	PYX	UG2HW	3.46	3.28	5.4
LPM08696	PYX	UG2HW	3.46	3.28	5.3
LPM08697	PYX	UG2HW	3.44	3.27	5.2
LPM08698	PYX	UG2HW	3.47	3.24	6.8
LPM08699	PYX	UG2HW	3.46	3.27	5.5
LPM08700	PYX	UG2HW	3.44	3.24	5.9
LPM08701	PYX	UG2HW	3.40	3.25	4.4
LPM08702	PYX	UG2HW	3.45	3.23	6.5
LPM08703	PYX	UG2HW	3.43	3.27	4.7
LPM08704	PYX	UG2HW	3.40	3.24	4.9
LPM08705	PYX	UG2HW	3.39	3.20	5.8
LPM08706	PYX	UG2HW	3.28	3.28	0.0
LPM08707	PYX	UG2HW	3.36	3.26	3.0
LPM08708	PYX	UG2HW	3.35	3.28	2.1
LPM08709	PYX	UG2HW	3.42	3.23	5.6
LPM08710	PYX	UG2HW	3.33	3.19	4.3
LPM08711	PYX	UG2HW	3.38	3.16	6.6
LPM08712	PYX	UG2HW	3.40	3.26	4.3
LPM08713	PYX	UG2HW	3.46	3.29	5.1
LPM08714	PYX	UG2HW	3.51	3.28	6.8
LPM08715	PYX	UG2HW	3.51	3.30	6.1
LPM08716	PYX	UG2HW	3.56	3.29	8.0
LPM08717	PYX	UG2HW	3.56	3.22	10.1
LPM08718	PYX	UG2HW	3.52	3.30	6.5
LPM08719	PYX	UG2HW	3.51	3.20	9.2
LPM08720	PYX	UG2HW	3.33	3.07	8.2
LPM08721	PYX	UG2HW	3.59	3.32	7.8
LPM08722	PYX	UG2HW	3.44	3.25	5.8
LPM08723	PYX	UG2HW	3.42	3.24	5.3
LPM08724	PYX	UG2HW	3.44	3.12	9.7
LPM08725	PYX	UG2HW	3.21	3.04	5.3
LPM08726	PYX	UG2HW	3.42	3.26	4.7
LPM08727	PYX	UG2HW	3.46	3.27	5.5
LPM08728	PYX	UG2HW	3.43	3.26	5.0
LPM08729	PYX	UG2HW	3.44	3.28	4.8
LPM08730	PYX	UG2HW	3.43	3.31	3.7
LPM08731	PYX	UG2HW	3.28	3.15	4.0
LPM08732	PYX	UG2HW	3.26	2.97	9.2
LPM08733	PYX	UG2HW	3.24	2.96	9.2
LPM08734	PYX	UG2HW	3.24	3.04	6.2
LPM08735	PYX	UG2HW	3.43	3.24	5.8
LPM08736	PYX	UG2HW	3.38	3.24	4.3
LPM08737	PYX	UG2HW	3.38	3.23	4.6
LPM08738	PYX	UG2HW	3.35	3.25	3.0
LPM08739	PYX	UG2HW	3.26	3.11	4.6
LPM08740	PYX	UG2HW	3.40	3.22	5.4
LPM08741	PYX	UG2HW	3.31	3.22	2.7
LPM08742	PYX	UG2HW	3.22	3.14	2.4
LPM08743	PYX	UG2HW	3.51	3.15	10.6
LPM08744	PYX	UG2HW	3.44	3.11	10.0
LPM08745	PYX	UG2HW	3.57	3.25	9.3

Table B 4. LPM dataset, outliers removed.

LPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Grabner Millled density**	**Driekop Density**	**AVRD**
LPM08746	PYX	UG2HW	3.69	3.27	12.1
LPM08747	PYX	UG2HW	3.53	3.25	8.3
LPM08748	PYX	UG2HW	3.34	3.18	4.9
LPM08749	PYX	UG2HW	3.42	3.40	0.7
LPM08750	PYX	UG2HW	3.47	3.25	6.4
LPM08751	PYX	UG2HW	3.47	3.25	6.5
LPM08752	PYX	UG2HW	3.47	3.24	6.8
LPM08753	PYX	UG2HW	3.44	3.20	7.1
LPM08754	PYX	UG2HW	3.44	3.24	6.0
LPM08755	PYX	UG2HW	3.42	3.23	5.8
LPM08756	PYX	UG2HW	3.42	3.22	5.9
LPM08757	PYX	UG2HW	3.39	3.27	3.7
LPM08758	PYX	UG2HW	3.28	3.26	0.7
LPM08759	PYX	UG2HW	3.48	3.25	6.8
LPM08760	PYX	UG2HW	3.50	3.27	6.9
LPM08761	PYX	UG2HW	3.46	3.27	5.7
LPM08762	PYX	UG2HW	3.46	3.28	5.4
LPM08763	PYX	UG2HW	3.32	3.20	3.8
LPM08764	FPYX	UG2HW	3.21	3.08	4.3
LPM08765	FPYX	UG2HW	3.18	2.91	9.0
LPM08766	FPYX	UG2HW	2.75	2.84	-3.3
LPM08767	PYX	UG2HW	3.40	3.30	2.9
LPM08768	PYX	UG2HW	3.41	3.28	4.0
LPM08769	PYX	UG2HW	3.32	3.22	2.9
LPM08770	PYX	UG2HW	3.35	3.27	2.5
LPM08771	PYX	UG2HW	3.37	3.32	1.6
LPM08772	PYX	UG2HW	3.46	3.21	7.4
LPM08773	PYX	UG2HW	3.45	3.25	5.9
LPM08774	PYX	UG2HW	3.49	3.24	7.2
LPM08775	PYX	UG2HW	3.44	3.24	5.9
LPM08776	PYX	UG2HW	3.44	3.25	5.8

Table B 5. LPM dataset descriptive statistics with the outliers removed.

LPM outliers removed dataset descriptive statistics					
Driekop dataset statistics		**Grabner Milled dataset statistics**		**AVRD**	
Mean	3.291	Mean	3.470	Mean	5.276
Standard Error	0.003	Standard Error	0.004	Standard Error	0.031
Median	3.229	Median	3.400	Median	5.144
Mode	3.250	Mode	3.410	Mode	1.470
Standard Deviation	0.320	Standard Deviation	0.352	Standard Deviation	2.858
Sample Variance	0.102	Sample Variance	0.124	Sample Variance	8.166
Kurtosis	2.206	Kurtosis	2.283	Kurtosis	1.013
Skewness	1.578	Skewness	1.546	Skewness	0.203
Range	2.013	Range	2.080	Range	19.481
Minimum	2.645	Minimum	2.750	Minimum	-4.447
Maximum	4.658	Maximum	4.830	Maximum	15.034
Count	8776	Count	8776	Count	8776
Confidence Level (95.0%)	0.007	Confidence Level (95.0%)	0.007	Confidence Level (95.0%)	0.060

LPM − MR Sampling cut AVRD frequency histogram data						
Bin (%)	*MRHW AVRD Frequency (No. Samples)*	*MR AVRD Frequency (No. Samples)*	*MRFW AVRD Frequency (No. Samples)*	*MRHW AVRD Frequency (%)*	*MR AVRD Frequency (%)*	*MRFW AVRD Frequency (%)*
-20	0	0	0	0.00	0.00	0.00
-19	0	0	0	0.00	0.00	0.00
-18	0	0	0	0.00	0.00	0.00
-17	0	0	0	0.00	0.00	0.00
-16	0	0	0	0.00	0.00	0.00
-15	0	0	0	0.00	0.00	0.00
-14	0	0	0	0.00	0.00	0.00
-13	0	0	0	0.00	0.00	0.00
-12	0	0	0	0.00	0.00	0.00
-11	0	0	0	0.00	0.00	0.00
-10	0	0	0	0.00	0.00	0.00
-9	0	0	0	0.00	0.00	0.00
-8	0	0	0	0.00	0.00	0.00
-7	0	0	0	0.00	0.00	0.00
-6	0	0	0	0.00	0.00	0.00
-5	0	0	0	0.00	0.00	0.00
-4	0	1	1	0.00	0.16	0.04
-3	1	0	5	0.10	0.00	0.22
-2	0	1	9	0.00	0.16	0.40
-1	4	5	9	0.39	0.80	0.40
0	5	5	21	0.49	0.80	0.93
1	15	10	65	1.46	1.60	2.89
2	55	20	112	5.34	3.21	4.98
3	70	60	176	6.80	9.62	7.83
4	137	91	311	13.31	14.58	13.83
5	245	97	418	23.81	15.54	18.59
6	187	118	416	18.17	18.91	18.51
7	133	80	265	12.93	12.82	11.79
8	71	38	157	6.90	6.09	6.98
9	42	33	104	4.08	5.29	4.63
10	26	18	53	2.53	2.88	2.36
11	14	15	45	1.36	2.40	2.00
12	8	9	29	0.78	1.44	1.29
13	4	12	25	0.39	1.92	1.11
14	6	5	17	0.58	0.80	0.76
15	6	4	10	0.58	0.64	0.44
16	0	2	0	0.00	0.32	0.00
17	0	0	0	0.00	0.00	0.00
18	0	0	0	0.00	0.00	0.00
19	0	0	0	0.00	0.00	0.00
20	0	0	0	0.00	0.00	0.00
More	0	0	0	0.00	0.00	0.00
TOTAL	1029	624	2248	100	100	100

LPM UG2 Sampling cut AVRD histogram data						
Bin (%)	*UG2HW AVRD Frequency (No. Samples)*	*UG2 AVRD Frequency (No. Samples)*	*UG2FW AVRD Frequency (No. Samples)*	*UG2HW AVRD Frequency (%)*	*UG2 AVRD Frequency (%)*	*UG2FW AVRD Frequency (%)*
-20	0	0	0	0.00	0.00	0.00
-19	0	0	0	0.00	0.00	0.00
-18	0	0	0	0.00	0.00	0.00
-17	0	0	0	0.00	0.00	0.00
-16	0	0	0	0.00	0.00	0.00
-15	0	0	0	0.00	0.00	0.00
-14	0	0	0	0.00	0.00	0.00
-13	0	0	0	0.00	0.00	0.00
-12	0	0	0	0.00	0.00	0.00
-11	0	0	0	0.00	0.00	0.00
-10	0	0	0	0.00	0.00	0.00
-9	0	0	0	0.00	0.00	0.00
-8	0	0	0	0.00	0.00	0.00
-7	0	0	0	0.00	0.00	0.00
-6	0	0	0	0.00	0.00	0.00
-5	0	0	0	0.00	0.00	0.00
-4	1	8	4	0.11	0.63	0.15
-3	2	16	5	0.21	1.25	0.19
-2	4	24	13	0.43	1.88	0.49
-1	12	22	24	1.29	1.72	0.90
0	11	36	42	1.18	2.82	1.58
1	26	43	55	2.79	3.37	2.06
2	14	46	125	1.50	3.60	4.69
3	76	80	200	8.15	6.26	7.50
4	123	94	331	13.20	7.36	12.42
5	175	129	465	18.78	10.10	17.44
6	203	144	458	21.78	11.28	17.18
7	127	153	368	13.63	11.98	13.80
8	59	147	214	6.33	11.51	8.03
9	40	104	146	4.29	8.14	5.48
10	32	83	72	3.43	6.50	2.70
11	14	62	55	1.50	4.86	2.06
12	5	37	38	0.54	2.90	1.43
13	4	26	32	0.43	2.04	1.20
14	2	13	9	0.21	1.02	0.34
15	2	9	10	0.21	0.70	0.38
16	0	1	0	0.00	0.08	0.00
17	0	0	0	0.00	0.00	0.00
18	0	0	0	0.00	0.00	0.00
19	0	0	0	0.00	0.00	0.00
20	0	0	0	0.00	0.00	0.00
More	0	0	0	0.00	0.00	0.00
TOTAL	932	1277	2666	100	100	100

Table B 8. Descriptive statistics for the GPM raw dataset.

GPM raw dataset descriptive statistics					
Driekop dataset statistics		**Grabner Milled dataset statistics**		**AVRD**	
Mean	3.273	Mean	3.460	Mean	5.527
Standard Error	0.006	Standard Error	0.006	Standard Error	0.088
Median	3.232	Median	3.400	Median	5.163
Mode	3.000	Mode	3.410	Mode	4.878
Standard Deviation	0.348	Standard Deviation	0.375	Standard Deviation	5.325
Sample Variance	0.121	Sample Variance	0.140	Sample Variance	28.360
Kurtosis	2.816	Kurtosis	2.439	Kurtosis	32.985
Skewness	1.491	Skewness	1.547	Skewness	1.530
Range	3.380	Range	2.245	Range	109.485
Minimum	1.954	Minimum	2.720	Minimum	-37.099
Maximum	5.334	Maximum	4.965	Maximum	72.386
Count	3626	Count	3626	Count	3626
Confidence Level (95.0%)	0.011	Confidence Level (95.0%)	0.012	Confidence Level(95.0%)	0.173

Table B 9. GPM outlier parameters.

LPM standard deviations from mean			
Number of standard deviations from the mean	**Driekop**	**Grabner Milled**	**AVRD**
3	4.260	4.542	15.049
2	3.938	4.186	11.808
1	3.615	3.830	8.567
0	3.293	3.475	5.325
-1	2.971	3.119	2.084
-2	2.648	2.763	-1.157
-3	2.326	2.407	-4.398

Table B 10. List of GPM outliers that were rem

GPM dataset outliers					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Millled density**	**AVRD**
GPM03553	CR	UG2	4.04	3.53	-13.36
GPM03554	FPYX	UG2HW	3.27	4.94	40.67
GPM03555	MER	MR	3.29	2.86	-14.06
GPM03556	FPYX	MRHW	1.97	3.32	50.92
GPM03557	POIKAN	MRHW	2.25	2.86	23.87
GPM03558	POIKFPYX	UG2HW	3.98	3.42	-15.17
GPM03559	CR	UG2	5.25	4.10	-24.62
GPM03560	CR	UG2	5.33	4.36	-20.10
GPM03561	CR	UG2	4.76	4.15	-13.71
GPM03562	PEGFPYX	UG2FW	4.11	3.47	-16.92
GPM03563	PEGFPYX	UG2FW	4.26	3.59	-16.98
GPM03564	POIKPYX	UG2FW	3.80	3.40	-11.07
GPM03565	POIKPYX	UG2FW	4.10	3.41	-18.28
GPM03566	PYX	MRFW	1.95	3.31	51.51
GPM03567	POIKPYX	UG2HW	4.16	3.43	-19.28
GPM03568	PEGFPYX	UG2FW	4.07	3.44	-16.78
GPM03569	PEGFPYX	UG2FW	4.09	3.49	-15.92
GPM03570	PP	UG2FW	3.95	3.41	-14.68
GPM03571	PP	UG2FW	3.80	3.39	-11.29
GPM03572	N	MRHW	3.43	3.03	-12.52
GPM03573	N	MRHW	3.82	3.11	-20.51
GPM03574	POIKPYX	MRHW	4.31	3.43	-22.84
GPM03575	MR	MR	3.92	3.51	-11.10
GPM03576	MR	MR	3.89	3.39	-13.68
GPM03577	MR	MR	4.35	3.44	-23.57
GPM03578	MR	MR	3.91	3.40	-14.07
GPM03579	GN	MRFW	4.44	3.13	-34.57
GPM03580	GN	MRFW	4.27	3.12	-31.18
GPM03581	POIKPYX	MRHW	4.17	3.42	-19.73
GPM03582	MR	MR	4.69	3.47	-29.86
GPM03583	MR	MR	4.65	3.42	-30.49
GPM03584	MR	MR	4.00	3.39	-16.47
GPM03585	MR	MR	4.95	3.40	-37.10
GPM03586	MR	MR	4.08	3.40	-18.12
GPM03587	MR	MR	3.92	3.38	-14.70
GPM03588	GN	MRFW	4.21	3.01	-33.29
GPM03589	GN	MRFW	3.97	3.07	-25.56
GPM03590	FPYX	UG2HW	3.30	4.71	35.24
GPM03591	MR	MR	3.99	3.36	-17.31
GPM03592	CR	UG2	4.05	3.31	-20.22
GPM03593	CR	UG2	4.05	3.29	-20.63
GPM03594	CR	UG2	4.07	3.34	-19.80
GPM03595	FPYX	UG2FW	3.43	4.30	22.53
GPM03596	FPYX	UG2FW	3.26	4.74	37.15
GPM03597	FPYX	UG2HW	3.22	4.97	42.65
GPM03598	CR	UG2	4.01	3.36	-17.70
GPM03599	CR	UG2	4.11	3.41	-18.60
GPM03600	FPYX	UG2FW	3.21	4.30	29.07
GPM03601	FPYX	UG2FW	3.21	4.66	36.90
GPM03602	MR	MR	3.12	4.11	27.35
GPM03603	FPYX	MRFW	3.27	4.23	25.54
GPM03604	FPYX	MRHW	3.22	4.06	23.09
GPM03605	MR	MR	3.17	3.95	21.97

Table B 10. List of GPM outliers that were rem

GPM dataset outliers					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Millled density**	**AVRD**
GPM03606	MR	MR	3.15	4.10	26.20
GPM03607	MR	MR	3.22	4.08	23.45
GPM03608	MR	MR	3.28	4.08	21.81
GPM03609	VTAN	MRHW	2.83	3.60	23.93
GPM03610	FPYX	UG1FW	3.44	4.75	31.96
GPM03611	CR	UG2	3.16	4.05	24.78
GPM03612	FPYX	UG2FW	2.06	3.32	47.04
GPM03613	DUP	UG2FW	2.69	3.77	33.50
GPM03614	CR	UG2	2.49	4.63	59.87
GPM03615	FPYX	UG2HW	2.55	3.43	29.35
GPM03616	FPYX	UG2HW	2.72	3.47	24.29
GPM03617	FPYX	UG2HW	2.61	3.48	28.57
GPM03618	CR	UG2	2.23	4.56	68.73
GPM03619	FPYX	UG2HW	3.28	4.83	38.24
GPM03620	CR	UG2	2.26	4.83	72.39
GPM03621	CR	UG2	2.61	4.91	61.13
GPM03622	CR	UG2	4.20	3.36	-22.32
GPM03623	FPYX	UG2FW	2.84	3.75	27.46
GPM03624	CR	UG2	3.79	3.20	-16.92
GPM03625	FPYX	UG2HW	3.25	4.47	31.58
GPM03626	CR	UG2	4.33	3.76	-14.15

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00001	PYX	MR	2.99	3.23	7.78
GPM00002	PYX	MR	3.16	3.26	3.02
GPM00003	PYX	MR	3.23	3.36	3.83
GPM00004	PYX	MR	3.26	3.43	5.20
GPM00005	PYX	MR	3.18	3.19	0.42
GPM00006	PYX	MR	3.08	3.32	7.59
GPM00007	PYX	MR	3.23	3.30	2.16
GPM00008	PYX	MR	3.22	3.32	3.14
GPM00009	PYX	MR	3.27	3.07	-6.46
GPM00010	PYX	MR	3.25	3.50	7.19
GPM00011	PYX	MR	3.22	3.47	7.53
GPM00012	PYX	MR	3.32	3.51	5.52
GPM00013	PYX	MR	3.42	3.50	2.15
GPM00014	PYX	MR	3.27	3.46	5.54
GPM00015	PYX	MR	3.47	3.58	3.12
GPM00016	PYX	MR	3.30	3.53	6.66
GPM00017	PYX	MR	3.21	3.51	8.98
GPM00018	PYX	MR	3.21	3.52	9.14
GPM00019	PYX	MR	3.26	3.58	9.41
GPM00020	PYX	MR	3.28	3.58	8.50
GPM00021	PYX	MR	3.34	3.41	2.17
GPM00022	PYX	MR	3.29	3.40	3.35
GPM00023	PYX	MR	3.26	3.39	3.86
GPM00024	PYX	MR	3.28	3.35	2.11
GPM00025	PYX	MR	3.29	3.38	2.82
GPM00026	PYX	MR	3.25	3.34	2.60
GPM00027	PYX	MR	3.33	3.49	4.58
GPM00028	PYX	MR	3.23	3.37	4.21
GPM00029	PYX	MR	3.11	3.44	10.01
GPM00030	PYX	MR	3.22	3.46	7.11
GPM00031	PYX	MR	3.15	3.43	8.65
GPM00032	PYX	MR	3.31	3.54	6.78
GPM00033	PYX	MR	3.28	3.47	5.67
GPM00034	PYX	MR	3.25	3.44	5.70
GPM00035	PYX	MR	3.04	3.49	13.78
GPM00036	PYX	MR	3.24	3.48	7.23
GPM00037	PYX	MR	3.19	3.48	8.80
GPM00038	PYX	MR	3.08	3.49	12.55
GPM00039	PYX	MR	3.28	3.47	5.52
GPM00040	PYX	MR	3.24	3.44	5.85
GPM00041	PYX	MR	3.30	3.52	6.35
GPM00042	PYX	MR	3.28	3.48	5.91
GPM00043	PYX	MR	3.34	3.54	5.95
GPM00044	PYX	MR	3.27	3.49	6.44
GPM00045	PYX	MR	3.26	3.48	6.65
GPM00046	PYX	MR	3.30	3.43	3.87
GPM00047	PYX	MR	3.31	3.49	5.19
GPM00048	PYX	MR	3.32	3.47	4.38
GPM00049	PYX	MR	3.30	3.50	5.88

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00050	PYX	MR	3.25	3.46	6.24
GPM00051	PYX	MR	3.24	3.45	6.28
GPM00052	PYX	MR	3.26	3.47	6.16
GPM00053	PYX	MR	3.25	3.56	9.03
GPM00054	PYX	MR	3.25	3.56	9.09
GPM00055	PYX	MR	3.22	3.53	9.26
GPM00056	PYX	MR	3.30	3.70	11.43
GPM00057	PYX	MR	3.32	3.66	9.81
GPM00058	PYX	MR	3.33	3.71	10.70
GPM00059	PYX	MR	3.35	3.73	10.68
GPM00060	PYX	MR	3.27	3.53	7.76
GPM00061	PYX	MR	3.31	3.49	5.31
GPM00062	PYX	MR	3.28	3.44	4.83
GPM00063	PYX	MR	3.35	3.42	2.09
GPM00064	PYX	MR	3.27	3.47	5.82
GPM00065	PYX	MR	3.36	3.51	4.50
GPM00066	PYX	MR	3.31	3.52	6.08
GPM00067	PYX	MR	3.28	3.42	4.25
GPM00068	PYX	MR	3.27	3.46	5.74
GPM00069	PYX	MR	3.25	3.46	6.19
GPM00070	PYX	MR	3.28	3.46	5.21
GPM00071	PYX	MR	3.22	3.45	6.76
GPM00072	PYX	MR	3.25	3.43	5.49
GPM00073	PYX	MR	3.26	3.46	5.90
GPM00074	PYX	MR	3.28	3.39	3.34
GPM00075	PYX	MR	3.23	3.35	3.53
GPM00076	PYX	MR	3.38	3.45	2.08
GPM00077	MER	MR	3.09	3.21	3.87
GPM00078	MER	MR	3.23	3.35	3.75
GPM00079	MER	MR	3.23	3.35	3.60
GPM00080	MER	MR	3.21	3.34	4.01
GPM00081	MER	MR	3.21	3.40	5.77
GPM00082	MER	MR	3.24	3.39	4.57
GPM00083	MER	MR	3.26	3.36	2.96
GPM00084	MER	MR	3.25	3.37	3.55
GPM00085	MER	MR	3.34	3.42	2.32
GPM00086	MER	MR	3.29	3.42	3.84
GPM00087	MER	MR	3.29	3.37	2.31
GPM00088	FPYX	MR	3.22	3.45	6.80
GPM00089	FPYX	MR	3.23	3.43	6.15
GPM00090	FPYX	MR	3.27	3.54	7.94
GPM00091	FPYX	MR	3.28	3.60	9.31
GPM00092	FPYX	MR	3.29	3.54	7.36
GPM00093	FPYX	MR	3.20	3.47	8.12
GPM00094	FPYX	MR	3.23	3.48	7.45
GPM00095	PYX	MR	3.25	3.49	7.04
GPM00096	PYX	MR	3.24	3.42	5.36
GPM00097	PYX	MR	3.23	3.45	6.55
GPM00098	PYX	MR	3.25	3.44	5.82

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00099	PYX	MR	2.86	3.00	4.87
GPM00100	PYX	MR	3.32	3.51	5.43
GPM00101	PYX	MR	3.30	3.60	8.81
GPM00102	PYX	MR	3.28	3.44	4.89
GPM00103	PYX	MR	3.13	3.30	5.20
GPM00104	PYX	MR	3.17	3.36	5.90
GPM00105	PYX	MR	3.07	3.35	8.86
GPM00106	PYX	MR	3.18	3.28	2.99
GPM00107	PYX	MR	3.29	3.32	0.98
GPM00108	PYX	MR	3.23	3.32	2.84
GPM00109	PYX	MR	3.20	3.40	6.21
GPM00110	PYX	MR	3.20	3.39	5.83
GPM00111	PYX	MR	3.15	3.39	7.31
GPM00112	PYX	MR	3.18	3.36	5.63
GPM00113	PYX	MR	3.20	3.43	6.97
GPM00114	PYX	MR	3.13	3.30	5.22
GPM00115	PYX	MR	3.21	3.38	5.22
GPM00116	PYX	MR	3.25	3.38	4.01
GPM00117	PYX	MR	3.22	3.31	2.69
GPM00118	PYX	MR	3.19	3.31	3.55
GPM00119	PYX	MR	3.11	3.44	10.14
GPM00120	PYX	MR	3.22	3.38	4.98
GPM00121	PYX	MR	3.30	3.39	2.81
GPM00122	FPYX	MR	3.31	3.36	1.63
GPM00123	FPYX	MR	3.23	3.35	3.53
GPM00124	FPYX	MR	3.26	3.36	3.11
GPM00125	FPYX	MR	3.24	3.35	3.24
GPM00126	FPYX	MR	3.28	3.35	2.26
GPM00127	FPYX	MR	3.32	3.47	4.38
GPM00128	FPYX	MR	3.34	3.42	2.39
GPM00129	FPYX	MR	3.25	3.37	3.52
GPM00130	FPYX	MR	3.26	3.41	4.64
GPM00131	FPYX	MR	3.28	3.46	5.05
GPM00132	FPYX	MR	3.26	3.34	2.29
GPM00133	FPYX	MR	3.25	3.34	2.84
GPM00134	FPYX	MR	3.26	3.34	2.34
GPM00135	FPYX	MR	3.23	3.34	3.27
GPM00136	FR	MR	3.26	3.39	3.94
GPM00137	FPYX	MR	3.26	3.37	3.26
GPM00138	FPYX	MR	3.24	3.40	4.86
GPM00139	FPYX	MR	3.23	3.40	5.00
GPM00140	FPYX	MR	3.40	3.39	-0.26
GPM00141	FPYX	MR	3.28	3.40	3.59
GPM00142	FPYX	MR	3.37	3.43	1.77
GPM00143	FPYX	MR	3.25	3.37	3.68
GPM00144	FPYX	MR	3.24	3.37	3.82
GPM00145	FPYX	MR	3.28	3.53	7.34
GPM00146	FPYX	MR	3.18	3.41	6.94
GPM00147	FPYX	MR	3.27	3.34	2.10

Table B 11. GPM dataset, outliers remove

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GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00148	FPYX	MR	3.22	3.34	3.77
GPM00149	FPYX	MR	3.21	3.34	3.84
GPM00150	FPYX	MR	3.22	3.38	4.79
GPM00151	FPYX	MR	3.27	3.40	3.84
GPM00152	PYX	MR	3.31	3.34	0.78
GPM00153	PYX	MR	3.27	3.36	2.53
GPM00154	PYX	MR	3.24	3.32	2.56
GPM00155	PYX	MR	3.28	3.36	2.33
GPM00156	PYX	MR	3.28	3.36	2.33
GPM00157	PYX	MR	3.26	3.33	2.20
GPM00158	PYX	MR	3.27	3.35	2.38
GPM00159	PYX	MR	3.29	3.38	2.71
GPM00160	PYX	MR	3.22	3.54	9.39
GPM00161	PYX	MR	3.34	3.48	4.13
GPM00162	PYX	MR	3.35	3.52	4.72
GPM00163	PYX	MR	3.37	3.53	4.67
GPM00164	PYX	MR	3.30	3.51	6.23
GPM00165	PYX	MR	3.21	3.45	7.35
GPM00166	PYX	MR	3.31	3.51	5.90
GPM00167	PYX	MR	3.39	3.48	2.71
GPM00168	PYX	MR	3.14	3.35	6.60
GPM00169	PYX	MR	3.28	3.44	4.73
GPM00170	PYX	MR	3.26	3.45	5.64
GPM00171	PYX	MR	3.30	3.48	5.41
GPM00172	PYX	MR	3.27	3.49	6.53
GPM00173	PYX	MR	3.25	3.40	4.40
GPM00174	PYX	MR	3.24	3.40	4.70
GPM00175	PYX	MR	3.26	3.40	4.32
GPM00176	PYX	MR	3.30	3.46	4.75
GPM00177	PYX	MR	3.28	3.49	6.19
GPM00178	PYX	MR	3.27	3.47	5.82
GPM00179	PYX	MR	3.27	3.48	6.22
GPM00180	PYX	MR	3.25	3.43	5.09
GPM00181	PYX	MR	3.32	3.52	5.79
GPM00182	PYX	MR	3.10	3.18	2.51
GPM00183	PYX	MR	3.12	3.48	10.83
GPM00184	PYX	MR	3.29	3.50	6.05
GPM00185	PYX	MR	3.30	3.51	6.23
GPM00186	PYX	MR	3.28	3.49	6.16
GPM00187	PYX	MR	3.31	3.56	7.16
GPM00188	PYX	MR	3.27	3.47	5.82
GPM00189	PYX	MR	3.33	3.47	4.21
GPM00190	PYX	MR	3.16	3.35	5.83
GPM00191	PYX	MR	3.26	3.48	6.43
GPM00192	PYX	MR	3.31	3.46	4.42
GPM00193	PYX	MR	3.16	3.30	4.44
GPM00194	PYX	MR	3.26	3.48	6.67
GPM00195	PYX	MR	3.27	3.54	7.92
GPM00196	PYX	MR	3.11	3.22	3.35

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00197	PYX	MR	3.03	3.17	4.55
GPM00198	PYX	MR	3.29	3.32	0.80
GPM00199	PYX	MR	3.14	3.29	4.53
GPM00200	PYX	MR	3.14	3.33	5.87
GPM00201	PYX	MR	3.27	3.37	2.97
GPM00202	PYX	MR	3.23	3.38	4.44
GPM00203	PYX	MR	3.27	3.39	3.35
GPM00204	PYX	MR	3.24	3.37	4.02
GPM00205	PYX	MR	3.22	3.37	4.65
GPM00206	PYX	MR	3.22	3.31	2.68
GPM00207	PYX	MR	3.22	3.35	3.82
GPM00208	PYX	MR	3.23	3.37	4.12
GPM00209	PYX	MR	3.26	3.38	3.56
GPM00210	PYX	MR	3.04	3.05	0.43
GPM00211	PYX	MR	3.08	3.11	0.71
GPM00212	PYX	MR	3.11	3.22	3.33
GPM00213	PYX	MR	3.17	3.24	2.24
GPM00214	PYX	MR	3.25	3.35	3.02
GPM00215	PYX	MR	3.27	3.34	2.12
GPM00216	PYX	MR	3.25	3.35	2.96
GPM00217	PYX	MR	3.23	3.36	4.02
GPM00218	PYX	MR	3.12	3.22	3.21
GPM00219	PYX	MR	3.22	3.32	3.08
GPM00220	PYX	MR	3.23	3.33	3.19
GPM00221	PYX	MR	3.25	3.35	3.16
GPM00222	PYX	MR	3.24	3.34	3.11
GPM00223	PYX	MR	3.26	3.35	2.62
GPM00224	PYX	MR	3.27	3.34	1.97
GPM00225	PYX	MR	3.28	3.35	2.02
GPM00226	PYX	MR	3.29	3.35	1.70
GPM00227	PYX	MR	3.22	3.32	3.14
GPM00228	PYX	MR	3.26	3.35	2.63
GPM00229	PYX	MR	3.21	3.34	4.09
GPM00230	PYX	MR	3.24	3.35	3.33
GPM00231	PYX	MR	3.21	3.35	4.39
GPM00232	PYX	MR	3.20	3.36	4.84
GPM00233	PYX	MR	3.29	3.38	2.75
GPM00234	PYX	MR	3.30	3.44	4.30
GPM00235	PYX	MR	3.29	3.45	4.90
GPM00236	PYX	MR	3.23	3.48	7.49
GPM00237	PYX	MR	3.20	3.33	3.86
GPM00238	PYX	MR	3.19	3.33	4.34
GPM00239	PYX	MR	3.26	3.40	4.30
GPM00240	PYX	MR	3.31	3.43	3.50
GPM00241	PYX	MR	3.25	3.36	3.32
GPM00242	PYX	MR	3.27	3.50	6.95
GPM00243	PYX	MR	3.28	3.47	5.73
GPM00244	PYX	MR	3.25	3.46	6.15
GPM00245	PYX	MR	3.26	3.47	6.26

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00246	PYX	MR	3.24	3.46	6.49
GPM00247	PYX	MR	3.26	3.50	7.16
GPM00248	PYX	MR	3.33	3.54	6.24
GPM00249	PYX	MR	3.24	3.45	6.19
GPM00250	PYX	MR	3.24	3.46	6.69
GPM00251	PYX	MR	3.21	3.46	7.39
GPM00252	PYX	MR	3.22	3.47	7.33
GPM00253	PYX	MR	3.25	3.47	6.67
GPM00254	PYX	MR	3.23	3.44	6.16
GPM00255	PYX	MR	3.33	3.53	5.72
GPM00256	PYX	MR	3.26	3.43	5.12
GPM00257	PYX	MR	3.23	3.41	5.45
GPM00258	PYX	MR	3.24	3.42	5.32
GPM00259	PYX	MR	3.24	3.36	3.53
GPM00260	PYX	MR	3.24	3.32	2.35
GPM00261	PYX	MR	3.22	3.30	2.46
GPM00262	PYX	MR	3.10	3.25	4.86
GPM00263	PYX	MR	3.03	3.20	5.31
GPM00264	PYX	MR	3.30	3.47	5.05
GPM00265	PYX	MR	3.27	3.41	4.34
GPM00266	PYX	MR	3.24	3.38	4.09
GPM00267	PYX	MR	3.22	3.34	3.65
GPM00268	PYX	MR	3.28	3.42	4.12
GPM00269	PYX	MR	3.23	3.38	4.41
GPM00270	PYX	MR	3.21	3.37	4.80
GPM00271	PYX	MR	3.21	3.39	5.49
GPM00272	PYX	MR	3.20	3.43	6.72
GPM00273	PYX	MR	3.26	3.43	5.12
GPM00274	PYX	MR	3.13	3.43	9.22
GPM00275	PYX	MR	3.22	3.41	5.59
GPM00276	PYX	MR	3.22	3.40	5.46
GPM00277	PYX	MR	3.23	3.41	5.22
GPM00278	PYX	MR	3.20	3.42	6.71
GPM00279	PYX	MR	3.20	3.43	6.84
GPM00280	PYX	MR	3.20	3.46	7.82
GPM00281	PYX	MR	3.31	3.48	4.97
GPM00282	PYX	MR	3.24	3.40	4.83
GPM00283	PYX	MR	3.15	3.37	6.74
GPM00284	PYX	MR	3.23	3.39	4.69
GPM00285	PYX	MR	3.31	3.43	3.67
GPM00286	PYX	MR	3.29	3.47	5.31
GPM00287	PYX	MR	3.19	3.42	7.04
GPM00288	PYX	MR	3.24	3.43	5.68
GPM00289	PYX	MR	3.22	3.47	7.55
GPM00290	PYX	MR	3.29	3.53	7.02
GPM00291	PYX	MR	3.28	3.50	6.57
GPM00292	PYX	MR	3.12	3.52	11.97
GPM00293	PYX	MR	3.29	3.52	6.65
GPM00294	PYX	MR	3.24	3.54	8.75

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00295	PYX	MR	3.24	3.55	9.17
GPM00296	PYX	MR	3.24	3.52	8.15
GPM00297	PYX	MR	3.20	3.51	9.25
GPM00298	PYX	MR	3.34	3.48	3.98
GPM00299	PYX	MR	3.27	3.42	4.51
GPM00300	PYX	MR	3.20	3.41	6.08
GPM00301	PYX	MR	3.26	3.39	3.90
GPM00302	PYX	MR	3.22	3.42	5.96
GPM00303	PYX	MR	3.27	3.43	4.73
GPM00304	PYX	MR	3.62	3.39	-6.59
GPM00305	PYX	MR	3.67	3.42	-7.08
GPM00306	PYX	MR	3.02	3.27	7.89
GPM00307	PYX	MR	3.28	3.47	5.55
GPM00308	PYX	MR	3.33	3.53	5.80
GPM00309	PYX	MR	3.32	3.56	6.94
GPM00310	PYX	MR	3.24	3.47	6.74
GPM00311	PYX	MR	3.21	3.48	8.02
GPM00312	PYX	MR	3.25	3.46	6.25
GPM00313	PYX	MR	3.26	3.48	6.44
GPM00314	PYX	MR	3.17	3.54	11.13
GPM00315	PYX	MR	3.26	3.48	6.49
GPM00316	PYX	MR	3.27	3.55	8.34
GPM00317	PYX	MR	3.24	3.51	8.02
GPM00318	PYX	MR	3.24	3.52	8.22
GPM00319	PYX	MR	3.24	3.38	4.21
GPM00320	PYX	MR	3.25	3.40	4.51
GPM00321	PYX	MR	3.25	3.43	5.41
GPM00322	PYX	MR	3.25	3.46	6.18
GPM00323	PYX	MR	3.20	3.43	7.02
GPM00324	PYX	MR	3.20	3.36	4.76
GPM00325	PYX	MR	3.31	3.56	7.23
GPM00326	PYX	MR	3.27	3.49	6.62
GPM00327	PYX	MR	3.24	3.49	7.53
GPM00328	PYX	MR	3.29	3.53	7.13
GPM00329	PYX	MR	3.37	3.53	4.65
GPM00330	PYX	MR	3.26	3.57	9.21
GPM00331	PYX	MR	3.14	3.33	5.84
GPM00332	PYX	MR	3.21	3.54	9.73
GPM00333	PYX	MR	3.24	3.50	7.81
GPM00334	PYX	MR	3.23	3.39	4.82
GPM00335	PYX	MR	3.27	3.44	5.09
GPM00336	PYX	MR	3.21	3.41	6.06
GPM00337	PYX	MR	3.22	3.42	6.03
GPM00338	PYX	MR	3.19	3.31	3.82
GPM00339	PYX	MR	3.28	3.33	1.62
GPM00340	PYX	MR	3.18	3.31	3.92
GPM00341	PYX	MR	3.31	3.35	1.27
GPM00342	PYX	MR	3.33	3.35	0.67
GPM00343	PYX	MR	3.19	3.39	5.93

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00344	PYX	MR	3.23	3.31	2.35
GPM00345	PYX	MR	3.24	3.36	3.69
GPM00346	PYX	MR	3.25	3.44	5.70
GPM00347	PYX	MR	3.25	3.48	6.85
GPM00348	PYX	MR	3.25	3.52	7.93
GPM00349	PYX	MR	3.29	3.48	5.73
GPM00350	PYX	MR	3.26	3.59	9.65
GPM00351	PYX	MR	3.25	3.58	9.79
GPM00352	PYX	MR	3.23	3.62	11.35
GPM00353	PYX	MR	3.23	3.66	12.40
GPM00354	PYX	MR	3.24	3.68	12.70
GPM00355	PYX	MR	3.32	3.38	1.72
GPM00356	PYX	MR	3.25	3.41	4.79
GPM00357	PYX	MR	3.25	3.41	4.84
GPM00358	PYX	MR	3.23	3.42	5.79
GPM00359	PYX	MR	3.25	3.45	5.82
GPM00360	PYX	MR	3.21	3.51	8.84
GPM00361	PYX	MR	3.29	3.53	6.90
GPM00362	PYX	MR	3.16	3.53	11.13
GPM00363	PYX	MR	3.28	3.35	1.88
GPM00364	PYX	MR	3.35	3.49	4.08
GPM00365	PYX	MR	3.23	3.08	-4.86
GPM00366	PYX	MR	3.27	3.41	4.29
GPM00367	PYX	MR	3.24	3.42	5.27
GPM00368	PYX	MR	3.23	3.40	5.00
GPM00369	PYX	MR	3.23	3.37	3.99
GPM00370	PYX	MR	3.26	3.36	2.99
GPM00371	PYX	MR	3.34	3.40	1.73
GPM00372	PYX	MR	3.29	3.42	3.74
GPM00373	PYX	MR	3.27	3.33	1.90
GPM00374	PYX	MR	3.24	3.35	3.28
GPM00375	PYX	MR	3.26	3.33	2.28
GPM00376	PYX	MR	3.24	3.34	2.96
GPM00377	PYX	MR	3.20	3.34	4.42
GPM00378	PYX	MR	3.28	3.40	3.67
GPM00379	PYX	MR	3.36	3.48	3.43
GPM00380	PYX	MR	3.27	3.49	6.46
GPM00381	PYX	MR	3.23	3.46	6.88
GPM00382	PYX	MR	3.09	3.46	11.25
GPM00383	PYX	MR	3.22	3.46	7.05
GPM00384	PYX	MR	3.25	3.47	6.53
GPM00385	PYX	MR	3.24	3.53	8.49
GPM00386	PYX	MR	3.23	3.55	9.56
GPM00387	PYX	MR	3.24	3.49	7.29
GPM00388	PYX	MR	3.25	3.45	6.04
GPM00389	PYX	MR	3.22	3.43	6.19
GPM00390	PYX	MR	3.15	3.39	7.23
GPM00391	PYX	MR	3.24	3.42	5.44
GPM00392	PYX	MR	3.20	3.41	6.38

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00393	PYX	MR	3.20	3.46	7.89
GPM00394	PYX	MR	3.23	3.46	6.97
GPM00395	PYX	MR	3.20	3.36	4.61
GPM00396	PYX	MR	3.23	3.34	3.40
GPM00397	PYX	MR	3.26	3.44	5.42
GPM00398	PYX	MR	3.27	3.40	3.96
GPM00399	PYX	MR	3.24	3.36	3.70
GPM00400	PYX	MR	3.22	3.23	0.27
GPM00401	PYX	MR	3.13	3.37	7.40
GPM00402	PYX	MR	3.06	3.28	6.96
GPM00403	PYX	MR	3.15	3.29	4.46
GPM00404	PYX	MR	3.11	3.30	5.80
GPM00405	PYX	MR	3.23	3.38	4.51
GPM00406	PYX	MR	3.21	3.43	6.58
GPM00407	PYX	MR	3.21	3.37	4.89
GPM00408	PYX	MR	3.29	3.40	3.31
GPM00409	PYX	MR	3.27	3.40	3.84
GPM00410	PYX	MR	3.23	3.34	3.47
GPM00411	PYX	MR	3.22	3.33	3.43
GPM00412	PYX	MR	3.23	3.32	2.90
GPM00413	PYX	MR	3.04	3.23	5.98
GPM00414	PYX	MR	3.15	3.31	4.87
GPM00415	PYX	MR	3.32	3.31	-0.43
GPM00416	PYX	MR	3.19	3.37	5.55
GPM00417	PYX	MR	3.33	3.54	6.06
GPM00418	PYX	MR	3.30	3.44	4.16
GPM00419	PYX	MR	3.23	3.41	5.51
GPM00420	PYX	MR	3.22	3.37	4.38
GPM00421	PYX	MR	3.21	3.40	5.64
GPM00422	PYX	MR	3.24	3.42	5.33
GPM00423	PYX	MR	3.21	3.37	4.79
GPM00424	PYX	MR	3.22	3.41	5.70
GPM00425	PYX	MR	3.19	3.52	9.73
GPM00426	PYX	MR	3.12	3.46	10.36
GPM00427	PYX	MR	3.23	3.40	5.15
GPM00428	PYX	MR	3.22	3.39	5.04
GPM00429	PYX	MR	3.19	3.34	4.55
GPM00430	PYX	MR	3.26	3.25	-0.43
GPM00431	PYX	MR	2.80	2.97	6.00
GPM00432	PYX	MR	3.23	3.39	4.98
GPM00433	PYX	MR	3.14	3.28	4.48
GPM00434	PYX	MR	3.17	3.40	7.00
GPM00435	PYX	MR	3.19	3.35	4.81
GPM00436	PYX	MR	3.25	3.38	3.86
GPM00437	PYX	MR	3.31	3.34	1.00
GPM00438	PYX	MR	3.27	3.37	3.12
GPM00439	PYX	MR	3.08	3.30	6.99
GPM00440	PYX	MR	3.13	3.30	5.19
GPM00441	PYX	MR	3.26	3.35	2.78

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00442	PYX	MR	3.29	3.41	3.48
GPM00443	PYX	MR	3.31	3.46	4.46
GPM00444	PYX	MR	3.28	3.44	4.70
GPM00445	PYX	MR	3.28	3.48	5.92
GPM00446	PYX	MR	3.32	3.49	5.06
GPM00447	PYX	MR	3.28	3.40	3.48
GPM00448	PYX	MR	3.25	3.46	6.23
GPM00449	PYX	MR	3.26	3.42	4.87
GPM00450	PYX	MR	3.22	3.46	7.20
GPM00451	MERENSKY	MR	3.28	3.51	6.63
GPM00452	MERENSKY	MR	2.89	3.42	16.89
GPM00453	MERENSKY	MR	3.29	3.37	2.37
GPM00454	MERENSKY	MR	3.23	3.42	5.73
GPM00455	MERENSKY	MR	3.26	3.44	5.27
GPM00456	MERENSKY	MR	3.23	3.44	6.14
GPM00457	MERENSKY	MR	3.26	3.48	6.45
GPM00458	MERENSKY	MR	3.25	3.47	6.42
GPM00459	MERENSKY	MR	3.27	3.50	6.85
GPM00460	MERENSKY	MR	3.28	3.52	7.07
GPM00461	MERENSKY	MR	3.24	3.46	6.69
GPM00462	MERENSKY	MR	3.20	3.46	7.85
GPM00463	MERENSKY	MR	3.22	3.44	6.50
GPM00464	MERENSKY	MR	3.25	3.46	6.19
GPM00465	MERENSKY	MR	3.30	3.50	5.95
GPM00466	PYX	MR	3.26	3.41	4.52
GPM00467	PYX	MR	3.29	3.39	3.01
GPM00468	PYX	MR	3.17	3.31	4.47
GPM00469	PYX	MR	3.14	3.31	5.24
GPM00470	PYX	MR	3.23	3.31	2.48
GPM00471	PYX	MR	3.21	3.34	3.82
GPM00472	PYX	MR	3.16	3.28	3.65
GPM00473	PYX	MR	3.20	3.36	4.89
GPM00474	PYX	MR	3.23	3.47	7.05
GPM00475	PYX	MR	3.26	3.73	13.42
GPM00476	PYX	MR	3.23	3.75	14.86
GPM00477	PYX	MR	3.22	3.88	18.60
GPM00478	PYX	MR	3.22	3.97	20.95
GPM00479	PYX	MR	3.20	3.38	5.59
GPM00480	PYX	MR	3.20	3.41	6.28
GPM00481	PYX	MR	3.23	3.54	9.30
GPM00482	PYX	MR	3.13	3.52	11.71
GPM00483	PYX	MR	3.24	3.69	13.08
GPM00484	PYX	MR	3.20	3.70	14.45
GPM00485	PYX	MR	3.22	3.83	17.25
GPM00486	PYX	MR	3.19	3.89	19.87
GPM00487	PYX	MR	3.24	3.98	20.61
GPM00488	PYX	MR	3.28	3.84	15.86
GPM00489	PYX	MR	3.21	3.90	19.34
GPM00490	PYX	MR	3.16	3.46	9.08

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00491	PYX	MR	3.21	3.55	10.08
GPM00492	PYX	MR	3.34	3.66	9.01
GPM00493	PYX	MR	3.42	3.75	9.26
GPM00494	PYX	MR	3.30	3.49	5.54
GPM00495	PYX	MR	3.36	3.50	4.10
GPM00496	PYX	MR	3.26	3.48	6.40
GPM00497	PYX	MR	3.30	3.55	7.44
GPM00498	PYX	MR	3.28	3.51	6.64
GPM00499	PYX	MR	3.35	3.60	7.22
GPM00500	PYX	MR	3.29	3.60	9.07
GPM00501	PYX	MR	3.40	3.59	5.30
GPM00502	PYX	MR	3.32	3.63	9.04
GPM00503	PYX	MR	3.34	3.53	5.58
GPM00504	PYX	MR	3.31	3.52	6.21
GPM00505	PYX	MR	3.29	3.45	4.84
GPM00506	PYX	MR	3.27	3.42	4.47
GPM00507	PYX	MR	3.25	3.42	5.16
GPM00508	PYX	MR	3.32	3.40	2.40
GPM00509	PYX	MR	3.27	3.43	4.75
GPM00510	PYX	MR	3.30	3.67	10.49
GPM00511	PYX	MR	3.32	3.42	3.07
GPM00512	PYX	MR	3.22	3.40	5.41
GPM00513	PYX	MR	3.26	3.40	4.12
GPM00514	PYX	MR	3.26	3.42	4.71
GPM00515	PYX	MR	3.28	3.48	5.86
GPM00516	PEGFPYX	MRFW	3.11	3.24	4.03
GPM00517	PEGFPYX	MRFW	3.18	3.36	5.63
GPM00518	PYX	MRFW	3.26	3.43	5.04
GPM00519	PYX	MRFW	3.22	3.41	5.67
GPM00520	PYX	MRFW	3.21	3.36	4.49
GPM00521	PYX	MRFW	3.25	3.41	4.73
GPM00522	PYX	MRFW	3.24	3.40	4.61
GPM00523	PYX	MRFW	3.21	3.40	5.62
GPM00524	PYX	MRFW	3.23	3.40	5.10
GPM00525	PYX	MRFW	3.25	3.33	2.29
GPM00526	PYX	MRFW	3.24	3.32	2.41
GPM00527	PYX	MRFW	3.25	3.34	2.66
GPM00528	PYX	MRFW	3.23	3.32	2.70
GPM00529	PYX	MRFW	3.25	3.32	2.08
GPM00530	PYX	MRFW	3.25	3.32	2.21
GPM00531	PYX	MRFW	3.23	3.33	2.93
GPM00532	PYX	MRFW	3.22	3.32	2.91
GPM00533	PYX	MRFW	3.21	3.33	3.61
GPM00534	PYX	MRFW	3.26	3.34	2.54
GPM00535	PYX	MRFW	3.27	3.35	2.42
GPM00536	PYX	MRFW	3.32	3.37	1.49
GPM00537	PYXAN	MRFW	2.71	2.79	2.86
GPM00538	PYXAN	MRFW	3.18	3.25	2.05
GPM00539	PEGFPYX	MRFW	2.92	3.04	3.90

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00540	PEGFPYX	MRFW	3.06	3.04	-0.55
GPM00541	PEGFPYX	MRFW	2.93	3.08	4.98
GPM00542	PYX	MRFW	3.14	3.27	3.93
GPM00543	PYX	MRFW	3.24	3.30	1.67
GPM00544	PYX	MRFW	3.23	3.25	0.72
GPM00545	PYX	MRFW	3.18	3.20	0.76
GPM00546	PYX	MRFW	3.14	3.34	6.27
GPM00547	PYX	MRFW	3.19	3.37	5.42
GPM00548	PYX	MRFW	3.25	3.39	4.24
GPM00549	PYX	MRFW	3.25	3.39	4.19
GPM00550	PYX	MRFW	3.26	3.38	3.74
GPM00551	PYX	MRFW	3.25	3.41	4.94
GPM00552	PYX	MRFW	3.25	3.41	4.65
GPM00553	PYX	MRFW	3.24	3.41	5.05
GPM00554	PYX	MRFW	3.25	3.40	4.50
GPM00555	PEGFPYX	MRFW	3.18	3.39	6.30
GPM00556	PEGFPYX	MRFW	3.26	3.41	4.42
GPM00557	N	MRFW	2.99	3.16	5.53
GPM00558	N	MRFW	2.98	3.16	5.81
GPM00559	PEGFPYX	MRFW	3.13	3.54	12.43
GPM00560	PEGFPYX	MRFW	3.10	3.43	10.25
GPM00561	N	MRFW	2.99	3.30	10.00
GPM00562	GN	MRFW	2.96	3.23	8.64
GPM00563	GN	MRFW	2.95	3.22	8.89
GPM00564	PEGFPYX	MRFW	3.31	3.44	3.89
GPM00565	PEGFPYX	MRFW	3.30	3.38	2.25
GPM00566	PEGFPYX	MRFW	3.33	3.49	4.64
GPM00567	PEGFPYX	MRFW	3.19	3.33	4.43
GPM00568	PEGFPYX	MRFW	3.32	3.42	2.86
GPM00569	PEGFPYX	MRFW	3.24	3.40	4.68
GPM00570	PYX	MRFW	3.26	3.38	3.59
GPM00571	PYX	MRFW	3.26	3.37	3.34
GPM00572	PYX	MRFW	3.32	3.42	2.96
GPM00573	PYX	MRFW	3.28	3.42	4.05
GPM00574	PYX	MRFW	3.30	3.41	3.39
GPM00575	PYX	MRFW	3.30	3.42	3.60
GPM00576	PYX	MRFW	3.29	3.37	2.25
GPM00577	PYX	MRFW	3.31	3.19	-3.56
GPM00578	PYX	MRFW	3.33	3.44	3.26
GPM00579	PYX	MRFW	3.34	3.44	2.91
GPM00580	PYX	MRFW	3.35	3.45	3.00
GPM00581	PYX	MRFW	3.32	3.45	3.83
GPM00582	PYX	MRFW	3.33	3.47	4.04
GPM00583	PYX	MRFW	3.32	3.46	4.15
GPM00584	PYX	MRFW	3.32	3.44	3.61
GPM00585	PYX	MRFW	3.31	3.44	3.71
GPM00586	PYX	MRFW	3.28	3.40	3.64
GPM00587	PYX	MRFW	3.27	3.41	4.30
GPM00588	PYX	MRFW	3.23	3.42	5.78

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00589	PYX	MRFW	3.26	3.40	4.21
GPM00590	PYX	MRFW	3.26	3.40	4.19
GPM00591	PYX	MRFW	3.26	3.41	4.36
GPM00592	PYX	MRFW	3.24	3.42	5.33
GPM00593	PYX	MRFW	3.24	3.41	5.24
GPM00594	PYX	MRFW	3.26	3.39	4.04
GPM00595	PYX	MRFW	3.27	3.42	4.40
GPM00596	PYX	MRFW	3.23	3.39	4.70
GPM00597	PYX	MRFW	3.26	3.41	4.51
GPM00598	PYX	MRFW	3.24	3.39	4.39
GPM00599	PYX	MRFW	3.25	3.40	4.40
GPM00600	PYX	MRFW	3.25	3.41	4.80
GPM00601	PYX	MRFW	3.24	3.41	5.01
GPM00602	PYX	MRFW	3.31	3.46	4.19
GPM00603	PYX	MRFW	3.35	3.51	4.69
GPM00604	PYX	MRFW	3.33	3.52	5.49
GPM00605	PYX	MRFW	3.27	3.42	4.62
GPM00606	PYX	MRFW	3.25	3.41	4.79
GPM00607	PYX	MRFW	3.26	3.42	4.57
GPM00608	PYX	MRFW	3.26	3.41	4.44
GPM00609	PYX	MRFW	3.26	3.43	5.01
GPM00610	PYX	MRFW	3.27	3.43	4.87
GPM00611	PYX	MRFW	3.27	3.42	4.46
GPM00612	PYX	MRFW	3.27	3.43	4.68
GPM00613	PYX	MRFW	3.27	3.43	4.91
GPM00614	PYX	MRFW	3.24	3.39	4.44
GPM00615	PYX	MRFW	3.27	3.41	4.24
GPM00616	PYX	MRFW	3.26	3.40	4.23
GPM00617	PYX	MRFW	3.06	3.27	6.48
GPM00618	PEGFPYX	MRFW	2.76	2.96	6.97
GPM00619	PEGFPYX	MRFW	2.80	2.92	4.17
GPM00620	PEGFPYX	MRFW	3.13	3.30	5.44
GPM00621	PEGFPYX	MRFW	3.16	3.24	2.49
GPM00622	PEGFPYX	MRFW	3.15	3.24	2.82
GPM00623	PEGFPYX	MRFW	2.95	3.06	3.79
GPM00624	PEGFPYX	MRFW	2.95	3.02	2.51
GPM00625	PEGFPYX	MRFW	3.03	3.13	3.34
GPM00626	PEGFPYX	MRFW	3.02	3.11	2.84
GPM00627	PEGFPYX	MRFW	3.06	3.14	2.71
GPM00628	PEGFPYX	MRFW	3.11	3.19	2.61
GPM00629	PEGFPYX	MRFW	3.03	3.00	-0.94
GPM00630	PEGFPYX	MRFW	3.04	3.06	0.73
GPM00631	PEGFPYX	MRFW	2.98	2.96	-0.59
GPM00632	PEGFPYX	MRFW	2.97	3.03	2.16
GPM00633	PEGFPYX	MRFW	3.02	3.07	1.59
GPM00634	PEGFPYX	MRFW	2.90	2.97	2.54
GPM00635	GN	MRFW	2.99	3.07	2.68
GPM00636	GN	MRFW	3.02	3.09	2.22
GPM00637	PEGFPYX	MRFW	3.26	3.34	2.58

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00638	PEGFPYX	MRFW	3.23	3.48	7.51
GPM00639	PYX	MRFW	3.17	3.18	0.41
GPM00640	PYX	MRFW	3.04	3.33	9.02
GPM00641	PYX	MRFW	3.21	3.44	7.00
GPM00642	PYX	MRFW	3.24	3.45	6.14
GPM00643	PYX	MRFW	3.28	3.47	5.65
GPM00644	PYX	MRFW	3.27	3.48	6.08
GPM00645	PYX	MRFW	3.31	3.51	5.74
GPM00646	PYX	MRFW	3.32	3.51	5.61
GPM00647	PYX	MRFW	3.24	3.50	7.57
GPM00648	PYX	MRFW	3.33	3.51	5.36
GPM00649	PYX	MRFW	3.30	3.52	6.31
GPM00650	PYX	MRFW	3.32	3.53	6.02
GPM00651	PYX	MRFW	3.34	3.51	5.05
GPM00652	PYX	MRFW	3.32	3.50	5.25
GPM00653	PYX	MRFW	3.30	3.48	5.22
GPM00654	PYX	MRFW	3.28	3.45	5.14
GPM00655	PEGFPYX	MRFW	3.16	3.34	5.47
GPM00656	PEGFPYX	MRFW	3.11	3.32	6.67
GPM00657	N	MRFW	3.03	3.16	4.27
GPM00658	N	MRFW	2.97	3.11	4.74
GPM00659	N	MRFW	2.99	3.12	4.39
GPM00660	GN	MRFW	2.97	3.10	4.37
GPM00661	GN	MRFW	2.96	3.08	4.10
GPM00662	GN	MRFW	2.95	3.08	4.26
GPM00663	GN	MRFW	2.96	3.08	4.04
GPM00664	GN	MRFW	2.95	3.08	4.04
GPM00665	GN	MRFW	2.98	3.09	3.77
GPM00666	GN	MRFW	2.94	3.09	4.93
GPM00667	GN	MRFW	2.92	3.07	4.87
GPM00668	GN	MRFW	2.96	3.07	3.53
GPM00669	PEGFPYX	MRFW	3.16	3.33	5.25
GPM00670	PEGFPYX	MRFW	3.11	3.39	8.58
GPM00671	GN	MRFW	2.99	3.17	5.80
GPM00672	GN	MRFW	2.99	3.16	5.60
GPM00673	FPYX	MRFW	3.19	3.59	11.88
GPM00674	FPYX	MRFW	3.11	3.43	9.83
GPM00675	N	MRFW	2.89	3.02	4.35
GPM00676	N	MRFW	2.88	3.02	4.70
GPM00677	N	MRFW	2.92	3.05	4.33
GPM00678	N	MRFW	2.94	3.13	6.01
GPM00679	N	MRFW	2.92	3.08	5.24
GPM00680	N	MRFW	2.94	3.08	4.57
GPM00681	FPYX	MRFW	3.18	3.56	11.28
GPM00682	N	MRFW	2.96	3.15	6.19
GPM00683	N	MRFW	2.89	3.05	5.35
GPM00684	N	MRFW	2.95	3.17	7.22
GPM00685	N	MRFW	3.00	3.20	6.38
GPM00686	N	MRFW	2.97	3.19	6.98

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00687	N	MRFW	2.96	3.18	7.00
GPM00688	FPYX	MRFW	3.22	3.54	9.51
GPM00689	N	MRFW	3.00	3.21	6.87
GPM00690	N	MRFW	3.00	3.19	5.98
GPM00691	N	MRFW	3.03	3.24	6.62
GPM00692	N	MRFW	2.97	3.16	6.22
GPM00693	N	MRFW	3.00	3.22	7.00
GPM00694	N	MRFW	3.00	3.22	7.12
GPM00695	FPYX	MRFW	3.21	3.40	5.85
GPM00696	FPYX	MRFW	3.16	3.38	6.74
GPM00697	FPYX	MRFW	3.22	3.40	5.49
GPM00698	FPYX	MRFW	3.23	3.44	6.21
GPM00699	FPYX	MRFW	3.22	3.41	5.75
GPM00700	FPYX	MRFW	3.15	3.33	5.50
GPM00701	FPYX	MRFW	3.06	3.32	8.16
GPM00702	FPYX	MRFW	3.04	3.22	5.68
GPM00703	FPYX	MRFW	2.84	3.02	6.18
GPM00704	FPYX	MRFW	3.22	3.43	6.32
GPM00705	FPYX	MRFW	3.21	3.43	6.65
GPM00706	FPYX	MRFW	3.16	3.39	7.13
GPM00707	FPYX	MRFW	3.19	3.37	5.54
GPM00708	FPYX	MRFW	3.22	3.33	3.29
GPM00709	FPYX	MRFW	3.62	3.29	-9.49
GPM00710	FPYX	MRFW	3.16	3.38	6.66
GPM00711	FPYX	MRFW	3.17	3.39	6.84
GPM00712	FPYX	MRFW	3.11	3.31	6.23
GPM00713	FPYX	MRFW	3.08	3.21	4.05
GPM00714	FPYX	MRFW	3.24	3.43	5.55
GPM00715	FPYX	MRFW	3.21	3.35	4.16
GPM00716	FPYX	MRFW	3.21	3.42	6.25
GPM00717	FPYX	MRFW	3.24	3.44	6.13
GPM00718	FPYX	MRFW	3.23	3.47	7.23
GPM00719	FPYX	MRFW	3.18	3.36	5.47
GPM00720	FPYX	MRFW	3.22	3.37	4.52
GPM00721	FPYX	MRFW	3.28	3.50	6.44
GPM00722	FPYX	MRFW	3.28	3.47	5.55
GPM00723	FPYX	MRFW	3.34	3.50	4.69
GPM00724	FPYX	MRFW	3.28	3.49	6.27
GPM00725	FPYX	MRFW	3.33	3.53	5.69
GPM00726	FPYX	MRFW	3.35	3.54	5.55
GPM00727	FPYX	MRFW	3.27	3.46	5.70
GPM00728	FPYX	MRFW	3.29	3.48	5.53
GPM00729	FPYX	MRFW	3.29	3.52	6.83
GPM00730	FPYX	MRFW	3.34	3.54	5.92
GPM00731	FPYX	MRFW	3.28	3.52	6.99
GPM00732	FPYX	MRFW	3.19	3.34	4.61
GPM00733	FPYX	MRFW	3.18	3.34	4.83
GPM00734	FPYX	MRFW	3.22	3.33	3.41
GPM00735	FPYX	MRFW	3.22	3.36	4.35

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00736	FPYX	MRFW	3.28	3.39	3.23
GPM00737	FPYX	MRFW	3.22	3.37	4.58
GPM00738	FPYX	MRFW	3.18	3.31	3.85
GPM00739	FPYX	MRFW	3.16	3.25	2.84
GPM00740	POIKPYX	MRFW	3.02	2.95	-2.45
GPM00741	POIKPYX	MRFW	2.82	2.89	2.32
GPM00742	POIKPYX	MRFW	2.83	2.93	3.39
GPM00743	N	MRFW	2.84	2.95	3.65
GPM00744	N	MRFW	2.87	2.94	2.53
GPM00745	N	MRFW	2.85	2.94	3.28
GPM00746	N	MRFW	2.82	2.90	2.69
GPM00747	N	MRFW	2.81	2.88	2.42
GPM00748	N	MRFW	2.83	2.89	2.27
GPM00749	N	MRFW	2.86	2.94	2.63
GPM00750	POIKAN	MRFW	2.79	2.91	4.08
GPM00751	POIKAN	MRFW	2.82	2.95	4.39
GPM00752	POIKAN	MRFW	2.80	2.93	4.69
GPM00753	N	MRFW	2.83	2.91	2.64
GPM00754	N	MRFW	2.85	2.94	3.01
GPM00755	N	MRFW	2.84	2.93	3.20
GPM00756	POIKAN	MRFW	2.83	2.92	3.13
GPM00757	POIKAN	MRFW	2.85	2.95	3.34
GPM00758	POIKAN	MRFW	2.82	2.94	3.99
GPM00759	POIKAN	MRFW	2.87	2.95	2.87
GPM00760	POIKAN	MRFW	2.73	3.00	9.47
GPM00761	POIKAN	MRFW	2.73	3.32	19.52
GPM00762	N	MRFW	2.81	3.00	6.62
GPM00763	N	MRFW	2.85	2.98	4.37
GPM00764	N	MRFW	2.81	2.96	5.16
GPM00765	POIKAN	MRFW	2.74	2.94	6.97
GPM00766	POIKAN	MRFW	2.81	2.93	4.33
GPM00767	POIKAN	MRFW	2.81	2.98	6.00
GPM00768	N	MRFW	2.81	2.98	5.72
GPM00769	N	MRFW	2.79	2.92	4.60
GPM00770	N	MRFW	2.77	2.92	5.41
GPM00771	N	MRFW	2.78	2.94	5.56
GPM00772	FPYX	MRFW	3.28	3.45	5.05
GPM00773	FPYX	MRFW	3.19	3.44	7.47
GPM00774	FPYX	MRFW	3.20	3.41	6.23
GPM00775	FPYX	MRFW	3.07	3.35	8.59
GPM00776	FPYX	MRFW	2.99	3.15	5.30
GPM00777	FPYX	MRFW	2.95	3.09	4.55
GPM00778	FPYX	MRFW	2.98	3.13	4.81
GPM00779	FPYX	MRFW	2.97	3.17	6.35
GPM00780	FPYX	MRFW	2.69	3.11	14.46
GPM00781	FPYX	MRFW	2.96	3.09	4.37
GPM00782	FPYX	MRFW	3.25	3.44	5.83
GPM00783	FPYX	MRFW	3.23	3.37	4.20
GPM00784	FPYX	MRFW	3.21	3.34	3.93

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00785	FPYX	MRFW	2.97	3.11	4.46
GPM00786	N	MRFW	2.90	3.15	8.31
GPM00787	N	MRFW	2.97	3.14	5.64
GPM00788	N	MRFW	2.99	3.15	5.19
GPM00789	N	MRFW	2.95	3.10	4.86
GPM00790	N	MRFW	2.88	3.11	7.77
GPM00791	PYX	MRFW	2.72	2.84	4.27
GPM00792	N	MRFW	2.70	2.95	8.89
GPM00793	N	MRFW	2.83	2.93	3.62
GPM00794	N	MRFW	2.74	2.94	6.91
GPM00795	N	MRFW	2.75	2.85	3.55
GPM00796	N	MRFW	2.80	2.91	3.91
GPM00797	N	MRFW	2.82	2.92	3.42
GPM00798	N	MRFW	2.71	2.79	2.88
GPM00799	PYX	MRFW	2.82	2.95	4.38
GPM00800	PYX	MRFW	2.80	2.91	3.77
GPM00801	PYX	MRFW	2.75	2.85	3.66
GPM00802	PYX	MRFW	2.74	2.78	1.57
GPM00803	PYX	MRFW	2.77	2.86	3.11
GPM00804	N	MRFW	2.87	3.00	4.35
GPM00805	POIKAN	MRFW	2.74	2.95	7.37
GPM00806	POIKAN	MRFW	2.76	2.90	5.08
GPM00807	POIKAN	MRFW	2.71	2.90	6.63
GPM00808	POIKAN	MRFW	2.75	2.90	5.31
GPM00809	POIKAN	MRFW	2.75	2.90	5.34
GPM00810	FOOTWALL	MRFW	2.98	3.12	4.74
GPM00811	FOOTWALL	MRFW	3.02	3.12	3.23
GPM00812	FOOTWALL	MRFW	3.01	3.11	3.34
GPM00813	FOOTWALL	MRFW	2.91	3.02	3.80
GPM00814	FOOTWALL	MRFW	2.92	3.03	3.54
GPM00815	FOOTWALL	MRFW	2.96	3.03	2.17
GPM00816	FOOTWALL	MRFW	2.95	3.04	2.92
GPM00817	FOOTWALL	MRFW	2.86	3.41	17.45
GPM00818	FOOTWALL	MRFW	3.18	3.25	2.05
GPM00819	FOOTWALL	MRFW	2.90	3.11	6.88
GPM00820	FOOTWALL	MRFW	2.79	3.08	10.05
GPM00821	FOOTWALL	MRFW	3.03	3.08	1.64
GPM00822	FOOTWALL	MRFW	2.92	3.07	4.97
GPM00823	FOOTWALL	MRFW	2.87	3.06	6.56
GPM00824	FOOTWALL	MRFW	2.87	3.08	7.00
GPM00825	FOOTWALL	MRFW	2.96	3.09	4.40
GPM00826	FOOTWALL	MRFW	2.99	3.24	8.10
GPM00827	FOOTWALL	MRFW	3.10	3.26	5.10
GPM00828	FOOTWALL	MRFW	2.77	3.03	8.85
GPM00829	FOOTWALL	MRFW	2.93	2.98	1.68
GPM00830	FOOTWALL	MRFW	2.68	2.99	11.09
GPM00831	FOOTWALL	MRFW	2.75	2.98	7.97
GPM00832	FOOTWALL	MRFW	2.74	3.02	9.73
GPM00833	FOOTWALL	MRFW	3.00	3.04	1.36

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00834	FOOTWALL	MRFW	2.91	3.03	4.18
GPM00835	PEGFPYX	MRFW	3.21	3.34	4.01
GPM00836	PEGFPYX	MRFW	3.22	3.33	3.10
GPM00837	PEGFPYX	MRFW	3.21	3.30	2.75
GPM00838	PEGFPYX	MRFW	3.27	3.36	2.71
GPM00839	FPYX	MRFW	3.25	3.30	1.67
GPM00840	FPYX	MRFW	3.25	3.34	2.61
GPM00841	FPYX	MRFW	3.29	3.36	2.25
GPM00842	FPYX	MRFW	3.24	3.33	2.61
GPM00843	FPYX	MRFW	3.26	3.34	2.51
GPM00844	PEGFPYX	MRFW	3.29	3.38	2.64
GPM00845	PEGFPYX	MRFW	3.30	3.36	1.76
GPM00846	PEGFPYX	MRFW	3.27	3.34	2.16
GPM00847	PEGFPYX	MRFW	3.29	3.36	2.12
GPM00848	FPYX	MRFW	3.27	3.33	1.94
GPM00849	FPYX	MRFW	3.26	3.34	2.31
GPM00850	FPYX	MRFW	3.27	3.30	0.92
GPM00851	PEGFPYX	MRFW	3.22	3.45	6.91
GPM00852	PEGFPYX	MRFW	3.18	3.41	6.94
GPM00853	PEGFPYX	MRFW	3.26	3.47	6.34
GPM00854	FPYX	MRFW	3.28	3.57	8.42
GPM00855	FPYX	MRFW	3.25	3.58	9.63
GPM00856	FPYX	MRFW	3.27	3.41	4.07
GPM00857	FPYX	MRFW	3.24	3.41	5.02
GPM00858	FPYX	MRFW	3.27	3.43	4.81
GPM00859	FPYX	MRFW	3.27	3.50	6.93
GPM00860	FPYX	MRFW	3.34	3.53	5.42
GPM00861	PEGFPYX	MRFW	3.18	3.28	3.05
GPM00862	FPYX	MRFW	3.28	3.37	2.56
GPM00863	FPYX	MRFW	3.24	3.32	2.44
GPM00864	FPYX	MRFW	3.25	3.34	2.80
GPM00865	FPYX	MRFW	3.24	3.30	1.87
GPM00866	GN	MRFW	3.00	3.02	0.83
GPM00867	GN	MRFW	2.93	3.03	3.20
GPM00868	GN	MRFW	2.92	3.00	2.87
GPM00869	PEGFPYX	MRFW	3.16	3.27	3.57
GPM00870	FPYX	MRFW	3.24	3.37	4.05
GPM00871	FPYX	MRFW	3.27	3.36	2.78
GPM00872	FPYX	MRFW	3.24	3.38	4.34
GPM00873	FPYX	MRFW	3.23	3.33	3.04
GPM00874	GN	MRFW	2.92	3.05	4.21
GPM00875	GN	MRFW	2.91	3.01	3.25
GPM00876	GN	MRFW	2.92	2.95	0.91
GPM00877	PEGFPYX	MRFW	3.02	3.07	1.67
GPM00878	PEGFPYX	MRFW	3.16	3.26	3.15
GPM00879	PEGFPYX	MRFW	3.22	3.29	2.27
GPM00880	N	MRFW	2.92	3.02	3.21
GPM00881	N	MRFW	2.91	3.01	3.35
GPM00882	N	MRFW	2.91	3.07	5.28

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00883	GN	MRFW	2.96	3.07	3.61
GPM00884	GN	MRFW	2.94	3.03	3.16
GPM00885	PEGFPYX	MRFW	3.00	3.15	4.77
GPM00886	PEGFPYX	MRFW	3.16	3.24	2.41
GPM00887	GN	MRFW	2.95	3.07	4.13
GPM00888	GN	MRFW	2.90	3.01	3.59
GPM00889	GN	MRFW	2.99	3.13	4.46
GPM00890	GN	MRFW	2.97	3.06	3.08
GPM00891	GN	MRFW	2.95	3.07	3.83
GPM00892	PEGFPYX	MRFW	3.26	3.31	1.36
GPM00893	PEGFPYX	MRFW	3.29	3.36	2.09
GPM00894	PEGFPYX	MRFW	3.26	3.41	4.54
GPM00895	PEGFPYX	MRFW	3.22	3.35	3.95
GPM00896	PYX	MRFW	3.22	3.36	4.32
GPM00897	PYX	MRFW	3.26	3.38	3.55
GPM00898	PYX	MRFW	3.26	3.40	4.31
GPM00899	PYX	MRFW	3.30	3.40	3.12
GPM00900	PYX	MRFW	3.24	3.41	5.08
GPM00901	PYX	MRFW	3.24	3.41	5.21
GPM00902	PYX	MRFW	3.30	3.42	3.56
GPM00903	PYX	MRFW	3.18	3.41	7.10
GPM00904	PYX	MRFW	3.26	3.41	4.51
GPM00905	PYX	MRFW	3.27	3.39	3.70
GPM00906	PYX	MRFW	3.15	3.36	6.53
GPM00907	PYX	MRFW	3.32	3.51	5.65
GPM00908	PYX	MRFW	3.24	3.42	5.46
GPM00909	PYX	MRFW	3.23	3.40	5.24
GPM00910	PYX	MRFW	3.24	3.42	5.46
GPM00911	PYX	MRFW	3.26	3.42	4.93
GPM00912	PYX	MRFW	3.28	3.42	4.18
GPM00913	PYX	MRFW	3.24	3.41	5.02
GPM00914	PYX	MRFW	3.24	3.42	5.56
GPM00915	PYX	MRFW	3.19	3.41	6.51
GPM00916	PYX	MRFW	3.29	3.43	4.16
GPM00917	PYX	MRFW	3.27	3.42	4.50
GPM00918	PEGFPYX	MRFW	3.28	3.49	6.29
GPM00919	PEGFPYX	MRFW	3.37	3.48	3.17
GPM00920	PEGFPYX	MRFW	3.25	3.55	8.80
GPM00921	PEGFPYX	MRFW	3.22	3.45	6.76
GPM00922	PEGFPYX	MRFW	3.07	3.45	11.70
GPM00923	PYX	MRFW	3.25	3.49	7.25
GPM00924	PYX	MRFW	3.22	3.53	9.23
GPM00925	PYX	MRFW	3.27	3.52	7.42
GPM00926	PYX	MRFW	3.08	3.50	12.75
GPM00927	PYX	MRFW	3.26	3.50	7.19
GPM00928	PYX	MRFW	3.24	3.51	8.01
GPM00929	PYX	MRFW	3.28	3.51	6.71
GPM00930	PYX	MRFW	3.16	3.52	10.64
GPM00931	PYX	MRFW	3.55	3.50	-1.44

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00932	PYX	MRFW	3.25	3.53	8.34
GPM00933	PEGFPYX	MRFW	3.15	3.41	7.86
GPM00934	PEGFPYX	MRFW	3.24	3.42	5.35
GPM00935	PYX	MRFW	3.26	3.45	5.73
GPM00936	PYX	MRFW	3.25	3.44	5.70
GPM00937	PYX	MRFW	3.25	3.43	5.37
GPM00938	PYX	MRFW	3.19	3.42	7.10
GPM00939	GN	MRFW	3.20	3.39	5.73
GPM00940	GN	MRFW	3.02	3.15	4.07
GPM00941	GN	MRFW	3.25	3.48	6.79
GPM00942	GN	MRFW	3.02	3.21	6.06
GPM00943	GN	MRFW	2.98	3.12	4.52
GPM00944	GN	MRFW	2.99	3.15	5.31
GPM00945	PEGFPYX	MRFW	3.21	3.41	6.18
GPM00946	PEGFPYX	MRFW	3.23	3.41	5.58
GPM00947	PYX	MRFW	3.23	3.41	5.39
GPM00948	PYX	MRFW	3.22	3.11	-3.54
GPM00949	PYX	MRFW	3.26	3.48	6.40
GPM00950	PYX	MRFW	3.27	3.43	4.87
GPM00951	PYX	MRFW	3.25	3.39	4.13
GPM00952	PYX	MRFW	3.24	3.20	-1.15
GPM00953	GN	MRFW	3.28	3.20	-2.42
GPM00954	GN	MRFW	3.10	3.11	0.18
GPM00955	GN	MRFW	3.13	3.15	0.77
GPM00956	GN	MRFW	2.95	3.10	4.92
GPM00957	GN	MRFW	2.95	3.11	5.38
GPM00958	GN	MRFW	2.96	3.48	16.02
GPM00959	PYXAN	MRFW	2.96	2.99	0.78
GPM00960	PYX	MRFW	3.06	3.07	0.24
GPM00961	PYX	MRFW	3.17	3.30	4.13
GPM00962	PYX	MRFW	3.13	3.31	5.47
GPM00963	PYX	MRFW	3.06	3.18	3.74
GPM00964	PYX	MRFW	3.00	3.06	2.09
GPM00965	PYX	MRFW	3.07	3.17	3.12
GPM00966	PYX	MRFW	3.10	3.11	0.34
GPM00967	PYX	MRFW	3.10	3.09	-0.30
GPM00968	PYX	MRFW	3.10	3.09	-0.23
GPM00969	PYX	MRFW	3.08	3.09	0.30
GPM00970	PYX	MRFW	3.08	3.08	0.00
GPM00971	PYX	MRFW	2.97	3.09	4.11
GPM00972	GN	MRFW	2.95	3.01	2.04
GPM00973	N	MRFW	2.86	2.99	4.45
GPM00974	N	MRFW	2.86	2.99	4.49
GPM00975	N	MRFW	2.86	2.97	3.88
GPM00976	PYX	MRFW	2.94	3.06	4.06
GPM00977	PYX	MRFW	2.94	3.06	4.12
GPM00978	PYX	MRFW	2.98	3.11	4.19
GPM00979	GN	MRFW	2.90	3.08	6.13
GPM00980	GN	MRFW	2.96	3.07	3.74

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM00981	GN	MRFW	3.06	3.27	6.58
GPM00982	PYX	MRFW	3.14	3.27	3.99
GPM00983	PYX	MRFW	2.94	3.05	3.69
GPM00984	GN	MRFW	2.95	3.07	4.11
GPM00985	GN	MRFW	2.99	3.08	2.80
GPM00986	GN	MRFW	2.95	3.08	4.46
GPM00987	PEGFPYX	MRFW	3.22	3.27	1.60
GPM00988	PEGFPYX	MRFW	3.14	3.27	3.98
GPM00989	N	MRFW	3.01	3.10	3.04
GPM00990	N	MRFW	3.04	3.12	2.63
GPM00991	N	MRFW	3.02	3.15	4.07
GPM00992	PYX	MRFW	3.06	3.16	3.16
GPM00993	PYX	MRFW	3.08	3.17	2.71
GPM00994	PYX	MRFW	3.07	3.22	4.71
GPM00995	GN	MRFW	3.16	3.25	2.86
GPM00996	GN	MRFW	3.03	3.16	4.12
GPM00997	GN	MRFW	3.01	3.10	3.00
GPM00998	GN	MRFW	2.96	3.06	3.38
GPM00999	GN	MRFW	2.95	3.04	2.93
GPM01000	PEGFPYX	MRFW	3.21	3.30	2.87
GPM01001	PEGFPYX	MRFW	3.19	3.27	2.48
GPM01002	PEGFPYX	MRFW	2.99	3.19	6.33
GPM01003	N	MRFW	2.99	3.04	1.64
GPM01004	N	MRFW	2.99	3.07	2.53
GPM01005	N	MRFW	2.99	3.06	2.15
GPM01006	PYX	MRFW	3.08	3.12	1.19
GPM01007	PYX	MRFW	3.05	3.10	1.67
GPM01008	PYX	MRFW	3.05	3.15	3.11
GPM01009	PYX	MRFW	3.05	3.17	3.79
GPM01010	PYX	MRFW	3.06	3.16	3.13
GPM01011	GN	MRFW	3.00	3.06	1.87
GPM01012	GN	MRFW	2.95	3.04	2.88
GPM01013	GN	MRFW	3.03	3.07	1.36
GPM01014	PEGFPYX	MRFW	3.22	3.26	1.34
GPM01015	PEGFPYX	MRFW	3.29	3.35	1.86
GPM01016	PEGFPYX	MRFW	3.18	3.16	-0.50
GPM01017	PEGFPYX	MRFW	2.96	3.33	11.65
GPM01018	PEGFPYX	MRFW	3.14	3.15	0.23
GPM01019	PYXAN	MRFW	2.87	2.98	3.80
GPM01020	GN	MRFW	3.00	3.09	2.74
GPM01021	GN	MRFW	2.91	3.06	4.89
GPM01022	GN	MRFW	2.96	3.05	2.96
GPM01023	GN	MRFW	2.94	3.04	3.28
GPM01024	GN	MRFW	2.95	3.03	2.44
GPM01025	GN	MRFW	2.95	3.04	2.87
GPM01026	PEGFPYX	MRFW	3.26	3.36	2.87
GPM01027	PEGFPYX	MRFW	3.18	3.33	4.76
GPM01028	PEGFPYX	MRFW	3.26	3.39	3.76
GPM01029	PEGFPYX	MRFW	3.27	3.39	3.73

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01030	PEGFPYX	MRFW	3.26	3.39	3.81
GPM01031	PEGFPYX	MRFW	3.10	3.23	4.14
GPM01032	GN	MRFW	2.91	3.06	5.15
GPM01033	GN	MRFW	2.95	3.06	3.66
GPM01034	GN	MRFW	2.90	3.06	5.31
GPM01035	PEGFPYX	MRFW	3.20	3.43	6.99
GPM01036	PEGFPYX	MRFW	3.20	3.47	8.03
GPM01037	PEGFPYX	MRFW	3.26	3.47	6.38
GPM01038	PEGFPYX	MRFW	3.23	3.46	6.93
GPM01039	PEGFPYX	MRFW	3.22	3.44	6.59
GPM01040	POIKPYX	MRFW	3.23	3.48	7.45
GPM01041	POIKPYX	MRFW	3.24	3.47	6.94
GPM01042	POIKPYX	MRFW	3.21	3.47	7.79
GPM01043	POIKPYX	MRFW	3.20	3.47	8.14
GPM01044	POIKPYX	MRFW	3.24	3.47	6.84
GPM01045	POIKPYX	MRFW	3.25	3.47	6.67
GPM01046	POIKPYX	MRFW	3.26	3.46	6.05
GPM01047	POIKPYX	MRFW	3.25	3.47	6.43
GPM01048	POIKPYX	MRFW	3.23	3.45	6.57
GPM01049	PEGFPYX	MRFW	3.16	3.40	7.21
GPM01050	PYX	MRFW	3.20	3.41	6.25
GPM01051	PYX	MRFW	3.22	3.47	7.50
GPM01052	PYX	MRFW	3.24	3.44	6.01
GPM01053	PYX	MRFW	3.24	3.45	6.43
GPM01054	PYX	MRFW	3.22	3.46	7.03
GPM01055	PYX	MRFW	3.24	3.46	6.52
GPM01056	PYX	MRFW	3.24	3.34	2.93
GPM01057	PYX	MRFW	3.20	3.33	3.96
GPM01058	PYX	MRFW	3.23	3.31	2.60
GPM01059	PYX	MRFW	3.23	3.29	1.99
GPM01060	PYX	MRFW	3.23	3.33	3.09
GPM01061	PYX	MRFW	3.25	3.33	2.56
GPM01062	PYX	MRFW	3.25	3.31	1.91
GPM01063	PYX	MRFW	3.24	3.33	2.82
GPM01064	PYX	MRFW	3.25	3.33	2.32
GPM01065	PYX	MRFW	3.25	3.37	3.52
GPM01066	PYX	MRFW	3.23	3.34	3.32
GPM01067	PYX	MRFW	3.22	3.33	3.25
GPM01068	PYX	MRFW	3.24	3.34	3.01
GPM01069	GN	MRFW	2.95	3.09	4.55
GPM01070	GN	MRFW	2.95	3.07	4.15
GPM01071	GN	MRFW	2.96	3.10	4.72
GPM01072	GN	MRFW	2.93	3.07	4.67
GPM01073	PYX	MRFW	3.07	3.22	4.62
GPM01074	PYX	MRFW	3.03	3.12	2.97
GPM01075	PYX	MRFW	2.98	3.12	4.60
GPM01076	PYX	MRFW	3.00	3.15	4.72
GPM01077	PYX	MRFW	3.03	3.16	4.25
GPM01078	PYX	MRFW	2.97	3.10	4.45

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01079	PYX	MRFW	3.09	3.31	6.61
GPM01080	PYX	MRFW	2.97	3.12	5.03
GPM01081	PYX	MRFW	2.93	3.07	4.66
GPM01082	PYX	MRFW	2.96	3.10	4.71
GPM01083	PEGFPYX	MRFW	3.18	3.31	3.89
GPM01084	PEGFPYX	MRFW	3.14	3.35	6.41
GPM01085	PEGFPYX	MRFW	3.13	3.24	3.50
GPM01086	N	MRFW	2.98	3.08	3.34
GPM01087	N	MRFW	2.97	3.11	4.49
GPM01088	N	MRFW	2.98	3.10	3.97
GPM01089	N	MRFW	2.96	3.11	5.04
GPM01090	POIKFPYX	MRFW	3.10	3.26	5.09
GPM01091	POIKFPYX	MRFW	3.21	3.37	4.87
GPM01092	POIKFPYX	MRFW	3.16	3.32	4.97
GPM01093	PEGFPYX	MRFW	3.10	3.34	7.54
GPM01094	PEGFPYX	MRFW	3.20	3.45	7.52
GPM01095	PEGFPYX	MRFW	2.97	3.43	14.43
GPM01096	PEGFPYX	MRFW	3.21	3.42	6.28
GPM01097	PEGFPYX	MRFW	3.26	3.30	1.30
GPM01098	PP	MRFW	2.88	3.04	5.47
GPM01099	PP	MRFW	2.90	3.03	4.51
GPM01100	PP	MRFW	3.05	3.26	6.55
GPM01101	PP	MRFW	3.00	3.15	4.88
GPM01102	PP	MRFW	3.15	3.35	6.09
GPM01103	PP	MRFW	3.14	3.33	5.76
GPM01104	PP	MRFW	3.18	3.34	4.95
GPM01105	GN	MRFW	3.12	3.28	4.95
GPM01106	PEGFPYX	MRFW	3.18	3.32	4.24
GPM01107	PEGFPYX	MRFW	3.18	3.34	4.98
GPM01108	PYX	MRFW	3.10	3.24	4.32
GPM01109	PYX	MRFW	3.11	3.23	3.91
GPM01110	PYX	MRFW	3.02	3.17	4.88
GPM01111	PYX	MRFW	2.99	3.13	4.42
GPM01112	PYX	MRFW	3.04	3.17	4.27
GPM01113	PYX	MRFW	3.00	3.13	4.32
GPM01114	PYX	MRFW	2.95	3.09	4.59
GPM01115	PYX	MRFW	3.06	3.07	0.40
GPM01116	PYX	MRFW	3.20	3.25	1.42
GPM01117	PYX	MRFW	3.21	3.38	5.10
GPM01118	PYX	MRFW	3.21	3.40	5.75
GPM01119	PYX	MRFW	3.21	3.41	5.76
GPM01120	PYX	MRFW	3.20	3.39	5.82
GPM01121	PYX	MRFW	3.23	3.40	5.06
GPM01122	GN	MRFW	2.99	3.40	12.69
GPM01123	PYX	MRFW	3.20	3.40	6.01
GPM01124	PYX	MRFW	3.21	3.38	5.06
GPM01125	PYX	MRFW	3.20	3.38	5.43
GPM01126	PYX	MRFW	3.22	3.40	5.32
GPM01127	PYX	MRFW	3.24	3.39	4.47

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01128	PYX	MRFW	3.11	3.27	4.87
GPM01129	PYX	MRFW	3.16	3.37	6.32
GPM01130	PYX	MRFW	3.25	3.44	5.63
GPM01131	PYX	MRFW	3.24	3.43	5.61
GPM01132	PYX	MRFW	3.21	3.40	5.83
GPM01133	PYX	MRFW	3.23	3.40	5.00
GPM01134	PYX	MRFW	3.24	3.39	4.47
GPM01135	PYX	MRFW	3.25	3.39	4.16
GPM01136	PYX	MRFW	3.24	3.38	4.21
GPM01137	PYX	MRFW	3.24	3.40	4.74
GPM01138	PYX	MRFW	3.23	3.42	5.57
GPM01139	PYX	MRFW	3.23	3.43	5.97
GPM01140	PYX	MRFW	3.24	3.39	4.44
GPM01141	PYX	MRFW	3.25	3.42	5.12
GPM01142	PYX	MRFW	3.06	3.21	4.68
GPM01143	PYX	MRFW	3.17	3.37	6.25
GPM01144	PYX	MRFW	2.98	3.14	5.25
GPM01145	PYX	MRFW	3.00	3.18	5.91
GPM01146	PYX	MRFW	2.91	3.15	7.86
GPM01147	PYX	MRFW	2.97	3.20	7.47
GPM01148	PYX	MRFW	3.20	3.29	2.70
GPM01149	PYX	MRFW	2.97	3.18	6.92
GPM01150	PYX	MRFW	3.07	3.28	6.70
GPM01151	GN	MRFW	2.96	3.12	5.26
GPM01152	GN	MRFW	2.96	3.11	4.98
GPM01153	PEGFPYX	MRFW	3.00	3.37	11.50
GPM01154	PYX	MRFW	3.18	3.41	6.87
GPM01155	PYX	MRFW	2.99	3.35	11.43
GPM01156	PYX	MRFW	2.99	3.28	9.34
GPM01157	PYX	MRFW	2.99	3.15	5.17
GPM01158	PYX	MRFW	3.08	3.18	3.16
GPM01159	PYX	MRFW	3.00	3.21	6.93
GPM01160	PYX	MRFW	2.95	3.13	5.83
GPM01161	PYX	MRFW	2.91	3.15	8.02
GPM01162	PYX	MRFW	3.13	3.26	4.07
GPM01163	PYX	MRFW	3.11	3.33	6.68
GPM01164	PYX	MRFW	3.23	3.41	5.29
GPM01165	PYX	MRFW	3.13	3.41	8.52
GPM01166	PYX	MRFW	3.26	3.40	4.25
GPM01167	N	MRFW	2.93	3.28	11.35
GPM01168	N	MRFW	2.68	2.86	6.51
GPM01169	PEGFPYX	MRFW	3.19	3.53	10.16
GPM01170	PEGFPYX	MRFW	3.18	3.46	8.50
GPM01171	POIKPYX	MRFW	3.22	3.52	8.81
GPM01172	POIKPYX	MRFW	3.22	3.48	7.65
GPM01173	POIKPYX	MRFW	3.18	3.48	8.99
GPM01174	N	MRFW	3.05	3.33	8.82
GPM01175	N	MRFW	3.11	3.34	7.15
GPM01176	N	MRFW	2.97	3.24	8.61

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01177	GN	MRFW	2.94	3.17	7.59
GPM01178	GN	MRFW	3.01	3.24	7.32
GPM01179	GN	MRFW	2.96	3.21	8.00
GPM01180	GN	MRFW	2.96	3.21	8.04
GPM01181	GN	MRFW	2.97	3.22	8.14
GPM01182	GN	MRFW	2.98	3.21	7.58
GPM01183	GN	MRFW	3.01	3.23	7.19
GPM01184	GN	MRFW	2.94	3.20	8.54
GPM01185	PEGFPYX	MRFW	2.97	3.47	15.44
GPM01186	GN	MRFW	2.92	3.06	4.80
GPM01187	GN	MRFW	3.07	3.14	2.23
GPM01188	GN	MRFW	2.97	3.11	4.44
GPM01189	PEGFPYX	MRFW	3.16	3.25	2.96
GPM01190	GN	MRFW	3.03	3.02	-0.39
GPM01191	PEGFPYX	MRFW	3.00	3.25	8.00
GPM01192	GN	MRFW	2.95	3.05	3.33
GPM01193	FPYX	MRFW	3.18	3.51	9.83
GPM01194	FPYX	MRFW	3.17	3.25	2.65
GPM01195	FPYX	MRFW	3.23	3.44	6.37
GPM01196	N	MRFW	3.09	3.31	6.89
GPM01197	N	MRFW	3.05	3.06	0.24
GPM01198	N	MRFW	2.87	3.09	7.37
GPM01199	N	MRFW	2.94	3.21	8.82
GPM01200	N	MRFW	2.95	3.31	11.54
GPM01201	N	MRFW	2.83	3.09	8.72
GPM01202	N	MRFW	2.93	3.13	6.64
GPM01203	N	MRFW	2.99	3.09	3.40
GPM01204	N	MRFW	2.89	3.13	7.96
GPM01205	N	MRFW	2.95	3.13	5.87
GPM01206	N	MRFW	3.04	3.22	5.77
GPM01207	N	MRFW	3.10	3.16	1.84
GPM01208	N	MRFW	2.86	3.00	4.80
GPM01209	N	MRFW	2.86	3.01	5.13
GPM01210	N	MRFW	2.86	3.01	4.83
GPM01211	N	MRFW	2.92	3.07	4.89
GPM01212	N	MRFW	2.93	3.10	5.60
GPM01213	N	MRFW	3.01	3.09	2.70
GPM01214	N	MRFW	2.94	3.08	4.62
GPM01215	N	MRFW	2.95	3.13	5.83
GPM01216	N	MRFW	3.09	3.27	5.76
GPM01217	N	MRFW	3.25	3.28	0.94
GPM01218	N	MRFW	2.95	3.08	4.30
GPM01219	DU	MRFW	2.95	3.11	5.14
GPM01220	N	MRFW	2.97	3.14	5.56
GPM01221	N	MRFW	2.95	3.05	3.43
GPM01222	N	MRFW	2.96	3.11	4.86
GPM01223	N	MRFW	2.91	3.28	11.93
GPM01224	N	MRFW	3.04	3.29	7.95
GPM01225	DU	MRFW	3.04	3.35	9.75

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01226	N	MRFW	3.26	3.33	2.10
GPM01227	N	MRFW	2.96	3.09	4.40
GPM01228	N	MRFW	2.95	3.06	3.66
GPM01229	N	MRFW	2.93	3.09	5.00
GPM01230	N	MRFW	2.99	3.10	3.67
GPM01231	PEGFPYX	MRFW	3.18	3.43	7.44
GPM01232	FPYX	MRFW	3.16	3.67	14.88
GPM01233	FPYX	MRFW	3.21	3.30	2.61
GPM01234	FPYX	MRFW	3.25	3.39	4.24
GPM01235	FPYX	MRFW	3.11	3.08	-1.08
GPM01236	FPYX	MRFW	2.79	3.43	20.41
GPM01237	FPYX	MRFW	3.08	3.46	11.62
GPM01238	FPYX	MRFW	3.25	3.63	11.06
GPM01239	PEGFPYX	MRFW	3.20	3.65	13.05
GPM01240	FPYX	MRFW	3.24	3.73	14.01
GPM01241	FPYX	MRFW	3.21	3.34	4.04
GPM01242	FPYX	MRFW	3.21	3.37	4.71
GPM01243	FPYX	MRFW	3.21	3.42	6.40
GPM01244	FPYX	MRFW	3.23	3.51	8.33
GPM01245	FPYX	MRFW	3.21	3.44	7.06
GPM01246	FPYX	MRFW	3.21	3.50	8.70
GPM01247	FPYX	MRFW	2.90	3.40	15.97
GPM01248	FPYX	MRFW	2.83	2.95	4.05
GPM01249	FPYX	MRFW	2.87	2.98	3.85
GPM01250	FPYX	MRFW	2.88	2.98	3.38
GPM01251	FPYX	MRFW	2.79	2.92	4.71
GPM01252	FPYX	MRFW	2.98	3.11	4.19
GPM01253	FPYX	MRFW	2.89	3.04	5.04
GPM01254	FPYX	MRFW	2.97	3.08	3.78
GPM01255	FPYX	MRFW	2.97	3.03	1.88
GPM01256	FPYX	MRFW	2.97	3.03	1.84
GPM01257	FPYX	MRFW	2.89	2.97	2.81
GPM01258	FPYX	MRFW	2.79	2.91	4.26
GPM01259	FPYX	MRFW	2.76	2.90	4.84
GPM01260	FPYX	MRFW	2.85	2.92	2.10
GPM01261	FPYX	MRFW	2.84	2.91	2.42
GPM01262	FPYX	MRFW	2.82	2.87	1.88
GPM01263	FPYX	MRFW	2.85	2.99	4.90
GPM01264	FPYX	MRFW	2.95	3.03	2.81
GPM01265	FPYX	MRFW	3.22	3.41	5.63
GPM01266	FPYX	MRFW	3.37	3.47	2.82
GPM01267	FPYX	MRFW	3.26	3.47	6.36
GPM01268	NORITE	MRFW	3.01	3.15	4.44
GPM01269	NORITE	MRFW	2.97	3.12	4.89
GPM01270	NORITE	MRFW	3.02	3.08	1.92
GPM01271	NORITE	MRFW	2.95	3.10	4.83
GPM01272	DUPLICATE	MRFW	2.95	3.12	5.48
GPM01273	NORITE	MRFW	3.01	3.14	4.25
GPM01274	FPYX	MRFW	3.25	3.47	6.60

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01275	FPYX	MRFW	3.24	3.49	7.48
GPM01276	FPYX	MRFW	3.25	3.44	5.81
GPM01277	FPYX	MRFW	3.27	3.41	4.20
GPM01278	FPYX	MRFW	3.27	3.43	4.83
GPM01279	FPYX	MRFW	3.06	3.24	5.79
GPM01280	NORITE	MRFW	2.99	3.14	5.01
GPM01281	DUPLICATE	MRFW	2.99	3.13	4.69
GPM01282	NORITE	MRFW	2.95	3.08	4.45
GPM01283	NORITE	MRFW	2.95	3.09	4.48
GPM01284	NORITE	MRFW	3.10	3.12	0.63
GPM01285	FPYX	MRFW	3.27	3.39	3.69
GPM01286	FPYX	MRFW	3.23	3.38	4.58
GPM01287	FPYX	MRFW	3.17	3.35	5.40
GPM01288	FPYX	MRFW	3.18	3.34	4.96
GPM01289	FPYX	MRFW	2.99	3.15	5.18
GPM01290	FPYX	MRFW	2.94	3.17	7.62
GPM01291	FPYX	MRFW	3.02	3.16	4.59
GPM01292	FPYX	MRFW	2.95	3.09	4.69
GPM01293	FPYX	MRFW	3.19	3.40	6.26
GPM01294	FPYX	MRFW	3.27	3.39	3.35
GPM01295	FPYX	MRFW	3.21	3.34	4.02
GPM01296	FPYX	MRFW	3.20	3.34	4.37
GPM01297	FPYX	MRFW	3.05	3.15	3.33
GPM01298	FPYX	MRFW	3.17	3.32	4.49
GPM01299	FPYX	MRFW	3.17	3.34	5.09
GPM01300	FPYX	MRFW	2.97	3.10	4.43
GPM01301	FPYX	MRFW	3.19	3.14	-1.71
GPM01302	FPYX	MRFW	2.97	3.10	4.43
GPM01303	FPYX	MRFW	3.18	3.37	5.76
GPM01304	FPYX	MRFW	3.12	3.28	5.08
GPM01305	FPYX	MRFW	3.12	3.25	4.03
GPM01306	FPYX	MRFW	3.06	3.31	7.88
GPM01307	FPYX	MRFW	2.81	3.31	16.19
GPM01308	NORITE	MRFW	2.94	3.21	8.65
GPM01309	NORITE	MRFW	2.89	3.02	4.28
GPM01310	NORITE	MRFW	3.01	3.13	3.99
GPM01311	NORITE	MRFW	2.95	3.06	3.59
GPM01312	FPYX	MRFW	3.18	3.36	5.37
GPM01313	FPYX	MRFW	3.17	3.35	5.58
GPM01314	NORITE	MRFW	2.94	3.02	2.68
GPM01315	NORITE	MRFW	2.91	3.03	4.15
GPM01316	NORITE	MRFW	2.98	3.07	3.13
GPM01317	NORITE	MRFW	3.02	3.09	2.37
GPM01318	FPYX	MRFW	3.23	3.31	2.41
GPM01319	FPYX	MRFW	3.17	3.34	5.13
GPM01320	FPYX	MRFW	3.17	2.92	-8.07
GPM01321	FPYX	MRFW	3.16	3.33	5.36
GPM01322	NORITE	MRFW	2.98	3.08	3.18
GPM01323	NORITE	MRFW	2.96	3.04	2.61

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01324	NORITE	MRFW	2.94	3.06	3.84
GPM01325	NORITE	MRFW	2.97	3.06	2.93
GPM01326	DUPLICATE	MRFW	2.97	3.04	2.27
GPM01327	NORITE	MRFW	2.99	3.10	3.56
GPM01328	NORITE	MRFW	2.98	3.10	4.06
GPM01329	FPYX	MRFW	3.12	3.32	6.10
GPM01330	FPYX	MRFW	3.18	3.41	6.96
GPM01331	FPYX	MRFW	3.12	3.37	7.78
GPM01332	FPYX	MRFW	3.11	3.27	4.86
GPM01333	NORITE	MRFW	3.04	3.10	1.93
GPM01334	NORITE	MRFW	2.97	3.09	3.98
GPM01335	NORITE	MRFW	3.01	3.15	4.52
GPM01336	NORITE	MRFW	2.98	3.12	4.61
GPM01337	NORITE	MRFW	2.99	3.14	4.99
GPM01338	NORITE	MRFW	2.98	3.14	5.07
GPM01339	DUPLICATE	MRFW	2.98	3.15	5.39
GPM01340	NORITE	MRFW	2.95	3.10	4.94
GPM01341	FPYX	MRFW	3.30	3.34	1.06
GPM01342	NORITE	MRFW	2.94	3.07	4.44
GPM01343	NORITE	MRFW	2.95	3.11	4.95
GPM01344	NORITE	MRFW	2.92	3.09	5.64
GPM01345	NORITE	MRFW	2.70	3.05	12.24
GPM01346	NORITE	MRFW	2.92	3.06	4.65
GPM01347	NORITE	MRFW	2.83	3.08	8.57
GPM01348	DUPLICATE	MRFW	2.83	3.08	8.57
GPM01349	NORITE	MRFW	2.96	3.12	5.31
GPM01350	NORITE	MRFW	2.94	3.12	5.81
GPM01351	FPYX	MRFW	3.13	3.31	5.56
GPM01352	NORITE	MRFW	2.94	3.11	5.64
GPM01353	NORITE	MRFW	2.94	3.07	4.49
GPM01354	NORITE	MRFW	2.96	3.11	4.86
GPM01355	NORITE	MRFW	2.92	3.05	4.33
GPM01356	NORITE	MRFW	2.87	3.07	6.58
GPM01357	NORITE	MRFW	2.99	3.07	2.77
GPM01358	NORITE	MRFW	2.91	3.08	5.50
GPM01359	NORITE	MRFW	2.95	3.17	7.29
GPM01360	DUPLICATE	MRFW	2.95	3.43	15.15
GPM01361	NORITE	MRFW	2.94	3.48	16.68
GPM01362	NORITE	MRFW	2.99	3.61	18.71
GPM01363	FPYX	MRFW	3.14	3.39	7.58
GPM01364	FPYX	MRFW	3.12	3.52	12.08
GPM01365	FPYX	MRFW	3.22	3.25	0.81
GPM01366	FPYX	MRFW	3.05	3.16	3.68
GPM01367	FPYX	MRFW	3.07	3.33	7.97
GPM01368	FPYX	MRFW	3.17	3.47	9.07
GPM01369	FPYX	MRFW	3.34	3.50	4.69
GPM01370	FPYX	MRFW	3.15	3.63	14.17
GPM01371	FPYX	MRFW	3.15	3.66	14.99
GPM01372	FPYX	MRFW	3.10	3.62	15.44

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01373	FPYX	MRFW	3.12	3.59	13.93
GPM01374	FPYX	MRFW	3.18	3.68	14.65
GPM01375	FPYX	MRFW	3.22	3.74	15.08
GPM01376	FPYX	MRFW	3.01	3.52	15.54
GPM01377	FPYX	MRFW	3.10	3.69	17.51
GPM01378	FPYX	MRFW	3.16	3.40	7.34
GPM01379	FPYX	MRFW	3.18	3.43	7.53
GPM01380	FPYX	MRFW	3.18	3.44	7.82
GPM01381	FPYX	MRFW	3.07	3.51	13.27
GPM01382	FPYX	MRFW	3.25	3.47	6.45
GPM01383	N	MRFW	2.99	3.17	5.75
GPM01384	N	MRFW	2.91	3.27	11.58
GPM01385	N	MRFW	2.93	3.30	12.04
GPM01386	N	MRFW	2.91	3.36	14.52
GPM01387	FPYX	MRFW	3.26	3.62	10.57
GPM01388	FPYX	MRFW	3.24	3.46	6.54
GPM01389	FPYX	MRFW	3.25	3.49	7.15
GPM01390	FPYX	MRFW	3.26	3.45	5.61
GPM01391	FPYX	MRFW	3.27	3.47	6.07
GPM01392	FPYX	MRFW	3.24	3.44	6.06
GPM01393	FPYX	MRFW	3.25	3.45	5.94
GPM01394	FPYX	MRFW	3.24	3.46	6.52
GPM01395	FPYX	MRFW	3.24	3.45	6.33
GPM01396	FPYX	MRFW	3.27	3.47	5.97
GPM01397	FPYX	MRFW	2.93	3.16	7.44
GPM01398	FPYX	MRFW	3.30	3.65	9.93
GPM01399	FPYX	MRFW	3.28	3.10	-5.53
GPM01400	FPYX	MRFW	3.25	3.17	-2.53
GPM01401	FPYX	MRFW	3.26	3.19	-2.09
GPM01402	FPYX	MRFW	3.23	3.24	0.31
GPM01403	FPYX	MRFW	3.25	3.29	1.31
GPM01404	FPYX	MRFW	3.26	3.36	3.14
GPM01405	FPYX	MRFW	3.26	3.58	9.38
GPM01406	FPYX	MRFW	3.26	3.03	-7.24
GPM01407	FPYX	MRFW	3.02	2.88	-4.84
GPM01408	FPYX	MRFW	3.24	3.41	5.23
GPM01409	FPYX	MRFW	3.24	3.39	4.38
GPM01410	FPYX	MRFW	3.24	3.40	4.77
GPM01411	FPYX	MRFW	3.27	3.42	4.44
GPM01412	FPYX	MRFW	3.26	3.41	4.45
GPM01413	FPYX	MRFW	3.24	3.45	6.29
GPM01414	FPYX	MRFW	3.27	3.52	7.35
GPM01415	FPYX	MRFW	3.23	3.49	7.68
GPM01416	FPYX	MRFW	3.25	3.37	3.72
GPM01417	DUPLICATE	MRFW	3.25	3.38	4.02
GPM01418	FPYX	MRFW	3.13	3.38	7.66
GPM01419	FPYX	MRFW	3.28	3.42	4.14
GPM01420	FPYX	MRFW	3.46	3.51	1.35
GPM01421	FPYX	MRFW	3.27	3.47	6.02

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01422	FPYX	MRFW	3.27	3.49	6.36
GPM01423	FPYX	MRFW	3.27	3.40	3.87
GPM01424	FPYX	MRFW	3.25	3.38	3.80
GPM01425	FPYX	MRFW	3.25	3.38	3.99
GPM01426	FPYX	MRFW	3.20	3.38	5.51
GPM01427	FPYX	MRFW	3.26	3.40	4.15
GPM01428	FPYX	MRFW	3.26	3.39	3.85
GPM01429	FPYX	MRFW	3.26	3.43	5.22
GPM01430	POIKAN	MRHW	2.94	3.11	5.68
GPM01431	POIKAN	MRHW	2.87	2.98	3.60
GPM01432	PYX	MRHW	3.13	3.21	2.68
GPM01433	PEGFPYX	MRHW	3.03	3.35	10.15
GPM01434	PEGFPYX	MRHW	3.22	3.39	4.99
GPM01435	PEGFPYX	MRHW	3.27	3.47	6.08
GPM01436	N	MRHW	2.92	2.98	1.96
GPM01437	N	MRHW	2.96	2.99	0.88
GPM01438	PEGFPYX	MRHW	3.24	3.32	2.38
GPM01439	PEGFPYX	MRHW	3.24	3.33	2.88
GPM01440	PEGFPYX	MRHW	3.26	3.32	1.71
GPM01441	PEGFPYX	MRHW	3.22	3.31	2.91
GPM01442	N	MRHW	3.00	3.15	4.88
GPM01443	N	MRHW	3.03	3.21	5.70
GPM01444	POIKPYX	MRHW	3.21	3.44	6.79
GPM01445	POIKPYX	MRHW	3.23	3.48	7.49
GPM01446	POIKPYX	MRHW	3.26	3.49	6.72
GPM01447	N	MRHW	2.99	3.31	10.04
GPM01448	N	MRHW	3.07	3.52	13.58
GPM01449	POIKPYX	MRHW	3.36	3.51	4.31
GPM01450	POIKPYX	MRHW	3.36	3.58	6.33
GPM01451	POIKPYX	MRHW	3.53	3.59	1.64
GPM01452	N	MRHW	2.98	3.08	3.34
GPM01453	N	MRHW	2.99	3.10	3.75
GPM01454	POIKPYX	MRHW	3.19	3.34	4.54
GPM01455	POIKPYX	MRHW	3.26	3.38	3.64
GPM01456	POIKPYX	MRHW	3.28	3.41	3.80
GPM01457	POIKPYX	MRHW	3.28	3.36	2.32
GPM01458	N	MRHW	2.98	3.05	2.44
GPM01459	N	MRHW	2.97	3.14	5.58
GPM01460	N	MRHW	2.96	3.12	5.14
GPM01461	N	MRHW	2.98	3.14	5.11
GPM01462	POIKPYX	MRHW	3.20	3.42	6.69
GPM01463	POIKPYX	MRHW	3.24	3.45	6.20
GPM01464	POIKPYX	MRHW	3.23	3.48	7.30
GPM01465	N	MRHW	2.98	3.09	3.69
GPM01466	N	MRHW	2.98	3.08	3.39
GPM01467	POIKPYX	MRHW	3.23	3.36	3.85
GPM01468	POIKPYX	MRHW	3.26	3.38	3.66
GPM01469	POIKPYX	MRHW	3.27	3.40	3.94
GPM01470	N	MRHW	2.96	3.14	5.62

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01471	N	MRHW	2.97	3.14	5.46
GPM01472	N	MRHW	3.00	3.25	8.00
GPM01473	N	MRHW	2.94	3.13	6.18
GPM01474	N	MRHW	2.98	3.18	6.54
GPM01475	N	MRHW	3.09	3.30	6.61
GPM01476	FPYX	MRHW	3.21	3.53	9.61
GPM01477	N	MRHW	3.00	3.23	7.34
GPM01478	N	MRHW	3.01	3.23	7.09
GPM01479	N	MRHW	3.09	3.33	7.55
GPM01480	FPYX	MRHW	3.25	3.56	9.07
GPM01481	FPYX	MRHW	3.28	3.68	11.39
GPM01482	N	MRHW	3.18	3.37	5.75
GPM01483	N	MRHW	3.08	3.20	3.95
GPM01484	N	MRHW	3.03	3.27	7.72
GPM01485	FPYX	MRHW	3.09	3.24	4.63
GPM01486	FPYX	MRHW	3.10	3.36	8.12
GPM01487	N	MRHW	3.12	3.24	3.75
GPM01488	N	MRHW	2.96	3.09	4.46
GPM01489	N	MRHW	2.94	3.07	4.29
GPM01490	FPYX	MRHW	3.17	3.39	6.67
GPM01491	FPYX	MRHW	3.20	3.35	4.57
GPM01492	FPYX	MRHW	3.29	3.46	5.10
GPM01493	N	MRHW	2.93	3.06	4.31
GPM01494	N	MRHW	2.92	3.03	3.84
GPM01495	N	MRHW	2.86	3.02	5.37
GPM01496	FPYX	MRHW	3.22	3.42	5.90
GPM01497	N	MRHW	3.03	3.17	4.60
GPM01498	N	MRHW	3.07	3.20	4.30
GPM01499	N	MRHW	3.10	3.27	5.29
GPM01500	FPYX	MRHW	3.18	3.32	4.18
GPM01501	FPYX	MRHW	3.23	3.39	4.74
GPM01502	FPYX	MRHW	3.24	3.35	3.41
GPM01503	N	MRHW	2.94	3.08	4.77
GPM01504	N	MRHW	2.96	3.08	3.98
GPM01505	N	MRHW	3.00	3.14	4.67
GPM01506	N	MRHW	2.95	3.05	3.41
GPM01507	N	MRHW	2.97	3.07	3.35
GPM01508	N	MRHW	3.02	3.12	3.26
GPM01509	FPYX	MRHW	3.17	3.30	4.11
GPM01510	FPYX	MRHW	3.22	3.38	4.74
GPM01511	FPYX	MRHW	3.23	3.44	6.28
GPM01512	N	MRHW	3.00	3.16	5.27
GPM01513	N	MRHW	3.05	3.32	8.40
GPM01514	N	MRHW	3.10	3.32	6.98
GPM01515	FPYX	MRHW	3.20	3.41	6.35
GPM01516	N	MRHW	3.03	3.22	6.01
GPM01517	N	MRHW	3.10	3.25	4.80
GPM01518	FPYX	MRHW	3.22	3.41	5.81
GPM01519	FPYX	MRHW	3.22	3.40	5.42

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01520	FPYX	MRHW	3.22	3.41	5.84
GPM01521	FPYX	MRHW	3.23	3.41	5.51
GPM01522	N	MRHW	2.97	3.09	3.90
GPM01523	N	MRHW	2.93	3.13	6.71
GPM01524	N	MRHW	3.01	3.18	5.43
GPM01525	FPYX	MRHW	3.20	3.40	6.15
GPM01526	FPYX	MRHW	3.16	3.44	8.24
GPM01527	N	MRHW	2.95	3.10	4.82
GPM01528	N	MRHW	2.96	3.13	5.64
GPM01529	N	MRHW	3.00	3.15	4.78
GPM01530	N	MRHW	3.13	3.26	4.10
GPM01531	FPYX	MRHW	3.34	3.52	5.34
GPM01532	N	MRHW	2.97	3.14	5.60
GPM01533	N	MRHW	3.01	3.19	5.86
GPM01534	N	MRHW	3.08	3.26	5.82
GPM01535	N	MRHW	3.02	3.14	3.82
GPM01536	N	MRHW	3.05	3.18	4.19
GPM01537	N	MRHW	3.12	3.24	3.66
GPM01538	POIKAN	MRHW	2.74	2.87	4.50
GPM01539	POIKAN	MRHW	2.84	2.96	4.13
GPM01540	HANGINGWALL	MRHW	3.00	3.14	4.73
GPM01541	HANGINGWALL	MRHW	3.05	3.15	3.23
GPM01542	HANGINGWALL	MRHW	3.11	3.25	4.12
GPM01543	HANGINGWALL	MRHW	3.15	3.32	5.22
GPM01544	HANGINGWALL	MRHW	3.00	3.09	3.11
GPM01545	HANGINGWALL	MRHW	2.99	3.16	5.43
GPM01546	HANGINGWALL	MRHW	3.06	3.20	4.33
GPM01547	HANGINGWALL	MRHW	3.15	3.31	4.82
GPM01548	HANGINGWALL	MRHW	3.19	3.43	7.22
GPM01549	HANGINGWALL	MRHW	3.05	3.11	1.95
GPM01550	HANGINGWALL	MRHW	3.07	3.16	2.84
GPM01551	HANGINGWALL	MRHW	3.07	3.23	4.98
GPM01552	HANGINGWALL	MRHW	3.30	3.34	1.20
GPM01553	HANGINGWALL	MRHW	3.18	3.33	4.45
GPM01554	N	MRHW	2.93	3.02	3.06
GPM01555	N	MRHW	2.95	3.02	2.49
GPM01556	N	MRHW	3.05	3.12	2.38
GPM01557	FPYX	MRHW	3.24	3.41	4.97
GPM01558	FPYX	MRHW	3.25	3.36	3.35
GPM01559	N	MRHW	2.94	3.02	2.66
GPM01560	N	MRHW	2.99	3.10	3.75
GPM01561	N	MRHW	3.08	3.14	1.94
GPM01562	FPYX	MRHW	3.26	3.32	1.68
GPM01563	FPYX	MRHW	3.26	3.35	2.78
GPM01564	N	MRHW	2.93	3.00	2.50
GPM01565	N	MRHW	2.98	3.06	2.64
GPM01566	N	MRHW	3.01	3.07	1.96
GPM01567	FPYX	MRHW	3.21	3.34	4.09
GPM01568	FPYX	MRHW	3.26	3.35	2.62

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01569	N	MRHW	2.96	3.02	2.02
GPM01570	N	MRHW	2.98	3.06	2.69
GPM01571	N	MRHW	3.02	3.07	1.73
GPM01572	FPYX	MRHW	3.25	3.39	4.19
GPM01573	FPYX	MRHW	3.27	3.38	3.41
GPM01574	N	MRHW	2.94	3.05	3.78
GPM01575	N	MRHW	2.97	3.06	2.97
GPM01576	N	MRHW	3.02	3.10	2.69
GPM01577	N	MRHW	3.08	3.33	7.72
GPM01578	FPYX	MRHW	3.29	3.39	2.98
GPM01579	N	MRHW	2.94	3.01	2.31
GPM01580	N	MRHW	2.97	3.06	2.67
GPM01581	N	MRHW	3.03	3.07	1.44
GPM01582	FPYX	MRHW	3.30	3.35	1.47
GPM01583	FPYX	MRHW	3.28	3.36	2.35
GPM01584	N	MRHW	2.76	2.84	2.91
GPM01585	N	MRHW	2.82	2.91	3.21
GPM01586	N	MRHW	2.83	2.89	2.13
GPM01587	POIKPYX	MRHW	3.19	3.32	3.90
GPM01588	POIKPYX	MRHW	3.26	3.32	1.75
GPM01589	POIKPYX	MRHW	3.28	3.32	1.20
GPM01590	POIKPYX	MRHW	3.34	3.32	-0.71
GPM01591	N	MRHW	2.77	2.90	4.50
GPM01592	N	MRHW	2.75	2.90	5.46
GPM01593	N	MRHW	2.73	2.87	5.17
GPM01594	POIKPYX	MRHW	3.26	3.35	2.72
GPM01595	POIKPYX	MRHW	3.24	3.44	6.13
GPM01596	POIKPYX	MRHW	3.27	3.45	5.50
GPM01597	POIKPYX	MRHW	3.25	3.44	5.56
GPM01598	N	MRHW	2.79	2.91	4.27
GPM01599	N	MRHW	2.80	2.91	3.86
GPM01600	N	MRHW	2.82	2.95	4.44
GPM01601	POIKPYX	MRHW	3.17	3.36	5.78
GPM01602	POIKPYX	MRHW	3.26	3.42	4.71
GPM01603	POIKPYX	MRHW	3.24	3.43	5.74
GPM01604	POIKPYX	MRHW	3.24	3.42	5.42
GPM01605	MOT	MRHW	2.72	2.82	3.47
GPM01606	MOT	MRHW	2.78	2.86	2.91
GPM01607	PYX	MRHW	3.04	3.23	6.12
GPM01608	PYX	MRHW	3.22	3.34	3.76
GPM01609	MOT	MRHW	2.78	2.92	4.94
GPM01610	MOT	MRHW	2.88	3.05	5.58
GPM01611	MOT	MRHW	3.10	3.22	3.93
GPM01612	PYXAN	MRHW	2.93	3.04	3.63
GPM01613	PYXAN	MRHW	2.87	2.93	2.01
GPM01614	PYXAN	MRHW	2.79	2.89	3.66
GPM01615	PYXAN	MRHW	3.00	3.08	2.58
GPM01616	N	MRHW	3.00	3.15	4.88
GPM01617	N	MRHW	3.01	3.20	6.18

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01618	PYX	MRHW	3.12	3.28	5.10
GPM01619	PYX	MRHW	3.15	3.30	4.71
GPM01620	PYX	MRHW	3.23	3.27	1.16
GPM01621	PYX	MRHW	3.07	3.22	4.68
GPM01622	N	MRHW	2.91	3.03	4.15
GPM01623	N	MRHW	2.89	3.04	4.87
GPM01624	N	MRHW	2.95	3.05	3.35
GPM01625	N	MRHW	3.03	3.04	0.42
GPM01626	N	MRHW	2.97	3.11	4.63
GPM01627	PYX	MRHW	3.02	3.19	5.56
GPM01628	PYX	MRHW	3.11	3.25	4.52
GPM01629	PYX	MRHW	3.14	3.28	4.27
GPM01630	PYX	MRHW	3.13	3.26	3.97
GPM01631	N	MRHW	3.02	3.10	2.57
GPM01632	N	MRHW	3.09	3.18	2.81
GPM01633	N	MRHW	3.12	3.22	3.13
GPM01634	N	MRHW	2.86	2.91	1.64
GPM01635	N	MRHW	2.93	3.01	2.61
GPM01636	N	MRHW	2.92	3.01	2.88
GPM01637	N	MRHW	2.97	3.04	2.34
GPM01638	N	MRHW	2.99	3.08	3.04
GPM01639	POIKPYX	MRHW	3.42	3.35	-2.00
GPM01640	POIKPYX	MRHW	3.24	3.37	4.02
GPM01641	POIKPYX	MRHW	3.26	3.36	2.95
GPM01642	POIKPYX	MRHW	3.25	3.35	3.10
GPM01643	N	MRHW	2.93	3.05	3.90
GPM01644	N	MRHW	2.95	3.08	4.39
GPM01645	N	MRHW	2.98	3.12	4.73
GPM01646	POIKPYX	MRHW	3.21	3.38	5.02
GPM01647	POIKPYX	MRHW	3.21	3.36	4.59
GPM01648	POIKPYX	MRHW	3.26	3.36	3.01
GPM01649	POIKPYX	MRHW	3.25	3.38	3.91
GPM01650	N	MRHW	3.04	3.22	5.73
GPM01651	N	MRHW	3.07	3.27	6.45
GPM01652	N	MRHW	3.10	3.33	7.18
GPM01653	POIKPYX	MRHW	3.16	3.36	6.03
GPM01654	POIKPYX	MRHW	3.14	3.36	6.61
GPM01655	POIKPYX	MRHW	3.19	3.47	8.30
GPM01656	POIKPYX	MRHW	3.28	3.53	7.20
GPM01657	N	MRHW	3.06	3.22	5.21
GPM01658	N	MRHW	3.11	3.29	5.67
GPM01659	PYXAN	MRHW	3.14	3.37	6.98
GPM01660	POIKPYX	MRHW	3.25	3.48	6.73
GPM01661	POIKPYX	MRHW	3.25	3.45	5.93
GPM01662	POIKPYX	MRHW	3.29	3.52	6.61
GPM01663	N	MRHW	2.99	3.18	6.05
GPM01664	N	MRHW	2.97	3.18	6.76
GPM01665	N	MRHW	3.03	3.23	6.31
GPM01666	N	MRHW	3.08	3.26	5.83

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01667	POIKFPYX	MRHW	3.13	3.36	7.00
GPM01668	POIKFPYX	MRHW	3.30	3.48	5.11
GPM01669	POIKFPYX	MRHW	3.24	3.48	7.00
GPM01670	POIKFPYX	MRHW	3.29	3.52	6.78
GPM01671	N	MRHW	2.91	3.03	3.93
GPM01672	N	MRHW	2.94	3.05	3.71
GPM01673	N	MRHW	2.92	3.07	4.89
GPM01674	N	MRHW	2.95	3.07	3.84
GPM01675	N	MRHW	3.02	3.13	3.70
GPM01676	POIKPYX	MRHW	3.07	3.25	5.85
GPM01677	POIKPYX	MRHW	3.12	3.23	3.35
GPM01678	N	MRHW	2.98	3.11	4.36
GPM01679	N	MRHW	2.99	3.11	4.02
GPM01680	POIKPYX	MRHW	3.26	3.37	3.25
GPM01681	POIKPYX	MRHW	3.25	3.41	4.88
GPM01682	POIKPYX	MRHW	3.22	3.40	5.33
GPM01683	N	MRHW	2.97	3.10	4.45
GPM01684	NPOIKPYX	MRHW	2.98	3.10	4.07
GPM01685	NPOIKPYX	MRHW	3.16	3.27	3.46
GPM01686	NPOIKPYX	MRHW	3.22	3.45	6.95
GPM01687	NPOIKPYX	MRHW	3.25	3.43	5.54
GPM01688	N	MRHW	2.97	3.11	4.66
GPM01689	N	MRHW	3.01	3.16	4.74
GPM01690	POIKPYX	MRHW	3.15	3.33	5.48
GPM01691	POIKPYX	MRHW	3.22	3.41	5.78
GPM01692	POIKPYX	MRHW	3.25	3.40	4.40
GPM01693	N	MRHW	2.95	3.10	4.83
GPM01694	N	MRHW	2.99	3.10	3.73
GPM01695	POIKPYX	MRHW	3.13	3.29	4.98
GPM01696	POIKPYX	MRHW	3.21	3.43	6.46
GPM01697	POIKPYX	MRHW	3.24	3.42	5.35
GPM01698	POIKPYX	MRHW	3.26	3.44	5.42
GPM01699	MOT	MRHW	2.73	2.85	4.15
GPM01700	MOT	MRHW	2.72	2.85	4.45
GPM01701	N	MRHW	2.93	3.14	6.82
GPM01702	N	MRHW	2.94	3.14	6.44
GPM01703	N	MRHW	2.90	3.10	6.66
GPM01704	N	MRHW	2.95	3.18	7.55
GPM01705	N	MRHW	2.99	3.23	7.63
GPM01706	N	MRHW	2.98	3.19	6.71
GPM01707	N	MRHW	2.99	3.25	8.37
GPM01708	POIKPYX	MRHW	3.06	3.29	7.13
GPM01709	POIKPYX	MRHW	3.11	3.38	8.26
GPM01710	POIKPYX	MRHW	3.15	3.42	8.27
GPM01711	POIKPYX	MRHW	3.15	3.45	9.02
GPM01712	POIKPYX	MRHW	3.08	3.37	8.92
GPM01713	POIKPYX	MRHW	3.08	3.35	8.29
GPM01714	POIKPYX	MRHW	2.83	3.09	8.75
GPM01715	N	MRHW	3.06	3.11	1.60

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01716	N	MRHW	3.05	3.18	4.29
GPM01717	POIKFPYX	MRHW	3.32	3.36	1.30
GPM01718	POIKFPYX	MRHW	3.22	3.40	5.35
GPM01719	N	MRHW	3.34	3.19	-4.51
GPM01720	POIKPYX	MRHW	3.45	3.39	-1.66
GPM01721	N	MRHW	2.95	3.09	4.52
GPM01722	N	MRHW	2.97	3.11	4.50
GPM01723	N	MRHW	3.09	3.17	2.48
GPM01724	POIKPYX	MRHW	3.22	3.38	4.76
GPM01725	POIKPYX	MRHW	3.29	3.45	4.66
GPM01726	N	MRHW	2.93	3.05	4.03
GPM01727	N	MRHW	2.95	3.11	5.44
GPM01728	N	MRHW	3.03	3.20	5.57
GPM01729	FPYX	MRHW	3.28	3.48	5.78
GPM01730	FPYX	MRHW	3.29	3.49	5.88
GPM01731	FPYX	MRHW	3.45	3.45	-0.05
GPM01732	FPYX	MRHW	3.18	3.50	9.64
GPM01733	N	MRHW	2.94	3.18	7.81
GPM01734	N	MRHW	2.99	3.21	7.25
GPM01735	N	MRHW	3.17	3.44	8.16
GPM01736	FPYX	MRHW	3.23	3.46	6.98
GPM01737	FPYX	MRHW	3.28	3.44	4.90
GPM01738	FPYX	MRHW	3.31	3.49	5.16
GPM01739	N	MRHW	2.98	3.14	5.13
GPM01740	N	MRHW	2.90	3.19	9.47
GPM01741	N	MRHW	3.09	3.07	-0.72
GPM01742	FPYX	MRHW	3.08	3.45	11.49
GPM01743	FPYX	MRHW	3.28	3.47	5.59
GPM01744	FPYX	MRHW	3.30	3.48	5.16
GPM01745	N	MRHW	2.93	3.04	3.75
GPM01746	N	MRHW	2.79	3.19	13.47
GPM01747	N	MRHW	3.06	3.26	6.44
GPM01748	FPYX	MRHW	3.24	3.45	6.30
GPM01749	FPYX	MRHW	3.23	3.45	6.54
GPM01750	N	MRHW	2.95	3.03	2.71
GPM01751	N	MRHW	2.97	3.05	2.63
GPM01752	N	MRHW	2.98	3.06	2.73
GPM01753	FPYX	MRHW	3.09	3.23	4.40
GPM01754	FPYX	MRHW	3.26	3.36	3.11
GPM01755	FPYX	MRHW	3.28	3.35	2.04
GPM01756	FPYX	MRHW	3.23	3.32	2.80
GPM01757	N	MRHW	2.87	3.31	14.04
GPM01758	N	MRHW	2.92	3.39	14.78
GPM01759	N	MRHW	2.97	3.08	3.48
GPM01760	FPYX	MRHW	3.04	3.28	7.45
GPM01761	FPYX	MRHW	3.24	3.44	5.82
GPM01762	FPYX	MRHW	3.17	3.18	0.18
GPM01763	FPYX	MRHW	3.03	3.10	2.31
GPM01764	FPYX	MRHW	3.22	3.32	2.82

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01765	FPYX	MRHW	3.13	3.36	7.02
GPM01766	FPYX	MRHW	3.26	3.35	2.85
GPM01767	FPYX	MRHW	3.23	3.43	6.01
GPM01768	FPYX	MRHW	2.79	3.01	7.58
GPM01769	FPYX	MRHW	3.01	3.13	3.83
GPM01770	FPYX	MRHW	2.99	3.04	1.59
GPM01771	FPYX	MRHW	3.03	3.10	2.42
GPM01772	FPYX	MRHW	3.25	3.31	1.93
GPM01773	FPYX	MRHW	3.27	3.37	2.98
GPM01774	FPYX	MRHW	3.26	3.35	2.76
GPM01775	NORITE	MRHW	2.92	3.10	5.82
GPM01776	NORITE	MRHW	3.00	3.15	4.78
GPM01777	NORITE	MRHW	3.00	3.17	5.63
GPM01778	FPYX	MRHW	3.26	3.48	6.51
GPM01779	FPYX	MRHW	3.27	3.45	5.24
GPM01780	NORITE	MRHW	2.93	3.07	4.69
GPM01781	NORITE	MRHW	2.97	3.10	4.37
GPM01782	NORITE	MRHW	2.99	3.13	4.73
GPM01783	FPYX	MRHW	3.21	3.41	5.94
GPM01784	FPYX	MRHW	3.24	3.40	4.88
GPM01785	FPYX	MRHW	3.23	3.41	5.49
GPM01786	FPYX	MRHW	2.94	3.03	3.04
GPM01787	FPYX	MRHW	2.97	3.06	2.93
GPM01788	FPYX	MRHW	2.98	3.08	3.44
GPM01789	FPYX	MRHW	3.04	3.14	3.37
GPM01790	FPYX	MRHW	3.22	3.27	1.48
GPM01791	FPYX	MRHW	3.23	3.38	4.41
GPM01792	FPYX	MRHW	3.19	3.38	5.77
GPM01793	FPYX	MRHW	2.99	3.08	2.86
GPM01794	FPYX	MRHW	3.01	3.09	2.76
GPM01795	FPYX	MRHW	3.07	3.14	2.37
GPM01796	FPYX	MRHW	3.27	3.36	2.70
GPM01797	FPYX	MRHW	3.22	3.38	4.94
GPM01798	FPYX	MRHW	2.88	3.03	5.03
GPM01799	FPYX	MRHW	2.87	3.03	5.27
GPM01800	FPYX	MRHW	2.87	3.08	7.21
GPM01801	FPYX	MRHW	2.87	3.07	6.82
GPM01802	FPYX	MRHW	3.11	3.21	3.32
GPM01803	FPYX	MRHW	3.20	3.40	5.99
GPM01804	FPYX	MRHW	3.18	3.33	4.48
GPM01805	FPYX	MRHW	3.22	3.42	6.03
GPM01806	FPYX	MRHW	3.05	3.42	11.58
GPM01807	NORITE	MRHW	2.77	2.87	3.38
GPM01808	NORITE	MRHW	2.87	2.90	1.14
GPM01809	NORITE	MRHW	2.85	2.96	3.76
GPM01810	FPYX	MRHW	2.85	2.89	1.48
GPM01811	FPYX	MRHW	2.83	2.94	3.73
GPM01812	FPYX	MRHW	3.00	3.26	8.15
GPM01813	FPYX	MRHW	3.03	3.24	6.73

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01814	FPYX	MRHW	3.14	3.32	5.47
GPM01815	FPYX	MRHW	3.19	3.35	5.04
GPM01816	FPYX	MRHW	3.19	3.36	5.33
GPM01817	FPYX	MRHW	3.05	3.39	10.59
GPM01818	NORITE	MRHW	2.81	2.90	2.99
GPM01819	NORITE	MRHW	2.90	2.99	2.92
GPM01820	NORITE	MRHW	2.96	3.03	2.25
GPM01821	FPYX	MRHW	3.23	3.37	4.10
GPM01822	FPYX	MRHW	3.24	3.35	3.21
GPM01823	FPYX	MRHW	3.23	3.31	2.49
GPM01824	NORITE	MRHW	2.84	2.92	2.83
GPM01825	NORITE	MRHW	2.89	2.97	2.81
GPM01826	NORITE	MRHW	2.97	3.05	2.53
GPM01827	FPYX	MRHW	3.27	3.31	1.20
GPM01828	FPYX	MRHW	3.28	3.39	3.32
GPM01829	FPYX	MRHW	3.27	3.34	2.11
GPM01830	NORATE	MRHW	3.01	3.15	4.68
GPM01831	NORATE	MRHW	3.00	3.19	6.02
GPM01832	NORATE	MRHW	3.03	3.22	6.17
GPM01833	FPYX	MRHW	3.24	3.40	4.85
GPM01834	FPYX	MRHW	3.17	3.46	8.77
GPM01835	NORATE	MRHW	2.99	3.15	5.28
GPM01836	NORATE	MRHW	3.01	3.19	5.68
GPM01837	FPYX	MRHW	3.08	3.23	4.72
GPM01838	FPYX	MRHW	3.16	3.39	6.96
GPM01839	N	MRHW	2.96	3.08	3.97
GPM01840	N	MRHW	2.95	3.09	4.54
GPM01841	N	MRHW	2.98	3.11	4.25
GPM01842	FPYX	MRHW	2.98	3.15	5.50
GPM01843	FPYX	MRHW	3.24	3.33	2.60
GPM01844	FPYX	MRHW	3.25	3.40	4.49
GPM01845	FPYX	MRHW	3.28	3.38	2.81
GPM01846	N	MRHW	2.97	3.47	15.44
GPM01847	N	MRHW	2.99	3.06	2.29
GPM01848	N	MRHW	3.08	3.17	2.84
GPM01849	FPYX	MRHW	3.12	3.44	9.76
GPM01850	FPYX	MRHW	3.37	3.52	4.39
GPM01851	FPYX	MRHW	3.27	3.63	10.31
GPM01852	N	MRHW	2.94	3.39	14.29
GPM01853	N	MRHW	2.93	3.46	16.71
GPM01854	N	MRHW	2.94	3.56	19.01
GPM01855	FPYX	MRHW	3.15	3.76	17.75
GPM01856	FPYX	MRHW	3.24	3.56	9.46
GPM01857	N	MRHW	2.93	3.40	14.75
GPM01858	N	MRHW	2.95	3.48	16.32
GPM01859	N	MRHW	2.96	3.59	19.11
GPM01860	FPYX	MRHW	3.02	3.71	20.54
GPM01861	FPYX	MRHW	3.12	3.48	10.92
GPM01862	FPYX	MRHW	3.26	3.59	9.73

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01863	FPYX	MRHW	3.23	3.68	13.02
GPM01864	N	MRHW	2.90	3.33	13.81
GPM01865	N	MRHW	2.93	3.42	15.49
GPM01866	N	MRHW	3.04	3.52	14.59
GPM01867	FPYX	MRHW	3.21	3.94	20.39
GPM01868	FPYX	MRHW	3.28	4.02	20.42
GPM01869	FPYX	MRHW	3.27	3.48	6.16
GPM01870	N	MRHW	2.90	3.09	6.20
GPM01871	N	MRHW	2.93	3.12	6.12
GPM01872	N	MRHW	2.98	3.18	6.60
GPM01873	FPYX	MRHW	3.23	3.48	7.33
GPM01874	FPYX	MRHW	3.26	3.46	6.01
GPM01875	FPYX	MRHW	3.24	3.48	7.23
GPM01876	VTAN	MRHW	2.81	2.95	5.01
GPM01877	VTAN	MRHW	2.77	3.03	8.96
GPM01878	PYXAN	MRHW	2.94	3.25	9.91
GPM01879	PYXAN	MRHW	3.02	3.39	11.61
GPM01880	PYXAN	MRHW	2.97	3.33	11.54
GPM01881	VTAN	MRHW	2.79	2.87	2.82
GPM01882	VTAN	MRHW	2.79	2.91	4.08
GPM01883	PYXAN	MRHW	2.79	2.89	3.56
GPM01884	PYXAN	MRHW	2.97	3.03	2.02
GPM01885	PYXAN	MRHW	3.07	3.24	5.31
GPM01886	PYXAN	MRHW	2.99	3.15	5.33
GPM01887	PYXAN	MRHW	2.95	3.12	5.60
GPM01888	CR	PUG2	4.00	4.20	4.88
GPM01889	CR	PUG2	4.09	4.50	9.55
GPM01890	CR	PUG2	4.18	4.52	7.88
GPM01891	CR	PUG2	4.16	4.27	2.58
GPM01892	FPYX	PUG2	3.27	3.41	4.06
GPM01893	FPYX	PUG2	3.22	3.41	5.77
GPM01894	FPYX	PUG2	3.26	3.45	5.45
GPM01895	FPYX	PUG2	4.07	3.92	-3.65
GPM01896	FPYX	PUG2	4.07	3.98	-2.13
GPM01897	CR	PUG2	4.04	4.35	7.45
GPM01898	CR	PUG2	4.10	4.47	8.56
GPM01899	CR	PUG2	3.98	4.46	11.40
GPM01900	CR	PUG2	4.13	4.53	9.07
GPM01901	CR	PUG2	3.91	4.18	6.64
GPM01902	CR	PUG2	4.09	4.33	5.78
GPM01903	CR	PUG2	4.12	4.60	11.08
GPM01904	CR	PUG2	4.12	4.64	11.94
GPM01905	CR	PUG2	4.12	4.66	12.23
GPM01906	CR	PUG2	3.95	4.45	11.97
GPM01907	FPYX	PUG2	3.65	3.66	0.20
GPM01908	FPYX	PUG2	2.99	3.39	12.70
GPM01909	FPYX	PUG2	2.73	2.88	5.31
GPM01910	FPYX	PUG2	2.93	3.12	6.33
GPM01911	POIKAN	PUG2	3.85	4.41	13.52

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01912	CR	PUG2	4.08	4.43	8.33
GPM01913	CR	PUG2	4.16	4.59	9.92
GPM01914	CR	PUG2	4.08	4.57	11.23
GPM01915	CR	PUG2	4.41	4.56	3.33
GPM01916	CR	PUG2	4.16	4.23	1.69
GPM01917	CR	PUG2	3.22	3.37	4.44
GPM01918	CR	UG1	3.19	3.38	5.93
GPM01919	CR	UG1	4.41	4.64	5.00
GPM01920	CR	UG1	4.11	4.82	15.80
GPM01921	FPYX	UG1	3.26	3.53	7.89
GPM01922	CR	UG1	3.25	3.51	7.82
GPM01923	CR	UG1	3.31	3.50	5.63
GPM01924	FPYX	UG1FW	3.31	3.59	8.06
GPM01925	FPYX	UG1FW	3.32	3.60	8.10
GPM01926	FPYX	UG1FW	3.55	3.64	2.49
GPM01927	FPYX	UG1FW	3.95	3.82	-3.47
GPM01928	FPYX	UG1FW	3.38	3.42	1.10
GPM01929	FPYX	UG1FW	3.33	3.66	9.57
GPM01930	FPYX	UG1FW	3.33	3.76	12.12
GPM01931	FPYX	UG1FW	3.35	3.63	7.88
GPM01932	N	UG1HW	3.31	3.53	6.46
GPM01933	N	UG1HW	3.21	3.54	9.75
GPM01934	CR	UG2	4.09	4.37	6.66
GPM01935	CR	UG2	4.10	4.75	14.60
GPM01936	CR	UG2	4.00	4.35	8.38
GPM01937	CR	UG2	3.88	4.30	10.30
GPM01938	CR	UG2	4.08	4.44	8.53
GPM01939	CR	UG2	3.61	4.07	12.11
GPM01940	CR	UG2	3.91	4.20	7.06
GPM01941	CR	UG2	3.48	3.67	5.24
GPM01942	CR	UG2	3.50	3.53	0.78
GPM01943	CR	UG2	3.31	3.39	2.38
GPM01944	PEGFPYX	UG2	3.26	3.36	2.87
GPM01945	PEGFPYX	UG2	3.58	3.50	-2.26
GPM01946	CR	UG2	3.61	3.49	-3.31
GPM01947	CR	UG2	3.38	3.96	15.94
GPM01948	CR	UG2	3.32	3.50	5.15
GPM01949	CR	UG2	3.41	3.53	3.60
GPM01950	CR	UG2	3.50	3.80	8.35
GPM01951	CR	UG2	3.83	4.09	6.62
GPM01952	CR	UG2	3.39	3.47	2.23
GPM01953	CR	UG2	3.59	3.90	8.37
GPM01954	CR	UG2	4.19	4.56	8.53
GPM01955	CR	UG2	4.16	4.55	8.86
GPM01956	CR	UG2	4.12	4.45	7.81
GPM01957	CR	UG2	3.74	4.03	7.45
GPM01958	CR	UG2	3.58	3.89	8.28
GPM01959	CR	UG2	4.13	4.50	8.61
GPM01960	CR	UG2	4.20	4.59	8.82

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM01961	CR	UG2	4.16	4.50	7.93
GPM01962	CR	UG2	4.06	4.04	-0.61
GPM01963	CR	UG2	4.11	4.03	-2.03
GPM01964	CR	UG2	4.15	4.23	2.02
GPM01965	CR	UG2	4.09	4.20	2.60
GPM01966	CR	UG2	3.85	3.87	0.59
GPM01967	CR	UG2	2.91	3.10	6.36
GPM01968	CR	UG2	3.03	3.12	3.06
GPM01969	CR	UG2	4.10	4.09	-0.30
GPM01970	CR	UG2	4.17	4.22	1.29
GPM01971	CR	UG2	4.23	4.33	2.35
GPM01972	CR	UG2	4.10	4.17	1.75
GPM01973	CR	UG2	4.27	4.30	0.68
GPM01974	CR	UG2	4.23	4.54	7.18
GPM01975	CR	UG2	4.16	4.37	4.91
GPM01976	CR	UG2	4.22	4.58	8.18
GPM01977	CR	UG2	4.20	4.55	8.01
GPM01978	CR	UG2	4.27	4.23	-0.94
GPM01979	CR	UG2	4.26	4.66	9.08
GPM01980	CR	UG2	4.34	4.65	6.95
GPM01981	CR	UG2	4.19	4.59	9.14
GPM01982	CR	UG2	4.37	4.78	9.03
GPM01983	CR	UG2	4.25	4.73	10.64
GPM01984	CR	UG2	4.29	4.62	7.38
GPM01985	CR	UG2	4.08	4.62	12.48
GPM01986	CR	UG2	3.75	4.32	13.96
GPM01987	CR	UG2	4.37	4.46	1.96
GPM01988	CR	UG2	4.08	4.31	5.57
GPM01989	CR	UG2	4.31	4.34	0.67
GPM01990	CR	UG2	4.32	4.47	3.52
GPM01991	CR	UG2	4.30	4.48	4.04
GPM01992	CR	UG2	4.15	4.13	-0.37
GPM01993	CR	UG2	3.96	4.25	6.99
GPM01994	CR	UG2	4.24	4.52	6.38
GPM01995	CR	UG2	4.30	4.34	0.92
GPM01996	CR	UG2	4.16	4.25	2.01
GPM01997	CR	UG2	4.35	4.45	2.23
GPM01998	CR	UG2	4.27	4.25	-0.36
GPM01999	CR	UG2	4.20	4.30	2.38
GPM02000	CR	UG2	4.30	4.47	3.97
GPM02001	CR	UG2	4.33	4.34	0.17
GPM02002	CR	UG2	4.06	4.24	4.33
GPM02003	CR	UG2	4.06	4.36	7.04
GPM02004	CR	UG2	4.13	4.24	2.65
GPM02005	CR	UG2	3.79	4.06	6.96
GPM02006	CR	UG2	4.18	4.32	3.35
GPM02007	CR	UG2	4.02	4.17	3.65
GPM02008	CR	UG2	3.73	4.21	12.16
GPM02009	CR	UG2	4.09	4.42	7.81

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02010	CR	UG2	4.37	4.40	0.67
GPM02011	CR	UG2	3.86	4.32	11.19
GPM02012	CR	UG2	3.81	4.14	8.26
GPM02013	CR	UG2	4.15	4.48	7.62
GPM02014	CR	UG2	4.24	4.45	4.73
GPM02015	CR	UG2	4.07	4.36	6.93
GPM02016	CR	UG2	3.29	3.48	5.73
GPM02017	CR	UG2	4.01	4.10	2.24
GPM02018	CR	UG2	4.06	4.43	8.74
GPM02019	CR	UG2	4.17	4.47	6.91
GPM02020	CR	UG2	4.27	4.28	0.31
GPM02021	CR	UG2	4.20	4.41	4.95
GPM02022	CR	UG2	3.91	4.30	9.40
GPM02023	CR	UG2	3.79	4.40	14.90
GPM02024	CR	UG2	4.19	4.43	5.64
GPM02025	CR	UG2	4.14	4.28	3.24
GPM02026	CR	UG2	4.22	4.37	3.58
GPM02027	CR	UG2	4.22	4.57	7.91
GPM02028	CR	UG2	4.21	4.46	5.71
GPM02029	CR	UG2	3.89	4.38	11.85
GPM02030	CR	UG2	4.14	4.48	7.84
GPM02031	CR	UG2	4.16	4.32	3.89
GPM02032	FPYX	UG2	3.19	3.28	2.92
GPM02033	FPYX	UG2	2.74	3.01	9.55
GPM02034	POIKAN	UG2	2.74	2.85	3.88
GPM02035	POIKAN	UG2	2.91	2.95	1.19
GPM02036	POIKAN	UG2	2.73	3.07	11.62
GPM02037	POIKAN	UG2	3.21	3.34	4.03
GPM02038	FPYX	UG2	3.10	3.33	7.30
GPM02039	FPYX	UG2	3.12	3.39	8.17
GPM02040	FPYX	UG2	2.74	2.84	3.69
GPM02041	CR	UG2	3.82	4.42	14.69
GPM02042	CR	UG2	4.14	4.78	14.37
GPM02043	CR	UG2	4.18	4.83	14.37
GPM02044	CR	UG2	3.76	4.43	16.30
GPM02045	CR	UG2	4.03	4.49	10.77
GPM02046	CR	UG2	4.15	4.66	11.67
GPM02047	CR	UG2	4.15	4.72	12.83
GPM02048	CR	UG2	3.98	4.37	9.30
GPM02049	CR	UG2	4.30	4.34	1.04
GPM02050	CR	UG2	3.55	4.02	12.33
GPM02051	CR	UG2	4.27	4.40	3.06
GPM02052	CR	UG2	3.97	3.98	0.32
GPM02053	CR	UG2	3.93	4.47	12.87
GPM02054	CR	UG2	4.32	4.15	-3.98
GPM02055	CR	UG2	3.37	3.47	2.80
GPM02056	CR	UG2	4.30	4.46	3.61
GPM02057	CR	UG2	3.79	3.74	-1.26
GPM02058	CR	UG2	3.82	4.12	7.64

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02059	CR	UG2	4.41	4.33	-1.79
GPM02060	CR	UG2	3.36	3.95	16.07
GPM02061	CR	UG2	4.25	4.58	7.53
GPM02062	CR	UG2	4.29	4.59	6.85
GPM02063	CR	UG2	3.86	4.21	8.80
GPM02064	CR	UG2	3.97	4.39	10.08
GPM02065	CR	UG2	4.23	4.60	8.32
GPM02066	CR	UG2	4.30	4.73	9.52
GPM02067	CR	UG2	3.90	4.41	12.30
GPM02068	CR	UG2	4.11	3.92	-4.78
GPM02069	CR	UG2	3.92	4.66	17.14
GPM02070	CR	UG2	4.23	4.42	4.34
GPM02071	CR	UG2	3.84	4.46	14.94
GPM02072	CR	UG2	4.29	4.65	7.94
GPM02073	CR	UG2	4.33	4.18	-3.57
GPM02074	CR	UG2	4.22	4.42	4.56
GPM02075	CR	UG2	4.38	4.71	7.24
GPM02076	CR	UG2	4.01	4.37	8.51
GPM02077	CR	UG2	4.28	4.44	3.71
GPM02078	CR	UG2	4.32	4.56	5.31
GPM02079	CR	UG2	4.22	4.29	1.58
GPM02080	CR	UG2	4.16	4.10	-1.56
GPM02081	CR	UG2	4.41	4.61	4.50
GPM02082	CR	UG2	4.13	4.66	11.95
GPM02083	CR	UG2	4.31	4.46	3.45
GPM02084	CR	UG2	3.71	3.90	5.00
GPM02085	CR	UG2	4.29	4.32	0.59
GPM02086	CR	UG2	4.19	4.44	5.75
GPM02087	CR	UG2	4.30	4.63	7.42
GPM02088	CR	UG2	4.02	4.36	8.01
GPM02089	CR	UG2	3.52	3.68	4.32
GPM02090	CR	UG2	4.06	4.39	7.83
GPM02091	CR	UG2	4.27	4.58	6.95
GPM02092	CR	UG2	4.35	4.61	5.90
GPM02093	CR	UG2	4.24	4.38	3.30
GPM02094	CR	UG2	3.84	4.23	9.58
GPM02095	CR	UG2	4.25	4.56	7.00
GPM02096	CR	UG2	4.37	4.59	4.94
GPM02097	CR	UG2	4.13	4.46	7.76
GPM02098	CR	UG2	3.72	4.18	11.62
GPM02099	CR	UG2	4.06	4.11	1.29
GPM02100	CR	UG2	3.93	4.39	11.10
GPM02101	CR	UG2	4.10	4.32	5.34
GPM02102	CR	UG2	4.10	4.36	6.20
GPM02103	CR	UG2	3.98	4.16	4.35
GPM02104	CR	UG2	3.91	4.12	5.15
GPM02105	CR	UG2	4.06	4.34	6.65
GPM02106	CR	UG2	4.12	4.38	6.07
GPM02107	CR	UG2	3.54	4.07	14.05

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02108	CR	UG2	4.51	4.33	-4.06
GPM02109	CR	UG2	3.97	4.35	8.97
GPM02110	CR	UG2	4.11	4.48	8.41
GPM02111	CR	UG2	4.10	4.57	10.93
GPM02112	CR	UG2	4.23	4.55	7.35
GPM02113	CR	UG2	3.95	4.10	3.84
GPM02114	CR	UG2	3.94	4.24	7.28
GPM02115	CR	UG2	3.91	4.49	13.89
GPM02116	CR	UG2	4.20	4.56	8.24
GPM02117	CR	UG2	4.12	4.44	7.41
GPM02118	CR	UG2	3.93	4.18	6.22
GPM02119	CR	UG2	3.90	4.20	7.34
GPM02120	CR	UG2	4.06	4.31	5.93
GPM02121	CR	UG2	4.08	4.31	5.45
GPM02122	CR	UG2	3.88	4.18	7.34
GPM02123	CR	UG2	3.93	4.23	7.46
GPM02124	CR	UG2	4.08	4.31	5.37
GPM02125	CR	UG2	4.13	4.34	5.06
GPM02126	CR	UG2	4.00	4.20	4.79
GPM02127	CR	UG2	3.10	3.08	-0.66
GPM02128	CR	UG2	4.13	4.29	3.72
GPM02129	CR	UG2	4.34	4.58	5.40
GPM02130	CR	UG2	4.49	4.28	-4.73
GPM02131	CR	UG2	3.28	3.44	4.74
GPM02132	CR	UG2	3.53	3.71	5.09
GPM02133	CR	UG2	3.89	4.12	5.70
GPM02134	CR	UG2	3.79	4.04	6.30
GPM02135	CR	UG2	4.10	4.41	7.33
GPM02136	CR	UG2	4.22	4.37	3.50
GPM02137	CR	UG2	4.01	4.15	3.47
GPM02138	CR	UG2	4.00	4.27	6.60
GPM02139	CR	UG2	3.96	4.23	6.48
GPM02140	CR	UG2	3.85	4.08	5.68
GPM02141	CR	UG2	3.92	4.12	4.76
GPM02142	CR	UG2	4.01	4.27	6.34
GPM02143	CR	UG2	4.00	4.29	7.00
GPM02144	CR	UG2	4.01	4.17	3.84
GPM02145	CR	UG2	4.06	4.17	2.63
GPM02146	CR	UG2	4.15	4.48	7.59
GPM02147	CR	UG2	4.07	4.33	6.31
GPM02148	CR	UG2	3.94	4.21	6.57
GPM02149	CR	UG2	3.87	4.09	5.47
GPM02150	CR	UG2	3.63	4.12	12.44
GPM02151	CR	UG2	4.07	4.46	9.27
GPM02152	CR	UG2	4.02	4.31	6.99
GPM02153	CR	UG2	3.63	3.92	7.81
GPM02154	CR	UG2	3.91	4.09	4.42
GPM02155	CR	UG2	3.80	4.14	8.49
GPM02156	CR	UG2	4.07	4.44	8.59

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02157	CR	UG2	3.74	3.96	5.67
GPM02158	CR	UG2	3.46	3.64	5.17
GPM02159	CR	UG2	3.52	3.95	11.58
GPM02160	CR	UG2	4.03	4.40	8.79
GPM02161	CR	UG2	4.14	4.43	6.72
GPM02162	CR	UG2	4.05	4.48	10.09
GPM02163	CR	UG2	4.57	4.26	-7.01
GPM02164	CR	UG2	4.28	4.44	3.60
GPM02165	CR	UG2	3.83	4.44	14.67
GPM02166	CR	UG2	4.26	4.46	4.54
GPM02167	CR	UG2	3.37	3.63	7.45
GPM02168	CR	UG2	4.07	4.16	2.16
GPM02169	CR	UG2	4.14	4.29	3.65
GPM02170	CR	UG2	4.25	4.44	4.46
GPM02171	CR	UG2	3.85	4.06	5.31
GPM02172	CR	UG2	3.75	4.07	8.22
GPM02173	CR	UG2	4.02	4.31	6.99
GPM02174	CR	UG2	4.30	4.40	2.24
GPM02175	CR	UG2	4.14	4.08	-1.43
GPM02176	CR	UG2	3.98	4.09	2.69
GPM02177	CR	UG2	4.08	4.26	4.35
GPM02178	CR	UG2	4.24	4.36	2.69
GPM02179	CR	UG2	4.17	3.98	-4.68
GPM02180	CR	UG2	4.09	4.18	2.06
GPM02181	CR	UG2	4.18	4.53	8.06
GPM02182	CR	UG2	4.24	4.56	7.27
GPM02183	CR	UG2	3.97	4.25	6.77
GPM02184	CR	UG2	3.83	4.14	7.72
GPM02185	CR	UG2	4.00	4.24	5.91
GPM02186	CR	UG2	4.21	4.52	7.11
GPM02187	CR	UG2	4.17	4.53	8.19
GPM02188	CR	UG2	4.00	4.21	5.20
GPM02189	CR	UG2	3.85	4.14	7.05
GPM02190	CR	UG2	3.72	4.11	10.00
GPM02191	CR	UG2	4.04	4.33	6.88
GPM02192	CR	UG2	4.18	4.39	4.85
GPM02193	CR	UG2	4.00	4.36	8.50
GPM02194	CR	UG2	4.09	4.20	2.73
GPM02195	CR	UG2	4.07	4.34	6.50
GPM02196	CR	UG2	4.14	4.44	6.88
GPM02197	CR	UG2	4.07	4.29	5.22
GPM02198	CR	UG2	4.38	4.42	0.89
GPM02199	CR	UG2	4.25	4.49	5.50
GPM02200	CR	UG2	4.14	4.36	5.07
GPM02201	CR	UG2	4.21	4.20	-0.29
GPM02202	CR	UG2	3.84	4.42	14.05
GPM02203	CR	UG2	4.11	4.51	9.23
GPM02204	CR	UG2	4.11	4.55	10.05
GPM02205	CR	UG2	3.94	4.28	8.22

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02206	CR	UG2	4.18	4.25	1.75
GPM02207	CR	UG2	4.22	4.47	5.67
GPM02208	CR	UG2	4.36	4.49	2.91
GPM02209	CR	UG2	4.12	4.34	5.27
GPM02210	CR	UG2	3.87	4.33	11.17
GPM02211	CR	UG2	4.27	4.50	5.18
GPM02212	CR	UG2	3.93	4.47	12.85
GPM02213	CR	UG2	4.00	4.31	7.48
GPM02214	CR	UG2	3.24	3.37	4.02
GPM02215	CR	UG2	3.92	4.07	3.86
GPM02216	CR	UG2	3.96	4.26	7.29
GPM02217	CR	UG2	4.06	4.30	5.75
GPM02218	CR	UG2	4.12	4.38	6.12
GPM02219	CR	UG2	4.00	4.17	4.16
GPM02220	CR	UG2	3.62	3.81	5.22
GPM02221	CR	UG2	3.98	4.17	4.58
GPM02222	CR	UG2	3.98	4.23	6.10
GPM02223	CR	UG2	4.01	4.30	7.02
GPM02224	CR	UG2	3.93	4.24	7.57
GPM02225	CR	UG2	4.05	4.12	1.48
GPM02226	CR	UG2	3.98	4.24	6.40
GPM02227	CR	UG2	4.16	4.42	6.17
GPM02228	CR	UG2	4.14	4.51	8.66
GPM02229	CR	UG2	4.12	4.41	6.87
GPM02230	CR	UG2	3.97	4.11	3.36
GPM02231	CR	UG2	4.29	4.29	0.09
GPM02232	CR	UG2	4.14	4.43	6.80
GPM02233	CR	UG2	4.11	4.45	7.83
GPM02234	CR	UG2	3.83	4.10	6.76
GPM02235	CR	UG2	3.80	4.01	5.32
GPM02236	CR	UG2	3.81	4.13	8.12
GPM02237	CR	UG2	3.99	4.26	6.47
GPM02238	CR	UG2	3.86	4.16	7.46
GPM02239	CR	UG2	3.56	3.99	11.14
GPM02240	CR	UG2	4.00	4.18	4.34
GPM02241	CR	UG2	3.79	4.16	9.09
GPM02242	CR	UG2	3.86	4.01	3.79
GPM02243	CR	UG2	3.86	4.21	8.57
GPM02244	CR	UG2	4.06	4.38	7.70
GPM02245	CR	UG2	4.09	4.45	8.32
GPM02246	CR	UG2	3.68	4.20	13.26
GPM02247	CR	UG2	3.83	4.06	5.74
GPM02248	CR	UG2	4.06	4.21	3.71
GPM02249	CR	UG2	4.09	4.24	3.67
GPM02250	CR	UG2	3.85	3.97	3.05
GPM02251	CR	UG2	3.87	4.33	11.23
GPM02252	CR	UG2	4.03	4.45	9.93
GPM02253	CR	UG2	4.04	4.36	7.51
GPM02254	CR	UG2	3.90	4.22	7.94

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02255	CR	UG2	3.77	4.07	7.71
GPM02256	CR	UG2	3.78	4.28	12.50
GPM02257	CR	UG2	4.01	4.34	7.85
GPM02258	CR	UG2	3.89	4.05	4.08
GPM02259	CR	UG2	3.84	4.16	8.03
GPM02260	CR	UG2	3.84	4.00	4.05
GPM02261	CR	UG2	3.97	4.08	2.74
GPM02262	CR	UG2	3.96	4.11	3.60
GPM02263	CR	UG2	3.62	3.80	4.91
GPM02264	CR	UG2	3.97	3.90	-1.70
GPM02265	CR	UG2	4.06	4.21	3.53
GPM02266	CR	UG2	4.03	4.13	2.41
GPM02267	CR	UG2	3.78	3.82	1.01
GPM02268	CR	UG2	3.76	4.03	6.85
GPM02269	CR	UG2	4.03	4.22	4.60
GPM02270	CR	UG2	4.10	4.25	3.69
GPM02271	CR	UG2	3.88	4.01	3.40
GPM02272	CR	UG2	4.00	4.02	0.56
GPM02273	CR	UG2	4.11	4.19	1.90
GPM02274	CR	UG2	3.96	4.06	2.48
GPM02275	CR	UG2	4.09	4.41	7.65
GPM02276	CR	UG2	3.72	4.11	10.02
GPM02277	CR	UG2	4.02	4.34	7.60
GPM02278	CR	UG2	4.08	4.37	6.85
GPM02279	CR	UG2	4.13	4.39	6.17
GPM02280	CR	UG2	3.96	4.15	4.70
GPM02281	CR	UG2	3.68	4.12	11.29
GPM02282	CR	UG2	4.00	4.21	5.08
GPM02283	CR	UG2	4.01	4.29	6.66
GPM02284	CR	UG2	3.74	3.88	3.77
GPM02285	CR	UG2	4.12	3.87	-6.29
GPM02286	CR	UG2	4.04	4.26	5.37
GPM02287	CR	UG2	3.97	4.23	6.35
GPM02288	CR	UG2	3.58	3.88	8.03
GPM02289	CR	UG2	3.72	4.15	11.04
GPM02290	CR	UG2	4.06	4.42	8.39
GPM02291	CR	UG2	4.13	4.41	6.56
GPM02292	CR	UG2	4.21	4.36	3.45
GPM02293	CR	UG2	4.01	4.21	4.77
GPM02294	CR	UG2	4.19	4.37	4.18
GPM02295	CR	UG2	3.91	4.38	11.23
GPM02296	CR	UG2	4.13	4.30	4.05
GPM02297	CR	UG2	4.14	4.42	6.66
GPM02298	CR	UG2	4.18	4.69	11.57
GPM02299	CR	UG2	4.16	4.77	13.66
GPM02300	CR	UG2	4.09	4.42	7.86
GPM02301	CR	UG2	4.36	4.47	2.53
GPM02302	CR	UG2	4.27	4.80	11.76
GPM02303	CR	UG2	4.33	4.84	11.19

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02304	CR	UG2	4.29	4.64	7.75
GPM02305	CR	UG2	3.83	4.10	6.76
GPM02306	CR	UG2	3.06	3.65	17.48
GPM02307	CR	UG2	3.04	3.64	17.89
GPM02308	CR	UG2	2.97	3.24	8.53
GPM02309	CR	UG2	3.44	3.59	4.20
GPM02310	CR	UG2	3.47	3.75	7.80
GPM02311	CR	UG2	3.71	4.12	10.39
GPM02312	CR	UG2	4.19	4.22	0.50
GPM02313	CR	UG2	3.23	3.41	5.53
GPM02314	CR	UG2	3.88	3.82	-1.53
GPM02315	CR	UG2	3.48	3.94	12.34
GPM02316	CR	UG2	3.52	3.86	9.13
GPM02317	CR	UG2	3.86	4.35	12.02
GPM02318	CR	UG2	3.91	3.92	0.34
GPM02319	CR	UG2	3.17	3.26	2.76
GPM02320	CR	UG2	3.24	3.60	10.64
GPM02321	CR	UG2	4.11	4.87	17.02
GPM02322	CR	UG2	3.82	4.14	7.93
GPM02323	CR	UG2	4.23	4.91	14.79
GPM02324	CR	UG2	4.23	3.93	-7.44
GPM02325	CR	UG2	3.51	3.93	11.21
GPM02326	CR	UG2	4.19	4.70	11.39
GPM02327	CR	UG2	4.33	4.64	6.81
GPM02328	CR	UG2	4.24	4.67	9.58
GPM02329	CR	UG2	4.24	4.75	11.27
GPM02330	CR	UG2	4.18	4.66	10.90
GPM02331	CR	UG2	4.22	4.68	10.28
GPM02332	CR	UG2	4.22	4.66	9.86
GPM02333	CR	UG2	4.27	4.72	9.97
GPM02334	CR	UG2	4.26	4.71	9.94
GPM02335	CR	UG2	4.33	4.70	8.31
GPM02336	CR	UG2	4.17	4.72	12.33
GPM02337	CR	UG2	4.29	4.65	7.94
GPM02338	CR	UG2	3.32	3.62	8.56
GPM02339	CR	UG2	4.38	4.71	7.29
GPM02340	CR	UG2	4.28	4.81	11.71
GPM02341	CR	UG2	3.91	4.24	8.20
GPM02342	CR	UG2	4.13	4.45	7.45
GPM02343	CR	UG2	4.33	4.61	6.19
GPM02344	CR	UG2	4.11	4.12	0.08
GPM02345	CR	UG2	4.26	4.28	0.49
GPM02346	CR	UG2	4.11	4.44	7.76
GPM02347	CR	UG2	4.24	4.64	8.94
GPM02348	CR	UG2	3.72	4.34	15.30
GPM02349	CR	UG2	3.92	4.43	12.25
GPM02350	CR	UG2	4.05	4.27	5.20
GPM02351	CR	UG2	3.89	4.19	7.45
GPM02352	CR	UG2	3.89	4.05	3.94

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02353	CR	UG2	3.58	3.85	7.17
GPM02354	CR	UG2	3.65	4.05	10.36
GPM02355	FPYX	UG2FW	3.20	3.40	5.92
GPM02356	FPYX	UG2FW	3.39	3.77	10.61
GPM02357	FPYX	UG2FW	3.40	3.73	9.30
GPM02358	FPYX	UG2FW	3.25	3.55	8.73
GPM02359	FPYX	UG2FW	3.21	3.57	10.74
GPM02360	FPYX	UG2FW	3.23	3.41	5.53
GPM02361	DUPLICATE	UG2FW	3.23	3.40	5.24
GPM02362	FPYX	UG2FW	3.21	3.39	5.52
GPM02363	FPYX	UG2FW	3.29	3.44	4.42
GPM02364	FPYX	UG2FW	3.25	3.38	4.07
GPM02365	FPYX	UG2FW	3.10	3.43	10.01
GPM02366	FPYX	UG2FW	3.49	3.65	4.49
GPM02367	FPYX	UG2FW	3.35	3.53	5.32
GPM02368	FPYX	UG2FW	3.16	3.39	7.13
GPM02369	FPYX	UG2FW	3.25	3.42	4.96
GPM02370	FPYX	UG2FW	3.22	3.38	4.88
GPM02371	DUPLICATE	UG2FW	3.22	3.36	4.29
GPM02372	FPYX	UG2FW	3.25	3.38	3.86
GPM02373	FPYX	UG2FW	3.25	3.38	3.91
GPM02374	FPYX	UG2FW	3.24	3.35	3.41
GPM02375	FPYX	UG2FW	3.24	3.35	3.47
GPM02376	PYX	UG2FW	3.32	3.38	1.72
GPM02377	PYX	UG2FW	3.29	3.36	2.13
GPM02378	PYX	UG2FW	3.32	3.37	1.48
GPM02379	PYX	UG2FW	3.30	3.49	5.58
GPM02380	PYX	UG2FW	3.27	3.36	2.80
GPM02381	PYX	UG2FW	3.32	3.41	2.75
GPM02382	PYX	UG2FW	3.24	3.30	1.94
GPM02383	PYX	UG2FW	3.16	3.32	4.66
GPM02384	PYX	UG2FW	3.25	3.29	1.11
GPM02385	PYX	UG2FW	3.25	3.18	-2.19
GPM02386	PYX	UG2FW	3.14	3.32	5.54
GPM02387	PYX	UG2FW	3.22	3.32	3.06
GPM02388	PYX	UG2FW	3.19	3.23	1.35
GPM02389	PEGFPYX	UG2FW	3.26	3.53	8.03
GPM02390	PEGFPYX	UG2FW	3.02	3.36	10.52
GPM02391	PEGFPYX	UG2FW	3.03	3.37	10.76
GPM02392	PYX	UG2FW	3.01	3.29	8.81
GPM02393	PYX	UG2FW	2.95	3.18	7.62
GPM02394	PYX	UG2FW	3.00	3.28	8.86
GPM02395	PYX	UG2FW	3.03	3.34	9.71
GPM02396	PYX	UG2FW	3.11	3.46	10.62
GPM02397	PYX	UG2FW	3.14	3.48	10.23
GPM02398	PYX	UG2FW	3.14	3.48	10.42
GPM02399	PYX	UG2FW	3.18	3.48	8.88
GPM02400	PYX	UG2FW	3.13	3.48	10.74
GPM02401	PYX	UG2FW	3.21	3.51	9.06

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02402	PYX	UG2FW	3.15	3.56	12.18
GPM02403	PYX	UG2FW	3.12	3.46	10.27
GPM02404	PYX	UG2FW	3.24	3.52	8.02
GPM02405	PYX	UG2FW	3.25	3.59	9.69
GPM02406	PYX	UG2FW	3.26	3.58	9.42
GPM02407	PYX	UG2FW	3.24	3.60	10.41
GPM02408	PYX	UG2FW	3.27	3.59	9.33
GPM02409	PYX	UG2FW	3.19	3.46	8.10
GPM02410	PYX	UG2FW	3.25	3.58	9.78
GPM02411	PEGFPYX	UG2FW	3.30	3.62	9.15
GPM02412	PEGFPYX	UG2FW	3.12	3.38	8.03
GPM02413	PEGFPYX	UG2FW	3.02	3.37	11.05
GPM02414	PYX	UG2FW	2.95	3.27	10.02
GPM02415	PYX	UG2FW	2.94	3.21	8.66
GPM02416	PYX	UG2FW	3.00	3.31	9.68
GPM02417	PYX	UG2FW	3.07	3.39	9.93
GPM02418	PYX	UG2FW	3.08	3.41	10.06
GPM02419	PYX	UG2FW	3.19	3.52	9.69
GPM02420	PYX	UG2FW	3.22	3.52	8.86
GPM02421	PYX	UG2FW	3.21	3.53	9.53
GPM02422	PYX	UG2FW	3.13	3.58	13.32
GPM02423	PYX	UG2FW	3.32	3.59	7.74
GPM02424	PYX	UG2FW	3.25	3.61	10.63
GPM02425	PYX	UG2FW	3.24	3.27	0.88
GPM02426	PYX	UG2FW	3.03	3.21	5.75
GPM02427	PYX	UG2FW	3.05	3.22	5.57
GPM02428	PYX	UG2FW	3.30	3.38	2.49
GPM02429	PYX	UG2FW	3.27	3.35	2.53
GPM02430	PYX	UG2FW	3.23	3.29	1.96
GPM02431	PEGFPYX	UG2FW	3.22	3.44	6.49
GPM02432	PYX	UG2FW	2.90	3.09	6.34
GPM02433	PYX	UG2FW	2.89	3.07	6.07
GPM02434	PYX	UG2FW	2.94	3.06	4.14
GPM02435	PYX	UG2FW	2.99	3.18	6.21
GPM02436	PYX	UG2FW	2.96	3.11	5.11
GPM02437	PYX	UG2FW	3.10	3.10	0.14
GPM02438	PEGFPYX	UG2FW	3.21	3.49	8.25
GPM02439	PEGFPYX	UG2FW	3.36	3.65	8.14
GPM02440	PEGFPYX	UG2FW	3.08	3.57	14.67
GPM02441	PEGFPYX	UG2FW	3.31	3.54	6.71
GPM02442	PEGFPYX	UG2FW	3.21	3.55	10.10
GPM02443	PYX	UG2FW	3.28	3.48	6.05
GPM02444	PYX	UG2FW	3.20	3.48	8.36
GPM02445	PYX	UG2FW	3.22	3.46	7.27
GPM02446	PEGFPYX	UG2FW	3.09	3.33	7.55
GPM02447	PEGFPYX	UG2FW	3.38	3.66	7.86
GPM02448	PEGFPYX	UG2FW	3.38	3.60	6.17
GPM02449	PEGFPYX	UG2FW	3.36	3.57	5.94
GPM02450	PEGFPYX	UG2FW	3.41	3.59	5.28

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02451	PEGFPYX	UG2FW	3.31	3.51	5.79
GPM02452	PYX	UG2FW	3.22	3.48	7.61
GPM02453	PYX	UG2FW	3.22	3.48	7.90
GPM02454	PYX	UG2FW	3.26	3.49	6.76
GPM02455	FPYX	UG2FW	3.56	3.76	5.38
GPM02456	FPYX	UG2FW	3.36	3.66	8.53
GPM02457	FPYX	UG2FW	3.41	3.72	8.80
GPM02458	FPYX	UG2FW	3.33	3.71	10.94
GPM02459	FPYX	UG2FW	3.15	3.48	10.06
GPM02460	FPYX	UG2FW	3.30	3.60	8.62
GPM02461	FPYX	UG2FW	3.32	3.57	7.29
GPM02462	FPYX	UG2FW	3.26	3.52	7.76
GPM02463	FPYX	UG2FW	3.59	3.85	6.89
GPM02464	FPYX	UG2FW	3.43	3.60	4.81
GPM02465	FPYX	UG2FW	3.36	3.66	8.64
GPM02466	FPYX	UG2FW	3.39	3.59	5.86
GPM02467	FPYX	UG2FW	3.22	3.43	6.46
GPM02468	FPYX	UG2FW	3.22	3.53	9.23
GPM02469	FPYX	UG2FW	3.37	3.62	7.00
GPM02470	FPYX	UG2FW	3.51	3.69	4.90
GPM02471	FPYX	UG2FW	3.27	3.52	7.47
GPM02472	FPYX	UG2FW	3.39	3.57	5.09
GPM02473	FPYX	UG2FW	3.30	3.58	8.12
GPM02474	FPYX	UG2FW	3.29	3.51	6.40
GPM02475	FPYX	UG2FW	3.29	3.52	6.64
GPM02476	FPYX	UG2FW	3.28	3.48	6.01
GPM02477	FPYX	UG2FW	3.02	3.16	4.41
GPM02478	FPYX	UG2FW	2.94	3.12	6.05
GPM02479	FPYX	UG2FW	3.19	3.27	2.54
GPM02480	FPYX	UG2FW	3.19	3.36	5.29
GPM02481	FPYX	UG2FW	3.12	3.16	1.25
GPM02482	FPYX	UG2FW	2.81	2.92	3.98
GPM02483	FPYX	UG2FW	3.00	3.11	3.48
GPM02484	FPYX	UG2FW	3.26	3.40	4.30
GPM02485	FPYX	UG2FW	3.26	3.40	4.17
GPM02486	FPYX	UG2FW	3.00	3.20	6.50
GPM02487	FPYX	UG2FW	3.05	3.10	1.50
GPM02488	FPYX	UG2FW	3.27	3.32	1.57
GPM02489	FPYX	UG2FW	3.12	3.31	5.77
GPM02490	FPYX	UG2FW	2.77	2.95	6.20
GPM02491	FPYX	UG2FW	2.86	3.15	9.52
GPM02492	FPYX	UG2FW	3.25	3.43	5.43
GPM02493	FPYX	UG2FW	3.29	3.39	2.84
GPM02494	FPYX	UG2FW	3.37	3.44	1.99
GPM02495	FPYX	UG2FW	3.34	3.45	3.11
GPM02496	FPYX	UG2FW	3.00	3.15	4.88
GPM02497	FPYX	UG2FW	3.09	3.17	2.71
GPM02498	FPYX	UG2FW	2.86	3.21	11.67
GPM02499	FPYX	UG2FW	3.11	3.28	5.28

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02500	FPYX	UG2FW	3.03	3.14	3.46
GPM02501	FPYX	UG2FW	2.93	3.00	2.40
GPM02502	FPYX	UG2FW	2.93	3.07	4.64
GPM02503	FPYX	UG2FW	2.99	3.03	1.31
GPM02504	FPYX	UG2FW	3.28	3.36	2.38
GPM02505	FPYX	UG2FW	3.22	3.33	3.42
GPM02506	FPYX	UG2FW	3.33	3.43	2.89
GPM02507	FPYX	UG2FW	3.35	3.52	4.82
GPM02508	FPYX	UG2FW	3.43	3.58	4.37
GPM02509	FPYX	UG2FW	3.39	3.48	2.60
GPM02510	FPYX	UG2FW	3.33	3.39	1.65
GPM02511	FPYX	UG2FW	3.22	3.33	3.40
GPM02512	FPYX	UG2FW	3.20	3.33	4.02
GPM02513	FPYX	UG2FW	3.28	3.46	5.27
GPM02514	FPYX	UG2FW	3.42	3.55	3.77
GPM02515	FPYX	UG2FW	3.43	3.54	3.19
GPM02516	FPYX	UG2FW	3.44	3.54	2.81
GPM02517	FPYX	UG2FW	3.24	3.35	3.38
GPM02518	FPYX	UG2FW	3.24	3.41	5.05
GPM02519	FPYX	UG2FW	3.26	3.37	3.04
GPM02520	FPYX	UG2FW	3.36	3.40	1.21
GPM02521	FPYX	UG2FW	3.15	3.30	4.77
GPM02522	FPYX	UG2FW	3.16	3.33	5.25
GPM02523	FPYX	UG2FW	3.27	3.42	4.62
GPM02524	FPYX	UG2FW	3.19	3.30	3.52
GPM02525	FPYX	UG2FW	3.07	3.28	6.69
GPM02526	FPYX	UG2FW	3.16	3.28	3.79
GPM02527	FPYX	UG2FW	3.23	3.33	3.09
GPM02528	FPYX	UG2FW	3.08	3.27	5.97
GPM02529	FPYX	UG2FW	3.24	3.37	3.82
GPM02530	FPYX	UG2FW	3.30	3.42	3.54
GPM02531	FPYX	UG2FW	3.08	3.32	7.49
GPM02532	FPYX	UG2FW	3.04	3.20	5.12
GPM02533	PEGFPYX	UG2FW	3.31	3.48	4.93
GPM02534	PEGFPYX	UG2FW	3.42	3.66	6.67
GPM02535	PEGFPYX	UG2FW	3.37	3.64	7.57
GPM02536	PEGFPYX	UG2FW	3.19	3.42	7.07
GPM02537	POIKPYX	UG2FW	3.25	3.46	6.27
GPM02538	POIKPYX	UG2FW	3.24	3.43	5.72
GPM02539	PEGFPYX	UG2FW	3.34	3.53	5.42
GPM02540	PEGFPYX	UG2FW	3.48	3.68	5.50
GPM02541	PEGFPYX	UG2FW	3.38	3.61	6.60
GPM02542	PEGFPYX	UG2FW	3.23	3.40	5.12
GPM02543	POIKPYX	UG2FW	3.24	3.44	5.92
GPM02544	POIKFPYX	UG2FW	3.23	3.44	6.21
GPM02545	PEGFPYX	UG2FW	3.83	4.25	10.35
GPM02546	PEGFPYX	UG2FW	3.35	3.55	5.82
GPM02547	PEGFPYX	UG2FW	3.38	3.59	5.82
GPM02548	PEGFPYX	UG2FW	3.30	3.53	6.68

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02549	PEGFPYX	UG2FW	3.19	3.40	6.51
GPM02550	POIKPYX	UG2FW	3.26	3.45	5.53
GPM02551	POIKPYX	UG2FW	3.24	3.43	5.71
GPM02552	FPYX	UG2FW	3.18	3.37	5.83
GPM02553	FPYX	UG2FW	3.17	3.31	4.19
GPM02554	FPYX	UG2FW	3.20	3.38	5.36
GPM02555	FPYX	UG2FW	3.41	3.58	4.85
GPM02556	FPYX	UG2FW	3.24	3.40	4.76
GPM02557	FPYX	UG2FW	3.29	3.41	3.59
GPM02558	FPYX	UG2FW	3.17	3.37	6.14
GPM02559	FPYX	UG2FW	3.16	3.27	3.31
GPM02560	FPYX	UG2FW	3.21	3.37	4.94
GPM02561	FPYX	UG2FW	3.35	3.53	5.09
GPM02562	FPYX	UG2FW	3.29	3.41	3.50
GPM02563	FPYX	UG2FW	3.29	3.40	3.17
GPM02564	FPYX	UG2FW	3.42	3.56	4.11
GPM02565	FPYX	UG2FW	3.31	3.54	6.77
GPM02566	FPYX	UG2FW	3.33	3.48	4.55
GPM02567	FPYX	UG2FW	3.29	3.48	5.74
GPM02568	FPYX	UG2FW	3.19	3.33	4.23
GPM02569	FPYX	UG2FW	3.27	3.39	3.73
GPM02570	FPYX	UG2FW	3.40	3.57	4.89
GPM02571	FPYX	UG2FW	3.33	3.52	5.40
GPM02572	FPYX	UG2FW	3.29	3.47	5.23
GPM02573	FPYX	UG2FW	3.19	3.41	6.39
GPM02574	FPYX	UG2FW	3.10	3.32	6.79
GPM02575	FPYX	UG2FW	2.77	3.26	16.18
GPM02576	FPYX	UG2FW	3.33	3.60	7.89
GPM02577	FPYX	UG2FW	3.05	3.51	13.92
GPM02578	FPYX	UG2FW	3.29	3.59	8.84
GPM02579	FPYX	UG2FW	3.27	3.39	3.69
GPM02580	FPYX	UG2FW	3.18	3.28	3.07
GPM02581	FPYX	UG2FW	3.24	3.45	6.28
GPM02582	FPYX	UG2FW	3.24	3.44	5.99
GPM02583	FPYX	UG2FW	3.32	3.47	4.32
GPM02584	FPYX	UG2FW	3.29	3.50	6.05
GPM02585	FPYX	UG2FW	3.23	3.45	6.57
GPM02586	FPYX	UG2FW	3.33	3.63	8.54
GPM02587	FPYX	UG2FW	3.23	3.48	7.48
GPM02588	FPYX	UG2FW	3.42	3.57	4.20
GPM02589	FPYX	UG2FW	3.26	3.47	6.23
GPM02590	FPYX	UG2FW	3.26	3.47	6.15
GPM02591	FPYX	UG2FW	3.28	3.44	4.64
GPM02592	FPYX	UG2FW	3.28	3.43	4.50
GPM02593	FPYX	UG2FW	3.20	3.38	5.32
GPM02594	FPYX	UG2FW	3.25	3.49	7.10
GPM02595	FPYX	UG2FW	3.26	3.45	5.79
GPM02596	FPYX	UG2FW	3.15	3.39	7.35
GPM02597	FPYX	UG2FW	3.18	3.36	5.51

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02598	FPYX	UG2FW	3.23	3.43	6.04
GPM02599	FPYX	UG2FW	3.62	3.78	4.22
GPM02600	FPYX	UG2FW	3.84	3.92	1.96
GPM02601	FPYX	UG2FW	3.57	3.64	1.90
GPM02602	FPYX	UG2FW	3.49	3.58	2.46
GPM02603	FPYX	UG2FW	3.50	3.48	-0.64
GPM02604	FPYX	UG2FW	3.43	3.52	2.73
GPM02605	FPYX	UG2FW	3.45	3.50	1.46
GPM02606	FPYX	UG2FW	3.44	3.51	1.94
GPM02607	FPYX	UG2FW	3.37	3.44	1.97
GPM02608	FPYX	UG2FW	3.50	3.63	3.76
GPM02609	FPYX	UG2FW	3.41	3.56	4.33
GPM02610	FPYX	UG2FW	3.41	3.55	4.00
GPM02611	FPYX	UG2FW	3.37	3.53	4.74
GPM02612	FPYX	UG2FW	3.42	3.57	4.21
GPM02613	FPYX	UG2FW	3.43	3.58	4.24
GPM02614	FPYX	UG2FW	3.43	3.55	3.54
GPM02615	FPYX	UG2FW	3.44	3.53	2.61
GPM02616	FPYX	UG2FW	3.44	3.57	3.73
GPM02617	PEGFPYX	UG2FW	3.65	3.65	-0.04
GPM02618	PEGFPYX	UG2FW	4.12	4.14	0.51
GPM02619	PEGFPYX	UG2FW	3.02	3.50	14.56
GPM02620	PEGFPYX	UG2FW	3.12	3.23	3.57
GPM02621	PEGFPYX	UG2FW	3.41	3.57	4.57
GPM02622	PEGFPYX	UG2FW	3.47	3.76	8.04
GPM02623	PEGFPYX	UG2FW	3.55	3.80	6.81
GPM02624	PEGFPYX	UG2FW	3.55	3.85	7.86
GPM02625	PEGFPYX	UG2FW	3.54	3.77	6.40
GPM02626	PEGFPYX	UG2FW	3.75	4.11	9.09
GPM02627	PEGFPYX	UG2FW	3.27	3.79	14.81
GPM02628	PEGFPYX	UG2FW	3.82	3.96	3.47
GPM02629	PEGFPYX	UG2FW	3.08	3.16	2.53
GPM02630	PEGFPYX	UG2FW	3.13	3.29	5.02
GPM02631	PEGFPYX	UG2FW	3.43	3.67	6.66
GPM02632	PEGFPYX	UG2FW	3.33	3.63	8.71
GPM02633	PEGFPYX	UG2FW	3.55	3.80	6.75
GPM02634	PEGFPYX	UG2FW	3.51	3.85	9.17
GPM02635	PEGFPYX	UG2FW	3.60	3.78	4.84
GPM02636	FPYX	UG2FW	3.19	3.30	3.34
GPM02637	FPYX	UG2FW	3.26	3.30	1.33
GPM02638	FPYX	UG2FW	3.29	3.36	2.07
GPM02639	FPYX	UG2FW	3.25	3.31	1.77
GPM02640	FPYX	UG2FW	3.28	3.33	1.64
GPM02641	HARZB	UG2FW	2.88	3.08	6.88
GPM02642	HARZB	UG2FW	2.78	3.02	8.22
GPM02643	HARZB	UG2FW	2.83	3.00	5.90
GPM02644	HARZB	UG2FW	2.79	2.99	7.06
GPM02645	HARZB	UG2FW	2.76	2.96	7.09
GPM02646	HARZB	UG2FW	2.80	2.97	5.88

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02647	HARZB	UG2FW	2.76	3.00	8.38
GPM02648	HARZB	UG2FW	2.79	3.06	9.23
GPM02649	HARZB	UG2FW	2.86	3.02	5.34
GPM02650	HARZB	UG2FW	2.78	2.96	6.21
GPM02651	HARZB	UG2FW	2.90	2.94	1.32
GPM02652	HARZB	UG2FW	2.81	3.04	7.84
GPM02653	HARZB	UG2FW	2.84	3.08	7.94
GPM02654	HARZB	UG2FW	2.79	3.08	9.88
GPM02655	HARZB	UG2FW	2.80	2.94	4.98
GPM02656	HARZB	UG2FW	2.86	3.02	5.11
GPM02657	HARZB	UG2FW	2.79	2.98	6.43
GPM02658	HARZB	UG2FW	2.83	2.99	5.47
GPM02659	HARZB	UG2FW	2.86	3.03	5.63
GPM02660	HARZB	UG2FW	2.82	3.02	6.83
GPM02661	HARZB	UG2FW	2.75	2.98	7.92
GPM02662	HARZB	UG2FW	2.88	3.01	4.38
GPM02663	HARZB	UG2FW	3.01	3.29	8.91
GPM02664	HARZB	UG2FW	3.08	3.34	7.99
GPM02665	HARZB	UG2FW	3.19	3.39	5.98
GPM02666	HARZB	UG2FW	3.18	3.37	5.88
GPM02667	HARZB	UG2FW	3.23	3.42	5.75
GPM02668	HARZB	UG2FW	3.30	3.49	5.64
GPM02669	FPYX	UG2FW	3.24	3.38	4.23
GPM02670	FPYX	UG2FW	3.25	3.44	5.76
GPM02671	FPYX	UG2FW	3.23	3.39	4.85
GPM02672	FPYX	UG2FW	3.23	3.42	5.70
GPM02673	FPYX	UG2FW	3.23	3.40	5.20
GPM02674	HARZB	UG2FW	3.02	3.16	4.54
GPM02675	HARZB	UG2FW	3.03	3.25	7.05
GPM02676	HARZB	UG2FW	3.22	3.35	3.97
GPM02677	HARZB	UG2FW	3.21	3.34	3.97
GPM02678	HARZB	UG2FW	3.18	3.37	5.86
GPM02679	HARZB	UG2FW	3.24	3.32	2.53
GPM02680	FPYX	UG2FW	3.24	3.35	3.23
GPM02681	FPYX	UG2FW	3.26	3.35	2.85
GPM02682	FPYX	UG2FW	3.26	3.33	2.05
GPM02683	FPYX	UG2FW	3.27	3.34	2.26
GPM02684	FPYX	UG2FW	3.25	3.32	2.17
GPM02685	FPYX	UG2FW	3.29	3.36	2.09
GPM02686	PYX	UG2FW	3.08	3.36	8.64
GPM02687	PYX	UG2FW	3.11	3.31	6.02
GPM02688	PYX	UG2FW	3.16	3.34	5.46
GPM02689	PYX	UG2FW	3.17	3.41	7.44
GPM02690	PYX	UG2FW	3.18	3.37	5.81
GPM02691	PYX	UG2FW	3.20	3.41	6.25
GPM02692	PYX	UG2FW	3.22	3.44	6.46
GPM02693	PYX	UG2FW	3.35	3.54	5.64
GPM02694	PYX	UG2FW	3.27	3.45	5.25
GPM02695	PYX	UG2FW	3.31	3.35	1.12

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02696	PYX	UG2FW	3.14	3.41	8.25
GPM02697	PYX	UG2FW	3.19	3.45	7.97
GPM02698	POIKPYX	UG2FW	3.09	3.25	4.99
GPM02699	POIKPYX	UG2FW	3.33	3.43	3.07
GPM02700	PYX	UG2FW	3.07	3.18	3.40
GPM02701	PYX	UG2FW	2.96	3.11	4.91
GPM02702	PEGFPYX	UG2FW	3.22	3.21	-0.45
GPM02703	PEGFPYX	UG2FW	3.03	3.40	11.63
GPM02704	PEGFPYX	UG2FW	3.16	3.36	6.06
GPM02705	PYX	UG2FW	3.15	3.29	4.27
GPM02706	PYX	UG2FW	3.24	3.37	4.01
GPM02707	PYX	UG2FW	2.96	3.26	9.60
GPM02708	PYX	UG2FW	3.00	3.30	9.58
GPM02709	PYX	UG2FW	2.86	3.35	15.92
GPM02710	PYX	UG2FW	3.08	3.40	9.96
GPM02711	PEGFPYX	UG2FW	3.24	3.41	5.06
GPM02712	PEGFPYX	UG2FW	3.28	3.28	0.05
GPM02713	PEGFPYX	UG2FW	3.31	3.34	0.92
GPM02714	PEGFPYX	UG2FW	3.22	3.32	2.93
GPM02715	PEGFPYX	UG2FW	3.10	3.33	7.14
GPM02716	PEGFPYX	UG2FW	3.29	3.27	-0.49
GPM02717	PEGFPYX	UG2FW	3.21	3.23	0.52
GPM02718	PEGFPYX	UG2FW	3.18	3.15	-0.84
GPM02719	PEGFPYX	UG2FW	3.16	3.23	2.04
GPM02720	PEGFPYX	UG2FW	3.17	3.35	5.65
GPM02721	POIKFPYX	UG2FW	3.11	3.32	6.43
GPM02722	POIKFPYX	UG2FW	3.22	3.32	3.06
GPM02723	PP	UG2FW	3.15	3.34	5.75
GPM02724	PP	UG2FW	3.29	3.44	4.42
GPM02725	PP	UG2FW	3.31	3.48	5.09
GPM02726	PP	UG2FW	3.23	3.43	5.90
GPM02727	PP	UG2FW	3.12	3.26	4.52
GPM02728	PP	UG2FW	3.12	3.31	5.88
GPM02729	PP	UG2FW	3.26	3.37	3.35
GPM02730	PEGFPYX	UG2FW	3.25	3.40	4.46
GPM02731	PEGFPYX	UG2FW	3.18	3.46	8.46
GPM02732	PEGFPYX	UG2FW	3.27	3.45	5.27
GPM02733	PEGFPYX	UG2FW	3.23	3.42	5.79
GPM02734	PEGFPYX	UG2FW	3.27	3.44	4.95
GPM02735	PEGFPYX	UG2FW	3.20	3.46	7.68
GPM02736	PEGFPYX	UG2FW	3.38	3.48	2.85
GPM02737	PYX	UG2FW	3.26	3.38	3.76
GPM02738	PYX	UG2FW	3.24	3.38	4.16
GPM02739	PYX	UG2FW	3.20	3.39	5.76
GPM02740	PYX	UG2FW	3.20	3.40	6.00
GPM02741	PEGFPYX	UG2FW	3.32	3.44	3.68
GPM02742	PEGFPYX	UG2FW	3.25	3.49	7.24
GPM02743	PEGFPYX	UG2FW	3.60	3.52	-2.18
GPM02744	PEGFPYX	UG2FW	3.28	3.45	5.06

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02745	PYX	UG2FW	3.24	3.39	4.61
GPM02746	PYX	UG2FW	3.22	3.40	5.42
GPM02747	PYX	UG2FW	3.23	3.38	4.44
GPM02748	PEGFPYX	UG2FW	3.14	3.34	6.21
GPM02749	PEGFPYX	UG2FW	3.16	3.33	5.16
GPM02750	PEGFPYX	UG2FW	3.11	3.27	4.93
GPM02751	PEGFPYX	UG2FW	3.32	3.35	0.96
GPM02752	PYX	UG2FW	2.98	3.37	12.22
GPM02753	PYX	UG2FW	3.25	3.37	3.59
GPM02754	PEGFPYX	UG2FW	3.39	3.50	3.18
GPM02755	PEGFPYX	UG2FW	3.36	3.48	3.56
GPM02756	PEGFPYX	UG2FW	3.34	3.52	5.11
GPM02757	PEGFPYX	UG2FW	3.24	3.35	3.05
GPM02758	PEGFPYX	UG2FW	3.24	3.35	3.45
GPM02759	PYX	UG2FW	3.24	3.39	4.26
GPM02760	PYX	UG2FW	3.25	3.34	2.79
GPM02761	PEGFPYX	UG2FW	3.23	3.36	4.08
GPM02762	PEGFPYX	UG2FW	3.25	3.39	4.19
GPM02763	PEGFPYX	UG2FW	3.18	3.32	4.24
GPM02764	PEGFPYX	UG2FW	3.15	3.30	4.76
GPM02765	PEGFPYX	UG2FW	3.16	3.28	3.66
GPM02766	PEGFPYX	UG2FW	3.20	3.33	3.80
GPM02767	PEGFPYX	UG2FW	2.89	3.03	4.56
GPM02768	PEGFPYX	UG2FW	3.01	3.15	4.44
GPM02769	PEGFPYX	UG2FW	3.08	3.20	3.75
GPM02770	PEGFPYX	UG2FW	2.80	3.20	13.22
GPM02771	PEGFPYX	UG2FW	3.09	3.24	4.61
GPM02772	PEGFPYX	UG2FW	3.05	3.21	5.12
GPM02773	PEGFPYX	UG2FW	3.08	3.19	3.55
GPM02774	PEGFPYX	UG2FW	3.03	3.16	4.34
GPM02775	PEGFPYX	UG2FW	2.73	2.93	7.07
GPM02776	PEGFPYX	UG2FW	2.66	2.92	9.32
GPM02777	PEGFPYX	UG2FW	2.85	3.05	6.81
GPM02778	PEGFPYX	UG2FW	2.86	3.01	5.02
GPM02779	PEGFPYX	UG2FW	2.80	3.05	8.55
GPM02780	PEGFPYX	UG2FW	2.85	2.98	4.43
GPM02781	PEGFPYX	UG2FW	2.84	2.97	4.59
GPM02782	PEGFPYX	UG2FW	2.56	2.85	10.87
GPM02783	PP	UG2FW	3.29	3.47	5.36
GPM02784	PEGFPYX	UG2FW	3.27	3.54	7.64
GPM02785	PEGFPYX	UG2FW	3.33	3.53	5.76
GPM02786	PEGFPYX	UG2FW	3.30	3.55	7.38
GPM02787	PEGFPYX	UG2FW	3.34	3.56	6.43
GPM02788	PEGFPYX	UG2FW	3.25	3.47	6.65
GPM02789	PEGFPYX	UG2FW	3.15	3.37	6.88
GPM02790	PYX	UG2FW	3.23	3.46	6.94
GPM02791	PYX	UG2FW	3.28	3.50	6.56
GPM02792	PYX	UG2FW	3.25	3.49	6.84
GPM02793	PEGFPYX	UG2FW	3.25	3.41	4.75

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02794	PEGFPYX	UG2FW	3.25	3.63	11.13
GPM02795	PEGFPYX	UG2FW	3.27	3.50	6.87
GPM02796	PEGFPYX	UG2FW	3.31	3.56	7.40
GPM02797	PEGFPYX	UG2FW	3.23	3.46	6.96
GPM02798	POIKFPYX	UG2FW	3.23	3.40	5.06
GPM02799	POIKFPYX	UG2FW	3.23	3.42	5.86
GPM02800	PEGFPYX	UG2FW	3.23	3.39	4.85
GPM02801	PEGFPYX	UG2FW	3.13	3.46	10.12
GPM02802	PEGFPYX	UG2FW	3.28	3.41	3.76
GPM02803	PEGFPYX	UG2FW	3.33	3.49	4.75
GPM02804	PYX	UG2FW	3.29	3.54	7.33
GPM02805	PYX	UG2FW	3.22	3.36	4.17
GPM02806	POIKFPYX	UG2FW	3.23	3.39	4.85
GPM02807	POIKFPYX	UG2FW	3.18	3.30	3.58
GPM02808	PEGFPYX	UG2FW	3.33	3.47	4.27
GPM02809	PEGFPYX	UG2FW	3.19	3.46	8.16
GPM02810	PEGFPYX	UG2FW	3.33	3.48	4.55
GPM02811	PEGFPYX	UG2FW	3.27	3.44	5.08
GPM02812	PEGFPYX	UG2FW	3.35	3.53	5.21
GPM02813	PEGFPYX	UG2FW	3.19	3.40	6.17
GPM02814	POIKPYX	UG2FW	3.24	3.36	3.72
GPM02815	POIKPYX	UG2FW	3.23	3.38	4.53
GPM02816	PEGFPYX	UG2FW	3.25	3.35	2.92
GPM02817	PEGFPYX	UG2FW	3.24	3.42	5.48
GPM02818	PEGFPYX	UG2FW	3.28	3.48	6.06
GPM02819	PEGFPYX	UG2FW	3.18	3.40	6.63
GPM02820	PEGFPYX	UG2FW	3.16	3.39	7.05
GPM02821	PEGFPYX	UG2FW	3.34	3.46	3.45
GPM02822	PEGFPYX	UG2FW	3.30	3.54	6.96
GPM02823	PEGFPYX	UG2FW	3.29	3.45	4.68
GPM02824	PYX	UG2FW	3.24	3.42	5.36
GPM02825	PYX	UG2FW	3.21	3.25	1.33
GPM02826	PEGFPYX	UG2FW	3.19	3.47	8.41
GPM02827	PEGFPYX	UG2FW	3.13	3.52	11.77
GPM02828	PEGFPYX	UG2FW	3.16	3.40	7.22
GPM02829	PEGFPYX	UG2FW	3.16	3.41	7.68
GPM02830	PEGFPYX	UG2FW	3.26	3.39	3.78
GPM02831	PEGFPYX	UG2FW	3.26	3.47	6.35
GPM02832	PEGFPYX	UG2FW	3.31	3.51	5.75
GPM02833	PEGFPYX	UG2FW	3.27	3.49	6.52
GPM02834	PYX	UG2FW	3.24	3.42	5.27
GPM02835	PYX	UG2FW	3.24	3.42	5.51
GPM02836	PEGFPYX	UG2FW	3.16	3.42	7.76
GPM02837	PYX	UG2FW	3.29	3.21	-2.61
GPM02838	PYX	UG2FW	3.07	3.26	6.13
GPM02839	PP	UG2FW	3.23	3.56	9.76
GPM02840	PP	UG2FW	3.30	3.55	7.15
GPM02841	PP	UG2FW	3.24	3.57	9.60
GPM02842	PEGFPYX	UG2FW	3.28	3.45	4.92

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02843	PEGFPYX	UG2FW	3.31	3.59	8.14
GPM02844	PEGFPYX	UG2FW	3.31	3.62	8.93
GPM02845	PEGFPYX	UG2FW	3.33	3.62	8.20
GPM02846	PEGFPYX	UG2FW	3.21	3.48	8.12
GPM02847	POIKPYX	UG2FW	3.20	3.50	9.00
GPM02848	POIKPYX	UG2FW	3.19	3.47	8.51
GPM02849	PEGFPYX	UG2FW	3.42	3.43	0.17
GPM02850	PEGFPYX	UG2FW	3.31	3.40	2.78
GPM02851	PEGFPYX	UG2FW	3.21	3.49	8.40
GPM02852	PEGFPYX	UG2FW	3.19	3.45	7.97
GPM02853	POIKFPYX	UG2FW	3.37	3.39	0.70
GPM02854	POIKFPYX	UG2FW	3.23	3.35	3.68
GPM02855	POIKFPYX	UG2FW	3.14	3.34	6.25
GPM02856	PEGFPYX	UG2FW	3.19	3.34	4.61
GPM02857	PEGFPYX	UG2FW	3.23	3.43	5.95
GPM02858	PEGFPYX	UG2FW	3.56	3.38	-5.32
GPM02859	PP	UG2FW	3.65	3.34	-8.82
GPM02860	PP	UG2FW	3.16	3.36	6.23
GPM02861	PP	UG2FW	3.14	3.37	7.21
GPM02862	FPYX	UG2FW	3.29	3.50	6.17
GPM02863	FPYX	UG2FW	3.20	3.40	5.97
GPM02864	FPYX	UG2FW	3.40	3.57	4.96
GPM02865	FPYX	UG2FW	3.23	3.51	8.22
GPM02866	FPYX	UG2FW	3.32	3.50	5.19
GPM02867	FPYX	UG2FW	3.18	3.38	6.12
GPM02868	FPYX	UG2FW	3.24	3.42	5.27
GPM02869	FPYX	UG2FW	3.24	3.43	5.66
GPM02870	FPYX	UG2FW	3.26	3.43	4.97
GPM02871	FPYX	UG2FW	3.26	3.39	4.05
GPM02872	FPYX	UG2FW	3.31	3.51	5.87
GPM02873	FPYX	UG2FW	3.17	3.39	6.78
GPM02874	FPYX	UG2FW	3.30	3.48	5.45
GPM02875	FPYX	UG2FW	3.33	3.52	5.41
GPM02876	FPYX	UG2FW	3.30	3.45	4.43
GPM02877	FPYX	UG2FW	3.20	3.33	4.02
GPM02878	FPYX	UG2FW	3.22	3.41	5.66
GPM02879	FPYX	UG2FW	3.23	3.42	5.85
GPM02880	FPYX	UG2FW	3.23	3.42	5.85
GPM02881	FPYX	UG2FW	3.23	3.40	4.98
GPM02882	FPYX	UG2FW	3.22	3.38	4.76
GPM02883	FPYX	UG2FW	3.51	3.64	3.77
GPM02884	FPYX	UG2FW	3.20	3.41	6.35
GPM02885	FPYX	UG2FW	3.20	3.45	7.65
GPM02886	FPYX	UG2FW	3.13	3.53	12.03
GPM02887	FPYX	UG2FW	3.15	3.42	8.01
GPM02888	FPYX	UG2FW	3.32	3.54	6.32
GPM02889	FPYX	UG2FW	3.27	3.44	5.02
GPM02890	FPYX	UG2FW	3.26	3.44	5.29
GPM02891	DU	UG2FW	3.26	3.44	5.29

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02892	FPYX	UG2FW	3.23	3.42	5.61
GPM02893	FPYX	UG2FW	3.25	3.45	5.82
GPM02894	FPYX	UG2FW	3.25	3.43	5.45
GPM02895	FPYX	UG2FW	3.34	3.55	6.04
GPM02896	FPYX	UG2FW	3.23	3.38	4.39
GPM02897	FPYX	UG2FW	3.20	3.36	4.87
GPM02898	FPYX	UG2FW	3.28	3.45	5.10
GPM02899	FPYX	UG2FW	3.30	3.44	4.10
GPM02900	FPYX	UG2FW	3.41	3.55	3.97
GPM02901	FPYX	UG2FW	3.27	3.40	3.90
GPM02902	FPYX	UG2FW	3.27	3.45	5.33
GPM02903	DU	UG2FW	3.27	3.43	4.75
GPM02904	FPYX	UG2FW	3.27	3.44	5.03
GPM02905	FPYX	UG2FW	3.27	3.43	4.65
GPM02906	MOT	UG2FW	2.84	2.94	3.33
GPM02907	PP	UG2FW	3.22	3.51	8.60
GPM02908	PP	UG2FW	3.15	3.49	10.28
GPM02909	PP	UG2FW	3.17	3.50	9.74
GPM02910	PP	UG2FW	3.11	3.52	12.36
GPM02911	PP	UG2FW	3.23	3.55	9.46
GPM02912	PP	UG2FW	3.20	3.54	10.22
GPM02913	PP	UG2FW	3.15	3.56	12.07
GPM02914	PP	UG2FW	3.18	3.57	11.55
GPM02915	PP	UG2FW	3.16	3.49	9.96
GPM02916	PP	UG2FW	3.11	3.50	11.76
GPM02917	PP	UG2FW	3.21	3.51	9.00
GPM02918	PP	UG2FW	3.12	3.47	10.55
GPM02919	PP	UG2FW	3.20	3.52	9.52
GPM02920	PP	UG2FW	3.14	3.51	11.02
GPM02921	PP	UG2FW	3.21	3.47	7.92
GPM02922	PP	UG2FW	3.23	3.53	8.82
GPM02923	PEGFPYX	UG2FW	2.95	3.45	15.71
GPM02924	PEGFPYX	UG2FW	3.07	3.39	9.83
GPM02925	PEGFPYX	UG2FW	2.98	3.29	9.86
GPM02926	PEGFPYX	UG2FW	2.93	3.28	11.35
GPM02927	PEGFPYX	UG2FW	3.05	3.33	8.63
GPM02928	PEGFPYX	UG2FW	2.97	3.31	10.76
GPM02929	PEGFPYX	UG2FW	3.16	3.44	8.61
GPM02930	POIKPYX	UG2FW	3.15	3.54	11.79
GPM02931	POIKPYX	UG2FW	3.25	3.53	8.38
GPM02932	PEGFPYX	UG2FW	3.03	3.36	10.30
GPM02933	PEGFPYX	UG2FW	3.08	3.39	9.58
GPM02934	PEGFPYX	UG2FW	3.00	3.34	10.79
GPM02935	PEGFPYX	UG2FW	3.02	3.35	10.22
GPM02936	PEGFPYX	UG2FW	3.05	3.27	6.85
GPM02937	PEGFPYX	UG2FW	3.04	3.36	10.04
GPM02938	PEGFPYX	UG2FW	3.07	3.49	12.69
GPM02939	POIKPYX	UG2FW	3.12	3.54	12.46
GPM02940	POIKPYX	UG2FW	3.08	3.35	8.32

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02941	FPYX	UG2FW	3.19	3.33	4.43
GPM02942	FPYX	UG2FW	2.99	3.21	7.09
GPM02943	FPYX	UG2FW	2.97	3.11	4.53
GPM02944	FPYX	UG2FW	3.20	3.32	3.68
GPM02945	FPYX	UG2FW	3.27	3.37	3.14
GPM02946	FPYX	UG2FW	3.20	3.34	4.26
GPM02947	FPYX	UG2FW	3.19	3.35	4.91
GPM02948	FPYX	UG2FW	3.21	3.33	3.74
GPM02949	FPYX	UG2FW	3.24	3.36	3.74
GPM02950	FPYX	UG2FW	3.36	3.42	1.87
GPM02951	FPYX	UG2FW	3.30	3.43	4.00
GPM02952	FPYX	UG2FW	3.14	3.30	4.88
GPM02953	FPYX	UG2FW	3.21	3.35	4.18
GPM02954	FPYX	UG2FW	3.21	3.34	3.98
GPM02955	FPYX	UG2FW	3.14	3.28	4.48
GPM02956	FPYX	UG2FW	3.21	3.32	3.49
GPM02957	FPYX	UG2FW	3.21	3.33	3.50
GPM02958	FPYX	UG2FW	3.21	3.34	3.95
GPM02959	FPYX	UG2FW	3.23	3.32	2.84
GPM02960	FPYX	UG2FW	3.25	3.33	2.52
GPM02961	FPYX	UG2FW	3.13	3.37	7.31
GPM02962	FPYX	UG2FW	3.24	3.43	5.83
GPM02963	FPYX	UG2FW	3.29	3.34	1.64
GPM02964	FPYX	UG2FW	3.22	3.66	12.84
GPM02965	FPYX	UG2FW	3.27	3.36	2.64
GPM02966	FPYX	UG2FW	3.18	3.41	6.96
GPM02967	DUPLICATE	UG2FW	3.18	3.38	6.08
GPM02968	FPYX	UG2FW	3.22	3.35	4.10
GPM02969	FPYX	UG2FW	3.23	3.38	4.44
GPM02970	FPYX	UG2FW	3.19	3.39	5.98
GPM02971	FPYX	UG2FW	3.24	3.39	4.38
GPM02972	FPYX	UG2FW	3.25	3.43	5.24
GPM02973	FPYX	UG2FW	3.27	3.48	6.27
GPM02974	FPYX	UG2FW	3.23	3.48	7.59
GPM02975	FPYX	UG2FW	3.39	3.44	1.58
GPM02976	FPYX	UG2FW	3.21	3.36	4.58
GPM02977	DUPLICATE	UG2FW	3.21	3.42	6.35
GPM02978	FPYX	UG2FW	3.23	3.42	5.62
GPM02979	FPYX	UG2FW	3.21	3.41	6.10
GPM02980	FPYX	UG2FW	3.23	3.43	5.92
GPM02981	FPYX	UG2FW	3.21	3.42	6.41
GPM02982	FPYX	UG2FW	3.30	3.52	6.38
GPM02983	FPYX	UG2FW	3.25	3.37	3.65
GPM02984	FPYX	UG2FW	3.34	3.51	5.11
GPM02985	FPYX	UG2FW	3.41	3.52	3.15
GPM02986	FPYX	UG2FW	3.23	3.40	5.23
GPM02987	FPYX	UG2FW	3.05	3.39	10.59
GPM02988	DUPLICATE	UG2FW	3.05	3.46	12.63
GPM02989	FPYX	UG2FW	3.24	3.45	6.25

Table B 11. GPM dataset, outliers remove

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GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM02990	FPYX	UG2FW	3.16	3.27	3.43
GPM02991	FPYX	UG2FW	3.19	3.33	4.38
GPM02992	FPYX	UG2FW	3.44	3.54	2.95
GPM02993	FPYX	UG2FW	3.44	3.45	0.15
GPM02994	FPYX	UG2FW	3.31	3.46	4.41
GPM02995	FPYX	UG2FW	3.31	3.60	8.53
GPM02996	FPYX	UG2FW	3.26	3.43	5.14
GPM02997	DUPLICATE	UG2FW	3.26	3.44	5.43
GPM02998	FPYX	UG2FW	3.19	3.39	6.16
GPM02999	FPYX	UG2FW	3.26	3.43	5.00
GPM03000	FPYX	UG2FW	3.27	3.49	6.47
GPM03001	FPYX	UG2FW	3.16	3.32	4.90
GPM03002	FPYX	UG2FW	3.31	3.51	5.79
GPM03003	FPYX	UG2FW	3.36	3.55	5.52
GPM03004	FPYX	UG2FW	3.31	3.38	2.11
GPM03005	FPYX	UG2FW	3.38	3.52	4.18
GPM03006	FPYX	UG2FW	3.37	3.46	2.68
GPM03007	FPYX	UG2FW	3.24	3.42	5.44
GPM03008	FPYX	UG2FW	3.26	3.38	3.48
GPM03009	FPYX	UG2FW	3.26	3.41	4.36
GPM03010	FPYX	UG2FW	3.25	3.42	5.24
GPM03011	FPYX	UG2FW	3.27	3.34	2.19
GPM03012	FPYX	UG2FW	3.29	3.41	3.70
GPM03013	FPYX	UG2FW	3.26	3.37	3.47
GPM03014	FPYX	UG2FW	3.38	3.35	-0.96
GPM03015	FPYX	UG2FW	3.33	3.39	1.79
GPM03016	FPYX	UG2FW	3.37	3.41	1.25
GPM03017	FPYX	UG2FW	3.17	3.32	4.65
GPM03018	FPYX	UG2FW	3.24	3.33	2.78
GPM03019	FPYX	UG2FW	3.24	3.32	2.48
GPM03020	FPYX	UG2FW	3.22	3.32	2.99
GPM03021	FPYX	UG2FW	3.26	3.37	3.30
GPM03022	FPYX	UG2FW	3.21	3.33	3.65
GPM03023	FPYX	UG2FW	3.23	3.46	6.85
GPM03024	FPYX	UG2FW	3.35	3.55	5.85
GPM03025	FPYX	UG2FW	3.30	3.46	4.84
GPM03026	FPYX	UG2FW	3.31	3.52	6.08
GPM03027	FPYX	UG2FW	3.20	3.42	6.49
GPM03028	FPYX	UG2FW	3.12	3.32	6.31
GPM03029	FPYX	UG2FW	3.18	3.30	3.60
GPM03030	FPYX	UG2FW	3.20	3.32	3.64
GPM03031	FPYX	UG2FW	3.20	3.33	3.94
GPM03032	FPYX	UG2FW	3.21	3.34	4.00
GPM03033	FPYX	UG2FW	3.21	3.47	7.63
GPM03034	FPYX	UG2FW	3.40	3.54	4.02
GPM03035	FPYX	UG2FW	3.33	3.48	4.28
GPM03036	FPYX	UG2FW	3.28	3.43	4.58
GPM03037	FPYX	UG2FW	3.10	3.36	7.98
GPM03038	FPYX	UG2FW	3.04	3.32	8.93

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03039	FPYX	UG2FW	3.18	3.30	3.74
GPM03040	FPYX	UG2FW	3.18	3.31	4.04
GPM03041	FPYX	UG2FW	3.20	3.33	4.09
GPM03042	FPYX	UG2FW	3.22	3.33	3.50
GPM03043	FPYX	UG2FW	3.22	3.35	4.07
GPM03044	FPYX	UG2FW	3.22	3.44	6.56
GPM03045	FPYX	UG2FW	3.05	3.34	9.19
GPM03046	FPYX	UG2FW	3.49	3.41	-2.21
GPM03047	FPYX	UG2FW	2.98	3.43	13.88
GPM03048	FPYX	UG2FW	2.57	2.94	13.54
GPM03049	DUPLICATE	UG2FW	2.57	2.83	9.74
GPM03050	FPYX	UG2FW	2.44	2.75	11.93
GPM03051	FPYX	UG2FW	2.62	2.72	3.77
GPM03052	FPYX	UG2FW	3.09	3.26	5.50
GPM03053	FPYX	UG2FW	3.24	3.31	2.11
GPM03054	FPYX	UG2FW	3.31	3.41	2.88
GPM03055	FPYX	UG2FW	3.34	3.47	3.87
GPM03056	FPYX	UG2FW	3.14	3.44	9.24
GPM03057	FPYX	UG2FW	3.22	3.25	1.01
GPM03058	FPYX	UG2FW	3.19	3.30	3.25
GPM03059	DUPLICATE	UG2FW	3.19	3.31	3.55
GPM03060	FPYX	UG2FW	3.23	3.29	1.97
GPM03061	FPYX	UG2FW	3.22	3.28	1.97
GPM03062	FPYX	UG2FW	3.26	3.30	1.22
GPM03063	FPYX	UG2FW	3.24	3.41	5.17
GPM03064	FPYX	UG2FW	3.27	3.44	5.09
GPM03065	FPYX	UG2FW	3.33	3.36	0.80
GPM03066	FPYX	UG2FW	3.32	3.44	3.49
GPM03067	FPYX	UG2FW	3.18	3.31	3.89
GPM03068	DUPLICATE	UG2FW	3.18	3.26	2.37
GPM03069	FPYX	UG2FW	2.97	3.27	9.48
GPM03070	FPYX	UG2FW	3.25	3.22	-1.07
GPM03071	FPYX	UG2FW	3.26	3.22	-1.30
GPM03072	FPYX	UG2FW	3.21	3.94	20.33
GPM03073	FPYX	UG2FW	3.29	3.60	9.11
GPM03074	FPYX	UG2FW	3.21	3.36	4.36
GPM03075	FPYX	UG2FW	3.06	3.50	13.53
GPM03076	FPYX	UG2FW	3.21	3.27	1.86
GPM03077	DUPLICATE	UG2FW	3.21	3.16	-1.56
GPM03078	FPYX	UG2FW	3.20	3.39	5.82
GPM03079	FPYX	UG2FW	3.18	3.49	9.37
GPM03080	FPYX	UG2FW	3.28	3.40	3.67
GPM03081	FPYX	UG2FW	3.19	3.41	6.56
GPM03082	FPYX	UG2FW	3.35	3.43	2.34
GPM03083	FPYX	UG2FW	3.14	3.39	7.66
GPM03084	FPYX	UG2FW	3.16	3.35	5.78
GPM03085	DUPLICATE	UG2FW	3.16	3.37	6.38
GPM03086	FPYX	UG2FW	3.18	3.36	5.21
GPM03087	FPYX	UG2FW	3.18	3.37	5.75

Table B 11. GPM dataset, outliers remove

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GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03088	FPYX	UG2FW	3.07	3.38	9.57
GPM03089	FPYX	UG2FW	3.25	3.43	5.41
GPM03090	FPYX	UG2FW	3.23	3.39	4.90
GPM03091	FPYX	UG2FW	3.27	3.42	4.55
GPM03092	FPYX	UG2FW	3.32	3.46	4.17
GPM03093	FPYX	UG2FW	3.21	3.37	4.71
GPM03094	FPYX	UG2FW	3.15	3.37	6.76
GPM03095	DUPLICATE	UG2FW	3.15	3.36	6.61
GPM03096	FPYX	UG2FW	3.18	3.37	5.83
GPM03097	FPYX	UG2FW	3.20	3.37	5.16
GPM03098	FPYX	UG2FW	3.08	3.24	4.91
GPM03099	FPYX	UG2FW	3.25	3.45	5.73
GPM03100	FPYX	UG2FW	3.19	3.36	5.33
GPM03101	FPYX	UG2FW	3.29	3.32	1.02
GPM03102	FPYX	UG2FW	3.25	3.33	2.16
GPM03103	FPYX	UG2FW	3.24	3.32	2.30
GPM03104	FPYX	UG2FW	3.22	3.32	3.19
GPM03105	FPYX	UG2FW	3.22	3.30	2.43
GPM03106	FPYX	UG2FW	3.20	3.29	2.91
GPM03107	FPYX	UG2FW	3.20	3.30	2.96
GPM03108	FPYX	UG2FW	3.23	3.29	1.83
GPM03109	FPYX	UG2FW	3.14	3.29	4.66
GPM03110	FPYX	UG2FW	3.31	3.51	5.84
GPM03111	FPYX	UG2FW	3.29	3.49	6.01
GPM03112	FPYX	UG2FW	3.24	3.44	6.03
GPM03113	FPYX	UG2FW	3.32	3.53	6.05
GPM03114	FPYX	UG2FW	3.30	3.42	3.69
GPM03115	FPYX	UG2FW	3.26	3.40	4.08
GPM03116	FPYX	UG2FW	3.26	3.42	4.66
GPM03117	FPYX	UG2FW	3.20	3.44	7.32
GPM03118	FPYX	UG2FW	3.24	3.45	6.38
GPM03119	FPYX	UG2FW	3.23	3.29	1.96
GPM03120	FPYX	UG2FW	3.24	3.43	5.59
GPM03121	FPYX	UG2FW	3.23	3.42	5.83
GPM03122	FPYX	UG2FW	3.23	3.35	3.74
GPM03123	FPYX	UG2FW	2.93	3.19	8.39
GPM03124	FPYX	UG2FW	2.82	3.08	8.65
GPM03125	FPYX	UG2FW	2.86	3.04	6.04
GPM03126	FPYX	UG2FW	2.85	3.11	8.72
GPM03127	FPYX	UG2FW	2.85	3.11	8.72
GPM03128	FPYX	UG2FW	2.87	3.06	6.52
GPM03129	FPYX	UG2FW	3.06	3.20	4.47
GPM03130	FPYX	UG2FW	3.32	3.41	2.71
GPM03131	FPYX	UG2FW	3.26	3.41	4.62
GPM03132	FPYX	UG2FW	3.27	3.40	3.86
GPM03133	FPYX	UG2FW	2.99	3.06	2.25
GPM03134	FPYX	UG2FW	2.94	3.09	5.10
GPM03135	FPYX	UG2FW	2.92	3.05	4.49
GPM03136	FPYX	UG2FW	2.92	3.11	6.43

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03137	FPYX	UG2FW	2.89	3.06	5.72
GPM03138	FPYX	UG2FW	2.95	3.05	3.11
GPM03139	FPYX	UG2FW	3.01	3.21	6.24
GPM03140	FPYX	UG2FW	3.15	3.37	6.66
GPM03141	FPYX	UG2FW	3.03	3.38	10.92
GPM03142	FPYX	UG2FW	3.07	3.33	7.97
GPM03143	FPYX	UG2FW	3.15	3.43	8.52
GPM03144	FPYX	UG2FW	3.18	3.49	9.16
GPM03145	FPYX	UG2FW	3.26	3.51	7.41
GPM03146	FPYX	UG2FW	3.21	3.50	8.67
GPM03147	FPYX	UG2FW	3.26	3.50	7.16
GPM03148	FPYX	UG2FW	3.05	3.30	7.97
GPM03149	FPYX	UG2FW	3.20	3.37	5.27
GPM03150	FPYX	UG2FW	3.15	3.43	8.46
GPM03151	FPYX	UG2FW	3.12	3.38	8.15
GPM03152	FPYX	UG2FW	3.05	3.28	7.23
GPM03153	FPYX	UG2FW	3.13	3.42	8.91
GPM03154	FPYX	UG2FW	3.26	3.45	5.65
GPM03155	FPYX	UG2FW	3.22	3.52	8.83
GPM03156	FPYX	UG2FW	3.28	3.53	7.26
GPM03157	FPYX	UG2FW	3.32	3.51	5.48
GPM03158	FPYX	UG2FW	3.11	3.77	19.03
GPM03159	FPYX	UG2FW	3.08	3.47	12.04
GPM03160	FPYX	UG2FW	3.14	3.62	14.11
GPM03161	FPYX	UG2FW	3.22	3.62	11.77
GPM03162	FPYX	UG2FW	2.91	3.18	8.70
GPM03163	FPYX	UG2FW	3.43	3.72	8.20
GPM03164	POIKAN	UG2FW	2.93	3.08	5.04
GPM03165	POIKAN	UG2FW	2.90	3.12	7.17
GPM03166	FPYX	UG2FW	2.88	3.40	16.50
GPM03167	FPYX	UG2FW	2.88	3.02	4.74
GPM03168	FPYX	UG2FW	3.20	3.90	19.67
GPM03169	FPYX	UG2FW	2.97	3.28	9.81
GPM03170	FPYX	UG2FW	2.78	2.93	5.38
GPM03171	FPYX	UG2FW	2.92	3.06	4.60
GPM03172	FPYX	UG2FW	2.73	2.90	5.95
GPM03173	FPYX	UG2FW	2.76	2.79	1.03
GPM03174	FPYX	UG2FW	2.43	2.78	13.38
GPM03175	FPYX	UG2FW	2.68	2.79	3.89
GPM03176	FPYX	UG2FW	2.70	2.78	2.90
GPM03177	FPYX	UG2FW	2.70	2.79	3.26
GPM03178	FPYX	UG2FW	3.07	3.48	12.40
GPM03179	FPYX	UG2FW	3.20	3.51	9.38
GPM03180	FPYX	UG2FW	3.32	3.71	11.17
GPM03181	FPYX	UG2FW	3.38	3.79	11.42
GPM03182	FPYX	UG2FW	3.33	3.75	11.98
GPM03183	FPYX	UG2FW	2.69	3.33	21.33
GPM03184	FPYX	UG2FW	3.21	3.34	3.96
GPM03185	FPYX	UG2FW	2.85	3.18	10.78

Table B 11. GPM dataset, outliers remove

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GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03186	FPYX	UG2FW	3.25	3.36	3.26
GPM03187	FPYX	UG2FW	3.10	3.41	9.40
GPM03188	FPYX	UG2FW	2.93	3.41	14.99
GPM03189	FPYX	UG2FW	3.29	3.58	8.36
GPM03190	FPYX	UG2FW	3.12	3.75	18.50
GPM03191	FPYX	UG2FW	3.17	3.61	12.98
GPM03192	FPYX	UG2FW	2.95	3.61	20.14
GPM03193	FPYX	UG2FW	3.21	3.30	2.78
GPM03194	DUP	UG2FW	3.03	3.30	8.64
GPM03195	FPYX	UG2FW	3.28	3.35	2.26
GPM03196	FPYX	UG2FW	3.03	3.35	10.14
GPM03197	FPYX	UG2FW	3.32	3.40	2.44
GPM03198	FPYX	UG2FW	2.98	3.40	13.18
GPM03199	FPYX	UG2FW	3.93	4.36	10.34
GPM03200	FPYX	UG2FW	2.94	3.19	8.08
GPM03201	FPYX	UG2FW	3.04	3.32	8.86
GPM03202	FPYX	UG2FW	3.16	3.35	5.96
GPM03203	FPYX	UG2FW	3.10	3.34	7.32
GPM03204	FPYX	UG2FW	3.18	3.43	7.48
GPM03205	FPYX	UG2FW	3.25	3.58	9.64
GPM03206	FPYX	UG2FW	3.27	3.53	7.64
GPM03207	FPYX	UG2FW	3.28	3.46	5.26
GPM03208	FPYX	UG2FW	3.23	3.43	6.06
GPM03209	FPYX	UG2FW	3.24	3.37	4.05
GPM03210	FPYX	UG2FW	3.78	4.48	17.05
GPM03211	FPYX	UG2FW	3.29	3.41	3.62
GPM03212	FPYX	UG2FW	3.08	3.32	7.60
GPM03213	FPYX	UG2FW	3.08	3.14	1.94
GPM03214	FPYX	UG2FW	2.72	2.98	9.17
GPM03215	FPYX	UG2FW	3.16	3.47	9.35
GPM03216	FPYX	UG2FW	2.66	2.82	5.59
GPM03217	FPYX	UG2FW	3.33	3.63	8.49
GPM03218	FPYX	UG2FW	3.34	3.65	9.01
GPM03219	FPYX	UG2FW	3.24	3.61	10.70
GPM03220	FPYX	UG2FW	3.30	3.58	8.15
GPM03221	FPYX	UG2FW	3.29	3.58	8.51
GPM03222	FPYX	UG2FW	3.29	3.56	7.84
GPM03223	FPYX	UG2FW	3.29	3.59	8.77
GPM03224	FPYX	UG2FW	3.29	3.57	8.22
GPM03225	FPYX	UG2FW	3.27	3.57	8.78
GPM03226	FPYX	UG2FW	3.28	3.56	8.17
GPM03227	FPYX	UG2FW	3.35	3.66	8.92
GPM03228	FPYX	UG2FW	3.35	3.65	8.51
GPM03229	FPYX	UG2FW	3.26	3.69	12.28
GPM03230	FPYX	UG2FW	3.31	3.61	8.67
GPM03231	FPYX	UG2FW	3.31	3.60	8.40
GPM03232	FPYX	UG2FW	3.34	3.60	7.50
GPM03233	FPYX	UG2FW	3.35	3.60	7.33
GPM03234	FPYX	UG2FW	3.35	3.65	8.55

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03235	FPYX	UG2FW	3.21	3.34	3.87
GPM03236	FPYX	UG2FW	3.19	3.34	4.58
GPM03237	FPYX	UG2FW	3.23	3.36	3.87
GPM03238	FPYX	UG2FW	3.22	3.38	4.74
GPM03239	FPYX	UG2FW	3.26	3.38	3.49
GPM03240	FPYX	UG2FW	3.28	3.38	2.99
GPM03241	FPYX	UG2FW	3.24	3.42	5.34
GPM03242	FPYX	UG2FW	3.24	3.39	4.26
GPM03243	FPYX	UG2FW	3.25	3.38	3.94
GPM03244	FPYX	UG2FW	3.22	3.43	6.19
GPM03245	FPYX	UG2FW	3.30	3.45	4.54
GPM03246	FPYX	UG2FW	3.23	3.38	4.48
GPM03247	FPYX	UG2FW	3.24	3.39	4.61
GPM03248	FPYX	UG2FW	3.25	3.40	4.48
GPM03249	FPYX	UG2FW	3.25	3.45	6.01
GPM03250	FPYX	UG2FW	3.24	3.45	6.13
GPM03251	FPYX	UG2FW	3.23	3.43	6.00
GPM03252	FPYX	UG2FW	3.22	3.40	5.52
GPM03253	FPYX	UG2FW	3.38	3.53	4.31
GPM03254	FPYX	UG2FW	3.16	3.55	11.52
GPM03255	FPYX	UG2FW	3.27	3.41	4.34
GPM03256	N	UG2FW	2.99	3.06	2.30
GPM03257	N	UG2FW	2.93	3.00	2.47
GPM03258	N	UG2FW	2.93	3.01	2.77
GPM03259	FPYX	UG2FW	3.30	3.44	4.20
GPM03260	FPYX	UG2FW	2.91	2.99	2.71
GPM03261	N	UG2FW	2.90	2.93	0.89
GPM03262	N	UG2FW	2.90	2.94	1.37
GPM03263	N	UG2FW	2.91	2.95	1.29
GPM03264	FPYX	UG2HW	3.30	3.46	4.85
GPM03265	FPYX	UG2HW	3.34	3.46	3.64
GPM03266	FPYX	UG2HW	3.44	3.55	3.25
GPM03267	FPYX	UG2HW	3.37	3.44	2.13
GPM03268	FPYX	UG2HW	3.21	3.43	6.50
GPM03269	FPYX	UG2HW	3.37	3.65	7.90
GPM03270	POIKPYX	UG2HW	3.32	3.40	2.39
GPM03271	POIKPYX	UG2HW	3.25	3.34	2.67
GPM03272	POIKFPYX	UG2HW	3.24	3.52	8.19
GPM03273	POIKFPYX	UG2HW	3.32	3.56	6.91
GPM03274	POIKFPYX	UG2HW	3.28	3.59	8.98
GPM03275	POIKFPYX	UG2HW	3.31	3.62	8.91
GPM03276	POIKFPYX	UG2HW	3.29	3.34	1.53
GPM03277	POIKFPYX	UG2HW	3.29	3.35	1.67
GPM03278	POIKPYX	UG2HW	3.29	3.40	3.23
GPM03279	POIKPYX	UG2HW	3.31	3.42	3.29
GPM03280	POIKPYX	UG2HW	3.29	3.52	6.88
GPM03281	POIKPYX	UG2HW	3.27	3.52	7.48
GPM03282	POIKPYX	UG2HW	3.30	3.51	6.09
GPM03283	POIKPYX	UG2HW	3.31	3.56	7.15

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03284	POIKPYX	UG2HW	3.28	3.55	7.81
GPM03285	POIKFPYX	UG2HW	3.37	3.52	4.35
GPM03286	POIKFPYX	UG2HW	3.33	3.53	5.93
GPM03287	POIKFPYX	UG2HW	3.32	3.53	6.11
GPM03288	POIKFPYX	UG2HW	4.13	4.23	2.31
GPM03289	FPYX	UG2HW	3.31	3.51	5.83
GPM03290	FPYX	UG2HW	3.21	3.52	9.23
GPM03291	FPYX	UG2HW	3.30	3.53	6.76
GPM03292	FPYX	UG2HW	3.31	3.48	4.88
GPM03293	FPYX	UG2HW	3.30	3.51	6.17
GPM03294	FPYX	UG2HW	3.34	3.55	6.02
GPM03295	FPYX	UG2HW	3.29	3.57	8.08
GPM03296	FPYX	UG2HW	3.26	3.60	9.89
GPM03297	FPYX	UG2HW	3.19	3.40	6.42
GPM03298	FPYX	UG2HW	3.30	3.45	4.38
GPM03299	FPYX	UG2HW	3.30	3.43	3.76
GPM03300	FPYX	UG2HW	3.09	3.28	5.98
GPM03301	FPYX	UG2HW	3.20	3.37	5.19
GPM03302	FPYX	UG2HW	3.17	3.31	4.29
GPM03303	FPYX	UG2HW	3.23	3.34	3.25
GPM03304	FPYX	UG2HW	3.00	3.32	10.26
GPM03305	FPYX	UG2HW	3.26	3.39	4.01
GPM03306	FPYX	UG2HW	3.30	3.42	3.50
GPM03307	FPYX	UG2HW	3.29	3.40	3.21
GPM03308	FPYX	UG2HW	3.32	3.41	2.63
GPM03309	FPYX	UG2HW	3.30	3.40	3.11
GPM03310	FPYX	UG2HW	3.32	3.42	2.87
GPM03311	FPYX	UG2HW	3.32	3.41	2.76
GPM03312	FPYX	UG2HW	3.27	3.41	3.99
GPM03313	FPYX	UG2HW	3.27	3.42	4.56
GPM03314	FPYX	UG2HW	3.33	3.44	3.37
GPM03315	FPYX	UG2HW	3.29	3.46	5.10
GPM03316	FPYX	UG2HW	3.28	3.47	5.69
GPM03317	FPYX	UG2HW	3.31	3.40	2.61
GPM03318	CR	UG2HW	3.81	3.96	3.79
GPM03319	FPYX	UG2HW	3.23	3.45	6.50
GPM03320	FPYX	UG2HW	3.23	3.47	7.22
GPM03321	POIKPYX	UG2HW	3.25	3.46	6.33
GPM03322	POIKPYX	UG2HW	3.28	3.48	5.91
GPM03323	POIKFPYX	UG2HW	3.27	3.46	5.61
GPM03324	FPYX	UG2HW	3.30	3.44	4.24
GPM03325	FPYX	UG2HW	3.32	3.44	3.55
GPM03326	FPYX	UG2HW	3.25	3.41	4.90
GPM03327	FPYX	UG2HW	3.31	3.42	3.22
GPM03328	FPYX	UG2HW	3.26	3.38	3.75
GPM03329	FPYX	UG2HW	3.31	3.48	5.05
GPM03330	FPYX	UG2HW	3.23	3.40	5.00
GPM03331	FPYX	UG2HW	3.23	3.43	6.11
GPM03332	FPYX	UG2HW	3.24	3.43	5.70

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03333	FPYX	UG2HW	3.18	3.40	6.67
GPM03334	FPYX	UG2HW	3.15	3.41	7.77
GPM03335	FPYX	UG2HW	3.10	3.45	10.57
GPM03336	FPYX	UG2HW	3.26	3.48	6.52
GPM03337	FPYX	UG2HW	3.28	3.53	7.31
GPM03338	FPYX	UG2HW	2.98	3.23	7.94
GPM03339	FPYX	UG2HW	3.15	3.44	8.66
GPM03340	FPYX	UG2HW	3.18	3.46	8.37
GPM03341	FPYX	UG2HW	2.90	3.19	9.37
GPM03342	FPYX	UG2HW	3.49	3.54	1.56
GPM03343	FPYX	UG2HW	3.11	3.27	5.05
GPM03344	FPYX	UG2HW	3.43	3.53	2.99
GPM03345	FPYX	UG2HW	3.46	3.51	1.49
GPM03346	FPYX	UG2HW	3.26	3.33	2.26
GPM03347	FPYX	UG2HW	3.50	3.50	-0.01
GPM03348	FPYX	UG2HW	3.21	3.33	3.64
GPM03349	FPYX	UG2HW	3.11	3.49	11.39
GPM03350	FPYX	UG2HW	3.35	3.48	3.83
GPM03351	FPYX	UG2HW	3.23	3.47	7.13
GPM03352	FPYX	UG2HW	3.25	3.54	8.51
GPM03353	FPYX	UG2HW	3.27	3.54	7.84
GPM03354	FPYX	UG2HW	3.01	3.18	5.44
GPM03355	FPYX	UG2HW	3.11	3.12	0.48
GPM03356	FPYX	UG2HW	3.12	3.21	2.83
GPM03357	FPYX	UG2HW	3.29	3.38	2.60
GPM03358	FPYX	UG2HW	3.28	3.41	3.92
GPM03359	FPYX	UG2HW	3.30	3.05	-7.75
GPM03360	FPYX	UG2HW	3.33	3.39	1.76
GPM03361	FPYX	UG2HW	3.30	3.45	4.50
GPM03362	FPYX	UG2HW	3.30	3.49	5.48
GPM03363	FPYX	UG2HW	3.30	3.49	5.66
GPM03364	FPYX	UG2HW	3.28	3.53	7.28
GPM03365	FPYX	UG2HW	3.33	3.47	4.23
GPM03366	FPYX	UG2HW	3.31	3.43	3.49
GPM03367	FPYX	UG2HW	3.33	3.49	4.76
GPM03368	POIKFPYX	UG2HW	3.36	3.42	1.63
GPM03369	POIKFPYX	UG2HW	3.32	3.42	2.82
GPM03370	POIKFPYX	UG2HW	3.30	3.43	3.99
GPM03371	POIKFPYX	UG2HW	3.29	3.48	5.51
GPM03372	POIKFPYX	UG2HW	3.31	3.54	6.68
GPM03373	POIKFPYX	UG2HW	3.28	3.52	6.96
GPM03374	POIKFPYX	UG2HW	3.30	3.47	5.07
GPM03375	POIKFPYX	UG2HW	3.32	3.51	5.51
GPM03376	POIKPYX	UG2HW	3.29	3.48	5.51
GPM03377	POIKPYX	UG2HW	3.28	3.47	5.50
GPM03378	POIKPYX	UG2HW	3.28	3.46	5.42
GPM03379	POIKPYX	UG2HW	3.27	3.52	7.14
GPM03380	POIKPYX	UG2HW	3.27	3.35	2.55
GPM03381	POIKFPYX	UG2HW	3.26	3.33	2.22

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03382	POIKFPYX	UG2HW	3.17	3.37	5.86
GPM03383	POIKFPYX	UG2HW	3.28	3.25	-0.77
GPM03384	POIKFPYX	UG2HW	3.24	3.43	5.65
GPM03385	POIKFPYX	UG2HW	3.29	3.45	4.80
GPM03386	POIKFPYX	UG2HW	3.52	3.39	-3.75
GPM03387	POIKPYX	UG2HW	3.29	3.45	4.89
GPM03388	POIKPYX	UG2HW	3.26	3.41	4.50
GPM03389	POIKPYX	UG2HW	3.28	3.42	4.30
GPM03390	POIKPYX	UG2HW	3.30	3.47	4.94
GPM03391	POIKPYX	UG2HW	3.31	3.44	3.77
GPM03392	POIKPYX	UG2HW	3.27	3.42	4.52
GPM03393	POIKPYX	UG2HW	3.27	3.42	4.50
GPM03394	POIKPYX	UG2HW	3.27	3.45	5.38
GPM03395	POIKPYX	UG2HW	3.30	3.42	3.60
GPM03396	POIKPYX	UG2HW	3.31	3.44	3.82
GPM03397	POIKPYX	UG2HW	3.29	3.42	3.96
GPM03398	POIKPYX	UG2HW	3.31	3.43	3.51
GPM03399	PP	UG2HW	2.88	3.11	7.84
GPM03400	PP	UG2HW	3.03	3.11	2.58
GPM03401	PEGFPYX	UG2HW	2.80	2.87	2.41
GPM03402	PEGFPYX	UG2HW	3.15	3.05	-3.23
GPM03403	POIKPYX	UG2HW	3.24	3.44	6.06
GPM03404	POIKPYX	UG2HW	3.22	3.42	5.95
GPM03405	POIKPYX	UG2HW	3.26	3.52	7.46
GPM03406	GN	UG2HW	2.94	3.13	6.34
GPM03407	GN	UG2HW	2.96	3.12	5.33
GPM03408	GN	UG2HW	3.10	3.20	3.05
GPM03409	GN	UG2HW	2.99	3.10	3.78
GPM03410	GN	UG2HW	3.04	3.17	4.11
GPM03411	POIKPYX	UG2HW	3.22	3.45	6.83
GPM03412	POIKPYX	UG2HW	3.18	3.20	0.32
GPM03413	POIKPYX	UG2HW	3.24	3.25	0.19
GPM03414	POIKFPYX	UG2HW	3.14	3.46	9.78
GPM03415	POIKFPYX	UG2HW	2.98	3.41	13.51
GPM03416	POIKFPYX	UG2HW	3.22	3.43	6.39
GPM03417	POIKFPYX	UG2HW	3.27	3.45	5.49
GPM03418	POIKFPYX	UG2HW	3.25	3.43	5.44
GPM03419	POIKFPYX	UG2HW	3.35	3.45	2.88
GPM03420	POIKFPYX	UG2HW	3.40	3.48	2.29
GPM03421	POIKFPYX	UG2HW	3.84	3.49	-9.67
GPM03422	POIKFPYX	UG2HW	3.26	3.47	6.34
GPM03423	POIKFPYX	UG2HW	3.83	3.49	-9.34
GPM03424	POIKFPYX	UG2HW	3.02	3.36	10.73
GPM03425	POIKFPYX	UG2HW	3.08	3.40	9.78
GPM03426	POIKPYX	UG2HW	3.17	3.40	6.87
GPM03427	POIKPYX	UG2HW	3.23	3.40	4.99
GPM03428	POIKPYX	UG2HW	3.39	3.51	3.56
GPM03429	POIKPYX	UG2HW	3.25	3.47	6.53
GPM03430	PP	UG2HW	3.12	3.37	7.79

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03431	POIKPYX	UG2HW	3.10	3.36	8.03
GPM03432	FPYX	UG2HW	3.29	3.44	4.54
GPM03433	FPYX	UG2HW	3.30	3.47	5.00
GPM03434	FPYX	UG2HW	3.28	3.47	5.55
GPM03435	FPYX	UG2HW	3.24	3.48	7.17
GPM03436	FPYX	UG2HW	3.24	3.40	4.60
GPM03437	FPYX	UG2HW	3.21	3.37	4.76
GPM03438	FPYX	UG2HW	3.08	3.27	5.82
GPM03439	FPYX	UG2HW	3.26	3.40	4.21
GPM03440	FPYX	UG2HW	3.18	3.41	6.97
GPM03441	FPYX	UG2HW	3.12	3.30	5.62
GPM03442	POIKPYX	UG2HW	3.31	3.49	5.26
GPM03443	POIKPYX	UG2HW	3.28	3.55	8.02
GPM03444	POIKPYX	UG2HW	3.16	3.55	11.50
GPM03445	PP	UG2HW	3.27	3.55	8.13
GPM03446	PP	UG2HW	3.27	3.59	9.29
GPM03447	POIKPYX	UG2HW	3.26	3.54	8.19
GPM03448	POIKPYX	UG2HW	3.31	3.52	6.29
GPM03449	POIKPYX	UG2HW	3.29	3.58	8.57
GPM03450	POIKPYX	UG2HW	3.22	3.64	12.25
GPM03451	FPYX	UG2HW	3.26	3.38	3.51
GPM03452	FPYX	UG2HW	3.17	3.36	5.97
GPM03453	FPYX	UG2HW	3.22	3.37	4.50
GPM03454	FPYX	UG2HW	3.20	3.31	3.34
GPM03455	FPYX	UG2HW	3.09	3.18	3.03
GPM03456	FPYX	UG2HW	3.02	3.41	12.10
GPM03457	FPYX	UG2HW	2.95	3.43	14.98
GPM03458	FPYX	UG2HW	3.32	3.46	4.24
GPM03459	FPYX	UG2HW	3.27	3.42	4.40
GPM03460	FPYX	UG2HW	3.24	3.44	5.91
GPM03461	FPYX	UG2HW	3.19	3.48	8.61
GPM03462	FPYX	UG2HW	3.24	3.41	5.05
GPM03463	FPYX	UG2HW	3.26	3.45	5.66
GPM03464	FPYX	UG2HW	3.30	3.46	4.65
GPM03465	FPYX	UG2HW	3.48	3.49	0.02
GPM03466	FPYX	UG2HW	3.30	3.50	5.93
GPM03467	FPYX	UG2HW	3.29	3.44	4.19
GPM03468	FPYX	UG2HW	3.31	3.48	5.11
GPM03469	FPYX	UG2HW	3.27	3.29	0.54
GPM03470	FPYX	UG2HW	3.27	3.30	1.04
GPM03471	FPYX	UG2HW	3.29	3.36	1.97
GPM03472	FPYX	UG2HW	3.26	3.43	5.13
GPM03473	FPYX	UG2HW	3.25	3.43	5.31
GPM03474	FPYX	UG2HW	3.17	3.42	7.57
GPM03475	FPYX	UG2HW	3.29	3.37	2.48
GPM03476	FPYX	UG2HW	3.24	3.39	4.45
GPM03477	FPYX	UG2HW	3.28	3.22	-1.70
GPM03478	FPYX	UG2HW	3.25	3.39	4.17
GPM03479	FPYX	UG2HW	3.38	3.41	0.92

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	Rock type	Stratigraphy	Driekop density	Grabner Millled density	AVRD
GPM03480	FPYX	UG2HW	3.22	3.32	2.99
GPM03481	FPYX	UG2HW	3.17	3.32	4.69
GPM03482	FPYX	UG2HW	3.26	3.19	-2.08
GPM03483	FPYX	UG2HW	3.05	3.38	10.13
GPM03484	FPYX	UG2HW	3.21	3.37	4.73
GPM03485	FPYX	UG2HW	3.29	3.37	2.52
GPM03486	FPYX	UG2HW	3.31	3.39	2.33
GPM03487	FPYX	UG2HW	3.23	3.29	1.64
GPM03488	FPYX	UG2HW	3.33	3.29	-1.34
GPM03489	FPYX	UG2HW	3.28	3.31	0.93
GPM03490	FPYX	UG2HW	3.18	3.47	8.73
GPM03491	FPYX	UG2HW	3.29	3.55	7.48
GPM03492	FPYX	UG2HW	3.24	3.37	3.91
GPM03493	FPYX	UG2HW	3.14	3.37	6.94
GPM03494	FPYX	UG2HW	3.14	3.41	8.22
GPM03495	N	UG2HW	2.96	3.41	14.20
GPM03496	FPYX	UG2HW	3.18	3.35	5.19
GPM03497	FPYX	UG2HW	3.22	3.34	3.81
GPM03498	FPYX	UG2HW	3.12	3.30	5.66
GPM03499	FPYX	UG2HW	3.27	3.29	0.72
GPM03500	FPYX	UG2HW	3.20	3.31	3.28
GPM03501	FPYX	UG2HW	3.35	3.41	1.66
GPM03502	FPYX	UG2HW	3.31	3.49	5.23
GPM03503	FPYX	UG2HW	3.41	3.47	1.78
GPM03504	FPYX	UG2HW	3.36	3.50	4.22
GPM03505	FPYX	UG2HW	3.28	3.47	5.75
GPM03506	FPYX	UG2HW	3.29	3.45	4.63
GPM03507	FPYX	UG2HW	3.32	3.46	4.24
GPM03508	FPYX	UG2HW	3.30	3.54	7.15
GPM03509	FPYX	UG2HW	3.33	3.54	6.07
GPM03510	FPYX	UG2HW	3.28	3.55	7.80
GPM03511	FPYX	UG2HW	3.31	3.56	7.29
GPM03512	FPYX	UG2HW	3.29	3.55	7.55
GPM03513	FPYX	UG2HW	3.28	3.55	7.92
GPM03514	FPYX	UG2HW	3.47	3.51	1.10
GPM03515	FPYX	UG2HW	2.93	3.10	5.53
GPM03516	FPYX	UG2HW	2.91	3.23	10.51
GPM03517	FPYX	UG2HW	3.10	3.52	12.64
GPM03518	FPYX	UG2HW	3.22	3.36	4.32
GPM03519	FPYX	UG2HW	3.23	3.42	5.77
GPM03520	FPYX	UG2HW	3.21	3.44	6.96
GPM03521	FPYX	UG2HW	3.29	3.53	7.18
GPM03522	FPYX	UG2HW	3.23	3.35	3.61
GPM03523	FPYX	UG2HW	3.17	3.29	3.85
GPM03524	FPYX	UG2HW	3.24	3.40	4.91
GPM03525	FPYX	UG2HW	3.24	3.47	6.73
GPM03526	FPYX	UG2HW	3.22	3.48	7.91
GPM03527	FPYX	UG2HW	3.09	3.46	11.38
GPM03528	FPYX	UG2HW	3.30	3.47	5.11

Table B 11. GPM dataset, outliers remove

GPM dataset outliers removed					
Sample Number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Millled density**	**AVRD**
GPM03529	FPYX	UG2HW	2.93	3.15	7.12
GPM03530	FPYX	UG2HW	3.17	3.42	7.62
GPM03531	FPYX	UG2HW	3.15	3.57	12.59
GPM03532	FPYX	UG2HW	3.37	3.57	5.73
GPM03533	FPYX	UG2HW	3.07	3.54	14.22
GPM03534	FPYX	UG2HW	3.30	3.60	8.81
GPM03535	FPYX	UG2HW	3.34	3.60	7.46
GPM03536	FPYX	UG2HW	2.95	3.36	12.96
GPM03537	FPYX	UG2HW	3.33	3.59	7.54
GPM03538	FPYX	UG2HW	3.26	3.55	8.46
GPM03539	FPYX	UG2HW	3.39	3.64	7.14
GPM03540	FPYX	UG2HW	3.34	3.59	7.20
GPM03541	FPYX	UG2HW	3.29	3.44	4.45
GPM03542	FPYX	UG2HW	3.30	3.46	4.61
GPM03543	FPYX	UG2HW	3.28	3.31	1.01
GPM03544	FPYX	UG2HW	3.29	3.44	4.44
GPM03545	FPYX	UG2HW	3.38	3.48	2.85
GPM03546	FPYX	UG2HW	3.30	3.44	3.94
GPM03547	FPYX	UG2HW	3.30	3.44	4.23
GPM03548	FPYX	UG2HW	3.26	3.43	5.22
GPM03549	FPYX	UG2HW	3.31	3.41	2.91
GPM03550	FPYX	UG2HW	3.28	3.41	3.60
GPM03551	UG 3 CR	UG3	3.66	3.84	4.93
GPM03552	UG 3 CR	UG3	3.90	3.90	-0.07

Table B 12. GPM dataset descriptive statistics with the outliers removed.

GPM descriptive statistics of dataset with outliers removed					
Driekop dataset statistics		**Grabner Milled dataset statistics**		**AVRD**	
Mean	3.266	Mean	3.454	Mean	5.551
Standard Error	0.006	Standard Error	0.006	Standard Error	0.056
Median	3.231	Median	3.400	Median	5.171
Mode	3.000	Mode	3.410	Mode	4.878
Standard Deviation	0.331	Standard Deviation	0.368	Standard Deviation	3.327
Sample Variance	0.110	Sample Variance	0.135	Sample Variance	11.069
Kurtosis	2.448	Kurtosis	2.469	Kurtosis	3.192
Skewness	1.546	Skewness	1.544	Skewness	0.677
Range	2.138	Range	2.190	Range	30.999
Minimum	2.431	Minimum	2.720	Minimum	-9.669
Maximum	4.569	Maximum	4.910	Maximum	21.330
Count	3552.000	Count	3552.000	Count	3552.000
Confidence Level(95.0%)	0.011	Confidence Level(95.0%)	0.012	Confidence Level(95.0%)	0.109

Table B 13. GPM − MR sampling cut AVRD fre

LPM MR Sampling cut AVRD histogram data						
Bin (%)	*MRHW AVRD Frequency (No. Samples)*	*MR AVRD Frequency (No. Samples)*	*MRFW AVRD Frequency (No. Samples)*	*MRHW AVRD Frequency (%)*	*MR AVRD Frequency (%)*	*MRFW AVRD Frequency (%)*
-20	0	0	0	0.00	0.00	0.00
-19	0	0	0	0.00	0.00	0.00
-18	0	0	0	0.00	0.00	0.00
-17	0	0	0	0.00	0.00	0.00
-16	0	0	0	0.00	0.00	0.00
-15	0	0	0	0.00	0.00	0.00
-14	0	0	0	0.00	0.00	0.00
-13	0	0	0	0.00	0.00	0.00
-12	0	0	0	0.00	0.00	0.00
-11	0	0	0	0.00	0.00	0.00
-10	0	0	0	0.00	0.00	0.00
-9	0	0	1	0.00	0.00	0.11
-8	0	0	1	0.00	0.00	0.11
-7	0	1	1	0.00	0.19	0.11
-6	0	2	0	0.00	0.39	0.00
-5	0	0	1	0.00	0.00	0.11
-4	1	1	1	0.22	0.19	0.11
-3	0	0	2	0.00	0.00	0.22
-2	1	0	4	0.22	0.00	0.44
-1	1	0	4	0.22	0.00	0.44
0	3	3	8	0.66	0.58	0.88
1	3	9	20	0.66	1.75	2.19
2	23	10	34	5.02	1.94	3.72
3	65	50	103	14.19	9.71	11.27
4	67	72	118	14.63	13.98	12.91
5	88	86	217	19.21	16.70	23.74
6	78	91	146	17.03	17.67	15.97
7	53	79	103	11.57	15.34	11.27
8	23	42	55	5.02	8.16	6.02
9	14	15	32	3.06	2.91	3.50
10	9	23	14	1.97	4.47	1.53
11	5	8	5	1.09	1.55	0.55
12	5	7	13	1.09	1.36	1.42
13	0	3	6	0.00	0.58	0.66
14	4	3	3	0.87	0.58	0.33
15	5	2	8	1.09	0.39	0.88
16	2	1	6	0.44	0.19	0.66
17	2	1	3	0.44	0.19	0.33
18	1	1	2	0.22	0.19	0.22
19	0	1	1	0.00	0.19	0.11
20	2	2	1	0.44	0.39	0.11
More	3	2	1	0.66	0.39	0.11
TOTAL	458	515	914	100	100	100

Table B 14. GPM - UG2 sampling cut AVRD freque

GPM – UG2 Sampling cut AVRD histogram data						
Bin (%)	*UG2HW AVRD Frequency (No. Samples)*	*UG2 AVRD Frequency (No. Samples)*	*UG2FW AVRD Frequency (No. Samples)*	*UG2HW AVRD Frequency (%)*	*UG2 AVRD Frequency (%)*	*UG2FW AVRD Frequency (%)*
-20	0	0	0	0.00	0.00	0.00
-19	0	0	0	0.00	0.00	0.00
-18	0	0	0	0.00	0.00	0.00
-17	0	0	0	0.00	0.00	0.00
-16	0	0	0	0.00	0.00	0.00
-15	0	0	0	0.00	0.00	0.00
-14	0	0	0	0.00	0.00	0.00
-13	0	0	0	0.00	0.00	0.00
-12	0	0	0	0.00	0.00	0.00
-11	0	0	0	0.00	0.00	0.00
-10	0	0	0	0.00	0.00	0.00
-9	2	0	0	0.70	0.00	0.00
-8	0	0	1	0.00	0.00	0.11
-7	1	2	0	0.35	0.48	0.00
-6	0	1	0	0.00	0.24	0.00
-5	0	0	1	0.00	0.00	0.11
-4	0	4	0	0.00	0.95	0.00
-3	2	3	0	0.70	0.71	0.00
-2	1	2	4	0.35	0.48	0.44
-1	2	6	3	0.70	1.43	0.33
0	2	7	6	0.70	1.66	0.66
1	8	17	12	2.79	4.04	1.32
2	13	11	41	4.53	2.61	4.51
3	25	26	60	8.71	6.18	6.60
4	38	36	104	13.24	8.55	11.44
5	44	33	143	15.33	7.84	15.73
6	49	40	151	17.07	9.50	16.61
7	29	48	106	10.10	11.40	11.66
8	31	56	67	10.80	13.30	7.37
9	17	41	77	5.92	9.74	8.47
10	6	18	46	2.09	4.28	5.06
11	5	13	34	1.74	3.09	3.74
12	3	21	16	1.05	4.99	1.76
13	5	14	13	1.74	3.33	1.43
14	1	4	8	0.35	0.95	0.88
15	3	10	5	1.05	2.38	0.55
16	0	2	2	0.00	0.48	0.22
17	0	2	2	0.00	0.48	0.22
18	0	4	1	0.00	0.95	0.11
19	0	0	1	0.00	0.00	0.11
20	0	0	2	0.00	0.00	0.22
More	0	0	3	0.00	0.00	0.33
TOTAL	287	421	909	100	100	100

Table B 15. Descriptive statistics for the THP raw dataset.

THP raw dataset descriptive statistics					
Driekop dataset statistics		**Grabner Milled dataset statistics**		**AVRD**	
Mean	3.312	Mean	3.478	Mean	4.885
Standard Error	0.004	Standard Error	0.004	Standard Error	0.046
Median	3.244	Median	3.410	Median	4.914
Mode	3.250	Mode	3.390	Mode	2.453
Standard Deviation	0.318	Standard Deviation	0.340	Standard Deviation	3.506
Sample Variance	0.101	Sample Variance	0.116	Sample Variance	12.290
Kurtosis	1.857	Kurtosis	2.067	Kurtosis	6.057
Skewness	1.365	Skewness	1.404	Skewness	-0.107
Range	2.387	Range	2.170	Range	47.305
Minimum	2.492	Minimum	2.660	Minimum	-15.962
Maximum	4.879	Maximum	4.830	Maximum	31.343
Count	5880.000	Count	5880.000	Count	5880.000
Confidence Level (95.0%)	0.008	Confidence Level (95.0%)	0.009	Confidence Level (95.0%)	0.090

Table B 16. THP outlier parameters.

THP standard deviations from mean			
Number of standard deviations from the mean	**Driekop**	**Grabner Milled**	**AVRD**
3	4.266	4.498	15.402
2	3.948	4.158	11.897
1	3.630	3.818	8.391
0	3.312	3.478	4.885
-1	2.994	3.138	1.379
-2	2.675	2.798	-2.126
-3	2.357	2.458	-5.632

Table B 17. List of THP outliers that were removed

THP dataset outliers					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05775	CR	UG2	4.08	3.83	-6.20
THP05776	GN	MRFW	3.65	3.11	-15.96
THP05777	PEGFPYX	UG2FW	3.76	3.45	-8.50
THP05778	MOT	MRHW	2.73	3.21	16.18
THP05779	PYX	UG2FW	3.24	4.06	22.37
THP05780	CR	UG2	4.40	4.09	-7.36
THP05781	PYX	MRFW	3.50	3.21	-8.64
THP05782	MR	MR	3.56	3.25	-9.10
THP05783	MR	MR	3.53	3.32	-6.01
THP05784	PEGFPYX	MRFW	3.81	3.325	-13.65
THP05785	PYX	MRFW	3.53	3.24	-8.68
THP05786	PYX	MRFW	3.55	3.26	-8.63
THP05787	PYX	MRFW	2.63	3.22	20.34
THP05788	PYX	MRFW	2.72	3.27	18.47
THP05789	PYX	MRFW	2.72	3.2	16.19
THP05790	MR	MR	2.61	3.12	17.88
THP05791	PEGFPYX	MRFW	2.95	3.46	15.77
THP05792	PEGFPYX	UG2FW	3.75	3.47	-7.68
THP05793	PEGFPYX	UG2FW	3.77	3.32	-12.62
THP05794	POIKFPYX	UG2FW	3.80	3.35	-12.49
THP05795	CR	UG2	4.88	4.2	-14.96
THP05796	CR	UG2	3.80	3.58	-5.96
THP05797	PEGFPYX	UG2FW	2.79	3.45	21.27
THP05798	POIKFPYX	UG2HW	3.27	3.08	-5.86
THP05799	CR	UG2	3.60	4.28	17.33
THP05800	CR	UG2	3.99	4.67	15.65
THP05801	PYX	UG2HW	2.89	3.52	19.67
THP05802	CR	UG2	3.55	4.25	18.03
THP05803	CR	UG2	3.67	4.34	16.65
THP05804	CR	UG2	3.70	4.325	15.68
THP05805	PEGFPYX	UG2FW	3.39	3.07	-10.02
THP05806	N	MRHW	3.01	2.82	-6.40
THP05807	PEGFPYX	MRFW	3.22	3	-6.98
THP05808	PYXAN	MRFW	2.86	2.66	-7.31
THP05809	PYXAN	MRFW	3.09	2.91	-6.01
THP05810	FPYX	UG2HW	3.29	3.11	-5.62
THP05811	CR	UG2	3.47	4.18	18.50
THP05812	PYX	UG2FW	3.24	3.06	-5.67
THP05813	FPYX	UG2HW	3.29	3.11	-5.60
THP05814	CR	UG2	4.12	3.88	-5.92
THP05815	PEGFPYX	UG2FW	3.39	3.18	-6.40
THP05816	PYX	MRHW	2.69	3.37	22.27
THP05817	CR	UG2	3.48	4.205	18.82
THP05818	N	MRHW	2.63	3.15	17.84
THP05819	PYX	MRHW	2.83	3.39	17.95
THP05820	CR	UG2	3.62	4.7	25.92
THP05821	PEGFPYX	UG2FW	2.98	3.56	17.88
THP05822	POIKFPYX	UG2HW	3.04	3.56	15.67
THP05823	CR	UG2	3.82	4.48	15.86
THP05824	POIKAN	MRHW	3.22	2.81	-13.55
THP05825	PYX	MRFW	3.70	3.42	-7.87
THP05826	CR	UG2	3.51	4.42	23.06
THP05827	PYX	MRFW	2.63	3.41	25.72

Table B 17. List of THP outliers that were removed f

THP dataset outliers					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05828	FPEG	MRFW	2.57	3.385	27.46
THP05829	POIKPYX	MRHW	2.83	3.365	17.17
THP05830	POIKPYX	MRHW	2.73	3.19	15.70
THP05831	POIKPYX	MRHW	3.15	2.94	-6.75
THP05832	CR	UG2	3.27	4.45	30.42
THP05833	PEGFPYX	UG2FW	2.89	3.42	16.67
THP05834	CR	UG2	4.35	3.83	-12.63
THP05835	CR	UG2	3.73	4.55	19.68
THP05836	CR	UG2	3.35	3.97	16.95
THP05837	POIKPYX	MRHW	3.75	3.46	-8.07
THP05838	PP	MRFW	3.75	3.23	-14.94
THP05839	PP	MRFW	3.64	3.42	-6.23
THP05840	PYX	MRFW	3.80	3.39	-11.46
THP05841	PYX	MRFW	3.89	3.36	-14.65
THP05842	PYX	MRFW	3.69	3.34	-10.08
THP05843	PYX	MRFW	3.84	3.34	-14.05
THP05844	PYX	MRFW	3.65	3.36	-8.15
THP05845	PYX	MRFW	3.72	3.19	-15.46
THP05846	N	MRHW	3.53	3.12	-12.44
THP05847	MR	MR	3.88	3.39	-13.53
THP05848	PEGFPYX	MRFW	3.66	3.45	-6.03
THP05849	CR	UG2	3.41	4.09	18.22
THP05850	PEGFPYX	UG2FW	3.24	3.81	16.20
THP05851	MR	MR	2.64	3.25	20.89
THP05852	POIKPYX	UG2HW	3.95	3.39	-15.28
THP05853	PYX	MRFW	2.67	3.435	25.18
THP05854	FPYX	UG2HW	3.34	3.02	-10.16
THP05855	PEGFPYX	UG2FW	2.98	3.51	16.26
THP05856	CR	UG2	3.84	4.55	16.98
THP05857	CR	UG2	3.72	4.34	15.45
THP05858	CR	UG2	3.62	4.34	18.14
THP05859	CR	UG2	3.82	4.55	17.49
THP05860	CR	UG2	3.65	4.43	19.31
THP05861	POIKPYX	UG2HW	3.26	3.01	-8.01
THP05862	POIKPYX	UG2HW	3.33	3.035	-9.26
THP05863	CR	UG2	3.34	4.58	31.34
THP05864	PEGFPYX	UG2FW	3.44	3.06	-11.71
THP05865	PEGFPYX	UG2FW	3.35	3.035	-9.86
THP05866	PEGFPYX	UG2FW	3.35	3.03	-9.92
THP05867	POIKPYX	UG2HW	3.23	2.99	-7.87
THP05868	POIKPYX	UG2HW	3.23	2.98	-8.15
THP05869	POIKPYX	UG2HW	3.20	2.97	-7.55
THP05870	POIKPYX	UG2HW	3.27	3.02	-8.03
THP05871	POIKPYX	UG2HW	3.34	3.01	-10.39
THP05872	POIKPYX	UG2HW	3.24	2.99	-8.14
THP05873	POIKPYX	UG2HW	3.22	2.98	-7.71
THP05874	CR	UG2	4.00	4.72	16.48
THP05875	CR	UG2	3.56	4.23	17.07
THP05876	CR	UG2	4.30	4.01	-6.87
THP05877	CR	UG2	4.34	4.09	-5.82
THP05878	CR	UG2	4.19	3.91	-6.96
THP05879	CR	UG2	4.47	4.07	-9.28
THP05880	FPYX	MRFW	2.89	3.47	18.25

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00001	PYX	PYX	3.09	3.3	6.56
THP00002	PYX	BASTARD	3.17	3.38	6.30
THP00003	PYX	BASTARD	3.18	3.38	6.10
THP00004	PYX	BASTARD	3.09	3.38	8.97
THP00005	PYX	BASTARD	3.18	3.37	5.93
THP00006	PYX	BASTARD	3.19	3.37	5.57
THP00007	PYX	BASTARD	3.18	3.37	5.80
THP00008	PYX	BASTARD	3.16	3.38	6.59
THP00009	PYX	BASTARD	3.18	3.38	6.22
THP00010	PYX	BASTARD	3.17	3.37	6.01
THP00011	PYX	BASTARD	3.19	3.4	6.37
THP00012	PYX	BASTARD	3.16	3.35	5.79
THP00013	PYX	BASTARD	3.14	3.32	5.67
THP00014	PYX	BASTARD	3.17	3.36	5.92
THP00015	PYX	BASTARD	3.07	3.28	6.74
THP00016	PYX	BASTARD	2.98	3.16	5.72
THP00017	PYX	BASTARD	3.06	3.235	5.59
THP00018	PYX	BASTARD	3.21	3.41	6.03
THP00019	PYX	BASTARD	3.20	3.42	6.66
THP00020	PYX	BASTARD	3.22	3.42	6.11
THP00021	PYX	BASTARD	3.25	3.43	5.29
THP00022	PYX	BASTARD	2.76	2.905	5.16
THP00023	PYX	BASTARD	3.30	3.43	3.72
THP00024	PYX	BASTARD	3.21	3.39	5.31
THP00025	PYX	BASTARD	3.23	3.4	5.01
THP00026	PYX	BASTARD	3.20	3.38	5.61
THP00027	PYX	BASTARD	3.25	3.42	5.18
THP00028	PYX	BASTARD	3.24	3.37	3.90
THP00029	PYX	BASTARD	3.21	3.36	4.68
THP00030	PYX	BASTARD	3.23	3.37	4.19
THP00031	PYX	BASTARD	3.25	3.38	3.96
THP00032	PYX	BASTARD	3.23	3.38	4.57
THP00033	PYX	BASTARD	3.23	3.38	4.41
THP00034	PYX	BASTARD	3.23	3.38	4.52
THP00035	PYX	BASTARD	3.23	3.38	4.60
THP00036	PYX	BASTARD	3.23	3.39	4.79
THP00037	PYX	BASTARD	3.24	3.4	4.86
THP00038	PYX	BASTARD	3.24	3.4	4.67
THP00039	PYX	BASTARD	3.38	3.36	-0.67
THP00040	PYX	BASTARD	2.83	2.92	3.00
THP00041	PYX	BASTARD	3.00	3.15	4.76
THP00042	PYX	BASTARD	3.17	3.33	4.89
THP00043	PYX	BASTARD	3.17	3.34	5.32
THP00044	PYX	BASTARD	3.19	3.34	4.70
THP00045	PYX	BASTARD	3.18	3.34	4.95
THP00046	PYX	BASTARD	3.20	3.34	4.15
THP00047	PYX	BASTARD	3.19	3.34	4.75
THP00048	PYX	BASTARD	3.20	3.34	4.23
THP00049	PYX	BASTARD	3.20	3.36	4.77
THP00050	PYX	BASTARD	3.20	3.36	4.81
THP00051	PYX	BASTARD	3.20	3.35	4.65
THP00052	PYX	BASTARD	3.07	3.35	8.72
THP00053	PYX	BASTARD	3.21	3.35	4.30

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00054	PYX	BASTARD	3.16	3.35	5.91
THP00055	PYX	BASTARD	3.21	3.36	4.52
THP00056	PYX	BASTARD	3.20	3.36	4.79
THP00057	PYX	BASTARD	3.22	3.32	2.95
THP00058	N	BHW	2.83	2.99	5.47
THP00059	PYXAN	BHW	2.74	2.86	4.14
THP00060	N	BHW	2.82	2.97	5.18
THP00061	MR	MR	3.11	3.375	8.04
THP00062	MR	MR	3.18	3.38	6.12
THP00063	MR	MR	3.20	3.36	4.81
THP00064	MR	MR	3.27	3.455	5.50
THP00065	MR	MR	3.25	3.4	4.47
THP00066	MR	MR	3.09	3.47	11.46
THP00067	MR	MR	3.21	3.41	6.01
THP00068	MR	MR	3.23	3.44	6.25
THP00069	MR	MR	3.25	3.46	6.13
THP00070	MR	MR	3.24	3.43	5.82
THP00071	MR	MR	3.23	3.48	7.41
THP00072	MR	MR	3.27	3.48	6.18
THP00073	MR	MR	3.27	3.51	7.05
THP00074	MR	MR	3.32	3.545	6.63
THP00075	MR	MR	3.34	3.54	5.94
THP00076	MR	MR	3.17	3.47	8.96
THP00077	MR	MR	3.26	3.48	6.51
THP00078	MR	MR	3.26	3.48	6.63
THP00079	MR	MR	3.25	3.46	6.35
THP00080	MR	MR	3.22	3.45	6.86
THP00081	MR	MR	3.24	3.49	7.49
THP00082	MR	MR	3.23	3.48	7.54
THP00083	MR	MR	3.27	3.52	7.43
THP00084	MR	MR	3.27	3.54	7.90
THP00085	MR	MR	3.24	3.52	8.28
THP00086	MR	MR	3.25	3.48	6.84
THP00087	MR	MR	3.25	3.49	7.15
THP00088	MR	MR	3.27	3.47	6.03
THP00089	MR	MR	3.25	3.49	7.17
THP00090	MR	MR	3.53	3.46	-2.11
THP00091	MR	MR	3.27	3.505	7.03
THP00092	MR	MR	3.23	3.51	8.28
THP00093	MR	MR	3.23	3.51	8.24
THP00094	MR	MR	3.19	3.46	8.15
THP00095	MR	MR	3.18	3.48	9.13
THP00096	MR	MR	3.09	3.35	8.19
THP00097	MR	MR	3.24	3.35	3.38
THP00098	MR	MR	3.25	3.39	4.15
THP00099	MR	MR	3.25	3.37	3.64
THP00100	MR	MR	3.25	3.33	2.29
THP00101	MR	MR	3.30	3.36	1.77
THP00102	MR	MR	3.26	3.35	2.74
THP00103	MR	MR	3.26	3.35	2.59
THP00104	MR	MR	3.20	3.37	5.08
THP00105	MR	MR	3.25	3.34	2.67
THP00106	MR	MR	3.27	3.44	4.95

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00107	MR	MR	3.24	3.36	3.53
THP00108	MR	MR	3.19	3.33	4.44
THP00109	MR	MR	3.21	3.385	5.36
THP00110	MR	MR	3.22	3.37	4.60
THP00111	MR	MR	3.26	3.42	4.90
THP00112	MR	MR	3.22	3.37	4.63
THP00113	MR	MR	3.26	3.39	3.99
THP00114	MR	MR	3.45	3.38	-2.10
THP00115	MR	MR	3.28	3.42	4.27
THP00116	MR	MR	3.20	3.36	4.78
THP00117	MR	MR	3.24	3.435	5.85
THP00118	MR	MR	3.27	3.45	5.28
THP00119	MR	MR	3.24	3.4	4.95
THP00120	MR	MR	3.23	3.33	3.17
THP00121	MR	MR	3.20	3.31	3.51
THP00122	MR	MR	3.24	3.37	3.96
THP00123	MR	MR	3.20	3.32	3.55
THP00124	MR	MR	3.22	3.34	3.67
THP00125	MR	MR	3.24	3.32	2.54
THP00126	MR	MR	2.90	3.33	13.81
THP00127	MR	MR	3.29	3.37	2.45
THP00128	MR	MR	3.30	3.39	2.80
THP00129	MR	MR	3.14	3.36	6.63
THP00130	MR	MR	3.46	3.56	2.97
THP00131	MR	MR	3.26	3.49	6.89
THP00132	MR	MR	3.22	3.46	7.31
THP00133	MR	MR	3.22	3.43	6.38
THP00134	MR	MR	3.21	3.47	7.78
THP00135	MR	MR	3.23	3.51	8.18
THP00136	MR	MR	3.23	3.49	7.81
THP00137	MR	MR	3.31	3.55	6.99
THP00138	MR	MR	3.22	3.47	7.36
THP00139	MR	MR	3.26	3.49	6.96
THP00140	MR	MR	3.26	3.52	7.59
THP00141	MR	MR	3.22	3.44	6.67
THP00142	MR	MR	3.21	3.4	5.70
THP00143	MR	MR	3.19	3.38	5.72
THP00144	MR	MR	3.23	3.44	6.24
THP00145	MR	MR	3.19	3.37	5.52
THP00146	MR	MR	3.24	3.39	4.58
THP00147	MR	MR	3.20	3.37	5.03
THP00148	MR	MR	3.22	3.41	5.73
THP00149	MR	MR	3.23	3.42	5.56
THP00150	MR	MR	3.19	3.41	6.65
THP00151	MR	MR	3.28	3.48	5.82
THP00152	MR	MR	3.31	3.44	3.80
THP00153	MR	MR	3.21	3.4	5.73
THP00154	MR	MR	3.24	3.45	6.29
THP00155	MR	MR	3.19	3.38	5.91
THP00156	MR	MR	3.23	3.41	5.34
THP00157	MR	MR	3.25	3.44	5.67
THP00158	MR	MR	3.22	3.42	6.11
THP00159	MR	MR	3.24	3.42	5.33

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00160	MR	MR	3.23	3.41	5.38
THP00161	MR	MR	3.21	3.39	5.44
THP00162	MR	MR	3.29	3.38	2.79
THP00163	MR	MR	3.25	3.32	2.23
THP00164	MR	MR	3.23	3.26	0.92
THP00165	MR	MR	2.75	2.83	2.74
THP00166	MR	MR	2.78	2.89	3.87
THP00167	MR	MR	2.75	2.865	4.12
THP00168	MR	MR	2.76	2.85	3.23
THP00169	MR	MR	3.09	3.17	2.57
THP00170	MR	MR	3.12	3.18	1.99
THP00171	MR	MR	2.83	3.14	10.29
THP00172	MR	MR	3.20	3.32	3.84
THP00173	MR	MR	3.21	3.33	3.80
THP00174	MR	MR	3.21	3.34	3.97
THP00175	MR	MR	3.24	3.36	3.68
THP00176	MR	MR	3.25	3.34	2.66
THP00177	MR	MR	3.20	3.33	4.10
THP00178	MR	MR	3.20	3.33	3.99
THP00179	MR	MR	3.23	3.35	3.49
THP00180	MR	MR	3.23	3.35	3.63
THP00181	MR	MR	3.28	3.39	3.20
THP00182	MR	MR	3.26	3.38	3.47
THP00183	MR	MR	3.31	3.36	1.60
THP00184	MR	MR	3.22	3.39	5.10
THP00185	MR	MR	3.24	3.38	4.25
THP00186	MR	MR	3.24	3.38	4.15
THP00187	MR	MR	3.21	3.41	6.05
THP00188	MR	MR	3.23	3.35	3.51
THP00189	MR	MR	3.16	3.36	6.04
THP00190	MR	MR	3.20	3.36	4.99
THP00191	MR	MR	3.07	3.26	6.14
THP00192	MR	MR	2.73	2.94	7.57
THP00193	MR	MR	2.99	3.18	6.10
THP00194	MR	MR	3.21	3.46	7.45
THP00195	MR	MR	3.21	3.485	8.21
THP00196	MR	MR	3.22	3.49	8.14
THP00197	MR	MR	3.23	3.5	7.96
THP00198	MR	MR	3.24	3.49	7.58
THP00199	MR	MR	3.24	3.48	7.29
THP00200	MR	MR	3.23	3.49	7.72
THP00201	MR	MR	3.14	3.5	10.73
THP00202	MR	MR	3.16	3.46	9.21
THP00203	MR	MR	3.23	3.51	8.46
THP00204	MR	MR	3.16	3.52	10.77
THP00205	MR	MR	3.24	3.51	8.15
THP00206	MR	MR	3.18	3.43	7.63
THP00207	MR	MR	3.12	3.35	7.15
THP00208	MR	MR	3.02	3.18	5.06
THP00209	MR	MR	3.11	3.29	5.67
THP00210	MR	MR	3.28	3.48	5.92
THP00211	MR	MR	3.26	3.42	4.65
THP00212	MR	MR	3.29	3.5	6.34

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00213	PP	MR	3.25	3.42	5.14
THP00214	MR	MR	3.28	3.37	2.81
THP00215	MR	MR	3.21	3.32	3.32
THP00216	MR	MR	3.20	3.3	2.94
THP00217	MR	MR	3.21	3.33	3.67
THP00218	MR	MR	3.25	3.33	2.34
THP00219	MR	MR	3.20	3.255	1.59
THP00220	MR	MR	3.25	3.25	0.07
THP00221	MR	MR	3.22	3.25	1.07
THP00222	MR	MR	3.23	3.29	1.87
THP00223	MR	MR	3.23	3.27	1.22
THP00224	MR	MR	3.25	3.27	0.58
THP00225	MR	MR	3.26	3.34	2.41
THP00226	MR	MR	3.25	3.43	5.54
THP00227	MR	MR	3.30	3.49	5.49
THP00228	MR	MR	3.23	3.39	4.90
THP00229	MR	MR	3.22	3.4	5.33
THP00230	MR	MR	3.24	3.21	-0.84
THP00231	MR	MR	3.21	3.36	4.58
THP00232	MR	MR	3.21	3.35	4.37
THP00233	MR	MR	3.25	3.37	3.56
THP00234	MR	MR	3.21	3.37	4.92
THP00235	MR	MR	3.20	3.38	5.56
THP00236	MR	MR	3.24	3.43	5.75
THP00237	MR	MR	3.30	3.48	5.40
THP00238	MR	MR	3.21	3.33	3.82
THP00239	MR	MR	3.15	3.29	4.26
THP00240	MR	MR	3.30	3.42	3.68
THP00241	MR	MR	3.25	3.34	2.72
THP00242	MR	MR	3.26	3.37	3.44
THP00243	MR	MR	3.26	3.32	1.77
THP00244	MR	MR	3.22	3.3	2.36
THP00245	MR	MR	3.19	3.27	2.61
THP00246	MR	MR	3.20	3.32	3.79
THP00247	MR	MR	3.19	3.29	3.02
THP00248	MR	MR	3.02	3.27	7.99
THP00249	MR	MR	3.24	3.27	0.84
THP00250	MR	MR	3.29	3.3	0.17
THP00251	MR	MR	3.28	3.33	1.48
THP00252	MR	MR	3.23	3.35	3.53
THP00253	MR	MR	3.19	3.27	2.35
THP00254	MR	MR	3.17	3.27	2.97
THP00255	MR	MR	3.00	3.28	9.03
THP00256	MR	MR	3.05	3.25	6.35
THP00257	MR	MR	3.19	3.08	-3.37
THP00258	MR	MR	3.20	3.25	1.59
THP00259	MR	MR	3.19	3.21	0.78
THP00260	MR	MR	3.22	3.26	1.30
THP00261	MR	MR	3.20	3.24	1.32
THP00262	MR	MR	3.21	3.25	1.20
THP00263	MR	MR	3.21	3.27	1.72
THP00264	MR	MR	3.16	3.2	1.28
THP00265	MR	MR	3.27	3.54	8.08

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00266	MR	MR	3.27	3.56	8.63
THP00267	MR	MR	3.27	3.52	7.37
THP00268	MR	MR	3.23	3.45	6.63
THP00269	MR	MR	3.19	3.39	6.00
THP00270	MR	MR	3.20	3.45	7.51
THP00271	MR	MR	3.19	3.455	7.87
THP00272	MR	MR	3.20	3.46	7.66
THP00273	MR	MR	3.22	3.48	7.81
THP00274	MR	MR	3.27	3.54	8.08
THP00275	MR	MR	3.33	3.33	0.02
THP00276	MR	MR	3.27	3.32	1.48
THP00277	MR	MR	3.29	3.32	0.88
THP00278	MR	MR	3.24	3.27	0.95
THP00279	MR	MR	3.27	3.31	1.37
THP00280	MR	MR	3.23	3.255	0.72
THP00281	MR	MR	3.22	3.25	1.05
THP00282	MR	MR	3.27	3.29	0.69
THP00283	MR	MR	3.28	3.29	0.34
THP00284	MR	MR	3.29	3.32	0.90
THP00285	MR	MR	3.27	3.37	3.00
THP00286	MR	MR	3.23	3.32	2.84
THP00287	MR	MR	3.06	3.03	-0.92
THP00288	MR	MR	3.31	3.25	-1.72
THP00289	MR	MR	2.91	3.11	6.67
THP00290	MR	MR	2.67	2.835	5.97
THP00291	MR	MR	2.75	2.78	1.11
THP00292	MR	MR	2.62	2.81	6.91
THP00293	MR	MR	2.62	2.95	11.83
THP00294	MR	MR	3.04	3.28	7.51
THP00295	MR	MR	2.94	3.25	10.04
THP00296	MR	MR	3.18	3.24	1.84
THP00297	MR	MR	3.28	3.325	1.25
THP00298	MR	MR	3.16	3.25	2.96
THP00299	MR	MR	3.19	3.27	2.33
THP00300	MR	MR	3.09	3.02	-2.32
THP00301	MR	MR	3.33	3.42	2.52
THP00302	MR	MR	3.28	3.47	5.75
THP00303	MR	MR	3.23	3.47	7.04
THP00304	MR	MR	3.23	3.39	4.81
THP00305	MR	MR	3.24	3.4	4.94
THP00306	MR	MR	3.23	3.39	4.97
THP00307	MR	MR	3.23	3.36	4.04
THP00308	MR	MR	3.26	3.41	4.49
THP00309	MR	MR	3.24	3.36	3.75
THP00310	MR	MR	3.13	3.36	7.03
THP00311	MR	MR	3.29	3.44	4.50
THP00312	MR	MR	3.26	3.36	3.08
THP00313	MR	MR	3.21	3.37	5.00
THP00314	MR	MR	3.23	3.365	4.15
THP00315	MR	MR	3.22	3.35	3.85
THP00316	MR	MR	3.26	3.37	3.23
THP00317	MR	MR	3.18	3.36	5.35
THP00318	MR	MR	3.21	3.35	4.22

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00319	MR	MR	3.26	3.34	2.54
THP00320	MR	MR	3.22	3.31	2.69
THP00321	MR	MR	3.27	3.39	3.72
THP00322	MR	MR	3.22	3.4	5.43
THP00323	MR	MR	3.29	3.46	5.10
THP00324	MR	MR	3.27	3.42	4.51
THP00325	MR	MR	3.23	3.4	5.02
THP00326	MR	MR	3.41	3.4	-0.27
THP00327	MR	MR	3.23	3.38	4.66
THP00328	MR	MR	3.27	3.25	-0.63
THP00329	MR	MR	3.30	3.26	-1.11
THP00330	MR	MR	3.30	3.28	-0.60
THP00331	MR	MR	3.11	3.1	-0.30
THP00332	MR	MR	3.27	3.31	1.16
THP00333	MR	MR	3.22	3.235	0.52
THP00334	MR	MR	2.93	3.28	11.12
THP00335	MR	MR	3.24	3.26	0.77
THP00336	MR	MR	3.23	3.24	0.36
THP00337	MR	MR	3.25	3.26	0.28
THP00338	MR	MR	3.23	3.29	1.74
THP00339	MR	MR	3.24	3.29	1.48
THP00340	MR	MR	3.20	3.3	3.12
THP00341	MR	MR	3.19	3.43	7.29
THP00342	MR	MR	3.19	3.37	5.45
THP00343	MR	MR	3.19	3.37	5.64
THP00344	MR	MR	3.21	3.39	5.43
THP00345	MR	MR	3.22	3.34	3.53
THP00346	MR	MR	3.23	3.35	3.61
THP00347	MR	MR	3.22	3.38	4.83
THP00348	MR	MR	3.22	3.38	4.85
THP00349	MR	MR	3.22	3.35	4.06
THP00350	MR	MR	3.23	3.385	4.55
THP00351	MR	MR	3.26	3.41	4.44
THP00352	MR	MR	3.27	3.42	4.44
THP00353	MR	MR	3.17	3.4	6.92
THP00354	MR	MR	3.25	3.4	4.43
THP00355	MR	MR	3.16	3.4	7.20
THP00356	MR	MR	3.27	3.39	3.71
THP00357	MR	MR	3.24	3.39	4.46
THP00358	MR	MR	3.21	3.37	4.83
THP00359	MR	MR	3.19	3.38	5.76
THP00360	MR	MR	3.23	3.37	4.36
THP00361	MR	MR	3.24	3.38	4.31
THP00362	MR	MR	3.29	3.43	4.07
THP00363	MR	MR	3.26	3.455	5.83
THP00364	MR	MR	3.04	3.37	10.33
THP00365	MR	MR	3.26	3.39	3.85
THP00366	MR	MR	3.21	3.38	5.24
THP00367	MR	MR	3.22	3.38	4.77
THP00368	MR	MR	3.23	3.4	5.13
THP00369	MR	MR	3.26	3.43	4.96
THP00370	MR	MR	3.29	3.41	3.72
THP00371	MR	MR	3.25	3.44	5.70

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00372	MR	MR	3.25	3.465	6.43
THP00373	MR	MR	3.24	3.51	7.97
THP00374	MR	MR	3.18	3.4	6.69
THP00375	MR	MR	3.22	3.43	6.27
THP00376	MR	MR	3.20	3.39	5.72
THP00377	MR	MR	3.22	3.43	6.31
THP00378	MR	MR	3.23	3.42	5.65
THP00379	MR	MR	3.23	3.45	6.64
THP00380	MR	MR	3.23	3.43	5.98
THP00381	MR	MR	3.26	3.44	5.32
THP00382	MR	MR	3.24	3.45	6.18
THP00383	MR	MR	3.28	3.455	5.31
THP00384	MR	MR	3.25	3.48	6.91
THP00385	MR	MR	3.23	3.43	6.12
THP00386	MR	MR	3.28	3.49	6.18
THP00387	MR	MR	3.25	3.47	6.42
THP00388	MR	MR	3.29	3.37	2.44
THP00389	MR	MR	3.28	3.45	5.03
THP00390	MR	MR	3.06	3.42	11.11
THP00391	MR	MR	3.21	3.38	5.13
THP00392	MR	MR	3.21	3.38	5.30
THP00393	MR	MR	3.18	3.4	6.80
THP00394	MR	MR	3.26	3.43	5.14
THP00395	MR	MR	3.24	3.39	4.48
THP00396	MR	MR	3.20	3.39	5.87
THP00397	MR	MR	3.16	3.4	7.35
THP00398	MR	MR	3.27	3.4	3.84
THP00399	MR	MR	3.30	3.42	3.58
THP00400	MR	MR	3.25	3.34	2.84
THP00401	MR	MR	3.22	3.39	5.27
THP00402	MR	MR	3.25	3.38	4.00
THP00403	MR	MR	3.28	3.38	3.08
THP00404	MR	MR	3.20	3.4	6.09
THP00405	MR	MR	3.25	3.39	4.08
THP00406	MR	MR	3.26	3.41	4.41
THP00407	MR	MR	3.31	3.4	2.65
THP00408	MR	MR	3.26	3.36	2.89
THP00409	MR	MR	3.24	3.36	3.55
THP00410	MR	MR	3.43	3.35	-2.31
THP00411	MR	MR	3.16	3.34	5.58
THP00412	MR	MR	3.24	3.31	1.99
THP00413	MR	MR	3.29	3.32	1.05
THP00414	MR	MR	3.26	3.34	2.54
THP00415	MR	MR	3.24	3.39	4.45
THP00416	MR	MR	3.19	3.34	4.62
THP00417	MR	MR	3.23	3.38	4.63
THP00418	MR	MR	3.21	3.41	5.90
THP00419	MR	MR	3.28	3.41	3.96
THP00420	MR	MR	3.32	3.41	2.76
THP00421	MR	MR	3.29	3.35	1.94
THP00422	MR	MR	3.29	3.405	3.33
THP00423	MR	MR	3.36	3.385	0.78
THP00424	MR	MR	3.28	3.31	0.79

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00425	MR	MR	3.21	3.33	3.52
THP00426	MR	MR	3.26	3.34	2.40
THP00427	MR	MR	3.20	3.3	2.95
THP00428	MR	MR	3.23	3.35	3.53
THP00429	MR	MR	3.26	3.35	2.66
THP00430	MR	MR	3.25	3.35	2.93
THP00431	MR	MR	3.28	3.41	3.83
THP00432	MR	MR	3.24	3.375	4.04
THP00433	MR	MR	3.22	3.36	4.19
THP00434	MR	MR	3.26	3.37	3.40
THP00435	MR	MR	3.24	3.36	3.50
THP00436	MR	MR	3.27	3.39	3.71
THP00437	MR	MR	3.22	3.35	4.07
THP00438	MR	MR	3.22	3.37	4.61
THP00439	MR	MR	3.24	3.36	3.55
THP00440	MR	MR	3.23	3.33	3.02
THP00441	MR	MR	3.17	3.16	-0.18
THP00442	MR	MR	3.17	3.31	4.33
THP00443	MR	MR	3.18	3.29	3.30
THP00444	MR	MR	3.27	3.47	5.88
THP00445	MR	MR	3.25	3.45	5.84
THP00446	MR	MR	3.26	3.43	5.21
THP00447	MR	MR	3.23	3.44	6.44
THP00448	MR	MR	3.23	3.46	6.92
THP00449	MR	MR	3.20	3.44	7.10
THP00450	MR	MR	3.23	3.465	6.91
THP00451	MR	MR	3.25	3.51	7.73
THP00452	MR	MR	3.24	3.45	6.15
THP00453	MR	MR	3.23	3.44	6.19
THP00454	MR	MR	3.17	3.42	7.67
THP00455	MR	MR	2.93	3.06	4.51
THP00456	MR	MR	2.49	2.78	10.91
THP00457	MR	MR	2.81	3.08	9.07
THP00458	MR	MR	3.08	3.31	7.26
THP00459	MR	MR	2.82	3.02	6.79
THP00460	MR	MR	2.74	3	9.11
THP00461	MR	MR	2.82	3.05	7.72
THP00462	MR	MR	2.88	3.09	6.95
THP00463	MR	MR	2.88	3.09	7.09
THP00464	MR	MR	2.82	3.13	10.43
THP00465	MR	MR	2.88	3.1	7.29
THP00466	MR	MR	2.92	3.3	12.19
THP00467	MR	MR	3.18	3.42	7.40
THP00468	MR	MR	3.30	3.51	6.28
THP00469	MR	MR	3.27	3.36	2.80
THP00470	MR	MR	3.28	3.71	12.44
THP00471	MR	MR	2.74	2.97	7.88
THP00472	MR	MR	3.13	3.14	0.40
THP00473	MR	MR	3.17	3.37	6.21
THP00474	MR	MR	3.20	3.39	5.84
THP00475	MR	MR	3.19	3.355	5.06
THP00476	MR	MR	3.22	3.37	4.44
THP00477	MR	MR	3.23	3.36	3.83

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00478	MR	MR	3.22	3.365	4.29
THP00479	MR	MR	3.16	3.29	4.03
THP00480	MR	MR	3.17	3.305	4.05
THP00481	MR	MR	3.15	3.33	5.69
THP00482	MR	MR	3.08	3.26	5.70
THP00483	MR	MR	3.07	3.23	5.17
THP00484	MR	MR	3.05	3.205	5.05
THP00485	MR	MR	2.97	3.2	7.51
THP00486	MR	MR	3.09	3.21	3.89
THP00487	MR	MR	3.05	3.21	4.98
THP00488	MR	MR	2.99	3.17	5.69
THP00489	MR	MR	3.15	3.36	6.38
THP00490	MR	MR	3.22	3.37	4.69
THP00491	MR	MR	3.19	3.34	4.47
THP00492	MR	MR	3.20	3.37	5.19
THP00493	MR	MR	3.20	3.355	4.88
THP00494	MR	MR	3.23	3.36	3.93
THP00495	MR	MR	3.23	3.35	3.62
THP00496	MR	MR	3.23	3.37	4.35
THP00497	MR	MR	3.18	3.4	6.74
THP00498	MR	MR	3.24	3.36	3.56
THP00499	MR	MR	3.29	3.43	4.07
THP00500	MR	MR	3.35	3.46	3.35
THP00501	MR	MR	3.32	3.45	3.85
THP00502	MR	MR	3.33	3.43	3.00
THP00503	MR	MR	3.32	3.45	3.75
THP00504	MR	MR	3.33	3.44	3.21
THP00505	MR	MR	3.31	3.46	4.35
THP00506	MR	MR	3.34	3.45	3.20
THP00507	MR	MR	3.34	3.46	3.43
THP00508	MR	MR	3.32	3.46	4.02
THP00509	MR	MR	3.34	3.45	3.23
THP00510	MR	MR	3.34	3.44	3.09
THP00511	MR	MR	3.36	3.44	2.45
THP00512	MR	MR	3.32	3.43	3.21
THP00513	MR	MR	3.35	3.44	2.78
THP00514	MR	MR	3.36	3.45	2.68
THP00515	MR	MR	3.36	3.46	2.89
THP00516	MR	MR	3.37	3.48	3.14
THP00517	MR	MR	3.37	3.49	3.48
THP00518	MR	MR	3.37	3.49	3.38
THP00519	MR	MR	3.38	3.5	3.63
THP00520	MR	MR	3.37	3.49	3.36
THP00521	MR	MR	3.41	3.48	2.16
THP00522	MR	MR	3.40	3.48	2.38
THP00523	MR	MR	3.39	3.5	3.11
THP00524	MR	MR	3.39	3.49	2.80
THP00525	MR	MR	3.40	3.5	2.96
THP00526	MR	MR	3.36	3.46	2.83
THP00527	MR	MR	3.30	3.39	2.73
THP00528	MR	MR	3.31	3.42	3.12
THP00529	MR	MR	3.27	3.37	2.93
THP00530	MR	MR	3.24	3.42	5.34

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00531	MR	MR	3.36	3.45	2.67
THP00532	MR	MR	3.11	3.38	8.33
THP00533	MR	MR	3.24	3.35	3.39
THP00534	MR	MR	3.28	3.35	2.02
THP00535	MR	MR	3.18	3.27	2.92
THP00536	MR	MR	3.11	3.19	2.44
THP00537	MR	MR	3.08	3.14	1.94
THP00538	MR	MR	3.14	3.22	2.41
THP00539	MR	MR	2.96	3.04	2.52
THP00540	MR	MR	2.98	3	0.55
THP00541	MR	MR	3.23	3.29	1.96
THP00542	MR	MR	3.15	3.315	5.21
THP00543	MR	MR	3.24	3.3	1.78
THP00544	MR	MR	3.23	3.3	2.04
THP00545	MR	MR	3.24	3.385	4.49
THP00546	MR	MR	3.33	3.44	3.25
THP00547	MR	MR	3.32	3.44	3.61
THP00548	MR	MR	3.30	3.41	3.27
THP00549	MR	MR	3.30	3.42	3.69
THP00550	MR	MR	3.30	3.41	3.17
THP00551	MR	MR	3.30	3.41	3.14
THP00552	MR	MR	3.30	3.42	3.66
THP00553	MR	MR	3.38	3.52	3.98
THP00554	MR	MR	3.40	3.49	2.57
THP00555	MR	MR	3.29	3.4	3.29
THP00556	MR	MR	3.28	3.39	3.43
THP00557	MR	MR	3.31	3.42	3.38
THP00558	MR	MR	3.30	3.395	2.99
THP00559	MR	MR	3.34	3.42	2.28
THP00560	MR	MR	3.24	3.36	3.64
THP00561	MR	MR	3.31	3.41	3.08
THP00562	MR	MR	3.30	3.4	3.12
THP00563	MR	MR	3.29	3.39	2.88
THP00564	MR	MR	3.33	3.45	3.65
THP00565	MR	MR	3.28	3.38	2.85
THP00566	MR	MR	3.29	3.39	2.97
THP00567	MR	MR	3.30	3.42	3.67
THP00568	MR	MR	3.32	3.42	2.92
THP00569	MR	MR	3.29	3.42	3.88
THP00570	MR	MR	3.29	3.46	5.05
THP00571	MR	MR	3.29	3.45	4.78
THP00572	MR	MR	3.29	3.45	4.89
THP00573	MR	MR	3.31	3.43	3.55
THP00574	MR	MR	2.78	2.99	7.44
THP00575	MR	MR	3.20	3.46	7.76
THP00576	MR	MR	3.23	3.445	6.32
THP00577	MR	MR	3.26	3.39	3.90
THP00578	MR	MR	3.21	3.45	7.29
THP00579	MR	MR	3.29	3.45	4.74
THP00580	MR	MR	3.26	3.42	4.73
THP00581	MR	MR	3.30	3.44	4.24
THP00582	MR	MR	3.34	3.52	5.35
THP00583	MR	MR	3.32	3.5	5.35

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00584	MR	MR	3.27	3.475	6.11
THP00585	MR	MR	3.26	3.49	6.87
THP00586	MR	MR	3.28	3.47	5.72
THP00587	MR	MR	3.28	3.49	6.34
THP00588	MR	MR	3.20	3.405	6.17
THP00589	MR	MR	3.09	3.46	11.14
THP00590	MR	MR	2.74	2.9	5.60
THP00591	MR	MR	3.30	3.46	4.66
THP00592	MR	MR	3.34	3.46	3.54
THP00593	MR	MR	3.31	3.45	4.00
THP00594	MR	MR	3.07	3.3	7.15
THP00595	MR	MR	3.30	3.46	4.69
THP00596	MR	MR	3.28	3.44	4.79
THP00597	MR	MR	3.21	3.09	-3.65
THP00598	MR	MR	3.20	3.08	-3.69
THP00599	MR	MR	3.20	3.11	-2.98
THP00600	MR	MR	3.20	3.06	-4.52
THP00601	MR	MR	3.21	3.07	-4.56
THP00602	MR	MR	3.27	3.16	-3.53
THP00603	MR	MR	3.25	3.1	-4.76
THP00604	MR	MR	3.29	3.15	-4.23
THP00605	MR	MR	3.23	3.19	-1.35
THP00606	MR	MR	3.22	3.44	6.71
THP00607	MR	MR	3.24	3.47	7.01
THP00608	MR	MR	3.20	3.49	8.80
THP00609	MR	MR	3.22	3.53	9.12
THP00610	MR	MR	3.24	3.55	9.12
THP00611	MR	MR	3.29	3.16	-4.03
THP00612	MR	MR	3.23	3.19	-1.24
THP00613	MR	MR	3.24	3.27	0.93
THP00614	MR	MR	3.22	3.33	3.29
THP00615	MR	MR	3.25	3.39	4.36
THP00616	MR	MR	3.25	3.51	7.74
THP00617	MR	MR	3.21	3.56	10.25
THP00618	MR	MR	3.19	3.11	-2.67
THP00619	MR	MR	3.23	3.16	-2.08
THP00620	MR	MR	3.21	3.17	-1.12
THP00621	MR	MR	3.26	3.25	-0.35
THP00622	MR	MR	3.21	3.31	3.03
THP00623	MR	MR	3.25	3.41	4.83
THP00624	MR	MR	3.22	3.46	7.05
THP00625	MR	MR	3.23	3.49	7.69
THP00626	MR	MR	3.24	3.57	9.65
THP00627	MR	MR	3.22	3.67	12.98
THP00628	MR	MR	3.31	3.47	4.76
THP00629	MR	MR	3.27	3.4	3.96
THP00630	MR	MR	3.07	3.32	7.82
THP00631	MR	MR	3.13	3.33	6.17
THP00632	MR	MR	3.24	3.4	4.83
THP00633	MR	MR	3.19	3.32	3.86
THP00634	MR	MR	3.20	3.33	3.90
THP00635	MR	MR	3.36	3.38	0.50
THP00636	MR	MR	3.21	3.39	5.46

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00637	MR	MR	3.24	3.425	5.64
THP00638	MR	MR	3.29	3.37	2.31
THP00639	MR	MR	3.19	3.29	3.22
THP00640	MR	MR	3.29	3.34	1.63
THP00641	MR	MR	3.14	3.41	8.15
THP00642	MR	MR	3.24	3.33	2.68
THP00643	MR	MR	3.20	3.28	2.58
THP00644	MR	MR	3.18	3.27	2.91
THP00645	MR	MR	3.20	3.29	2.78
THP00646	MR	MR	3.22	3.28	1.96
THP00647	MR	MR	3.22	3.3	2.49
THP00648	MR	MR	3.21	3.3	2.66
THP00649	MR	MR	3.32	3.39	2.20
THP00650	MR	MR	3.26	3.4	4.35
THP00651	MR	MR	3.29	3.35	1.71
THP00652	MR	MR	3.18	3.3	3.76
THP00653	MR	MR	3.19	3.36	5.19
THP00654	MR	MR	3.23	3.35	3.52
THP00655	MR	MR	3.24	3.39	4.51
THP00656	MR	MR	3.20	3.31	3.27
THP00657	MR	MR	3.15	3.27	3.76
THP00658	MR	MR	3.16	3.29	3.88
THP00659	MR	MR	3.18	3.37	5.96
THP00660	MR	MR	3.28	3.35	2.00
THP00661	MR	MR	3.26	3.39	3.85
THP00662	MR	MR	3.27	3.4	3.95
THP00663	MR	MR	3.28	3.385	3.01
THP00664	MR	MR	3.31	3.4	2.64
THP00665	MR	MR	3.25	3.35	3.02
THP00666	MR	MR	3.24	3.3	1.96
THP00667	MR	MR	3.32	3.43	3.29
THP00668	MR	MR	3.19	3.35	4.98
THP00669	MR	MR	3.31	3.65	9.80
THP00670	MR	MR	3.31	3.61	8.70
THP00671	MR	MR	3.34	3.46	3.47
THP00672	MR	MR	2.98	3.45	14.70
THP00673	MR	MR	3.01	3.45	13.76
THP00674	MR	MR	3.30	3.52	6.51
THP00675	MR	MR	3.24	3.385	4.46
THP00676	MR	MR	3.14	3.43	8.94
THP00677	MR	MR	3.27	3.5	6.69
THP00678	MR	MR	3.22	3.48	7.78
THP00679	MR	MR	3.16	3.35	5.89
THP00680	MR	MR	3.33	3.37	1.28
THP00681	MR	MR	3.26	3.38	3.62
THP00682	MR	MR	3.25	3.33	2.55
THP00683	MR	MR	3.12	3.33	6.55
THP00684	MR	MR	3.24	3.35	3.26
THP00685	MR	MR	3.32	3.37	1.54
THP00686	MR	MR	3.25	3.35	3.09
THP00687	MR	MR	3.34	3.32	-0.71
THP00688	MR	MR	3.10	3.26	5.11
THP00689	MR	MR	3.32	3.34	0.48

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00690	MR	MR	3.35	3.41	1.75
THP00691	MR	MR	3.22	3.37	4.52
THP00692	MR	MR	3.24	3.4	4.94
THP00693	MR	MR	3.22	3.4	5.51
THP00694	MR	MR	3.23	3.39	4.78
THP00695	MR	MR	3.22	3.4	5.56
THP00696	MR	MR	3.22	3.41	5.73
THP00697	MR	MR	3.19	3.38	5.67
THP00698	MR	MR	3.22	3.41	5.75
THP00699	MR	MR	3.42	3.44	0.48
THP00700	MR	MR	3.26	3.38	3.63
THP00701	MR	MR	3.21	3.43	6.59
THP00702	MR	MR	3.24	3.36	3.61
THP00703	MR	MR	3.24	3.35	3.23
THP00704	MR	MR	3.22	3.35	3.96
THP00705	MR	MR	3.20	3.33	3.84
THP00706	MR	MR	3.26	3.34	2.42
THP00707	MR	MR	3.25	3.35	3.18
THP00708	MR	MR	3.24	3.35	3.21
THP00709	MR	MR	3.22	3.32	3.06
THP00710	MR	MR	3.23	3.34	3.36
THP00711	MR	MR	3.25	3.33	2.55
THP00712	MR	MR	3.27	3.36	2.60
THP00713	MR	MR	3.22	3.35	4.07
THP00714	MR	MR	3.27	3.35	2.48
THP00715	MR	MR	3.26	3.35	2.63
THP00716	MR	MR	3.35	3.35	0.13
THP00717	MR	MR	3.26	3.35	2.85
THP00718	MR	MR	3.18	3.35	5.22
THP00719	MR	MR	3.21	3.36	4.60
THP00720	MR	MR	3.26	3.37	3.22
THP00721	MR	MR	3.06	3.36	9.25
THP00722	MR	MR	2.94	3.19	8.01
THP00723	MR	MR	2.97	3.19	7.04
THP00724	MR	MR	3.00	3.14	4.69
THP00725	MR	MR	3.07	3.19	3.76
THP00726	MR	MR	3.08	3.22	4.45
THP00727	MR	MR	2.71	2.96	8.72
THP00728	MR	MR	3.29	3.54	7.18
THP00729	MR	MR	3.28	3.48	6.02
THP00730	MR	MR	3.22	3.43	6.20
THP00731	MR	MR	3.21	3.42	6.24
THP00732	MR	MR	3.27	3.495	6.72
THP00733	MR	MR	3.25	3.43	5.39
THP00734	MR	MR	3.21	3.41	5.95
THP00735	MR	MR	3.28	3.45	5.15
THP00736	MR	MR	3.27	3.44	5.02
THP00737	MR	MR	3.28	3.43	4.50
THP00738	MR	MR	3.30	3.53	6.61
THP00739	MR	MR	3.25	3.5	7.42
THP00740	MR	MR	3.25	3.49	7.23
THP00741	MR	MR	3.25	3.48	6.79
THP00742	MR	MR	3.30	3.52	6.60

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00743	MR	MR	3.34	3.52	5.23
THP00744	MR	MR	3.30	3.46	4.59
THP00745	MR	MR	3.25	3.49	6.98
THP00746	MR	MR	3.27	3.49	6.37
THP00747	MR	MR	3.28	3.51	6.77
THP00748	MR	MR	3.27	3.48	6.32
THP00749	MR	MR	3.30	3.5	5.84
THP00750	MR	MR	3.22	3.5	8.25
THP00751	MR	MR	3.32	3.56	7.11
THP00752	MR	MR	3.25	3.43	5.45
THP00753	MR	MR	3.21	3.37	4.85
THP00754	MR	MR	3.26	3.39	4.01
THP00755	MR	MR	3.25	3.37	3.52
THP00756	MR	MR	3.23	3.4	5.16
THP00757	MR	MR	3.24	3.38	4.36
THP00758	MR	MR	3.24	3.37	4.08
THP00759	MR	MR	3.26	3.38	3.54
THP00760	MR	MR	3.26	3.38	3.54
THP00761	MR	MR	3.19	3.39	5.96
THP00762	MR	MR	3.18	3.35	5.09
THP00763	MR	MR	3.34	3.45	3.27
THP00764	MR	MR	3.28	3.32	1.30
THP00765	MR	MR	3.27	3.34	2.03
THP00766	MR	MR	3.29	3.49	5.99
THP00767	MR	MR	3.28	3.41	4.02
THP00768	MR	MR	3.27	3.405	3.91
THP00769	MR	MR	3.24	3.39	4.46
THP00770	MR	MR	3.30	3.44	4.02
THP00771	MR	MR	3.30	3.43	3.89
THP00772	MR	MR	3.29	3.4	3.31
THP00773	MR	MR	3.28	3.425	4.30
THP00774	MR	MR	3.18	3.38	6.03
THP00775	MR	MR	3.21	3.38	5.14
THP00776	MR	MR	3.28	3.25	-0.90
THP00777	MR	MR	3.29	3.44	4.47
THP00778	MR	MR	3.32	3.47	4.32
THP00779	MR	MR	3.26	3.415	4.78
THP00780	MR	MR	3.23	3.4	5.13
THP00781	MR	MR	3.25	3.42	5.24
THP00782	MR	MR	3.22	3.42	6.17
THP00783	MR	MR	3.30	3.45	4.31
THP00784	MR	MR	3.17	3.39	6.82
THP00785	MR	MR	3.28	3.4	3.46
THP00786	MR	MR	3.29	3.49	6.05
THP00787	MR	MR	3.26	3.5	6.97
THP00788	MR	MR	3.28	3.48	5.93
THP00789	MR	MR	3.21	3.4	5.78
THP00790	MR	MR	3.27	3.46	5.50
THP00791	MR	MR	3.28	3.46	5.43
THP00792	MR	MR	3.28	3.46	5.40
THP00793	MR	MR	3.27	3.48	6.36
THP00794	MR	MR	3.25	3.48	6.91
THP00795	MR	MR	3.26	3.5	7.01

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00796	MR	MR	3.25	3.53	8.19
THP00797	MR	MR	3.29	3.53	6.95
THP00798	MR	MR	3.27	3.53	7.70
THP00799	MR	MR	3.21	3.465	7.78
THP00800	MR	MR	3.24	3.51	7.93
THP00801	MR	MR	3.23	3.5	7.98
THP00802	MR	MR	3.28	3.51	6.73
THP00803	MR	MR	3.27	3.5	6.84
THP00804	MR	MR	3.28	3.55	7.80
THP00805	MR	MR	3.29	3.54	7.37
THP00806	MR	MR	3.24	3.49	7.32
THP00807	MR	MR	3.25	3.5	7.32
THP00808	MR	MR	3.25	3.495	7.19
THP00809	MR	MR	3.24	3.49	7.32
THP00810	MR	MR	3.22	3.505	8.50
THP00811	MR	MR	3.24	3.48	7.12
THP00812	MR	MR	3.23	3.47	7.23
THP00813	MR	MR	2.95	3.05	3.28
THP00814	MR	MR	3.19	3.36	5.04
THP00815	MR	MR	3.22	3.42	6.16
THP00816	MR	MR	3.22	3.42	6.14
THP00817	MR	MR	3.25	3.45	6.04
THP00818	MR	MR	3.28	3.48	5.91
THP00819	MR	MR	3.21	3.49	8.43
THP00820	MR	MR	3.19	3.21	0.69
THP00821	MR	MR	3.14	3.36	6.68
THP00822	MR	MR	3.22	3.47	7.33
THP00823	MR	MR	3.21	3.42	6.36
THP00824	MR	MR	3.23	3.44	6.29
THP00825	MR	MR	3.23	3.46	7.02
THP00826	MR	MR	3.22	3.45	6.76
THP00827	MR	MR	3.28	3.49	6.15
THP00828	MR	MR	3.24	3.46	6.49
THP00829	MR	MR	3.25	3.47	6.63
THP00830	MR	MR	3.25	3.47	6.59
THP00831	MR	MR	3.24	3.47	6.84
THP00832	MR	MR	3.24	3.46	6.59
THP00833	MR	MR	3.25	3.38	3.85
THP00834	MR	MR	3.28	3.39	3.22
THP00835	MR	MR	3.25	3.355	3.30
THP00836	MR	MR	3.19	3.33	4.45
THP00837	MR	MR	3.29	3.415	3.81
THP00838	MR	MR	3.29	3.39	2.89
THP00839	MR	MR	3.27	3.39	3.51
THP00840	MR	MR	3.26	3.45	5.55
THP00841	MR	MR	3.26	3.4	4.19
THP00842	MR	MR	3.34	3.44	2.99
THP00843	MR	MR	3.27	3.38	3.31
THP00844	MR	MR	3.22	3.42	5.95
THP00845	MR	MR	3.28	3.44	4.89
THP00846	MR	MR	3.32	3.47	4.47
THP00847	MR	MR	3.25	3.39	4.09
THP00848	MR	MR	3.26	3.42	4.93

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00849	MR	MR	3.26	3.46	5.93
THP00850	MR	MR	3.17	3.34	5.11
THP00851	MR	MR	3.28	3.44	4.76
THP00852	MR	MR	3.17	3.39	6.80
THP00853	MR	MR	3.25	3.43	5.48
THP00854	MR	MR	3.10	3.3	6.40
THP00855	MR	MR	3.10	3.28	5.69
THP00856	MR	MR	3.08	3.26	5.76
THP00857	MR	MR	3.09	3.25	5.00
THP00858	MR	MR	2.95	3.24	9.41
THP00859	MR	MR	3.21	3.37	4.76
THP00860	MR	MR	3.20	3.37	5.07
THP00861	MR	MR	3.22	3.4	5.42
THP00862	MR	MR	3.22	3.41	5.77
THP00863	MR	MR	3.09	3.21	3.84
THP00864	MR	MR	3.11	3.23	3.90
THP00865	MR	MR	3.10	3.25	4.59
THP00866	MR	MR	2.96	3.06	3.28
THP00867	MR	MR	2.95	3.07	4.10
THP00868	MR	MR	3.19	3.26	2.12
THP00869	MR	MR	3.22	3.37	4.42
THP00870	MR	MR	3.21	3.37	4.83
THP00871	MR	MR	3.20	3.37	5.05
THP00872	MR	MR	3.19	3.28	2.77
THP00873	MR	MR	2.97	3.06	2.89
THP00874	MR	MR	2.95	3.03	2.66
THP00875	MR	MR	2.96	3.32	11.50
THP00876	MR	MR	3.22	3.34	3.71
THP00877	MR	MR	3.23	3.35	3.55
THP00878	MR	MR	3.28	3.35	2.03
THP00879	MR	MR	3.09	3.34	7.79
THP00880	MR	MR	3.19	3.31	3.58
THP00881	MR	MR	3.14	3.23	2.75
THP00882	MR	MR	3.19	3.33	4.29
THP00883	MR	MR	3.32	3.41	2.72
THP00884	MR	MR	3.02	3.42	12.41
THP00885	MR	MR	3.23	3.39	4.92
THP00886	MR	MR	3.24	3.4	4.79
THP00887	MR	MR	3.14	3.3	5.08
THP00888	MR	MR	2.95	3.24	9.43
THP00889	MR	MR	3.12	3.23	3.53
THP00890	MR	MR	3.10	3.24	4.40
THP00891	MR	MR	3.04	3.28	7.71
THP00892	MR	MR	3.20	3.38	5.62
THP00893	MR	MR	3.15	3.38	7.11
THP00894	MR	MR	3.19	3.38	5.72
THP00895	MR	MR	3.16	3.38	6.76
THP00896	MR	MR	3.22	3.31	2.77
THP00897	MR	MR	3.20	3.24	1.29
THP00898	MR	MR	3.08	3.25	5.52
THP00899	MR	MR	2.97	3.13	5.19
THP00900	MR	MR	2.78	3.09	10.39
THP00901	MR	MR	3.11	3.32	6.39

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00902	MR	MR	3.19	3.38	5.76
THP00903	MR	MR	3.07	3.37	9.33
THP00904	MR	MR	3.03	3.39	11.15
THP00905	MR	MR	3.14	3.34	6.08
THP00906	MR	MR	2.93	3.05	3.86
THP00907	MR	MR	3.23	3.34	3.26
THP00908	MR	MR	3.25	3.38	4.01
THP00909	MR	MR	3.10	3.38	8.59
THP00910	MR	MR	3.22	3.38	4.80
THP00911	MR	MR	3.17	3.37	6.16
THP00912	MR	MR	3.11	3.36	7.82
THP00913	MR	MR	3.06	3.26	6.27
THP00914	MR	MR	3.26	3.42	4.72
THP00915	MR	MR	3.23	3.41	5.47
THP00916	MR	MR	3.20	3.32	3.55
THP00917	MR	MR	3.22	3.22	-0.13
THP00918	MR	MR	3.20	3.34	4.21
THP00919	MR	MR	3.25	3.35	3.04
THP00920	MR	MR	3.24	3.36	3.69
THP00921	MR	MR	3.30	3.47	5.04
THP00922	MR	MR	3.33	3.49	4.66
THP00923	MR	MR	3.20	3.41	6.50
THP00924	MR	MR	3.20	3.36	4.94
THP00925	MR	MR	3.25	3.42	5.20
THP00926	MR	MR	3.23	3.41	5.57
THP00927	MR	MR	3.23	3.42	5.66
THP00928	MR	MR	3.22	3.4	5.49
THP00929	MR	MR	3.20	3.38	5.56
THP00930	MR	MR	3.23	3.42	5.84
THP00931	MERENSKY	MR	3.21	3.48	8.04
THP00932	MERENSKY	MR	3.30	3.48	5.35
THP00933	MERENSKY	MR	3.25	3.43	5.46
THP00934	MERENSKY	MR	3.21	3.395	5.57
THP00935	MERENSKY	MR	3.24	3.46	6.57
THP00936	MERENSKY	MR	3.21	3.4	5.64
THP00937	MERENSKY	MR	3.27	3.44	5.21
THP00938	MERENSKY	MR	3.26	3.45	5.51
THP00939	MERENSKY	MR	3.28	3.44	4.86
THP00940	MERENSKY	MR	3.28	3.5	6.34
THP00941	MERENSKY	MR	3.30	3.445	4.45
THP00942	MERENSKY	MR	3.29	3.48	5.68
THP00943	MERENSKY	MR	3.33	3.52	5.55
THP00944	MERENSKY	MR	3.31	3.49	5.16
THP00945	MERENSKY	MR	3.26	3.46	6.09
THP00946	MERENSKY	MR	3.25	3.47	6.62
THP00947	MERENSKY	MR	3.21	3.44	6.86
THP00948	MERENSKY	MR	3.26	3.46	6.04
THP00949	MR	MR	3.26	3.46	5.85
THP00950	MR	MR	3.23	3.47	7.10
THP00951	MR	MR	3.23	3.45	6.67
THP00952	MR	MR	3.27	3.3	1.02
THP00953	MR	MR	3.22	3.37	4.66
THP00954	MR	MR	3.18	3.31	3.93

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP00955	MR	MR	3.12	3.32	6.12
THP00956	MR	MR	3.21	3.32	3.24
THP00957	MR	MR	3.21	3.34	3.91
THP00958	MR	MR	3.24	3.36	3.59
THP00959	MR	MR	3.26	3.49	6.94
THP00960	MR	MR	3.49	3.42	-2.12
THP00961	MR	MR	3.26	3.43	4.98
THP00962	MR	MR	3.27	3.43	4.65
THP00963	MR	MR	3.34	3.49	4.36
THP00964	MR	MR	3.51	3.51	0.02
THP00965	MR	MR	3.22	3.52	8.81
THP00966	MR	MR	3.24	3.51	7.91
THP00967	MR	MR	3.24	3.54	8.96
THP00968	MR	MR	3.28	3.54	7.71
THP00969	MR	MR	3.26	3.48	6.54
THP00970	MR	MR	3.22	3.445	6.63
THP00971	MR	MR	3.25	3.45	5.99
THP00972	MR	MR	3.11	3.4	8.77
THP00973	MR	MR	3.23	3.44	6.43
THP00974	MR	MR	3.24	3.47	6.81
THP00975	MR	MR	3.26	3.46	5.87
THP00976	MR	MR	3.24	3.43	5.69
THP00977	MR	MR	3.26	3.45	5.72
THP00978	MR	MR	3.19	3.5	9.33
THP00979	MR	MR	3.26	3.56	8.70
THP00980	MR	MR	3.28	3.51	6.83
THP00981	MR	MR	3.27	3.61	9.81
THP00982	MR	MR	3.21	3.48	8.02
THP00983	MR	MR	3.26	3.57	9.19
THP00984	MR	MR	3.22	3.51	8.68
THP00985	MR	MR	3.17	3.49	9.59
THP00986	MR	MR	3.28	3.54	7.67
THP00987	MR	MR	3.30	3.51	6.07
THP00988	MR	MR	3.27	3.49	6.66
THP00989	MR	MR	3.27	3.55	8.32
THP00990	MR	MR	3.23	3.47	7.11
THP00991	MR	MR	3.27	3.48	6.20
THP00992	MR	MR	3.21	3.39	5.42
THP00993	MR	MR	3.19	3.39	6.02
THP00994	MR	MR	3.25	3.45	5.84
THP00995	MR	MR	3.21	3.42	6.31
THP00996	MR	MR	3.12	3.42	9.10
THP00997	MR	MR	3.00	3.22	7.07
THP00998	MR	MR	3.34	3.43	2.73
THP00999	MR	MR	3.27	3.43	4.85
THP01000	MR	MR	3.20	3.35	4.46
THP01001	MR	MR	3.28	3.37	2.83
THP01002	MR	MR	3.08	3.35	8.44
THP01003	MR	MR	3.26	3.38	3.75
THP01004	MR	MR	3.21	3.34	3.87
THP01005	MR	MR	3.25	3.39	4.18
THP01006	MR	MR	3.32	3.41	2.70
THP01007	MR	MR	3.24	3.43	5.65

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01008	MR	MR	3.31	3.39	2.50
THP01009	MR	MR	3.22	3.39	5.15
THP01010	MR	MR	3.24	3.37	3.96
THP01011	MR	MR	3.20	3.35	4.52
THP01012	MR	MR	3.29	3.37	2.26
THP01013	MR	MR	3.23	3.39	4.89
THP01014	MR	MR	3.27	3.4	3.94
THP01015	MR	MR	3.21	3.35	4.30
THP01016	MR	MR	3.22	3.4	5.38
THP01017	MR	MR	3.28	3.41	3.82
THP01018	MR	MR	3.29	3.41	3.50
THP01019	MR	MR	3.26	3.43	5.03
THP01020	MR	MR	3.31	3.41	3.08
THP01021	MR	MR	3.26	3.41	4.56
THP01022	MR	MR	3.20	3.35	4.57
THP01023	MR	MR	3.23	3.4	4.98
THP01024	MR	MR	3.31	3.45	4.06
THP01025	MR	MR	3.27	3.44	5.14
THP01026	MR	MR	3.26	3.42	4.77
THP01027	MR	MR	3.25	3.42	5.08
THP01028	MR	MR	3.25	3.42	5.07
THP01029	MR	MR	3.23	3.38	4.57
THP01030	MR	MR	3.20	3.38	5.39
THP01031	MR	MR	3.20	3.39	5.71
THP01032	MR	MR	3.27	3.45	5.50
THP01033	MR	MR	3.08	3.34	8.01
THP01034	MR	MR	3.23	3.49	7.71
THP01035	MR	MR	3.24	3.47	6.88
THP01036	MR	MR	3.20	3.46	7.72
THP01037	MR	MR	3.30	3.39	2.71
THP01038	MR	MR	3.19	3.28	2.69
THP01039	MR	MR	3.20	3.33	4.02
THP01040	MR	MR	3.25	3.31	1.76
THP01041	MR	MR	3.19	3.25	1.83
THP01042	MR	MR	3.22	3.32	3.15
THP01043	MR	MR	3.22	3.29	2.02
THP01044	MR	MR	3.24	3.33	2.84
THP01045	MR	MR	3.27	3.31	1.15
THP01046	MR	MR	3.30	3.4	2.93
THP01047	MR	MR	3.27	3.37	2.90
THP01048	MR	MR	3.23	3.3	2.26
THP01049	MR	MR	3.23	3.31	2.44
THP01050	MR	MR	3.28	3.35	2.22
THP01051	MR	MR	3.29	3.33	1.12
THP01052	MR	MR	3.23	3.28	1.42
THP01053	MR	MR	3.21	3.28	2.16
THP01054	MR	MR	3.22	3.28	1.73
THP01055	MR	MR	3.25	3.32	2.16
THP01056	MR	MR	3.00	3.3	9.41
THP01057	MR	MR	3.14	3.31	5.36
THP01058	MR	MR	3.21	3.33	3.62
THP01059	MR	MR	3.27	3.47	5.99
THP01060	MR	MR	3.25	3.475	6.57

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01061	MR	MR	3.24	3.43	5.67
THP01062	MR	MR	3.05	3.36	9.76
THP01063	MR	MR	3.14	3.43	8.70
THP01064	MR	MR	3.23	3.41	5.46
THP01065	MR	MR	3.23	3.42	5.70
THP01066	MR	MR	3.19	3.39	6.02
THP01067	MR	MR	3.23	3.42	5.72
THP01068	MR	MR	3.15	3.36	6.36
THP01069	MR	MR	3.19	3.29	3.03
THP01070	MR	MR	3.25	3.46	6.30
THP01071	MR	MR	3.21	3.43	6.77
THP01072	MR	MR	3.22	3.42	5.98
THP01073	MR	MR	3.20	3.5	8.98
THP01074	MR	MR	3.09	3.52	12.91
THP01075	MR	MR	3.15	3.46	9.46
THP01076	MR	MR	3.04	3.49	13.79
THP01077	MR	MR	3.19	3.51	9.47
THP01078	MR	MR	3.22	3.54	9.59
THP01079	MR	MR	3.26	3.59	9.78
THP01080	MR	MR	3.22	3.55	9.75
THP01081	MR	MR	3.17	3.29	3.72
THP01082	MR	MR	3.21	3.51	8.78
THP01083	MR	MR	3.26	3.4	4.06
THP01084	MR	MR	3.16	3.56	11.92
THP01085	MR	MR	3.13	3.48	10.64
THP01086	MR	MR	3.20	3.49	8.79
THP01087	MR	MR	3.20	3.48	8.30
THP01088	MR	MR	3.16	3.47	9.48
THP01089	MR	MR	3.21	3.725	14.72
THP01090	MR	MR	3.24	3.43	5.56
THP01091	MR	MR	3.23	3.46	6.96
THP01092	MR	MR	3.16	3.35	5.90
THP01093	MR	MR	3.34	3.44	2.85
THP01094	MR	MR	3.26	3.5	6.97
THP01095	MR	MR	3.28	3.5	6.64
THP01096	MR	MR	3.23	3.47	7.01
THP01097	MR	MR	3.27	3.47	5.98
THP01098	MR	MR	3.30	3.49	5.70
THP01099	MR	MR	3.30	3.51	6.05
THP01100	MR	MR	3.29	3.46	5.14
THP01101	MR	MR	3.35	3.52	4.87
THP01102	MR	MR	3.23	3.45	6.66
THP01103	MR	MR	3.24	3.46	6.43
THP01104	MR	MR	3.18	3.49	9.39
THP01105	MR	MR	3.21	3.455	7.25
THP01106	MR	MR	3.22	3.47	7.34
THP01107	MR	MR	3.16	3.45	8.80
THP01108	MR	MR	3.24	3.44	5.94
THP01109	MR	MR	3.30	3.45	4.52
THP01110	MR	MR	3.19	3.37	5.38
THP01111	MR	MR	3.20	3.37	5.19
THP01112	MR	MR	3.21	3.38	5.12
THP01113	MR	MR	3.21	3.36	4.69

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01114	MR	MR	3.26	3.41	4.65
THP01115	MR	MR	3.23	3.41	5.34
THP01116	MR	MR	3.35	3.41	1.74
THP01117	MR	MR	3.20	3.285	2.56
THP01118	MR	MR	3.21	3.25	1.36
THP01119	MR	MR	3.30	3.38	2.50
THP01120	MR	MR	3.03	3.295	8.51
THP01121	MR	MR	3.28	3.41	3.77
THP01122	MR	MR	3.25	3.38	3.83
THP01123	MR	MR	3.33	3.39	1.76
THP01124	MR	MR	3.32	3.33	0.42
THP01125	MR	MR	3.33	3.28	-1.40
THP01126	MR	MR	3.24	3.3	1.80
THP01127	MR	MR	3.24	3.3	1.80
THP01128	MR	MR	3.19	3.26	2.14
THP01129	MR	MR	3.20	3.23	0.98
THP01130	MR	MR	3.19	3.23	1.32
THP01131	MR	MR	3.22	3.29	2.14
THP01132	MR	MR	3.22	3.25	0.86
THP01133	MR	MR	3.26	3.505	7.17
THP01134	MR	MR	3.01	3.1	3.06
THP01135	MR	MR	3.01	3.48	14.60
THP01136	MR	MR	3.11	3.43	9.79
THP01137	MR	MR	3.19	3.48	8.70
THP01138	MR	MR	3.21	3.56	10.45
THP01139	MR	MR	3.26	3.58	9.35
THP01140	MR	MR	3.19	3.49	8.83
THP01141	MR	MR	3.21	3.49	8.42
THP01142	MR	MR	3.26	3.54	8.31
THP01143	PYX	MR	2.89	3.32	13.94
THP01144	PYX	MR	3.24	3.28	1.27
THP01145	PYX	MR	3.11	3.27	5.10
THP01146	PYX	MR	3.16	3.28	3.73
THP01147	PYX	MR	3.28	3.45	5.16
THP01148	PYX	MR	3.24	3.41	4.99
THP01149	PYX	MR	3.24	3.44	6.05
THP01150	PYX	MR	3.13	3.42	8.87
THP01151	PYX	MR	2.96	3.35	12.45
THP01152	PYX	MR	3.27	3.46	5.70
THP01153	PYX	MR	3.25	3.45	5.89
THP01154	PYX	MR	3.25	3.46	6.27
THP01155	PYX	MR	3.25	3.46	6.23
THP01156	PYX	MR	3.23	3.48	7.48
THP01157	PYX	MR	3.23	3.48	7.45
THP01158	PYX	MR	3.05	3.26	6.51
THP01159	PYX	MR	3.28	3.29	0.24
THP01160	PYX	MR	3.22	3.22	0.05
THP01161	PYX	MR	3.22	3.22	0.11
THP01162	PYX	MR	3.28	3.26	-0.51
THP01163	PYX	MR	3.28	3.25	-0.83
THP01164	PEGFPYX	MRFW	3.19	3.41	6.58
THP01165	PP	MRFW	3.28	3.46	5.29
THP01166	PP	MRFW	3.22	3.43	6.44

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01167	PP	MRFW	3.12	3.32	6.12
THP01168	PEGFPYX	MRFW	3.25	3.47	6.61
THP01169	POIKPYX	MRFW	3.28	3.49	6.33
THP01170	POIKPYX	MRFW	3.26	3.48	6.45
THP01171	PP	MRFW	2.91	3.29	12.29
THP01172	PP	MRFW	2.92	3.22	9.74
THP01173	PP	MRFW	3.14	3.34	6.24
THP01174	PP	MRFW	3.18	3.4	6.67
THP01175	PP	MRFW	3.08	3.29	6.67
THP01176	GN	MRFW	3.09	3.28	5.90
THP01177	GN	MRFW	3.05	3.25	6.20
THP01178	GN	MRFW	3.08	3.26	5.83
THP01179	GN	MRFW	3.11	3.2	2.82
THP01180	GN	MRFW	3.02	3.26	7.69
THP01181	GN	MRFW	2.93	3.16	7.40
THP01182	GN	MRFW	2.90	3.11	7.11
THP01183	PEGFPYX	MRFW	3.25	3.5	7.39
THP01184	POIKPYX	MRFW	3.27	3.51	7.01
THP01185	POIKPYX	MRFW	3.27	3.51	7.21
THP01186	POIKPYX	MRFW	3.22	3.43	6.35
THP01187	GN	MRFW	2.94	3.14	6.50
THP01188	PP	MRFW	3.11	3.34	7.12
THP01189	PP	MRFW	3.11	3.41	9.19
THP01190	PP	MRFW	3.13	3.36	7.13
THP01191	PP	MRFW	3.04	3.24	6.51
THP01192	GN	MRFW	3.02	3.2	5.79
THP01193	GN	MRFW	3.07	3.29	6.90
THP01194	GN	MRFW	3.11	3.24	3.99
THP01195	GN	MRFW	2.93	3.28	11.22
THP01196	GN	MRFW	2.90	3.14	7.80
THP01197	PEGFPYX	MRFW	3.19	3.38	5.85
THP01198	POIKFPYX	MRFW	3.23	3.46	6.80
THP01199	POIKFPYX	MRFW	3.28	3.45	4.93
THP01200	POIKFPYX	MRFW	3.24	3.39	4.44
THP01201	POIKPYX	MRFW	3.21	3.33	3.76
THP01202	POIKPYX	MRFW	3.23	3.37	4.26
THP01203	POIKPYX	MRFW	3.24	3.39	4.67
THP01204	POIKPYX	MRFW	3.23	3.36	3.92
THP01205	POIKPYX	MRFW	3.23	3.34	3.47
THP01206	POIKPYX	MRFW	3.23	3.36	4.00
THP01207	POIKPYX	MRFW	3.24	3.34	3.19
THP01208	PEGFPYX	MRFW	3.18	3.335	4.73
THP01209	POIKPYX	MRFW	3.21	3.42	6.46
THP01210	POIKPYX	MRFW	3.27	3.4	4.05
THP01211	POIKPYX	MRFW	3.25	3.41	4.78
THP01212	POIKPYX	MRFW	3.25	3.4	4.52
THP01213	POIKPYX	MRFW	3.22	3.39	5.04
THP01214	POIKPYX	MRFW	3.25	3.4	4.56
THP01215	POIKPYX	MRFW	3.24	3.39	4.51
THP01216	POIKPYX	MRFW	3.24	3.38	4.27
THP01217	POIKPYX	MRFW	3.25	3.38	3.88
THP01218	POIKPYX	MRFW	3.24	3.37	4.05
THP01219	POIKPYX	MRFW	3.24	3.36	3.57

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01220	PEGFPYX	MRFW	3.17	3.28	3.46
THP01221	PEGFPYX	MRFW	3.23	3.39	4.72
THP01222	POIKPYX	MRFW	3.26	3.38	3.54
THP01223	POIKPYX	MRFW	3.23	3.39	4.76
THP01224	POIKPYX	MRFW	3.25	3.33	2.58
THP01225	POIKPYX	MRFW	3.26	3.37	3.27
THP01226	POIKPYX	MRFW	3.29	3.39	2.87
THP01227	PEGFPYX	MRFW	3.15	3.31	4.97
THP01228	POIKPYX	MRFW	3.15	3.34	5.80
THP01229	POIKPYX	MRFW	3.23	3.285	1.69
THP01230	POIKPYX	MRFW	3.21	3.32	3.51
THP01231	POIKPYX	MRFW	3.28	3.34	1.80
THP01232	POIKPYX	MRFW	3.24	3.29	1.48
THP01233	LN	MRFW	3.06	3.1	1.39
THP01234	LN	MRFW	3.05	3.225	5.71
THP01235	PYX	MRFW	3.30	3.42	3.48
THP01236	PYX	MRFW	3.24	3.44	6.04
THP01237	POIKPYX	MRFW	3.24	3.51	7.93
THP01238	POIKPYX	MRFW	3.28	3.49	6.31
THP01239	POIKPYX	MRFW	3.23	3.475	7.24
THP01240	PEGFPYX	MRFW	3.08	3.33	7.90
THP01241	PEGFPYX	MRFW	3.10	3.41	9.37
THP01242	PEGFPYX	MRFW	3.12	3.34	6.71
THP01243	POIKAN	MRFW	2.87	3.03	5.31
THP01244	POIKAN	MRFW	2.96	3.1	4.51
THP01245	PEGFPYX	MRFW	3.16	3.35	5.71
THP01246	PYXAN	MRFW	3.08	3.17	2.75
THP01247	PYXAN	MRFW	2.91	3.03	4.13
THP01248	GN	MRFW	2.94	3.07	4.46
THP01249	GN	MRFW	2.95	3.12	5.60
THP01250	GN	MRFW	3.24	3.41	5.12
THP01251	GN	MRFW	3.21	3.38	5.03
THP01252	GN	MRFW	3.17	3.34	5.08
THP01253	GN	MRFW	3.03	3.24	6.66
THP01254	GN	MRFW	2.94	3.07	4.25
THP01255	PP	MRFW	3.23	3.4	5.06
THP01256	PP	MRFW	3.14	3.37	7.17
THP01257	PP	MRFW	3.01	3.27	8.16
THP01258	PP	MRFW	3.18	3.27	2.94
THP01259	PP	MRFW	3.02	3.21	6.11
THP01260	GN	MRFW	2.96	3.08	3.92
THP01261	GN	MRFW	2.86	3	4.82
THP01262	PEGFPYX	MRFW	3.08	3.21	4.16
THP01263	PEGFPYX	MRFW	3.17	3.38	6.30
THP01264	PP	MRFW	3.16	3.41	7.67
THP01265	PP	MRFW	3.17	3.395	6.71
THP01266	PP	MRFW	3.20	3.38	5.45
THP01267	PP	MRFW	2.99	3.16	5.54
THP01268	N	MRFW	2.89	3.015	4.29
THP01269	N	MRFW	2.79	2.98	6.50
THP01270	PP	MRFW	3.23	3.43	5.90
THP01271	PP	MRFW	3.21	3.43	6.64
THP01272	PP	MRFW	3.23	3.43	6.01

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01273	PP	MRFW	3.23	3.4	4.98
THP01274	PP	MRFW	3.19	3.35	4.94
THP01275	PP	MRFW	3.18	3.31	3.99
THP01276	GN	MRFW	3.02	3.04	0.77
THP01277	GN	MRFW	2.80	3.01	7.15
THP01278	GN	MRFW	2.93	3.08	5.00
THP01279	PYX	MRFW	3.24	3.26	0.54
THP01280	PYX	MRFW	3.27	3.23	-1.09
THP01281	PYX	MRFW	3.11	3.21	3.29
THP01282	PYX	MRFW	3.29	3.27	-0.53
THP01283	PYX	MRFW	3.24	3.27	1.05
THP01284	PYX	MRFW	3.23	3.26	0.89
THP01285	PYX	MRFW	3.23	3.25	0.66
THP01286	PYX	MRFW	3.26	3.25	-0.42
THP01287	PYX	MRFW	3.12	3.26	4.53
THP01288	PYX	MRFW	3.20	3.26	1.74
THP01289	PYX	MRFW	3.17	3.26	2.69
THP01290	PYX	MRFW	3.24	3.27	1.01
THP01291	PYX	MRFW	3.27	3.27	0.07
THP01292	PYX	MRFW	3.26	3.265	0.27
THP01293	PEGFPYX	MRFW	3.28	3.42	4.16
THP01294	PEGFPYX	MRFW	3.16	3.38	6.72
THP01295	PEGFPYX	MRFW	3.23	3.455	6.78
THP01296	PEGFPYX	MRFW	3.22	3.45	6.79
THP01297	PEGFPYX	MRFW	3.15	3.36	6.48
THP01298	GN	MRFW	2.91	3.16	8.10
THP01299	GN	MRFW	2.92	3.055	4.50
THP01300	GN	MRFW	2.87	3	4.41
THP01301	GN	MRFW	2.94	3.1	5.13
THP01302	PYX	MRFW	3.12	3.235	3.66
THP01303	PYX	MRFW	3.07	3.23	5.01
THP01304	PYX	MRFW	3.08	3.15	2.31
THP01305	PYX	MRFW	3.13	3.21	2.48
THP01306	PYX	MRFW	3.23	3.36	4.02
THP01307	PYX	MRFW	3.20	3.36	5.02
THP01308	PYX	MRFW	3.21	3.34	3.95
THP01309	PYX	MRFW	3.20	3.36	4.75
THP01310	PYX	MRFW	3.05	3.36	9.53
THP01311	PYX	MRFW	3.18	3.34	4.79
THP01312	PYX	MRFW	3.06	3.34	8.71
THP01313	PYX	MRFW	3.21	3.36	4.49
THP01314	PYX	MRFW	3.20	3.34	4.33
THP01315	PYX	MRFW	3.21	3.36	4.45
THP01316	PYX	MRFW	3.22	3.35	3.89
THP01317	PYX	MRFW	3.17	3.35	5.37
THP01318	PYX	MRFW	3.23	3.36	4.02
THP01319	PYX	MRFW	3.24	3.38	4.33
THP01320	PYX	MRFW	3.26	3.36	3.14
THP01321	PYX	MRFW	3.23	3.37	4.18
THP01322	PYX	MRFW	3.24	3.38	4.21
THP01323	PYX	MRFW	3.28	3.35	2.26
THP01324	PYX	MRFW	3.25	3.35	3.07
THP01325	PYX	MRFW	3.23	3.35	3.53

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01326	PYX	MRFW	3.25	3.34	2.79
THP01327	PYX	MRFW	3.25	3.32	2.14
THP01328	PYX	MRFW	3.25	3.33	2.30
THP01329	PYX	MRFW	3.25	3.34	2.77
THP01330	PYX	MRFW	3.24	3.35	3.19
THP01331	PYX	MRFW	3.23	3.34	3.25
THP01332	PYX	MRFW	3.20	3.33	3.85
THP01333	PYX	MRFW	3.25	3.33	2.39
THP01334	PYX	MRFW	3.18	3.28	2.96
THP01335	PYXAN	MRFW	3.07	3.195	4.00
THP01336	PYXAN	MRFW	3.11	3.2	3.00
THP01337	PEGFPYX	MRFW	3.24	3.28	1.37
THP01338	PEGFPYX	MRFW	3.14	3.22	2.42
THP01339	PEGFPYX	MRFW	3.26	3.3	1.13
THP01340	PEGFPYX	MRFW	3.21	3.27	1.71
THP01341	PEGFPYX	MRFW	3.21	3.26	1.50
THP01342	GN	MRFW	2.94	3.02	2.65
THP01343	GN	MRFW	2.97	2.98	0.43
THP01344	PEGFPYX	MRFW	3.14	3.19	1.44
THP01345	PEGFPYX	MRFW	3.25	3.29	1.24
THP01346	PEGFPYX	MRFW	3.24	3.28	1.18
THP01347	PEGFPYX	MRFW	3.22	3.28	1.81
THP01348	GN	MRFW	2.94	3.04	3.24
THP01349	GN	MRFW	3.00	3.04	1.43
THP01350	PEGFPYX	MRFW	3.30	3.53	6.85
THP01351	PEGFPYX	MRFW	3.13	3.41	8.69
THP01352	PEGFPYX	MRFW	3.21	3.45	7.21
THP01353	PP	MRFW	3.24	3.43	5.78
THP01354	GN	MRFW	3.01	3.18	5.38
THP01355	GN	MRFW	3.09	3.28	5.95
THP01356	GN	MRFW	3.17	3.33	4.97
THP01357	GN	MRFW	2.97	3.13	5.22
THP01358	GN	MRFW	3.01	3.15	4.39
THP01359	GN	MRFW	3.05	3.08	0.85
THP01360	GN	MRFW	3.10	3.11	0.30
THP01361	GN	MRFW	3.02	3.08	2.05
THP01362	PEGFPYX	MRFW	3.28	3.34	1.96
THP01363	PEGFPYX	MRFW	3.33	3.33	-0.02
THP01364	PEGFPYX	MRFW	3.22	3.28	1.86
THP01365	PEGFPYX	MRFW	3.20	3.25	1.65
THP01366	GN	MRFW	3.18	3.19	0.20
THP01367	GN	MRFW	2.96	3.05	3.00
THP01368	GN	MRFW	3.16	3.25	2.71
THP01369	GN	MRFW	3.12	3.1	-0.78
THP01370	POIKPYXAN	MRFW	2.92	2.89	-0.99
THP01371	POIKPY	MRFW	2.99	3.08	3.05
THP01372	PP	MRFW	2.70	2.97	9.62
THP01373	PP	MRFW	2.71	2.8	3.21
THP01374	PP	MRFW	2.77	2.96	6.48
THP01375	PP	MRFW	2.71	2.98	9.44
THP01376	PEGFPYX	MRFW	3.24	3.39	4.59
THP01377	POIKPYX	MRFW	3.27	3.42	4.52
THP01378	POIKPYX	MRFW	3.20	3.36	4.99

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01379	POIKPYX	MRFW	3.25	3.4	4.53
THP01380	POIKPYX	MRFW	3.29	3.34	1.62
THP01381	POIKPYX	MRFW	3.31	3.33	0.56
THP01382	PEGFPYX	MRFW	3.23	3.32	2.82
THP01383	PEGFPYX	MRFW	3.24	3.32	2.55
THP01384	PEGFPYX	MRFW	3.20	3.34	4.24
THP01385	PEGFPYX	MRFW	3.29	3.36	2.08
THP01386	PEGFPYX	MRFW	3.25	3.37	3.74
THP01387	PEGFPYX	MRFW	3.22	3.39	5.07
THP01388	PEGFPYX	MRFW	3.18	3.32	4.35
THP01389	PYX	MRFW	3.22	3.34	3.75
THP01390	PYX	MRFW	3.23	3.37	4.26
THP01391	PYX	MRFW	3.23	3.37	4.20
THP01392	PYX	MRFW	3.24	3.37	3.93
THP01393	PYX	MRFW	3.23	3.395	5.13
THP01394	PYX	MRFW	2.73	2.8	2.62
THP01395	PYX	MRFW	2.81	3.04	7.95
THP01396	PYX	MRFW	3.14	3.28	4.52
THP01397	PYX	MRFW	3.25	3.27	0.55
THP01398	PYX	MRFW	3.36	3.24	-3.62
THP01399	PYX	MRFW	3.30	3.275	-0.84
THP01400	PYX	MRFW	3.30	3.18	-3.70
THP01401	PYX	MRFW	3.19	3.22	0.90
THP01402	PYX	MRFW	3.26	3.21	-1.69
THP01403	PYX	MRFW	3.28	3.24	-1.35
THP01404	PEGFPYX	MRFW	3.31	3.36	1.46
THP01405	PEGFPYX	MRFW	3.26	3.3	1.08
THP01406	PYX	MRFW	3.20	3.3	2.97
THP01407	PYX	MRFW	3.26	3.32	1.83
THP01408	PYX	MRFW	3.30	3.34	1.23
THP01409	PYX	MRFW	3.19	3.27	2.37
THP01410	PYX	MRFW	3.23	3.27	1.21
THP01411	PYX	MRFW	3.21	3.24	0.89
THP01412	PYX	MRFW	3.25	3.23	-0.65
THP01413	PEGFPYX	MRFW	3.25	3.415	4.81
THP01414	PEGFPYX	MRFW	3.24	3.38	4.36
THP01415	PEGFPYX	MRFW	3.18	3.32	4.35
THP01416	POIKPYX	MRFW	3.05	3.34	9.09
THP01417	POIKPYX	MRFW	3.21	3.38	5.12
THP01418	POIKPYX	MRFW	3.14	3.36	6.79
THP01419	POIKPYX	MRFW	3.21	3.39	5.38
THP01420	POIKPYX	MRFW	3.23	3.4	5.28
THP01421	POIKPYX	MRFW	3.21	3.44	6.89
THP01422	POIKPYX	MRFW	3.23	3.42	5.62
THP01423	POIKPYX	MRFW	3.18	3.42	7.35
THP01424	POIKPYX	MRFW	3.24	3.41	5.00
THP01425	POIKPYX	MRFW	3.20	3.34	4.43
THP01426	POIKPYX	MRFW	3.22	3.395	5.18
THP01427	POIKPYX	MRFW	3.21	3.38	5.10
THP01428	POIKPYX	MRFW	3.23	3.37	4.33
THP01429	POIKPYX	MRFW	3.23	3.39	4.73
THP01430	POIKPYX	MRFW	3.23	3.38	4.42
THP01431	PEGFPYX	MRFW	3.18	3.375	5.88

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01432	PEGFPYX	MRFW	3.17	3.28	3.30
THP01433	PEGFPYX	MRFW	3.21	3.34	3.93
THP01434	PEGFPYX	MRFW	3.10	3.3	6.30
THP01435	PEGFPYX	MRFW	3.22	3.36	4.26
THP01436	PEGFPYX	MRFW	3.22	3.36	4.41
THP01437	POIKFPYX	MRFW	3.23	3.36	3.91
THP01438	POIKFPYX	MRFW	3.23	3.36	3.94
THP01439	POIKFPYX	MRFW	3.24	3.37	4.02
THP01440	PEGFPYX	MRFW	3.22	3.41	5.59
THP01441	POIKFPYX	MRFW	3.32	3.48	4.78
THP01442	POIKFPYX	MRFW	3.35	3.55	5.83
THP01443	POIKFPYX	MRFW	3.32	3.48	4.77
THP01444	POIKFPYX	MRFW	3.22	3.43	6.47
THP01445	POIKFPYX	MRFW	3.23	3.45	6.66
THP01446	POIKFPYX	MRFW	3.25	3.45	5.97
THP01447	POIKFPYX	MRFW	3.28	3.46	5.48
THP01448	POIKFPYX	MRFW	3.23	3.46	6.98
THP01449	POIKFPYX	MRFW	3.23	3.47	7.16
THP01450	POIKFPYX	MRFW	3.23	3.47	7.02
THP01451	POIKFPYX	MRFW	3.23	3.48	7.33
THP01452	POIKFPYX	MRFW	3.24	3.46	6.69
THP01453	PEGFPYX	MRFW	3.23	3.36	3.92
THP01454	PEGFPYX	MRFW	3.14	3.32	5.57
THP01455	POIKPYX	MRFW	3.35	3.42	2.02
THP01456	POIKPYX	MRFW	3.35	3.49	3.96
THP01457	POIKPYX	MRFW	3.30	3.41	3.42
THP01458	POIKPYX	MRFW	3.17	3.33	4.89
THP01459	POIKPYX	MRFW	3.24	3.38	4.29
THP01460	PP	MRFW	3.24	3.39	4.53
THP01461	PP	MRFW	3.25	3.39	4.17
THP01462	PP	MRFW	3.24	3.38	4.25
THP01463	PP	MRFW	3.22	3.39	5.06
THP01464	PP	MRFW	3.26	3.39	3.94
THP01465	PP	MRFW	3.24	3.38	4.30
THP01466	PP	MRFW	3.23	3.39	4.82
THP01467	PEGFPYX	MRFW	3.25	3.37	3.56
THP01468	POIK FPYX	MRFW	3.22	3.34	3.64
THP01469	POIKFPYX	MRFW	3.27	3.38	3.17
THP01470	PEGFPYX	MRFW	3.16	3.35	5.85
THP01471	PEGFPYX	MRFW	3.13	3.28	4.70
THP01472	PEGFPYX	MRFW	3.25	3.31	1.88
THP01473	PEGFPYX	MRFW	3.06	3.29	7.34
THP01474	POIKFPYX	MRFW	3.36	3.31	-1.49
THP01475	POIKFPYX	MRFW	3.29	3.32	0.78
THP01476	POIKFPYX	MRFW	3.27	3.36	2.70
THP01477	PEGFPYX	MRFW	3.23	3.34	3.34
THP01478	POIKFPYX	MRFW	3.24	3.36	3.61
THP01479	POIKFPYX	MRFW	3.22	3.32	3.01
THP01480	POIKPYX	MRFW	3.30	3.45	4.36
THP01481	POIKPYX	MRFW	3.27	3.42	4.50
THP01482	POIKPYX	MRFW	3.23	3.405	5.38
THP01483	PEGFPYX	MRFW	3.23	3.34	3.27
THP01484	PYX	MRFW	3.21	3.39	5.45

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01485	PYX	MRFW	3.18	3.39	6.41
THP01486	PYX	MRFW	2.90	3.36	14.53
THP01487	PYX	MRFW	2.91	3.11	6.76
THP01488	PYX	MRFW	2.71	3.02	10.84
THP01489	PYX	MRFW	2.70	2.8	3.68
THP01490	PYX	MRFW	2.85	2.885	1.16
THP01491	PYX	MRFW	2.90	3.28	12.35
THP01492	PYX	MRFW	3.22	3.335	3.58
THP01493	PYX	MRFW	3.22	3.36	4.26
THP01494	PYX	MRFW	3.20	3.27	2.04
THP01495	PYX	MRFW	3.19	3.16	-0.80
THP01496	PYX	MRFW	2.68	2.91	8.28
THP01497	PYX	MRFW	2.98	3.36	11.95
THP01498	PYX	MRFW	2.90	3.34	14.16
THP01499	PYX	MRFW	3.04	3.22	5.66
THP01500	PYX	MRFW	2.85	3.32	15.12
THP01501	PYX	MRFW	3.13	3.26	3.94
THP01502	PYX	MRFW	3.14	3.29	4.54
THP01503	PYX	MRFW	2.84	3.31	15.32
THP01504	PYX	MRFW	2.62	2.79	6.28
THP01505	PYX	MRFW	2.59	2.8	7.86
THP01506	PYX	MRFW	2.62	2.78	5.76
THP01507	PYX	MRFW	2.59	2.81	7.99
THP01508	PYX	MRFW	3.24	3.43	5.69
THP01509	PYX	MRFW	3.24	3.44	6.04
THP01510	PYX	MRFW	3.25	3.45	6.03
THP01511	PYX	MRFW	3.25	3.47	6.47
THP01512	PYX	MRFW	3.25	3.46	6.21
THP01513	PYX	MRFW	3.24	3.47	6.80
THP01514	PYX	MRFW	3.24	3.46	6.46
THP01515	PYX	MRFW	3.24	3.45	6.37
THP01516	PYX	MRFW	3.26	3.43	5.18
THP01517	PYX	MRFW	3.19	3.45	7.86
THP01518	PYX	MRFW	3.33	3.49	4.59
THP01519	PYX	MRFW	3.33	3.49	4.67
THP01520	PYX	MRFW	3.36	3.55	5.60
THP01521	PYX	MRFW	3.33	3.52	5.59
THP01522	PYX	MRFW	3.32	3.5	5.19
THP01523	PYX	MRFW	3.33	3.47	4.27
THP01524	PYX	MRFW	3.44	3.5	1.61
THP01525	PYX	MRFW	3.36	3.51	4.32
THP01526	PYX	MRFW	3.35	3.53	5.18
THP01527	PYX	MRFW	3.34	3.52	5.29
THP01528	PYX	MRFW	3.34	3.55	6.21
THP01529	PYX	MRFW	3.39	3.56	4.84
THP01530	PYX	MRFW	3.35	3.58	6.56
THP01531	PYX	MRFW	3.26	3.48	6.43
THP01532	PYX	MRFW	3.28	3.37	2.64
THP01533	PYX	MRFW	3.28	3.35	2.04
THP01534	PYX	MRFW	3.27	3.37	2.89
THP01535	PYX	MRFW	3.28	3.39	3.38
THP01536	PYX	MRFW	3.26	3.37	3.38
THP01537	PYX	MRFW	3.17	3.27	3.07

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01538	PYX	MRFW	3.11	3.22	3.46
THP01539	PYX	MRFW	3.09	3.16	2.13
THP01540	PYX	MRFW	3.15	3.25	3.26
THP01541	PYX	MRFW	2.97	3.11	4.71
THP01542	PYX	MRFW	2.93	3.07	4.61
THP01543	PYX	MRFW	3.23	3.36	3.90
THP01544	PYX	MRFW	3.24	3.38	4.32
THP01545	PYX	MRFW	3.35	3.4	1.39
THP01546	GN	MRFW	2.94	3.12	5.95
THP01547	GN	MRFW	2.96	3.11	4.82
THP01548	GN	MRFW	3.02	3.11	3.05
THP01549	GN	MRFW	2.98	3.1	3.86
THP01550	GN	MRFW	2.93	3.09	5.31
THP01551	GN	MRFW	2.94	3.11	5.79
THP01552	GN	MRFW	2.93	3.16	7.72
THP01553	GN	MRFW	2.95	3.1	5.11
THP01554	N	MRFW	2.92	3.06	4.62
THP01555	N	MRFW	2.91	3.19	9.06
THP01556	PYX	MRFW	3.19	3.34	4.57
THP01557	PYX	MRFW	3.05	3.03	-0.56
THP01558	PYX	MRFW	3.19	3.33	4.18
THP01559	PYX	MRFW	3.27	3.37	2.94
THP01560	PYX	MRFW	3.24	3.38	4.14
THP01561	PYX	MRFW	3.24	3.38	4.24
THP01562	PYX	MRFW	3.28	3.41	3.74
THP01563	PYX	MRFW	3.26	3.39	3.86
THP01564	PYX	MRFW	3.31	3.42	3.27
THP01565	PYX	MRFW	3.34	3.47	3.96
THP01566	PYX	MRFW	3.28	3.43	4.52
THP01567	PYX	MRFW	3.13	3.28	4.65
THP01568	N	MRFW	3.03	3.16	4.28
THP01569	N	MRFW	3.03	3.18	4.93
THP01570	N	MRFW	3.04	3.18	4.44
THP01571	N	MRFW	2.86	2.97	3.61
THP01572	N	MRFW	2.88	3.01	4.53
THP01573	N	MRFW	2.87	2.99	4.24
THP01574	PYX	MRFW	3.28	3.31	0.98
THP01575	PYX	MRFW	2.91	3.14	7.51
THP01576	PYX	MRFW	3.21	3.205	-0.13
THP01577	PYX	MRFW	3.32	3.49	4.89
THP01578	PYX	MRFW	3.28	3.46	5.33
THP01579	PYX	MRFW	3.28	3.44	4.88
THP01580	PYX	MRFW	3.02	3.18	5.04
THP01581	PYX	MRFW	3.00	3.15	5.00
THP01582	PYX	MRFW	3.01	3.19	5.97
THP01583	PYX	MRFW	3.00	3.14	4.66
THP01584	PYX	MRFW	3.11	3.33	6.77
THP01585	PYX	MRFW	2.92	3.11	6.39
THP01586	PYX	MRFW	2.95	3.13	5.83
THP01587	PYX	MRFW	2.96	3.12	5.20
THP01588	PYX	MRFW	3.30	3.34	1.21
THP01589	PYX	MRFW	3.30	3.495	5.73
THP01590	PYX	MRFW	3.28	3.49	6.12

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01591	PYX	MRFW	3.28	3.46	5.27
THP01592	PYX	MRFW	2.96	3.11	4.92
THP01593	PYX	MRFW	2.94	3.12	5.83
THP01594	PYX	MRFW	3.01	3.19	5.72
THP01595	GN	MRFW	2.99	3.06	2.17
THP01596	GN	MRFW	2.95	3.02	2.22
THP01597	GN	MRFW	2.95	3.01	1.96
THP01598	GN	MRFW	2.94	3.02	2.71
THP01599	GN	MRFW	2.94	3	1.96
THP01600	GN	MRFW	2.95	2.975	0.70
THP01601	GN	MRFW	2.95	2.99	1.36
THP01602	GN	MRFW	2.95	2.98	1.17
THP01603	GN	MRFW	2.96	2.99	0.89
THP01604	GN	MRFW	3.01	3.06	1.77
THP01605	PYX	MRFW	3.15	3.18	0.96
THP01606	PYX	MRFW	3.14	3.2	1.86
THP01607	PYX	MRFW	2.76	2.94	6.32
THP01608	PYX	MRFW	3.22	3.26	1.15
THP01609	PYX	MRFW	3.24	3.28	1.11
THP01610	PYX	MRFW	3.24	3.28	1.08
THP01611	PYX	MRFW	3.25	3.28	0.97
THP01612	PYX	MRFW	3.24	3.29	1.59
THP01613	PYX	MRFW	3.28	3.32	1.13
THP01614	PYX	MRFW	3.26	3.3	1.16
THP01615	PYX	MRFW	3.26	3.26	-0.02
THP01616	PYX	MRFW	3.26	3.3	1.14
THP01617	PYX	MRFW	3.25	3.29	1.10
THP01618	PYX	MRFW	3.30	3.33	1.04
THP01619	PYX	MRFW	3.31	3.34	1.02
THP01620	PYX	MRFW	3.15	3.2	1.65
THP01621	GN	MRFW	3.09	3.12	0.82
THP01622	GN	MRFW	2.99	3.055	2.03
THP01623	PEGFPYX	MRFW	3.22	3.39	5.07
THP01624	PEGFPYX	MRFW	3.34	3.39	1.36
THP01625	PEGFPYX	MRFW	3.26	3.36	2.95
THP01626	PEGFPYX	MRFW	3.24	3.27	1.04
THP01627	PP	MRFW	3.13	3.26	4.10
THP01628	GN	MRFW	2.99	3.1	3.65
THP01629	GN	MRFW	2.96	3.08	3.82
THP01630	GN	MRFW	2.94	3.11	5.68
THP01631	PEGFPYX	MRFW	3.28	3.38	3.08
THP01632	PP	MRFW	3.28	3.42	4.26
THP01633	PP	MRFW	3.27	3.41	4.13
THP01634	PP	MRFW	3.19	3.31	3.61
THP01635	GN	MRFW	3.26	3.26	0.12
THP01636	GN	MRFW	3.03	3.13	3.20
THP01637	GN	MRFW	2.97	3.05	2.80
THP01638	PEGFPYX	MRFW	3.24	3.39	4.42
THP01639	PYX	MRFW	3.30	3.47	5.16
THP01640	PYX	MRFW	3.25	3.4	4.64
THP01641	PYX	MRFW	3.20	3.32	3.64
THP01642	GN	MRFW	3.18	3.31	4.16
THP01643	GN	MRFW	2.99	3.15	5.08

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01644	GN	MRFW	2.97	3.09	4.02
THP01645	POIKPYX	MRFW	3.32	3.48	4.77
THP01646	PEGFPYX	MRFW	3.25	3.41	4.85
THP01647	PEGFPYX	MRFW	3.18	3.36	5.37
THP01648	LN	MRFW	2.96	3.08	4.08
THP01649	LN	MRFW	2.88	3.04	5.41
THP01650	LN	MRFW	2.93	3.07	4.82
THP01651	PEGFPYX	MRFW	3.03	3.27	7.53
THP01652	PEGFPYX	MRFW	3.01	3.3	9.35
THP01653	PEGFPYX	MRFW	2.97	3.38	13.03
THP01654	N	MRFW	2.79	3.1	10.65
THP01655	N	MRFW	2.87	3.105	7.84
THP01656	N	MRFW	2.89	3.05	5.46
THP01657	POIKPYX	MRFW	3.33	3.49	4.70
THP01658	POIKPYX	MRFW	3.23	3.39	4.70
THP01659	POIKPYX	MRFW	3.26	3.36	2.94
THP01660	LN	MRFW	2.71	3.13	14.26
THP01661	LN	MRFW	2.91	3.06	5.05
THP01662	LN	MRFW	2.99	3.1	3.71
THP01663	PEGFPYX	MRFW	3.16	3.12	-1.37
THP01664	MOT	MRFW	2.81	2.885	2.52
THP01665	PYXAN	MRFW	2.94	2.86	-2.66
THP01666	PYXAN	MRFW	2.85	2.81	-1.38
THP01667	PYXAN	MRFW	2.85	2.9	1.78
THP01668	PYXAN	MRFW	2.81	2.89	2.76
THP01669	PYXAN	MRFW	2.80	2.82	0.66
THP01670	PYXAN	MRFW	2.82	2.86	1.48
THP01671	PYXAN	MRFW	3.05	3.02	-1.03
THP01672	PYXAN	MRFW	2.90	2.89	-0.38
THP01673	PYXAN	MRFW	2.89	2.8	-2.99
THP01674	PYXAN	MRFW	2.97	2.86	-3.87
THP01675	PYXAN	MRFW	2.89	2.83	-1.96
THP01676	PYXAN	MRFW	2.94	2.98	1.29
THP01677	PYXAN	MRFW	2.58	2.99	14.77
THP01678	PYXAN	MRFW	3.01	3.15	4.42
THP01679	PYXAN	MRFW	2.88	3.09	7.13
THP01680	PYXAN	MRFW	2.79	2.93	4.81
THP01681	PYXAN	MRFW	2.96	3.17	6.71
THP01682	PEGFPYX	MRFW	2.89	3.36	15.12
THP01683	POIKAN	MRFW	2.86	3	4.79
THP01684	POIKAN	MRFW	2.78	3.04	9.03
THP01685	PYX	MRFW	2.91	2.86	-1.66
THP01686	PYX	MRFW	2.87	2.82	-1.80
THP01687	PYX	MRFW	2.97	2.88	-3.21
THP01688	PYX	MRFW	3.18	3.08	-3.28
THP01689	PYX	MRFW	2.81	2.85	1.41
THP01690	PYX	MRFW	3.16	3.1	-1.89
THP01691	PYX	MRFW	2.81	2.84	1.13
THP01692	PYX	MRFW	2.80	2.9	3.62
THP01693	PEGFPYX	MRFW	3.27	3.14	-3.98
THP01694	PEGFPYX	MRFW	3.17	3.33	4.83
THP01695	PEGFPYX	MRFW	3.18	3.39	6.52
THP01696	PEGFPYX	MRFW	3.10	3.36	7.96

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01697	PEGFPYX	MRFW	2.92	3.17	8.13
THP01698	PYXAN	MRFW	2.87	3.15	9.38
THP01699	PYXAN	MRFW	2.94	3.19	8.02
THP01700	PYXAN	MRFW	2.85	2.92	2.53
THP01701	PYXAN	MRFW	2.92	3.04	4.11
THP01702	PYXAN	MRFW	2.96	3.04	2.75
THP01703	PYXAN	MRFW	2.95	3.165	7.16
THP01704	PYXAN	MRFW	2.92	3.17	8.20
THP01705	PYXAN	MRFW	2.80	3.05	8.68
THP01706	PEGFPYX	MRFW	3.26	3.34	2.56
THP01707	PEGFPYX	MRFW	3.12	3.38	8.04
THP01708	PEGFPYX	MRFW	3.18	3.35	5.07
THP01709	PEGFPYX	MRFW	3.16	3.3	4.41
THP01710	PEGFPYX	MRFW	3.20	3.4	6.20
THP01711	PEGFPYX	MRFW	3.21	3.44	6.93
THP01712	PEGFPYX	MRFW	3.13	3.33	6.11
THP01713	PEGFPYX	MRFW	3.20	3.38	5.38
THP01714	PEGFPYX	MRFW	3.09	3.36	8.30
THP01715	PEGFPYX	MRFW	3.19	3.38	5.75
THP01716	PYX	MRFW	3.24	3.4	4.71
THP01717	PYX	MRFW	3.23	3.41	5.54
THP01718	PYX	MRFW	3.17	3.34	5.19
THP01719	GN	MRFW	2.89	3.06	5.70
THP01720	GN	MRFW	2.97	3.05	2.73
THP01721	PEGFPYX	MRFW	3.24	3.3	1.91
THP01722	PEGFPYX	MRFW	3.10	3.24	4.36
THP01723	PEGFPYX	MRFW	3.08	3.17	2.75
THP01724	PEGFPYX	MRFW	3.23	3.36	3.95
THP01725	PEGFPYX	MRFW	3.22	3.36	4.37
THP01726	PEGFPYX	MRFW	3.23	3.33	3.14
THP01727	PEGFPYX	MRFW	3.20	3.33	4.02
THP01728	PEGFPYX	MRFW	3.22	3.33	3.37
THP01729	PEGFPYX	MRFW	3.22	3.35	3.93
THP01730	PEGFPYX	MRFW	3.23	3.36	3.96
THP01731	PEGFPYX	MRFW	3.33	3.36	0.96
THP01732	PEGFPYX	MRFW	3.10	3.14	1.34
THP01733	PEGFPYX	MRFW	3.01	3.16	4.80
THP01734	PEGFPYX	MRFW	3.51	3.38	-3.68
THP01735	PEGFPYX	MRFW	3.15	3.31	4.86
THP01736	PEGFPYX	MRFW	3.29	3.37	2.45
THP01737	PEGFPYX	MRFW	3.14	3.32	5.47
THP01738	PEGFPYX	MRFW	3.22	3.37	4.42
THP01739	PEGFPYX	MRFW	3.28	3.385	3.17
THP01740	PEGFPYX	MRFW	3.21	3.35	4.22
THP01741	PEGFPYX	MRFW	3.24	3.34	3.08
THP01742	PEGFPYX	MRFW	3.23	3.38	4.46
THP01743	PEGFPYX	MRFW	3.19	3.28	2.89
THP01744	PYX	MRFW	3.31	3.41	2.97
THP01745	PYX	MRFW	3.33	3.38	1.60
THP01746	PYX	MRFW	3.26	3.31	1.38
THP01747	PYX	MRFW	3.24	3.32	2.57
THP01748	PYX	MRFW	3.21	3.4	5.72
THP01749	PYX	MRFW	3.32	3.28	-1.26

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01750	PYX	MRFW	3.37	3.39	0.66
THP01751	PYX	MRFW	3.31	3.36	1.64
THP01752	PYX	MRFW	3.33	3.375	1.41
THP01753	PYX	MRFW	3.25	3.39	4.25
THP01754	PYX	MRFW	3.25	3.38	4.03
THP01755	PYX	MRFW	3.26	3.43	5.22
THP01756	PYX	MRFW	3.28	3.46	5.26
THP01757	PYX	MRFW	3.30	3.59	8.52
THP01758	PYX	MRFW	3.12	3.3	5.72
THP01759	PYX	MRFW	3.16	3.21	1.66
THP01760	PYX	MRFW	3.19	3.37	5.60
THP01761	PYX	MRFW	3.13	3.4	8.27
THP01762	PYX	MRFW	3.28	3.47	5.67
THP01763	PYX	MRFW	3.39	3.54	4.39
THP01764	PYX	MRFW	3.21	3.525	9.28
THP01765	PYX	MRFW	3.05	3.54	14.77
THP01766	PYX	MRFW	3.18	3.55	11.01
THP01767	PYX	MRFW	3.18	3.29	3.47
THP01768	PYX	MRFW	3.21	3.34	3.88
THP01769	PYX	MRFW	3.17	3.39	6.69
THP01770	PYX	MRFW	3.24	3.36	3.77
THP01771	PYX	MRFW	3.26	3.41	4.56
THP01772	PYX	MRFW	3.08	3.38	9.31
THP01773	PYX	MRFW	3.23	3.37	4.24
THP01774	PYX	MRFW	3.21	3.27	1.92
THP01775	PYX	MRFW	3.26	3.34	2.28
THP01776	PYX	MRFW	3.25	3.34	2.87
THP01777	PYX	MRFW	3.26	3.29	0.94
THP01778	PYX	MRFW	3.26	3.31	1.54
THP01779	PYX	MRFW	3.32	3.39	2.10
THP01780	PYX	MRFW	3.24	3.31	2.05
THP01781	PYX	MRFW	3.30	3.31	0.40
THP01782	PYX	MRFW	3.27	3.34	2.01
THP01783	PYX	MRFW	3.27	3.32	1.59
THP01784	PYX	MRFW	3.17	3.35	5.58
THP01785	PYX	MRFW	3.28	3.365	2.70
THP01786	PYX	MRFW	3.20	3.35	4.62
THP01787	PYX	MRFW	3.30	3.38	2.27
THP01788	PYX	MRFW	3.20	3.43	6.97
THP01789	PYX	MRFW	3.22	3.4	5.45
THP01790	LN	MRFW	3.00	3.16	5.19
THP01791	LN	MRFW	2.88	3.09	7.14
THP01792	PYX	MRFW	3.15	3.345	5.87
THP01793	PYX	MRFW	3.21	3.35	4.38
THP01794	PYX	MRFW	3.21	3.43	6.72
THP01795	PYX	MRFW	3.08	3.43	10.80
THP01796	PYX	MRFW	3.40	3.42	0.55
THP01797	PYX	MRFW	3.25	3.41	4.68
THP01798	PYX	MRFW	3.18	3.29	3.46
THP01799	PYX	MRFW	3.19	3.34	4.69
THP01800	PYX	MRFW	3.25	3.36	3.47
THP01801	PYX	MRFW	3.24	3.37	3.80
THP01802	PYX	MRFW	3.24	3.37	3.79

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01803	PYX	MRFW	3.25	3.33	2.34
THP01804	PYX	MRFW	3.21	3.07	-4.55
THP01805	FPYX	MRFW	3.32	3.37	1.64
THP01806	PYX	MRFW	3.31	3.4	2.61
THP01807	PYX	MRFW	3.20	3.345	4.54
THP01808	PYX	MRFW	3.35	3.4	1.57
THP01809	PYX	MRFW	3.26	3.4	4.23
THP01810	PYX	MRFW	2.85	2.99	4.87
THP01811	PYX	MRFW	3.00	3.09	2.92
THP01812	PYX	MRFW	2.86	2.96	3.53
THP01813	PYX	MRFW	3.21	3.33	3.57
THP01814	FPEG	MRFW	2.57	2.84	10.06
THP01815	FPEG	MRFW	2.60	2.82	8.14
THP01816	FPEG	MRFW	2.62	2.81	6.89
THP01817	FPEG	MRFW	2.59	2.83	8.89
THP01818	FPEG	MRFW	2.58	2.88	11.18
THP01819	FPEG	MRFW	2.58	2.87	10.63
THP01820	FPEG	MRFW	2.88	2.8	-2.81
THP01821	FPEG	MRFW	3.00	3.09	2.88
THP01822	PP	MRFW	3.03	3.16	4.24
THP01823	PP	MRFW	3.00	3.16	5.33
THP01824	PP	MRFW	2.98	3.18	6.37
THP01825	PP	MRFW	2.94	3.12	5.79
THP01826	PP	MRFW	2.94	3.11	5.58
THP01827	PP	MRFW	2.93	3.1	5.54
THP01828	PP	MRFW	2.94	3.12	5.80
THP01829	PP	MRFW	2.95	3.14	6.13
THP01830	PP	MRFW	2.94	3.18	7.69
THP01831	PEGFPYX	MRFW	3.34	3.52	5.32
THP01832	PEGFPYX	MRFW	3.24	3.43	5.75
THP01833	PEGFPYX	MRFW	3.23	3.46	6.79
THP01834	PEGFPYX	MRFW	3.21	3.4	5.73
THP01835	POIKAN	MRFW	2.96	3.11	4.96
THP01836	N	MRFW	2.91	3.055	5.03
THP01837	PEGFPYX	MRFW	3.26	3.44	5.32
THP01838	PEGFPYX	MRFW	3.32	3.51	5.46
THP01839	PEGFPYX	MRFW	3.16	3.35	5.75
THP01840	PEGFPYX	MRFW	3.23	3.39	4.86
THP01841	PEGFPYX	MRFW	3.26	3.44	5.43
THP01842	PEGFPYX	MRFW	3.27	3.33	1.76
THP01843	PEGFPYX	MRFW	3.33	3.45	3.63
THP01844	PEGFPYX	MRFW	3.26	3.42	4.74
THP01845	PEGFPYX	MRFW	3.25	3.39	4.13
THP01846	PEGFPYX	MRFW	3.24	3.31	2.27
THP01847	LN	MRFW	3.01	3.05	1.40
THP01848	LN	MRFW	2.89	2.99	3.26
THP01849	PEGFPYX	MRFW	3.18	3.36	5.40
THP01850	POIKPYX	MRFW	3.26	3.39	3.80
THP01851	POIKPYX	MRFW	3.26	3.41	4.38
THP01852	POIKPYX	MRFW	3.32	3.44	3.51
THP01853	POIKPYX	MRFW	3.30	3.46	4.59
THP01854	PEGFPYX	MRFW	3.19	3.33	4.18
THP01855	PP	MRFW	3.26	3.38	3.67

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01856	PP	MRFW	3.24	3.35	3.43
THP01857	PP	MRFW	3.26	3.39	4.01
THP01858	PP	MRFW	3.24	3.415	5.14
THP01859	PP	MRFW	3.24	3.41	4.97
THP01860	PP	MRFW	3.24	3.4	4.80
THP01861	POIKPYX	MRFW	3.24	3.4	4.76
THP01862	POIKPYX	MRFW	3.24	3.4	4.82
THP01863	POIKPYX	MRFW	3.25	3.41	4.67
THP01864	POIKPYX	MRFW	3.22	3.39	5.18
THP01865	PEGFPYX	MRFW	3.28	3.48	5.94
THP01866	PEGFPYX	MRFW	3.19	3.36	5.32
THP01867	PEGFPYX	MRFW	3.18	3.37	5.88
THP01868	POIKPYX	MRFW	3.25	3.41	4.74
THP01869	POIKPYX	MRFW	3.24	3.41	5.18
THP01870	PP	MRFW	3.24	3.4	4.83
THP01871	PP	MRFW	3.24	3.39	4.45
THP01872	PP	MRFW	3.24	3.4	4.74
THP01873	PP	MRFW	3.24	3.39	4.65
THP01874	POIKPYX	MRFW	3.24	3.39	4.57
THP01875	POIKPYX	MRFW	3.25	3.4	4.55
THP01876	POIKPYX	MRFW	3.24	3.39	4.60
THP01877	POIKPYX	MRFW	3.19	3.38	5.81
THP01878	PEGFPYX	MRFW	3.23	3.41	5.33
THP01879	PP	MRFW	3.31	3.5	5.57
THP01880	PP	MRFW	3.20	3.43	7.00
THP01881	PP	MRFW	3.24	3.45	6.13
THP01882	PP	MRFW	3.24	3.36	3.73
THP01883	PP	MRFW	3.25	3.43	5.28
THP01884	PP	MRFW	3.24	3.44	5.91
THP01885	PP	MRFW	3.24	3.42	5.39
THP01886	PP	MRFW	3.24	3.42	5.34
THP01887	PP	MRFW	3.23	3.43	5.99
THP01888	PP	MRFW	3.26	3.44	5.46
THP01889	PP	MRFW	3.22	3.4	5.39
THP01890	PP	MRFW	3.22	3.4	5.37
THP01891	POIKPYX	MRFW	3.20	3.42	6.69
THP01892	POIKPYX	MRFW	3.21	3.47	7.89
THP01893	POIKPYX	MRFW	3.21	3.46	7.40
THP01894	POIKPYX	MRFW	3.24	3.5	7.59
THP01895	POIKPYX	MRFW	3.21	3.45	7.25
THP01896	POIKPYX	MRFW	3.23	3.48	7.60
THP01897	PEGFPYX	MRFW	3.21	3.42	6.33
THP01898	PP	MRFW	3.22	3.43	6.27
THP01899	PP	MRFW	3.21	3.43	6.55
THP01900	PP	MRFW	3.27	3.48	6.14
THP01901	PP	MRFW	3.30	3.5	5.82
THP01902	PP	MRFW	3.24	3.45	6.13
THP01903	PP	MRFW	3.18	3.45	8.02
THP01904	PP	MRFW	3.25	3.44	5.56
THP01905	PP	MRFW	3.27	3.42	4.54
THP01906	PP	MRFW	3.25	3.46	6.21
THP01907	PP	MRFW	3.28	3.55	8.01
THP01908	PP	MRFW	3.28	3.47	5.48

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01909	PP	MRFW	3.26	3.47	6.13
THP01910	PP	MRFW	3.23	3.47	7.20
THP01911	PP	MRFW	3.21	3.4	5.78
THP01912	PP	MRFW	3.24	3.43	5.71
THP01913	PP	MRFW	3.25	3.43	5.28
THP01914	PP	MRFW	3.25	3.45	6.07
THP01915	POIKPYX	MRFW	3.24	3.42	5.53
THP01916	POIKPYX	MRFW	3.13	3.36	6.99
THP01917	POIKPYX	MRFW	3.21	3.4	5.62
THP01918	POIKPYX	MRFW	3.19	3.44	7.62
THP01919	GN	MRFW	2.95	3.14	6.32
THP01920	GN	MRFW	2.94	3.12	5.81
THP01921	PEGFPYX	MRFW	3.27	3.5	6.85
THP01922	POIKPYX	MRFW	3.25	3.46	6.38
THP01923	POIKPYX	MRFW	3.27	3.49	6.42
THP01924	POIKPYX	MRFW	3.30	3.49	5.52
THP01925	POIKPYX	MRFW	3.26	3.46	5.91
THP01926	POIKPYX	MRFW	3.22	3.44	6.71
THP01927	POIKPYX	MRFW	3.24	3.45	6.18
THP01928	POIKPYX	MRFW	3.23	3.44	6.43
THP01929	POIKPYX	MRFW	3.25	3.46	6.35
THP01930	POIKPYX	MRFW	3.23	3.45	6.72
THP01931	POIKPYX	MRFW	3.22	3.45	6.90
THP01932	PP	MRFW	3.23	3.44	6.30
THP01933	LN/GN	MRFW	3.22	3.45	6.80
THP01934	GN	MRFW	3.22	3.42	5.87
THP01935	PP	MRFW	2.95	3.13	5.95
THP01936	PP	MRFW	2.94	3.13	6.20
THP01937	PEGFPYX	MRFW	3.24	3.3	1.81
THP01938	PEGFPYX	MRFW	3.17	3.27	3.21
THP01939	PEGFPYX	MRFW	3.26	3.31	1.43
THP01940	PEGFPYX	MRFW	3.24	3.38	4.11
THP01941	PEGFPYX	MRFW	3.25	3.33	2.42
THP01942	PEGFPYX	MRFW	3.28	3.35	2.12
THP01943	PEGFPYX	MRFW	3.23	3.32	2.64
THP01944	PEGFPYX	MRFW	3.20	3.32	3.62
THP01945	PEGFPYX	MRFW	3.24	3.34	2.97
THP01946	PEGFPYX	MRFW	3.24	3.34	3.01
THP01947	PEGFPYX	MRFW	3.25	3.35	3.02
THP01948	PEGFPYX	MRFW	3.21	3.23	0.64
THP01949	PEGFPYX	MRFW	3.28	3.33	1.54
THP01950	PEGFPYX	MRFW	3.20	3.39	5.86
THP01951	PEGFPYX	MRFW	3.26	3.37	3.25
THP01952	PEGFPYX	MRFW	3.21	3.365	4.60
THP01953	PEGFPYX	MRFW	3.18	3.37	5.68
THP01954	PEGFPYX	MRFW	3.23	3.37	4.39
THP01955	PEGFPYX	MRFW	3.27	3.42	4.63
THP01956	PEGFPYX	MRFW	3.22	3.4	5.51
THP01957	PEGFPYX	MRFW	3.26	3.38	3.66
THP01958	PEGFPYX	MRFW	3.25	3.39	4.15
THP01959	PEGFPYX	MRFW	3.31	3.39	2.52
THP01960	PEGFPYX	MRFW	3.31	3.38	2.01
THP01961	PEGFPYX	MRFW	3.26	3.38	3.64

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP01962	GN	MRFW	3.22	3.3	2.40
THP01963	GN	MRFW	2.85	3.01	5.50
THP01964	PEGFPYX	MRFW	3.29	3.42	3.92
THP01965	PEGFPYX	MRFW	3.13	3.35	6.71
THP01966	PEGFPYX	MRFW	3.28	3.4	3.56
THP01967	PEGFPYX	MRFW	3.24	3.37	3.79
THP01968	PEGFPYX	MRFW	3.25	3.39	4.34
THP01969	PEGFPYX	MRFW	3.23	3.37	4.39
THP01970	PEGFPYX	MRFW	3.24	3.38	4.11
THP01971	PEGFPYX	MRFW	3.23	3.36	4.01
THP01972	PEGFPYX	MRFW	3.24	3.36	3.78
THP01973	PEGFPYX	MRFW	3.25	3.38	3.90
THP01974	PEGFPYX	MRFW	3.22	3.37	4.51
THP01975	PEGFPYX	MRFW	3.21	3.33	3.72
THP01976	GN	MRFW	3.06	3.19	4.03
THP01977	GN	MRFW	2.88	2.96	2.82
THP01978	GN	MRFW	2.96	3.03	2.47
THP01979	GN	MRFW	2.95	3.1	5.01
THP01980	FPYX GN	MRFW	3.06	3.1	1.33
THP01981	GN	MRFW	2.98	3.06	2.53
THP01982	GN	MRFW	2.97	3.02	1.77
THP01983	GN	MRFW	2.96	3.07	3.62
THP01984	GN	MRFW	2.98	3.07	2.82
THP01985	GN	MRFW	2.99	3.09	3.34
THP01986	GN	MRFW	3.07	3.18	3.39
THP01987	GN	MRFW	3.00	3.12	3.99
THP01988	GN	MRFW	2.98	3.12	4.60
THP01989	GN	MRFW	3.08	3.16	2.49
THP01990	PEGFPYX	MRFW	2.96	3.1	4.68
THP01991	PEGFPYX	MRFW	3.07	3.23	5.00
THP01992	PP	MRFW	3.20	3.36	4.91
THP01993	PP	MRFW	3.21	3.36	4.44
THP01994	PP	MRFW	3.28	3.42	4.33
THP01995	PP	MRFW	3.26	3.4	4.29
THP01996	PP	MRFW	3.26	3.4	4.31
THP01997	POIKPYX	MRFW	3.20	3.36	4.86
THP01998	POIKPYX	MRFW	3.22	3.37	4.46
THP01999	POIKPYX	MRFW	3.32	3.38	1.88
THP02000	POIKPYX	MRFW	3.23	3.38	4.46
THP02001	POIKPYX	MRFW	3.24	3.38	4.08
THP02002	POIKPYX	MRFW	3.24	3.37	4.00
THP02003	POIKPYX	MRFW	2.99	3.005	0.40
THP02004	POIKPYX	MRFW	2.84	2.84	0.04
THP02005	POIKPYX	MRFW	3.19	3.23	1.31
THP02006	PEGFPYX	MRFW	3.18	3.36	5.48
THP02007	PP	MRFW	3.23	3.39	4.90
THP02008	PP	MRFW	3.22	3.36	4.18
THP02009	PP	MRFW	3.20	3.38	5.41
THP02010	PP	MRFW	3.22	3.38	4.92
THP02011	PP	MRFW	3.19	3.37	5.36
THP02012	PP	MRFW	3.25	3.38	3.85
THP02013	PP	MRFW	3.24	3.41	5.04
THP02014	PP	MRFW	3.23	3.4	5.24

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02015	PP	MRFW	3.23	3.4	5.14
THP02016	POIKPYX	MRFW	3.22	3.42	5.92
THP02017	POIKPYX	MRFW	3.24	3.35	3.44
THP02018	MOT	MRFW	2.73	2.96	8.00
THP02019	MOT	MRFW	2.81	2.93	4.14
THP02020	PEGFPYX	MRFW	3.00	3.3	9.39
THP02021	PEGFPYX	MRFW	3.24	3.37	3.96
THP02022	PEGFPYX	MRFW	3.21	3.405	5.84
THP02023	PEGFPYX	MRFW	3.21	3.41	6.07
THP02024	POIKPYX	MRFW	3.30	3.39	2.73
THP02025	POIKPYX	MRFW	2.94	3.11	5.61
THP02026	POIKPYX	MRFW	2.99	3.13	4.61
THP02027	PP	MRFW	2.98	3.12	4.50
THP02028	PP	MRFW	3.00	3.13	4.38
THP02029	PP	MRFW	3.01	3.175	5.28
THP02030	PP	MRFW	3.15	3.31	5.10
THP02031	PP	MRFW	3.30	3.4	2.95
THP02032	PP	MRFW	3.27	3.27	0.12
THP02033	POIKPYX	MRFW	3.33	3.43	2.83
THP02034	POIKPYX	MRFW	3.27	3.43	4.81
THP02035	POIKPYX	MRFW	3.27	3.44	5.12
THP02036	POIKPYX	MRFW	3.26	3.44	5.23
THP02037	POIKPYX	MRFW	3.27	3.43	4.81
THP02038	PEGFPYX	MRFW	3.21	3.39	5.50
THP02039	PEGFPYX	MRFW	3.34	3.55	6.15
THP02040	PEGFPYX	MRFW	3.31	3.52	6.20
THP02041	PEGFPYX	MRFW	3.19	3.4	6.33
THP02042	LN	MRFW	2.98	3.14	5.24
THP02043	LN	MRFW	3.19	3.24	1.64
THP02044	LN	MRFW	2.97	3.16	6.36
THP02045	POIKPYX	MRFW	2.99	3.16	5.54
THP02046	POIKPYX	MRFW	3.05	3.18	4.27
THP02047	POIKPYX	MRFW	3.09	3.275	5.86
THP02048	POIKPYX	MRFW	3.08	3.29	6.63
THP02049	POIKPYX	MRFW	3.05	3.25	6.46
THP02050	PEGFPYX	MRFW	3.21	3.44	6.79
THP02051	PYX	MRFW	3.25	3.47	6.57
THP02052	PYX	MRFW	3.26	3.45	5.52
THP02053	PYX	MRFW	3.23	3.46	6.94
THP02054	PYX	MRFW	3.24	3.46	6.72
THP02055	PYX	MRFW	3.23	3.445	6.30
THP02056	PYX	MRFW	3.23	3.45	6.48
THP02057	PYX	MRFW	3.23	3.42	5.85
THP02058	PYX	MRFW	3.24	3.41	5.25
THP02059	PYX	MRFW	3.16	3.31	4.69
THP02060	PYX	MRFW	3.05	3.265	6.65
THP02061	PYX	MRFW	3.16	3.35	5.80
THP02062	PYX	MRFW	3.20	3.43	7.03
THP02063	PYX	MRFW	3.23	3.44	6.43
THP02064	PYX	MRFW	3.23	3.46	6.75
THP02065	PEGFPYX	MRFW	3.24	3.34	3.17
THP02066	PYX	MRFW	2.94	3.37	13.77
THP02067	PYX	MRFW	3.24	3.35	3.31

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02068	PYX	MRFW	3.28	3.28	-0.02
THP02069	PYX	MRFW	3.23	3.42	5.70
THP02070	PYX	MRFW	3.37	3.42	1.33
THP02071	PYX	MRFW	3.19	3.39	6.09
THP02072	PEGFPYX	MRFW	3.23	3.44	6.21
THP02073	PYX	MRFW	3.18	3.43	7.53
THP02074	PYX	MRFW	3.23	3.45	6.73
THP02075	PYX	MRFW	3.22	3.44	6.55
THP02076	PYX	MRFW	3.23	3.43	5.91
THP02077	PYX	MRFW	3.24	3.45	6.12
THP02078	PYX	MRFW	3.24	3.45	6.38
THP02079	PYX	MRFW	3.26	3.445	5.43
THP02080	PYX	MRFW	3.06	3.24	5.80
THP02081	PYX	MRFW	3.11	3.3	5.95
THP02082	PYX	MRFW	3.18	3.395	6.58
THP02083	PYX	MRFW	3.18	3.4	6.66
THP02084	PYX	MRFW	3.20	3.42	6.63
THP02085	PYX	MRFW	3.16	3.41	7.75
THP02086	PEGFPYX	MRFW	3.22	3.48	7.91
THP02087	PEGFPYX	MRFW	3.25	3.51	7.73
THP02088	PEGFPYX	MRFW	3.21	3.47	7.66
THP02089	PEGFPYX	MRFW	3.22	3.48	7.73
THP02090	PEGFPYX	MRFW	3.22	3.49	8.10
THP02091	PEGFPYX	MRFW	3.34	3.48	4.01
THP02092	POIKFPYX	MRFW	3.37	3.49	3.53
THP02093	POIKFPYX	MRFW	3.20	3.48	8.31
THP02094	PEGFPYX	MRFW	3.13	3.41	8.48
THP02095	POIKPYX	MRFW	3.25	3.41	4.92
THP02096	PEGFPYX	MRFW	3.11	3.32	6.47
THP02097	POIKFPYX	MRFW	3.26	3.47	6.16
THP02098	POIKFPYX	MRFW	3.33	3.44	3.26
THP02099	PEGFPYX	MRFW	3.28	3.4	3.49
THP02100	PEGFPYX	MRFW	3.03	3.22	5.99
THP02101	PEGFPYX	MRFW	3.10	3.34	7.59
THP02102	PP	MRFW	3.23	3.39	4.95
THP02103	PP	MRFW	3.24	3.39	4.68
THP02104	PP	MRFW	3.20	3.38	5.56
THP02105	PP	MRFW	3.21	3.34	3.90
THP02106	PP	MRFW	3.27	3.4	3.81
THP02107	PP	MRFW	3.29	3.36	2.06
THP02108	PP	MRFW	3.24	3.36	3.66
THP02109	PP	MRFW	3.23	3.36	3.84
THP02110	PP	MRFW	3.24	3.37	3.93
THP02111	PP	MRFW	3.15	3.38	7.15
THP02112	PP	MRFW	3.27	3.36	2.59
THP02113	PP	MRFW	3.25	3.19	-1.83
THP02114	PP	MRFW	3.04	3.22	5.72
THP02115	PP	MRFW	3.28	3.42	4.24
THP02116	PEGFPYX	MRFW	3.22	3.26	1.15
THP02117	PEGFPYX	MRFW	3.22	3.36	4.16
THP02118	PEGFPYX	MRFW	3.25	3.37	3.65
THP02119	PEGFPYX	MRFW	3.02	3.16	4.51
THP02120	PEGFPYX	MRFW	3.17	3.24	2.17

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02121	POIKPYX	MRFW	3.26	3.38	3.65
THP02122	POIKPYX	MRFW	3.24	3.39	4.57
THP02123	POIKPYX	MRFW	3.24	3.38	4.10
THP02124	POIKPYX	MRFW	3.26	3.37	3.33
THP02125	POIKPYX	MRFW	3.27	3.38	3.30
THP02126	POIKPYX	MRFW	3.27	3.38	3.38
THP02127	POIKPYX	MRFW	3.25	3.38	4.05
THP02128	POIKPYX	MRFW	3.25	3.39	4.13
THP02129	POIKPYX	MRFW	3.26	3.38	3.47
THP02130	POIKPYX	MRFW	3.25	3.38	3.93
THP02131	POIKPYX	MRFW	3.24	3.39	4.54
THP02132	POIKPYX	MRFW	3.20	3.39	5.72
THP02133	POIKPYX	MRFW	3.23	3.4	5.05
THP02134	POIKPYX	MRFW	3.29	3.45	4.64
THP02135	POIKPYX	MRFW	3.25	3.45	6.10
THP02136	POIKPYX	MRFW	3.22	3.39	5.10
THP02137	POIKPYX	MRFW	3.22	3.39	5.29
THP02138	POIKPYX	MRFW	3.21	3.39	5.58
THP02139	PP	MRFW	3.27	3.47	5.99
THP02140	PP	MRFW	3.27	3.45	5.50
THP02141	PP	MRFW	3.23	3.41	5.42
THP02142	PEGFPYX	MRFW	3.18	3.4	6.79
THP02143	PP	MRFW	3.24	3.42	5.54
THP02144	PP	MRFW	3.23	3.41	5.35
THP02145	PEGFPYX	MRFW	3.23	3.41	5.47
THP02146	PEGFPYX	MRFW	3.24	3.4	4.88
THP02147	PEGFPYX	MRFW	3.18	3.38	6.09
THP02148	POIKPYX	MRFW	3.20	3.4	6.01
THP02149	POIKPYX	MRFW	3.26	3.42	4.77
THP02150	PP	MRFW	3.20	3.4	5.96
THP02151	PP	MRFW	3.20	3.39	5.77
THP02152	PP	MRFW	3.19	3.38	5.74
THP02153	PP	MRFW	3.23	3.43	6.13
THP02154	POIKPYX	MRFW	3.24	3.46	6.58
THP02155	POIKPYX	MRFW	3.27	3.48	6.15
THP02156	POIKPYX	MRFW	3.28	3.46	5.35
THP02157	POIKPYX	MRFW	3.21	3.41	5.94
THP02158	PEGFPYX	MRFW	3.20	3.37	5.11
THP02159	POIKPYX	MRFW	3.16	3.33	5.31
THP02160	POIKPYX	MRFW	3.20	3.42	6.63
THP02161	POIKPYX	MRFW	3.23	3.43	6.10
THP02162	POIKPYX	MRFW	3.21	3.42	6.44
THP02163	POIKPYX	MRFW	3.23	3.45	6.55
THP02164	PP	MRFW	3.23	3.47	7.04
THP02165	PP	MRFW	3.17	3.46	8.73
THP02166	PP	MRFW	3.22	3.46	7.05
THP02167	PP	MRFW	3.23	3.47	7.28
THP02168	PP	MRFW	3.22	3.48	7.84
THP02169	PP	MRFW	3.22	3.46	7.21
THP02170	PP	MRFW	3.24	3.48	7.03
THP02171	PP	MRFW	3.20	3.47	8.13
THP02172	PP	MRFW	3.23	3.46	6.80
THP02173	PP	MRFW	3.21	3.485	8.12

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02174	PP	MRFW	3.23	3.48	7.37
THP02175	PP	MRFW	3.25	3.48	6.87
THP02176	PP	MRFW	3.23	3.49	7.70
THP02177	PP	MRFW	3.24	3.515	8.19
THP02178	PP	MRFW	3.16	3.41	7.73
THP02179	PP	MRFW	3.19	3.45	7.94
THP02180	PP	MRFW	3.11	3.36	7.64
THP02181	LN	MRFW	2.90	3.13	7.63
THP02182	LN	MRFW	2.93	3.12	6.21
THP02183	PEGFPYX	MRFW	3.25	3.34	2.65
THP02184	POIKPYX	MRFW	3.32	3.37	1.42
THP02185	POIKPYX	MRFW	3.24	3.3	1.75
THP02186	POIKPYX	MRFW	3.24	3.33	2.66
THP02187	POIKPYX	MRFW	3.25	3.35	3.08
THP02188	POIKPYX	MRFW	3.28	3.3	0.72
THP02189	POIKPYX	MRFW	3.25	3.33	2.41
THP02190	POIKPYX	MRFW	3.20	3.32	3.58
THP02191	POIKPYX	MRFW	3.24	3.3	1.97
THP02192	POIKPYX	MRFW	3.20	3.29	2.63
THP02193	POIKPYX	MRFW	3.24	3.32	2.31
THP02194	POIKPYX	MRFW	3.24	3.32	2.32
THP02195	N	MRFW	3.23	3.31	2.38
THP02196	PEGFPYX	MRFW	3.26	3.33	2.22
THP02197	POIKPYX	MRFW	3.39	3.39	-0.08
THP02198	POIKPYX	MRFW	3.32	3.31	-0.19
THP02199	POIKPYX	MRFW	3.23	3.32	2.62
THP02200	POIKPYX	MRFW	3.28	3.35	2.05
THP02201	POIKPYX	MRFW	3.23	3.35	3.74
THP02202	PEGFPYX	MRFW	3.24	3.22	-0.49
THP02203	PEGFPYX	MRFW	3.23	3.33	3.08
THP02204	POIKPYX	MRFW	3.23	3.3	2.01
THP02205	POIKPYX	MRFW	3.25	3.28	0.99
THP02206	POIKPYX	MRFW	3.21	3.3	2.87
THP02207	POIKPYX	MRFW	3.23	3.31	2.49
THP02208	POIKPYX	MRFW	3.22	3.29	2.21
THP02209	POIKPYX	MRFW	3.24	3.32	2.41
THP02210	PYX	MRFW	3.22	3.43	6.22
THP02211	PYX	MRFW	3.19	3.315	3.92
THP02212	PYX	MRFW	3.03	3.09	1.97
THP02213	PYX	MRFW	3.25	3.515	7.76
THP02214	PYX	MRFW	3.24	3.43	5.70
THP02215	PYX	MRFW	3.28	3.44	4.91
THP02216	PYX	MRFW	3.24	3.4	4.70
THP02217	PYX	MRFW	3.26	3.42	4.68
THP02218	PYX	MRFW	3.16	3.43	8.33
THP02219	PYX	MRFW	3.28	3.41	3.80
THP02220	PYX	MRFW	3.16	3.44	8.57
THP02221	PYX	MRFW	3.25	3.42	5.20
THP02222	PYX	MRFW	3.20	3.42	6.50
THP02223	PYX	MRFW	3.20	3.4	6.10
THP02224	PYX	MRFW	3.13	3.39	7.97
THP02225	PYX	MRFW	3.13	3.4	8.34
THP02226	PYX	MRFW	3.21	3.34	3.83

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02227	PYX	MRFW	3.21	3.52	9.18
THP02228	PYX	MRFW	3.21	3.52	9.13
THP02229	PYX	MRFW	3.23	3.52	8.73
THP02230	PYX	MRFW	3.23	3.5	7.89
THP02231	PYX	MRFW	3.19	3.25	1.99
THP02232	PYX	MRFW	3.14	3.64	14.63
THP02233	PYX	MRFW	3.18	3.51	9.88
THP02234	PYX	MRFW	3.22	3.345	3.76
THP02235	PYX	MRFW	3.24	3.55	9.08
THP02236	PYX	MRFW	3.20	3.53	9.69
THP02237	PYX	MRFW	3.23	3.51	8.29
THP02238	PYX	MRFW	3.25	3.55	8.94
THP02239	PYX	MRFW	3.25	3.57	9.29
THP02240	PYX	MRFW	3.06	3.53	14.34
THP02241	PYX	MRFW	3.25	3.52	7.95
THP02242	PYX	MRFW	3.18	3.49	9.27
THP02243	PYX	MRFW	3.18	3.44	7.76
THP02244	PYX	MRFW	3.15	3.42	8.30
THP02245	PYX	MRFW	3.23	3.5	7.89
THP02246	PYX	MRFW	3.24	3.425	5.51
THP02247	PYX	MRFW	3.26	3.45	5.78
THP02248	PYX	MRFW	3.24	3.42	5.26
THP02249	PYX	MRFW	3.28	3.44	4.87
THP02250	PYX	MRFW	3.24	3.45	6.28
THP02251	PYX	MRFW	3.28	3.32	1.27
THP02252	PYX	MRFW	3.25	3.27	0.55
THP02253	PYX	MRFW	3.22	3.39	5.02
THP02254	PYX	MRFW	3.23	3.43	6.09
THP02255	PYX	MRFW	3.25	3.42	4.98
THP02256	PYX	MRFW	3.24	3.43	5.71
THP02257	PYX	MRFW	3.21	3.39	5.38
THP02258	PYX	MRFW	3.24	3.41	5.12
THP02259	PYX	MRFW	3.24	3.43	5.60
THP02260	PYX	MRFW	3.12	3.39	8.26
THP02261	PYX	MRFW	3.01	3.25	7.79
THP02262	PYX	MRFW	2.68	2.82	4.93
THP02263	PYX	MRFW	2.87	3.07	6.74
THP02264	PEGFPYX	MRFW	3.10	3.45	10.61
THP02265	PEGFPYX	MRFW	3.10	3.3	6.10
THP02266	PEGFPYX	MRFW	3.28	3.5	6.61
THP02267	PEGFPYX	MRFW	3.19	3.42	7.00
THP02268	POIKFPYX	MRFW	3.24	3.45	6.19
THP02269	POIKFPYX	MRFW	3.22	3.4	5.52
THP02270	LN	MRFW	2.95	3.17	7.29
THP02271	LN	MRFW	2.95	3.16	6.91
THP02272	LN	MRFW	2.96	3.17	6.94
THP02273	LN	MRFW	3.00	3.21	6.81
THP02274	LN	MRFW	3.00	3.27	8.61
THP02275	POIKPYX	MRFW	3.10	3.34	7.40
THP02276	POIKPYX	MRFW	3.07	3.3	7.16
THP02277	POIKPYX	MRFW	3.11	3.34	7.06
THP02278	POIKPYX	MRFW	3.13	3.36	7.17
THP02279	POIKPYX	MRFW	3.20	3.45	7.49

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02280	POIKPYX	MRFW	3.20	3.45	7.47
THP02281	POIKPYX	MRFW	3.20	3.45	7.57
THP02282	POIKPYX	MRFW	3.20	3.46	7.66
THP02283	PEGFPYX	MRFW	3.20	3.33	4.06
THP02284	PEGFPYX	MRFW	3.18	3.34	4.90
THP02285	PEGFPYX	MRFW	3.21	3.35	4.39
THP02286	PEGFPYX	MRFW	3.25	3.39	4.36
THP02287	PEGFPYX	MRFW	3.24	3.41	5.04
THP02288	PEGFPYX	MRFW	3.22	3.39	5.21
THP02289	PEGFPYX	MRFW	3.11	3.39	8.69
THP02290	PEGFPYX	MRFW	3.22	3.4	5.59
THP02291	PEGFPYX	MRFW	3.21	3.39	5.54
THP02292	LN	MRFW	3.00	3.34	10.67
THP02293	LN	MRFW	2.98	3.14	5.33
THP02294	PEGFPYX	MRFW	3.18	3.32	4.18
THP02295	PYX	MRFW	3.32	3.42	3.01
THP02296	PYX	MRFW	3.28	3.4	3.46
THP02297	PYX	MRFW	3.24	3.36	3.57
THP02298	PYX	MRFW	3.23	3.35	3.78
THP02299	PYX	MRFW	3.27	3.33	1.96
THP02300	PYX	MRFW	3.26	3.37	3.30
THP02301	PYX	MRFW	3.21	3.34	3.99
THP02302	PYX	MRFW	3.20	3.37	5.23
THP02303	PYX	MRFW	3.26	3.37	3.45
THP02304	PYX	MRFW	3.21	3.37	4.76
THP02305	PYX	MRFW	3.26	3.37	3.44
THP02306	PYX	MRFW	3.29	3.35	1.83
THP02307	PYX	MRFW	3.22	3.35	3.83
THP02308	PYX	MRFW	3.18	3.33	4.60
THP02309	PYX	MRFW	3.17	3.24	2.29
THP02310	PYX	MRFW	3.23	3.3	2.26
THP02311	PYX	MRFW	3.24	3.31	2.00
THP02312	PYX	MRFW	3.27	3.3	0.83
THP02313	PYX	MRFW	3.23	3.31	2.44
THP02314	PYX	MRFW	3.21	3.31	3.05
THP02315	PYX	MRFW	3.21	3.29	2.39
THP02316	PYX	MRFW	3.20	3.31	3.36
THP02317	PYX	MRFW	3.22	3.31	2.67
THP02318	PYX	MRFW	3.48	3.32	-4.79
THP02319	PYX	MRFW	3.14	3.3	4.88
THP02320	PYX	MRFW	3.27	3.31	1.19
THP02321	PYX	MRFW	3.36	3.31	-1.52
THP02322	FPYX	MRFW	3.26	3.49	6.92
THP02323	FPYX	MRFW	3.26	3.43	4.94
THP02324	FPYX	MRFW	3.20	3.5	8.91
THP02325	FPYX	MRFW	3.25	3.54	8.57
THP02326	FPYX	MRFW	3.24	3.53	8.57
THP02327	FPYX	MRFW	3.26	3.48	6.62
THP02328	FPYX	MRFW	3.23	3.475	7.27
THP02329	FPYX	MRFW	3.23	3.45	6.60
THP02330	FPYX	MRFW	3.27	3.48	6.11
THP02331	FPYX	MRFW	3.15	3.47	9.72
THP02332	FPYX	MRFW	3.06	3.475	12.65

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02333	FPYX	MRFW	3.51	3.48	-0.84
THP02334	FPYX	MRFW	3.24	3.44	6.07
THP02335	PYX	MRFW	3.20	3.275	2.23
THP02336	PYX	MRFW	3.21	3.26	1.54
THP02337	PYX	MRFW	3.09	3.17	2.56
THP02338	PYX	MRFW	3.00	3.15	5.00
THP02339	PYX	MRFW	3.03	3.18	4.70
THP02340	PYX	MRFW	3.14	3.17	0.98
THP02341	PYX	MRFW	3.02	3.1	2.55
THP02342	PYX	MRFW	3.05	3.1	1.78
THP02343	PYX	MRFW	3.05	3.19	4.49
THP02344	PYX	MRFW	3.05	3.08	0.98
THP02345	PYX	MRFW	3.18	3.38	6.09
THP02346	PYX	MRFW	3.17	3.45	8.31
THP02347	PYX	MRFW	3.18	3.43	7.46
THP02348	PYX	MRFW	2.91	3.24	10.74
THP02349	PYX	MRFW	3.16	3.31	4.59
THP02350	PYX	MRFW	3.03	3.28	7.84
THP02351	PYX	MRFW	3.08	3.27	5.93
THP02352	PYX	MRFW	2.96	3.21	8.09
THP02353	PYX	MRFW	2.96	3.23	8.71
THP02354	PYX	MRFW	3.10	3.44	10.50
THP02355	PYX	MRFW	3.17	3.4	6.87
THP02356	PYX	MRFW	3.16	3.4	7.34
THP02357	PYX	MRFW	2.86	3.17	10.22
THP02358	PYX	MRFW	2.83	3.17	11.23
THP02359	PYX	MRFW	2.76	3.15	13.04
THP02360	PYX	MRFW	3.08	3.36	8.71
THP02361	PYX	MRFW	3.10	3.44	10.26
THP02362	PYX	MRFW	3.28	3.44	4.87
THP02363	PYX	MRFW	3.18	3.48	9.05
THP02364	DUPLICATE	MRFW	3.18	3.33	4.65
THP02365	PYX	MRFW	3.23	3.22	-0.42
THP02366	PYX	MRFW	3.18	3.16	-0.54
THP02367	PYX	MRFW	3.20	3.21	0.23
THP02368	PYX	MRFW	2.97	2.98	0.42
THP02369	PYX	MRFW	2.89	2.96	2.38
THP02370	PYX	MRFW	2.96	2.98	0.52
THP02371	PYX	MRFW	3.23	3.2	-0.82
THP02372	PYX	MRFW	3.22	3.2	-0.48
THP02373	PYX	MRFW	3.31	3.23	-2.37
THP02374	PYX	MRFW	3.21	3.22	0.46
THP02375	PYX	MRFW	3.20	3.26	1.78
THP02376	PYX	MRFW	3.20	3.27	2.09
THP02377	N	MRHW	2.86	3.1	8.01
THP02378	N	MRHW	2.95	3.14	6.37
THP02379	POIKPYX	MRHW	3.27	3.45	5.47
THP02380	POIKPYX	MRHW	3.24	3.44	5.84
THP02381	POIKPYX	MRHW	3.25	3.41	4.86
THP02382	N	MRHW	2.94	3.12	6.01
THP02383	N	MRHW	2.95	3.15	6.43
THP02384	POIKPYX	MRHW	3.21	3.43	6.53
THP02385	POIKPYX	MRHW	3.26	3.48	6.53

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02386	POIKPYX	MRHW	3.26	3.45	5.63
THP02387	N	MRHW	2.92	3.12	6.57
THP02388	N	MRHW	2.95	3.14	6.34
THP02389	POIKPYX	MRHW	3.17	3.4	6.85
THP02390	POIKPYX	MRHW	3.25	3.49	7.04
THP02391	POIKPYX	MRHW	3.24	3.45	6.14
THP02392	N	MRHW	3.00	3.075	2.39
THP02393	N	MRHW	2.92	3.06	4.64
THP02394	N	MRHW	2.95	3.13	5.80
THP02395	POIKPYX	MRHW	3.23	3.43	6.09
THP02396	POIKPYX	MRHW	3.32	3.47	4.30
THP02397	POIKPYX	MRHW	3.25	3.46	6.28
THP02398	N	MRHW	2.91	2.99	2.64
THP02399	N	MRHW	2.92	3.01	3.08
THP02400	N	MRHW	2.95	3.04	3.11
THP02401	POIKPYX	MRHW	3.16	3.19	0.88
THP02402	POIKPYX	MRHW	3.17	3.37	6.16
THP02403	POIKPYX	MRHW	3.26	3.38	3.64
THP02404	POIKPYX	MRHW	3.27	3.36	2.77
THP02405	N	MRHW	2.92	3.05	4.35
THP02406	N	MRHW	2.93	3.075	4.81
THP02407	N	MRHW	2.99	3.09	3.43
THP02408	PYX	MRHW	3.25	3.36	3.38
THP02409	PYX	MRHW	3.21	3.38	5.13
THP02410	PYX	MRHW	3.35	3.37	0.53
THP02411	N	MRHW	2.87	2.99	4.26
THP02412	N	MRHW	2.89	3.03	4.58
THP02413	POIKFPYX	MRHW	3.23	3.27	1.29
THP02414	POIKFPYX	MRHW	3.09	3.305	6.67
THP02415	POIKFPYX	MRHW	3.29	3.35	1.71
THP02416	POIKFPYX	MRHW	3.26	3.36	3.01
THP02417	N	MRHW	2.90	3.1	6.57
THP02418	N	MRHW	2.92	3.12	6.65
THP02419	N	MRHW	2.97	3.17	6.65
THP02420	POIKFPYX	MRHW	3.14	3.51	10.99
THP02421	POIKFPYX	MRHW	3.26	3.51	7.43
THP02422	POIKFPYX	MRHW	3.21	3.45	7.11
THP02423	POIKFPYX	MRHW	3.29	3.48	5.67
THP02424	N	MRHW	2.92	3.08	5.18
THP02425	N	MRHW	2.99	3.1	3.54
THP02426	POIKPYX	MRHW	3.26	3.37	3.21
THP02427	POIKPYX	MRHW	3.26	3.43	5.17
THP02428	POIKPYX	MRHW	3.22	3.39	5.02
THP02429	POIKPYX	MRHW	2.93	3.05	4.00
THP02430	POIKPYX	MRHW	2.96	3.09	4.24
THP02431	POIKPYX	MRHW	3.11	3.35	7.53
THP02432	POIKPYX	MRHW	3.26	3.42	4.91
THP02433	POIKPYX	MRHW	3.27	3.41	4.26
THP02434	N	MRHW	3.18	3.28	3.11
THP02435	N	MRHW	3.15	3.28	4.11
THP02436	N	MRHW	3.11	3.26	4.79
THP02437	MOT	MRHW	2.73	2.96	7.97
THP02438	MOT	MRHW	3.16	3.475	9.62

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02439	MOT	MRHW	3.26	3.54	8.14
THP02440	MOT	MRHW	3.21	3.41	6.12
THP02441	MOT	MRHW	2.75	2.93	6.36
THP02442	MOT	MRHW	2.76	2.95	6.73
THP02443	MOT	MRHW	2.73	2.9	6.19
THP02444	N	MRHW	2.98	3.145	5.53
THP02445	N	MRHW	3.05	3.22	5.28
THP02446	POIKPYX	MRHW	3.08	3.24	5.09
THP02447	N	MRHW	3.01	3.17	5.34
THP02448	N	MRHW	3.08	3.25	5.46
THP02449	POIKFPYX	MRHW	3.13	3.3	5.37
THP02450	POIKFPYX	MRHW	3.12	3.305	5.74
THP02451	POIKFPYX	MRHW	3.31	3.42	3.19
THP02452	N	MRHW	3.07	3.22	4.75
THP02453	N	MRHW	3.10	3.25	4.71
THP02454	N	MRHW	3.11	3.28	5.40
THP02455	POIKPYX	MRHW	3.20	3.37	5.09
THP02456	POIKPYX	MRHW	3.29	3.48	5.50
THP02457	N	MRHW	2.81	2.99	6.10
THP02458	N	MRHW	2.92	3	2.69
THP02459	N	MRHW	2.98	3.03	1.73
THP02460	N	MRHW	3.18	3.11	-2.16
THP02461	PYX	MRHW	3.21	3.29	2.35
THP02462	PYX	MRHW	3.19	3.33	4.14
THP02463	PYX	MRHW	3.26	3.33	2.05
THP02464	N	MRHW	2.92	3.03	3.70
THP02465	N	MRHW	2.95	3.07	4.11
THP02466	POIKPYX	MRHW	3.22	3.33	3.51
THP02467	POIKPYX	MRHW	3.23	3.41	5.41
THP02468	POIKPYX	MRHW	3.24	3.39	4.38
THP02469	POIKPYX	MRHW	2.90	2.95	1.72
THP02470	POIKPYX	MRHW	2.96	3.04	2.58
THP02471	POIKPYX	MRHW	3.20	3.28	2.59
THP02472	N	MRHW	2.93	2.95	0.54
THP02473	N	MRHW	2.94	3.01	2.27
THP02474	POIKFPYX	MRHW	3.24	3.27	1.00
THP02475	POIKFPYX	MRHW	3.25	3.28	1.02
THP02476	POIKFPYX	MRHW	3.26	3.275	0.53
THP02477	N	MRHW	2.98	3.17	6.16
THP02478	N	MRHW	3.04	3.26	6.96
THP02479	POIKPYX	MRHW	3.22	3.5	8.46
THP02480	POIKPYX	MRHW	3.26	3.51	7.26
THP02481	N	MRHW	2.96	2.99	0.94
THP02482	N	MRHW	3.01	3.05	1.28
THP02483	POIKPYX	MRHW	3.21	3.26	1.62
THP02484	POIKPYX	MRHW	3.25	3.32	1.99
THP02485	POIKPYX	MRHW	3.25	3.3	1.47
THP02486	N	MRHW	2.94	3.06	4.17
THP02487	N	MRHW	2.95	3.08	4.18
THP02488	POIKFPYX	MRHW	3.12	3.25	4.03
THP02489	POIKFPYX	MRHW	3.19	3.37	5.47
THP02490	POIKFPYX	MRHW	3.18	3.36	5.41
THP02491	N	MRHW	2.93	3.02	3.07

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02492	N	MRHW	2.93	3.03	3.23
THP02493	POIKFPYX	MRHW	3.18	3.29	3.50
THP02494	POIKFPYX	MRHW	3.24	3.29	1.40
THP02495	POIKFPYX	MRHW	3.20	3.34	4.36
THP02496	N	MRHW	2.96	3.39	13.59
THP02497	N	MRHW	2.98	3.08	3.26
THP02498	N	MRHW	3.19	3.11	-2.45
THP02499	POIKPYX	MRHW	3.24	3.345	3.16
THP02500	POIKPYX	MRHW	3.26	3.4	4.33
THP02501	N	MRHW	2.97	3.09	4.11
THP02502	N	MRHW	3.02	3.16	4.54
THP02503	POIKPYX	MRHW	3.24	3.34	3.17
THP02504	POIKPYX	MRHW	3.26	3.37	3.44
THP02505	POIKPYX	MRHW	3.22	3.35	4.00
THP02506	N	MRHW	2.96	3.1	4.53
THP02507	N	MRHW	2.99	3.13	4.57
THP02508	POIKPYX	MRHW	3.15	3.38	7.06
THP02509	POIKPYX	MRHW	3.23	3.41	5.38
THP02510	POIKPYX	MRHW	3.26	3.43	5.18
THP02511	N	MRHW	2.97	2.97	0.12
THP02512	N	MRHW	3.00	3.05	1.72
THP02513	POIKPYX	MRHW	3.17	3.25	2.41
THP02514	POIKPYX	MRHW	3.25	3.25	0.08
THP02515	POIKPYX	MRHW	3.25	3.25	0.13
THP02516	PYXAN	MRHW	2.80	2.95	5.27
THP02517	PYXAN	MRHW	2.82	2.95	4.50
THP02518	PYXAN	MRHW	2.87	3.17	9.81
THP02519	POIKPYX	MRHW	3.19	3.4	6.50
THP02520	POIKPYX	MRHW	3.22	3.4	5.39
THP02521	POIKPYX	MRHW	3.23	3.31	2.38
THP02522	PYXAN	MRHW	2.85	2.96	3.83
THP02523	PYXAN	MRHW	2.93	3.02	3.08
THP02524	PYXAN	MRHW	2.97	3.12	4.92
THP02525	POIKFPYX	MRHW	3.24	3.38	4.37
THP02526	POIKFPYX	MRHW	3.26	3.38	3.57
THP02527	POIKFPYX	MRHW	3.24	3.38	4.37
THP02528	N	MRHW	2.96	3.07	3.73
THP02529	N	MRHW	2.96	3.09	4.19
THP02530	POIKPYX	MRHW	3.10	3.32	6.99
THP02531	POIKPYX	MRHW	3.26	3.41	4.50
THP02532	POIKPYX	MRHW	3.20	3.4	5.97
THP02533	N	MRHW	2.97	3.11	4.64
THP02534	N	MRHW	2.96	3.13	5.62
THP02535	POIKFPYX	MRHW	3.20	3.42	6.79
THP02536	POIKFPYX	MRHW	3.24	3.46	6.47
THP02537	POIKFPYX	MRHW	3.21	3.43	6.55
THP02538	POIKPYX	MRHW	3.23	3.4	5.05
THP02539	N	MRHW	2.93	3.09	5.23
THP02540	N	MRHW	2.97	3.14	5.56
THP02541	POIKPYX	MRHW	3.36	3.43	1.94
THP02542	POIKPYX	MRHW	3.24	3.45	6.32
THP02543	POIKPYX	MRHW	3.28	3.44	4.62
THP02544	N	MRHW	2.84	2.94	3.34

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02545	N	MRHW	2.74	2.99	8.66
THP02546	N	MRHW	2.99	3.11	3.91
THP02547	POIKPYX	MRHW	2.95	3.16	6.96
THP02548	POIKPYX	MRHW	3.15	3.3	4.53
THP02549	POIKPYX	MRHW	3.27	3.38	3.26
THP02550	N	MRHW	2.93	3.01	2.85
THP02551	N	MRHW	2.95	3.06	3.69
THP02552	POIKPYX	MRHW	3.22	3.32	3.16
THP02553	POIKPYX	MRHW	3.24	3.36	3.54
THP02554	POIKPYX	MRHW	3.28	3.35	2.11
THP02555	N	MRHW	2.92	3.01	3.14
THP02556	N	MRHW	2.97	3.04	2.39
THP02557	POIKPYX	MRHW	3.22	3.28	1.78
THP02558	POIKPYX	MRHW	3.25	3.35	3.17
THP02559	N	MRHW	2.91	3.02	3.80
THP02560	N	MRHW	2.94	3.04	3.51
THP02561	N	MRHW	2.98	3.06	2.70
THP02562	POIKPYX	MRHW	3.22	3.28	1.95
THP02563	POIKPYX	MRHW	3.26	3.38	3.52
THP02564	POIKPYX	MRHW	3.26	3.38	3.72
THP02565	N	MRHW	2.93	3.09	5.16
THP02566	N	MRHW	2.95	3.115	5.31
THP02567	N	MRHW	2.95	3.13	5.92
THP02568	POIKPYX	MRHW	3.16	3.45	8.82
THP02569	POIKPYX	MRHW	3.27	3.455	5.45
THP02570	POIKAN	MRHW	2.93	2.94	0.40
THP02571	POIKAN	MRHW	2.87	2.98	3.60
THP02572	POIKAN	MRHW	2.99	3.08	2.96
THP02573	POIKPYX	MRHW	3.22	3.25	0.90
THP02574	POIKPYX	MRHW	3.26	3.4	4.21
THP02575	N	MRHW	2.89	3.02	4.37
THP02576	N	MRHW	2.96	3.07	3.82
THP02577	N	MRHW	3.02	3.125	3.54
THP02578	POIKPYX	MRHW	3.23	3.32	2.81
THP02579	POIKPYX	MRHW	3.29	3.42	3.76
THP02580	N	MRHW	2.91	3	2.93
THP02581	N	MRHW	2.98	3.05	2.32
THP02582	N	MRHW	3.00	3.14	4.60
THP02583	POIKPYX	MRHW	3.20	3.33	3.94
THP02584	POIKPYX	MRHW	3.28	3.39	3.15
THP02585	POIKPYX	MRHW	3.20	3.38	5.54
THP02586	PYXAN	MRHW	2.73	2.85	4.18
THP02587	PYXAN	MRHW	2.63	2.86	8.49
THP02588	POIKPYX	MRHW	3.21	3.38	5.09
THP02589	POIKPYX	MRHW	3.29	3.5	6.24
THP02590	N	MRHW	2.73	2.93	6.99
THP02591	N	MRHW	2.77	2.92	5.24
THP02592	POIKPYX	MRHW	3.28	3.37	2.79
THP02593	POIKPYX	MRHW	3.38	3.555	4.96
THP02594	POIKAN	MRHW	2.73	2.88	5.34
THP02595	POIKAN	MRHW	2.73	2.89	5.55
THP02596	PYXAN	MRHW	3.24	3.38	4.09
THP02597	PYXAN	MRHW	3.39	3.45	1.88

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02598	N	MRHW	2.93	2.88	-1.85
THP02599	PYX	MRHW	3.23	3.105	-3.80
THP02600	PYX	MRHW	3.24	3.11	-4.21
THP02601	PYX	MRHW	3.25	3.09	-4.92
THP02602	N	MRHW	2.95	2.81	-4.90
THP02603	N	MRHW	2.96	2.87	-3.20
THP02604	PYX	MRHW	3.23	3.19	-1.36
THP02605	PYX	MRHW	3.24	3.33	2.80
THP02606	PYX	MRHW	3.23	3.37	4.33
THP02607	N	MRHW	2.95	3.01	2.00
THP02608	N	MRHW	2.97	3.07	3.27
THP02609	PYX	MRHW	3.22	3.41	5.81
THP02610	PYX	MRHW	3.24	3.52	8.16
THP02611	PYX	MRHW	3.25	3.58	9.78
THP02612	N	MRHW	2.91	3.03	3.98
THP02613	N	MRHW	2.84	3.02	6.09
THP02614	N	MRHW	3.02	3.06	1.46
THP02615	PYX	MRHW	3.22	3.37	4.64
THP02616	N	MRHW	3.02	3.005	-0.53
THP02617	PEGFPYX	MRHW	3.09	3.02	-2.14
THP02618	PYX	MRHW	3.19	3.33	4.19
THP02619	PYX	MRHW	3.13	3.33	6.09
THP02620	PYX	MRHW	3.23	3.28	1.48
THP02621	N	MRHW	2.96	3.02	2.16
THP02622	N+PYX	MRHW	3.09	3.18	2.90
THP02623	PYX	MRHW	3.29	3.35	1.93
THP02624	PYX	MRHW	3.25	3.35	2.94
THP02625	PYX	MRHW	3.26	3.33	2.08
THP02626	POIKAN	MRHW	2.76	2.83	2.36
THP02627	POIKAN	MRHW	2.68	2.85	5.99
THP02628	POIKAN	MRHW	2.77	2.875	3.58
THP02629	POIKAN	MRHW	2.76	2.87	3.78
THP02630	POIKAN	MRHW	2.75	2.84	3.37
THP02631	POIKAN	MRHW	2.67	2.83	5.76
THP02632	FPYX	MRHW	3.34	3.29	-1.65
THP02633	POIKAN	MRHW	2.75	2.98	7.97
THP02634	POIKAN	MRHW	2.82	2.92	3.56
THP02635	POIKAN	MRHW	2.74	2.915	6.10
THP02636	POIKAN	MRHW	2.73	2.93	7.12
THP02637	POIKAN	MRHW	2.76	2.93	5.86
THP02638	POIKAN	MRHW	2.76	2.905	5.16
THP02639	FPYX	MRHW	3.21	3.62	11.99
THP02640	POIKAN	MRHW	2.73	2.89	5.70
THP02641	POIKAN	MRHW	2.74	2.8	2.14
THP02642	POIKAN	MRHW	2.75	2.82	2.59
THP02643	POIKAN	MRHW	2.75	3	8.72
THP02644	FPYX	MRHW	3.05	3.27	7.09
THP02645	FPYX	MRHW	3.23	3.3	2.01
THP02646	N	MRHW	2.97	3.11	4.77
THP02647	N	MRHW	2.99	3.12	4.17
THP02648	PYX	MRHW	3.27	3.3	1.05
THP02649	PYX	MRHW	3.26	3.45	5.69
THP02650	PYX	MRHW	3.37	3.42	1.49

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02651	N	MRHW	2.95	3.11	5.15
THP02652	N	MRHW	3.21	3.17	-1.35
THP02653	PYX	MRHW	3.22	3.36	4.40
THP02654	PYX	MRHW	3.27	3.44	5.10
THP02655	PYX	MRHW	3.25	3.42	5.02
THP02656	PYX	MRHW	3.31	3.35	1.20
THP02657	N	MRHW	2.98	3.14	5.39
THP02658	N	MRHW	3.04	3.36	10.02
THP02659	FPYX	MRHW	3.25	3.4	4.42
THP02660	FPYX	MRHW	3.43	3.44	0.39
THP02661	FPYX	MRHW	3.28	3.41	3.82
THP02662	FPYX	MRHW	3.38	3.35	-0.97
THP02663	N	MRHW	2.86	3	4.84
THP02664	N	MRHW	2.86	3.01	5.06
THP02665	POIKFPYX	MRHW	2.91	3.06	5.02
THP02666	POIKFPYX	MRHW	2.91	3.08	5.64
THP02667	POIKFPYX	MRHW	2.89	3.06	5.83
THP02668	POIKPYX	MRHW	2.73	2.86	4.63
THP02669	POIKPYX	MRHW	2.77	2.91	5.01
THP02670	POIKPYX	MRHW	3.15	3.385	7.15
THP02671	POIKPYX	MRHW	3.28	3.46	5.38
THP02672	POIKAN	MRHW	2.80	2.92	4.27
THP02673	POIKAN	MRHW	2.85	3	5.14
THP02674	POIKPYX	MRHW	3.26	3.42	4.70
THP02675	POIKPYX	MRHW	3.27	3.47	5.83
THP02676	N	MRHW	2.87	3.02	5.01
THP02677	N	MRHW	2.89	3.01	3.93
THP02678	POIKPYX	MRHW	3.24	3.36	3.68
THP02679	POIKPYX	MRHW	3.31	3.44	3.82
THP02680	POIKPYX	MRHW	3.27	3.4	3.93
THP02681	POIKPYX	MRHW	3.27	3.41	4.17
THP02682	POIKPYX	MRHW	3.35	3.4	1.39
THP02683	LN	MRHW	2.87	2.95	2.88
THP02684	PYXAN	MRHW	2.78	2.89	3.77
THP02685	N	MRHW	2.88	2.99	3.62
THP02686	N	MRHW	2.90	3.01	3.62
THP02687	N	MRHW	2.92	3.02	3.48
THP02688	N	MRHW	2.93	3.04	3.62
THP02689	N	MRHW	2.94	3.07	4.16
THP02690	MN	MRHW	2.95	3.07	3.91
THP02691	MN	MRHW	2.98	3.19	6.96
THP02692	POIKPYX	MRHW	3.25	3.39	4.12
THP02693	N	MRHW	2.86	2.98	4.20
THP02694	N	MRHW	2.80	2.93	4.57
THP02695	LN	MRHW	2.87	2.99	4.27
THP02696	LN	MRHW	2.91	3.03	3.93
THP02697	N	MRHW	2.92	3.05	4.24
THP02698	N	MRHW	2.93	3.06	4.20
THP02699	N/POIKPYX	MRHW	2.95	3.09	4.55
THP02700	POIKPYX	MRHW	3.16	3.28	3.65
THP02701	POIKPYX	MRHW	3.23	3.41	5.51
THP02702	POIKPYX	MRHW	3.14	3.425	8.61
THP02703	N	MRHW	2.86	2.97	3.70

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02704	N	MRHW	2.78	2.9	4.10
THP02705	N	MRHW	2.88	3	4.22
THP02706	N	MRHW	2.89	3.03	4.69
THP02707	N	MRHW	2.91	3.06	5.08
THP02708	N	MRHW	2.94	3.07	4.47
THP02709	N/POIKPYX	MRHW	3.10	3.27	5.27
THP02710	POIKPYX	MRHW	3.24	3.43	5.61
THP02711	POIKPYX	MRHW	3.23	3.42	5.76
THP02712	POIKPYX	MRHW	3.25	3.415	5.08
THP02713	N	MRHW	2.89	3.07	5.98
THP02714	N	MRHW	2.90	3.115	7.06
THP02715	POIKPYX	MRHW	3.21	3.42	6.35
THP02716	POIKPYX	MRHW	3.22	3.44	6.52
THP02717	POIKPYX	MRHW	3.23	3.47	7.10
THP02718	POIKPYX	MRHW	3.23	3.47	7.03
THP02719	N	MRHW	2.87	3.07	6.87
THP02720	N	MRHW	2.88	3.1	7.31
THP02721	POIKPYX	MRHW	3.21	3.37	4.79
THP02722	POIKPYX	MRHW	3.22	3.5	8.32
THP02723	POIKPYX	MRHW	3.22	3.485	7.97
THP02724	POIKPYX	MRHW	3.23	3.47	7.06
THP02725	N	MRHW	2.93	3.11	5.88
THP02726	N	MRHW	2.95	3.13	5.79
THP02727	POIKPYX	MRHW	3.12	3.39	8.31
THP02728	POIKPYX	MRHW	3.15	3.1	-1.52
THP02729	POIKPYX	MRHW	3.20	3.39	5.77
THP02730	N	MRHW	2.92	3.1	6.10
THP02731	N	MRHW	2.94	3.12	6.06
THP02732	POIKPYX	MRHW	3.15	3.45	8.94
THP02733	POIKPYX	MRHW	3.21	3.43	6.58
THP02734	POIKPYX	MRHW	3.25	3.48	6.85
THP02735	POIKPYX	MRHW	3.21	3.43	6.50
THP02736	POIKPYX	MRHW	3.24	3.46	6.58
THP02737	POIKPYX	MRHW	3.22	3.44	6.58
THP02738	PP	MRHW	3.22	3.45	6.88
THP02739	PP	MRHW	3.18	3.44	7.71
THP02740	PP	MRHW	3.23	3.5	7.95
THP02741	PP	MRHW	3.24	3.48	7.06
THP02742	PP	MRHW	3.23	3.47	7.18
THP02743	N	MRHW	2.92	3	2.64
THP02744	N	MRHW	2.95	3.02	2.29
THP02745	POIKPYX	MRHW	3.23	3.29	1.75
THP02746	POIKPYX	MRHW	3.21	3.33	3.66
THP02747	POIKPYX	MRHW	3.23	3.32	2.80
THP02748	N	MRHW	2.96	3.07	3.69
THP02749	N	MRHW	2.95	3.36	12.86
THP02750	POIKFPYX	MRHW	3.20	3.37	5.29
THP02751	POIKFPYX	MRHW	3.24	3.38	4.32
THP02752	POIKFPYX	MRHW	3.24	3.48	7.08
THP02753	N	MRHW	2.92	3.04	4.05
THP02754	N	MRHW	2.92	3.06	4.56
THP02755	PP	MRHW	3.18	3.3	3.55
THP02756	PEGFPYX	MRHW	3.23	3.39	4.91

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02757	PEGFPYX	MRHW	3.23	3.36	3.82
THP02758	N	MRHW	2.93	3.06	4.44
THP02759	N	MRHW	2.95	3.1	5.05
THP02760	N	MRHW	2.80	3.04	8.23
THP02761	N	MRHW	2.84	3.08	8.09
THP02762	N	MRHW	2.96	3.06	3.41
THP02763	N	MRHW	2.96	3.07	3.64
THP02764	POIKPYX	MRHW	3.18	3.27	2.68
THP02765	POIKPYX	MRHW	3.24	3.38	4.11
THP02766	POIKPYX	MRHW	3.25	3.39	4.31
THP02767	N	MRHW	2.94	3.07	4.29
THP02768	N	MRHW	2.95	3.11	5.19
THP02769	POIKPYX	MRHW	3.09	3.25	5.16
THP02770	POIKPYX	MRHW	3.23	3.42	5.84
THP02771	POIKPYX	MRHW	3.25	3.42	5.10
THP02772	POIKPYX	MRHW	3.28	3.46	5.34
THP02773	POIKPYX	MRHW	3.26	3.44	5.39
THP02774	N	MRHW	2.97	3.135	5.49
THP02775	N	MRHW	3.02	3.21	6.02
THP02776	POIKPYX	MRHW	3.24	3.43	5.67
THP02777	POIKPYX	MRHW	3.24	3.46	6.46
THP02778	POIKPYX	MRHW	3.30	3.49	5.61
THP02779	N	MRHW	2.95	3.12	5.49
THP02780	N	MRHW	2.97	3.17	6.63
THP02781	POIKPYX	MRHW	3.17	3.39	6.58
THP02782	POIKPYX	MRHW	3.19	3.45	7.96
THP02783	POIKPYX	MRHW	3.25	3.3	1.51
THP02784	N	MRHW	2.95	3.05	3.39
THP02785	N	MRHW	2.95	3.07	4.01
THP02786	POIKFPYX	MRHW	3.11	3.29	5.50
THP02787	POIKFPYX	MRHW	3.24	3.34	3.12
THP02788	N	MRHW	3.16	3.2	1.22
THP02789	POIKPYX	MRHW	3.22	3.43	6.22
THP02790	N	MRHW	3.01	3.15	4.42
THP02791	N	MRHW	3.02	3.22	6.46
THP02792	POIKPYX	MRHW	3.19	3.41	6.78
THP02793	POIKPYX	MRHW	3.24	3.47	6.78
THP02794	POIKPYX	MRHW	3.27	3.53	7.78
THP02795	N	MRHW	2.96	3.09	4.19
THP02796	N	MRHW	2.95	3.095	4.87
THP02797	POIKPYX	MRHW	3.22	3.36	4.16
THP02798	POIKPYX	MRHW	3.25	3.45	5.96
THP02799	POIKPYX	MRHW	3.27	3.44	5.21
THP02800	N	MRHW	2.95	3.17	7.26
THP02801	N	MRHW	2.97	3.2	7.44
THP02802	POIKPYX	MRHW	3.08	3.38	9.20
THP02803	POIKPYX	MRHW	3.18	3.49	9.28
THP02804	POIKPYX	MRHW	3.24	3.5	7.63
THP02805	N	MRHW	2.91	3.09	5.88
THP02806	N	MRHW	2.94	3.1	5.22
THP02807	POIKFPYX	MRHW	3.13	3.27	4.44
THP02808	POIKFPYX	MRHW	3.24	3.43	5.69
THP02809	POIKFPYX	MRHW	3.26	3.43	5.23

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02810	MH4	MRHW	2.75	2.83	3.02
THP02811	MH4	MRHW	2.74	2.83	3.16
THP02812	N	MRHW	2.74	2.81	2.58
THP02813	N	MRHW	2.79	2.89	3.63
THP02814	POIKPYX	MRHW	2.82	2.86	1.54
THP02815	N	MRHW	2.93	3.05	3.98
THP02816	N	MRHW	2.95	3.07	4.06
THP02817	PEGFPYX	MRHW	3.03	3.21	5.75
THP02818	POIKPYX	MRHW	3.26	3.39	3.96
THP02819	POIKPYX	MRHW	3.25	3.39	4.20
THP02820	N	MRHW	2.94	3.06	4.00
THP02821	N	MRHW	2.93	3.09	5.19
THP02822	POIKPYX	MRHW	3.16	3.3	4.44
THP02823	POIKPYX	MRHW	3.20	3.4	5.93
THP02824	POIKPYX	MRHW	3.26	3.42	4.92
THP02825	N	MRHW	2.93	3.18	8.13
THP02826	N	MRHW	2.97	3.18	6.89
THP02827	POIKPYX	MRHW	3.01	3.235	7.20
THP02828	POIKPYX	MRHW	3.06	3.28	6.96
THP02829	POIKPYX	MRHW	3.09	3.33	7.64
THP02830	POIKPYX	MRHW	3.11	3.32	6.46
THP02831	POIKPYX	MRHW	3.13	3.35	6.65
THP02832	POIKPYX	MRHW	3.17	3.36	5.85
THP02833	POIKPYX	MRHW	3.11	3.33	6.71
THP02834	POIKPYX	MRHW	3.07	3.285	6.65
THP02835	N	MRHW	2.95	3.02	2.41
THP02836	N	MRHW	2.99	3.08	2.87
THP02837	POIKPYX	MRHW	3.17	3.3	4.18
THP02838	POIKPYX	MRHW	3.26	3.35	2.72
THP02839	POIKPYX	MRHW	3.27	3.36	2.60
THP02840	POIKPYX	MRHW	3.29	3.42	3.80
THP02841	N	MRHW	2.97	3.02	1.55
THP02842	POIKPYX	MRHW	3.05	3.12	2.16
THP02843	POIKPYX	MRHW	3.22	3.3	2.47
THP02844	POIKPYX	MRHW	3.25	3.34	2.62
THP02845	N	MRHW	2.95	3.14	6.10
THP02846	N	MRHW	2.97	3.12	4.77
THP02847	N	MRHW	3.02	3.2	5.82
THP02848	N	MRHW	3.06	3.25	6.18
THP02849	N	MRHW	3.01	3.25	7.55
THP02850	POIKAN	MRHW	3.02	3.13	3.55
THP02851	POIKAN	MRHW	2.79	2.97	6.19
THP02852	PYX	MRHW	3.14	3.39	7.66
THP02853	N	MRHW	2.94	3.2	8.31
THP02854	N	MRHW	3.01	3.22	6.68
THP02855	N	MRHW	3.09	3.33	7.46
THP02856	N	MRHW	3.09	3.32	7.11
THP02857	FPYX	MRHW	3.17	3.63	13.47
THP02858	N	MRHW	2.86	3.04	6.20
THP02859	N	MRHW	2.75	2.94	6.66
THP02860	N	MRHW	2.79	3.02	7.76
THP02861	PYX	MRHW	2.72	2.92	7.20
THP02862	PYX	MRHW	2.93	3.06	4.39

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02863	PYX	MRHW	2.83	3.19	11.86
THP02864	PYX	MRHW	3.11	3.33	6.98
THP02865	PYX	MRHW	3.14	3.38	7.23
THP02866	PYX	MRHW	3.23	3.43	6.01
THP02867	PYX	MRHW	3.23	3.47	7.18
THP02868	PYX	MRHW	3.21	3.44	7.07
THP02869	PYX	MRHW	3.24	3.42	5.46
THP02870	PYX	MRHW	3.23	3.45	6.57
THP02871	PYX	MRHW	3.09	3.3	6.64
THP02872	N	MRHW	3.04	3.25	6.83
THP02873	N	MRHW	3.08	3.3	6.77
THP02874	POIKPYX	MRHW	3.27	3.49	6.55
THP02875	POIKPYX	MRHW	3.20	3.51	9.33
THP02876	N	MRHW	2.99	3.1	3.51
THP02877	N	MRHW	3.06	3.2	4.53
THP02878	POIKPYX	MRHW	3.17	3.4	6.95
THP02879	POIKPYX	MRHW	3.27	3.455	5.40
THP02880	POIKPYX	MRHW	3.25	3.44	5.76
THP02881	N	MRHW	2.93	2.99	2.19
THP02882	N PYX	MRHW	2.98	3.16	5.76
THP02883	PYX	MRHW	3.27	3.33	1.87
THP02884	PYX	MRHW	3.19	3.33	4.34
THP02885	PYX	MRHW	2.82	2.86	1.46
THP02886	PYX	MRHW	2.92	2.97	1.84
THP02887	PYX	MRHW	3.06	3.13	2.18
THP02888	PYX	MRHW	3.28	3.285	0.00
THP02889	PYX	MRHW	3.42	3.32	-2.92
THP02890	PYX	MRHW	3.30	3.32	0.59
THP02891	N	MRHW	2.88	2.975	3.28
THP02892	N	MRHW	2.98	3.02	1.46
THP02893	FPYX	MRHW	3.15	3.35	6.18
THP02894	FPYX	MRHW	3.23	3.41	5.44
THP02895	FPYX	MRHW	3.26	3.56	8.89
THP02896	FPYX	MRHW	3.23	3.48	7.54
THP02897	N	MRHW	2.75	2.94	6.53
THP02898	N	MRHW	2.83	2.97	4.85
THP02899	N	MRHW	2.92	3	2.86
THP02900	N	MRHW	2.96	3.04	2.82
THP02901	N	MRHW	2.90	3.08	5.89
THP02902	PYX	MRHW	3.23	3.3	2.17
THP02903	PYX	MRHW	3.24	3.27	0.79
THP02904	PYX	MRHW	2.93	3.095	5.41
THP02905	N	MRHW	2.95	3.14	6.15
THP02906	N	MRHW	3.01	3.22	6.63
THP02907	PYX	MRHW	3.12	3.49	11.10
THP02908	PYX	MRHW	3.19	3.39	6.14
THP02909	N	MRHW	2.84	3.03	6.54
THP02910	N	MRHW	2.89	3.13	8.02
THP02911	N	MRHW	2.94	3.17	7.37
THP02912	N	MRHW	3.00	3.2	6.40
THP02913	PYX	MRHW	3.06	3.2	4.59
THP02914	PYX	MRHW	3.10	3.34	7.52
THP02915	PYX	MRHW	3.26	3.47	6.22

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02916	N	MRHW	2.92	2.98	2.00
THP02917	N	MRHW	2.93	2.96	1.02
THP02918	N	MRHW	2.96	2.985	0.86
THP02919	PYX	MRHW	3.00	3.04	1.49
THP02920	PYX	MRHW	3.17	3.16	-0.21
THP02921	PYX	MRHW	3.04	3.22	5.80
THP02922	MR	MRPH	3.23	3.435	6.22
THP02923	PHOTOLE	MRPH	3.09	3.28	6.09
THP02924	PHOTOLE	MRPH	3.20	3.41	6.41
THP02925	PHOTOLE	MRPH	3.19	3.36	5.24
THP02926	PHOTOLE	MRPH	3.01	3.16	4.93
THP02927	PHOTOLE	MRPH	2.98	2.83	-5.24
THP02928	PHOTOLE	MRPH	2.69	2.8	3.97
THP02929	PHOTOLE	MRPH	2.79	3.02	7.86
THP02930	PHOTOLE	MRPH	3.21	3.42	6.48
THP02931	PHOTOLE	MRPH	3.31	3.46	4.48
THP02932	PHOTOLE	MRPH	3.13	3.36	7.21
THP02933	PHOTOLE	MRPH	2.95	3.26	10.01
THP02934	PHOTOLE	MRPH	3.26	3.35	2.84
THP02935	PHOTOLE	MRPH	3.18	3.27	2.77
THP02936	PHOTOLE	MRPH	3.18	3.11	-2.17
THP02937	PHOTOLE	MRPH	2.97	3.32	11.23
THP02938	PHOTOLE	MRPH	3.05	3.37	10.04
THP02939	PHOTOLE	MRPH	2.88	3.08	6.71
THP02940	PHOTOLE	MRPH	2.82	3.08	8.80
THP02941	PHOTOLE	MRPH	2.98	3.13	4.98
THP02942	PHOTOLE	MRPH	3.01	3.17	5.25
THP02943	PHOTOLE	MRPH	2.77	2.86	3.30
THP02944	PHOTOLE	MRPH	2.75	2.9	5.35
THP02945	PHOTOLE	MRPH	2.87	2.86	-0.29
THP02946	PHOTOLE	MRPH	2.76	2.84	2.98
THP02947	PHOTOLE	MRPH	2.74	2.84	3.60
THP02948	PHOTOLE	MRPH	2.72	2.82	3.45
THP02949	PHOTOLE	MRPH	2.72	2.87	5.37
THP02950	PHOTOLE	MRPH	2.85	2.94	3.21
THP02951	PHOTOLE	MRPH	3.04	3.18	4.52
THP02952	PHOTOLE	MRPH	2.95	3.19	7.97
THP02953	PHOTOLE	MRPH	3.17	3.36	5.69
THP02954	PHOTOLE	MRPH	3.21	3.41	6.08
THP02955	PHOTOLE	MRPH	3.24	3.43	5.76
THP02956	PHOTOLE	MRPH	3.24	3.41	5.07
THP02957	PHOTOLE	MRPH	3.28	3.3	0.57
THP02958	PHOTOLE	MRPH	2.72	2.84	4.38
THP02959	PHOTOLE	MRPH	2.76	2.865	3.70
THP02960	PHOTOLE	MRPH	2.68	2.82	5.05
THP02961	PHOTOLE	MRPH	2.92	3.07	5.07
THP02962	PHOTOLE	MRPH	2.62	2.82	7.37
THP02963	PHOTOLE	MRPH	2.62	2.79	6.21
THP02964	PHOTOLE	MRPH	3.14	3.32	5.43
THP02965	PHOTOLE	MRPH	3.04	3.34	9.50
THP02966	PHOTOLE	MRPH	3.10	3.25	4.65
THP02967	PHOTOLE	MRPH	3.14	3.39	7.79
THP02968	PHOTOLE	MRPH	3.19	3.35	5.00

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP02969	PHOTOLE	MRPH	3.22	3.44	6.70
THP02970	PHOTOLE	MRPH	3.22	3.43	6.32
THP02971	PHOTOLE	MRPH	3.19	3.43	7.10
THP02972	PHOTOLE	MRPH	3.25	3.44	5.69
THP02973	PHOTOLE	MRPH	3.21	3.4	5.60
THP02974	PHOTOLE	MRPH	3.13	3.4	8.41
THP02975	PHOTOLE	MRPH	3.17	3.36	5.84
THP02976	PHOTOLE	MRPH	3.11	3.365	8.00
THP02977	PHOTOLE	MRPH	3.27	3.42	4.61
THP02978	PHOTOLE	MRPH	3.22	3.4	5.49
THP02979	PHOTOLE	MRPH	3.23	3.42	5.57
THP02980	PHOTOLE	MRPH	3.26	3.365	3.31
THP02981	PHOTOLE	MRPH	3.27	3.41	4.32
THP02982	PHOTOLE	MRPH	3.05	3.31	8.12
THP02983	PHOTOLE	MRPH	2.92	2.995	2.64
THP02984	PEGFPYX	PH	3.28	3.48	6.02
THP02985	N	PH	2.92	3.07	4.91
THP02986	N	PH	2.92	3.09	5.77
THP02987	POIKPYX	PH	2.94	3.06	4.13
THP02988	POIKPYX	PH	2.87	3.1	7.64
THP02989	POIKPYX	PH	3.01	3.15	4.41
THP02990	POIKPYX	PH	3.04	3.2	5.03
THP02991	PP	PH	3.09	3.25	4.97
THP02992	PP	PH	3.03	3.27	7.77
THP02993	PP	PH	3.13	3.28	4.77
THP02994	PP	PH	3.14	3.33	5.77
THP02995	PP	PH	3.15	3.32	5.34
THP02996	PP	PH	3.10	3.24	4.56
THP02997	PP	PH	3.05	3.22	5.29
THP02998	PP	PH	3.16	3.28	3.70
THP02999	PP	PH	3.24	3.4	4.89
THP03000	LN	PH	2.81	2.94	4.63
THP03001	PP	PH	3.25	3.39	4.07
THP03002	PP	PH	3.17	3.4	7.08
THP03003	PP	PH	3.23	3.39	4.90
THP03004	PP	PH	3.24	3.39	4.41
THP03005	PP	PH	3.22	3.39	5.06
THP03006	PP	PH	3.22	3.38	4.69
THP03007	PP	PH	3.22	3.38	4.76
THP03008	PP	PH	3.23	3.39	4.82
THP03009	PP	PH	3.22	3.38	4.72
THP03010	PP	PH	3.22	3.32	3.06
THP03011	PP	PH	3.23	3.36	4.03
THP03012	PP	PH	3.23	3.36	4.02
THP03013	PP	PH	3.22	3.35	3.81
THP03014	PP	PH	3.29	3.36	2.18
THP03015	PP	PH	3.24	3.31	2.07
THP03016	MOT	PH	2.74	2.83	3.10
THP03017	POIKFPYX	PH	3.24	3.39	4.39
THP03018	UG 1	UG1	2.72	2.96	8.55
THP03019	UG1	UG1	2.78	2.85	2.60
THP03020	UG 1	UG1	2.78	2.855	2.82
THP03021	UG 1	UG1	3.15	3.21	1.90

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03022	UG 1	UG1	2.75	3.08	11.32
THP03023	UG 1	UG1	3.05	3.04	-0.31
THP03024	UG 1	UG1	2.79	2.82	0.91
THP03025	CR	UG2	4.09	4.4	7.32
THP03026	CR	UG2	4.16	4.46	7.06
THP03027	CR	UG2	4.18	4.34	3.69
THP03028	CR	UG2	3.73	3.96	5.96
THP03029	CR	UG2	3.33	3.78	12.77
THP03030	CR	UG2	4.07	4.27	4.87
THP03031	CR	UG2	3.62	4.02	10.57
THP03032	CR	UG2	3.91	4.21	7.31
THP03033	CR	UG2	4.07	4.32	5.86
THP03034	CR	UG2	3.98	4.27	7.04
THP03035	CR	UG2	3.82	4.02	4.99
THP03036	CR	UG2	4.05	4.01	-1.03
THP03037	CR	UG2	4.00	4.31	7.46
THP03038	CR	UG2	4.14	4.39	5.76
THP03039	CR	UG2	3.77	4.04	6.99
THP03040	CR	UG2	3.96	4.25	7.06
THP03041	CR	UG2	4.04	4.27	5.46
THP03042	CR	UG2	3.96	4.2	5.91
THP03043	CR	UG2	3.82	4.04	5.55
THP03044	CR	UG2	3.85	4.14	7.38
THP03045	CR	UG2	4.01	4.14	3.31
THP03046	CR	UG2	4.04	4.09	1.17
THP03047	CR	UG2	3.59	3.61	0.53
THP03048	CR	UG2	4.06	3.86	-5.05
THP03049	CR	UG2	4.14	4.21	1.68
THP03050	CR	UG2	4.00	4.24	5.92
THP03051	CR	UG2	4.16	4.02	-3.44
THP03052	CR	UG2	3.70	4.05	9.00
THP03053	CR	UG2	4.04	4.39	8.37
THP03054	CR	UG2	4.04	4.33	7.04
THP03055	CR	UG2	4.03	4.35	7.75
THP03056	CR	UG2	3.97	4.05	1.89
THP03057	CR	UG2	3.74	4.09	9.04
THP03058	CR	UG2	4.01	4.33	7.66
THP03059	CR	UG2	4.02	4.4	8.94
THP03060	CR	UG2	4.04	4.39	8.32
THP03061	CR	UG2	3.89	4.13	6.00
THP03062	CR	UG2	3.73	4.13	10.25
THP03063	CR	UG2	4.01	4.33	7.73
THP03064	CR	UG2	4.09	4.39	7.17
THP03065	CR	UG2	4.09	4.43	8.04
THP03066	CR	UG2	3.86	4.12	6.51
THP03067	CR	UG2	4.08	4.24	3.92
THP03068	CR	UG2	3.98	4.3	7.84
THP03069	CR	UG2	4.07	4.34	6.36
THP03070	CR	UG2	3.98	4.24	6.43
THP03071	CR	UG2	4.06	4.19	3.11
THP03072	CR	UG2	3.99	4.22	5.61
THP03073	CR	UG2	4.07	4.33	6.13
THP03074	CR	UG2	4.00	4.24	5.85

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03075	CR	UG2	4.01	4.25	5.85
THP03076	CR	UG2	4.00	4.43	10.23
THP03077	CR	UG2	4.04	4.4	8.58
THP03078	CR	UG2	3.74	4.15	10.35
THP03079	CR	UG2	3.93	4.25	7.81
THP03080	CR	UG2	3.92	4.25	8.18
THP03081	CR	UG2	4.06	4.41	8.18
THP03082	CR	UG2	4.06	4.16	2.31
THP03083	CR	UG2	3.96	4.28	7.86
THP03084	CR	UG2	3.97	4.35	9.22
THP03085	CR	UG2	4.05	4.46	9.55
THP03086	CR	UG2	4.02	4.08	1.55
THP03087	CR	UG2	3.89	4.025	3.39
THP03088	CR	UG2	4.02	4.21	4.55
THP03089	CR	UG2	4.04	4.2	3.90
THP03090	CR	UG2	4.00	4.11	2.79
THP03091	CR	UG2	3.78	3.91	3.36
THP03092	CR	UG2	4.12	3.99	-3.09
THP03093	CR	UG2	4.09	4.23	3.43
THP03094	CR	UG2	4.06	4.22	3.82
THP03095	CR	UG2	4.00	4.12	3.01
THP03096	CR	UG2	3.37	3.85	13.40
THP03097	CR	UG2	3.89	3.985	2.48
THP03098	CR	UG2	4.04	4.15	2.69
THP03099	CR	UG2	4.15	4.2	1.14
THP03100	CR	UG2	4.03	4.1	1.73
THP03101	CR	UG2	3.67	3.94	7.16
THP03102	CR	UG2	3.66	3.94	7.35
THP03103	CR	UG2	4.07	4.28	5.11
THP03104	CR	UG2	4.15	4.48	7.55
THP03105	CR	UG2	3.73	4.08	8.96
THP03106	CR	UG2	3.82	4.07	6.46
THP03107	CR	UG2	4.10	4.36	6.17
THP03108	CR	UG2	4.20	4.37	3.99
THP03109	CR	UG2	4.02	4.03	0.29
THP03110	CR	UG2	3.91	3.93	0.59
THP03111	CR	UG2	4.01	4.27	6.31
THP03112	CR	UG2	3.79	4.32	13.05
THP03113	CR	UG2	3.76	3.95	4.85
THP03114	CR	UG2	3.77	3.98	5.36
THP03115	CR	UG2	4.07	4.26	4.46
THP03116	CR	UG2	4.15	4.23	2.00
THP03117	CR	UG2	4.00	4.08	2.03
THP03118	CR	UG2	4.01	4.22	5.18
THP03119	CR	UG2	4.02	4.21	4.64
THP03120	CR	UG2	3.94	3.99	1.17
THP03121	CR	UG2	3.76	3.93	4.47
THP03122	CR	UG2	4.01	4.19	4.44
THP03123	CR	UG2	4.03	4.22	4.60
THP03124	CR	UG2	4.03	4.22	4.49
THP03125	CR	UG2	3.61	3.78	4.52
THP03126	CR	UG2	3.76	3.955	5.03
THP03127	CR	UG2	4.02	4.18	4.01

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03128	CR	UG2	4.03	4.22	4.55
THP03129	CR	UG2	4.10	4.25	3.69
THP03130	CR	UG2	3.84	4.01	4.42
THP03131	CR	UG2	4.03	4.09	1.44
THP03132	CR	UG2	4.06	4.31	6.08
THP03133	CR	UG2	4.12	4.41	6.74
THP03134	CR	UG2	4.18	4.19	0.28
THP03135	CR	UG2	3.72	3.99	7.14
THP03136	CR	UG2	3.97	4.07	2.47
THP03137	CR	UG2	4.08	4.305	5.44
THP03138	CR	UG2	4.17	4.515	8.04
THP03139	CR	UG2	4.26	4.43	3.89
THP03140	CR	UG2	3.74	3.98	6.17
THP03141	CR	UG2	3.73	4.04	7.93
THP03142	CR	UG2	4.05	4.36	7.43
THP03143	CR	UG2	4.04	4.4	8.54
THP03144	CR	UG2	4.07	4.43	8.39
THP03145	CR	UG2	4.05	4.34	7.00
THP03146	CR	UG2	3.66	3.9	6.23
THP03147	CR	UG2	3.75	3.91	4.27
THP03148	CR	UG2	4.02	4.34	7.65
THP03149	CR	UG2	4.06	4.35	6.94
THP03150	CR	UG2	4.06	4.4	8.11
THP03151	CR	UG2	3.68	4.06	9.85
THP03152	CR	UG2	3.82	3.97	3.95
THP03153	CR	UG2	4.02	4.38	8.49
THP03154	CR	UG2	4.05	4.26	5.07
THP03155	CR	UG2	3.93	4.44	12.13
THP03156	CR	UG2	3.82	4.15	8.24
THP03157	CR	UG2	4.00	4.14	3.53
THP03158	CR	UG2	4.00	4.4	9.52
THP03159	CR	UG2	4.07	4.39	7.58
THP03160	CR	UG2	4.03	4.22	4.53
THP03161	CR	UG2	4.03	4.26	5.60
THP03162	CR	UG2	4.09	4.43	8.01
THP03163	CR	UG2	4.04	4.435	9.31
THP03164	CR	UG2	3.99	4.25	6.36
THP03165	CR	UG2	3.81	4.13	8.17
THP03166	CR	UG2	4.11	4.44	7.62
THP03167	CR	UG2	4.05	4.39	8.06
THP03168	CR	UG2	4.12	4.5	8.92
THP03169	CR	UG2	3.93	4.25	7.71
THP03170	CR	UG2	3.78	3.96	4.73
THP03171	CR	UG2	4.03	4.06	0.77
THP03172	CR	UG2	4.13	4.27	3.22
THP03173	CR	UG2	4.09	4.2	2.64
THP03174	CR	UG2	4.00	4.16	3.92
THP03175	CR	UG2	3.62	3.89	7.30
THP03176	CR	UG2	4.07	4.14	1.63
THP03177	CR	UG2	4.03	4.1	1.65
THP03178	CR	UG2	4.39	4.4	0.12
THP03179	CR	UG2	3.87	3.95	1.93
THP03180	CR	UG2	4.12	3.99	-3.16

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03181	CR	UG2	4.16	4.34	4.17
THP03182	CR	UG2	3.80	4.035	6.02
THP03183	CR	UG2	3.66	3.79	3.60
THP03184	CR	UG2	3.97	4.14	4.21
THP03185	CR	UG2	3.90	4.06	4.09
THP03186	CR	UG2	3.88	4.145	6.52
THP03187	CR	UG2	3.87	4.08	5.35
THP03188	CR	UG2	3.70	3.66	-1.08
THP03189	CR	UG2	3.94	4.13	4.73
THP03190	CR	UG2	3.77	4.08	7.98
THP03191	CR	UG2	3.98	4.12	3.50
THP03192	CR	UG2	4.03	3.84	-4.95
THP03193	CR	UG2	3.99	3.92	-1.85
THP03194	CR	UG2	4.02	4.27	6.14
THP03195	CR	UG2	4.00	4.22	5.30
THP03196	CR	UG2	3.59	3.91	8.41
THP03197	CR	UG2	3.66	4.01	9.06
THP03198	CR	UG2	3.86	4.205	8.47
THP03199	CR	UG2	4.13	4.16	0.70
THP03200	CR	UG2	3.41	3.62	6.04
THP03201	CR	UG2	4.12	4.15	0.69
THP03202	CR	UG2	4.11	4.29	4.29
THP03203	CR	UG2	4.13	4.33	4.75
THP03204	CR	UG2	4.07	4.27	4.89
THP03205	CR	UG2	3.64	3.89	6.74
THP03206	CR	UG2	4.08	4.11	0.63
THP03207	CR	UG2	4.05	4.27	5.37
THP03208	CR	UG2	4.23	4.38	3.54
THP03209	CR	UG2	4.08	4.27	4.59
THP03210	CR	UG2	3.83	3.88	1.29
THP03211	CR	UG2	4.07	4.32	5.85
THP03212	CR	UG2	4.29	4.37	1.75
THP03213	CR	UG2	4.12	4.23	2.71
THP03214	CR	UG2	3.55	3.79	6.56
THP03215	CR	UG2	4.00	4.19	4.76
THP03216	CR	UG2	4.06	4.38	7.69
THP03217	CR	UG2	4.12	4.46	7.90
THP03218	CR	UG2	4.11	4.38	6.30
THP03219	CR	UG2	4.04	4.06	0.39
THP03220	CR	UG2	3.94	4.15	5.20
THP03221	CR	UG2	4.11	4.395	6.67
THP03222	CR	UG2	4.09	4.27	4.20
THP03223	CR	UG2	4.36	4.36	-0.08
THP03224	CR	UG2	3.83	4.08	6.21
THP03225	CR	UG2	3.98	4.07	2.32
THP03226	CR	UG2	4.02	4.17	3.65
THP03227	CR	UG2	4.09	4.28	4.65
THP03228	CR	UG2	4.17	4.21	1.00
THP03229	CR	UG2	4.03	4.05	0.59
THP03230	CR	UG2	4.05	3.96	-2.25
THP03231	CR	UG2	4.04	4.23	4.71
THP03232	CR	UG2	3.87	4.11	5.92
THP03233	CR	UG2	3.84	3.91	1.80

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03234	CR	UG2	3.78	4.02	6.16
THP03235	CR	UG2	3.85	3.91	1.46
THP03236	CR	UG2	4.10	4.24	3.46
THP03237	CR	UG2	4.06	4.235	4.28
THP03238	CR	UG2	3.80	3.96	4.20
THP03239	CR	UG2	4.09	3.98	-2.82
THP03240	CR	UG2	3.80	4.1	7.59
THP03241	CR	UG2	3.32	3.73	11.68
THP03242	CR	UG2	3.93	4.32	9.36
THP03243	CR	UG2	3.72	3.97	6.63
THP03244	CR	UG2	3.77	3.88	2.92
THP03245	CR	UG2	4.02	4.24	5.35
THP03246	CR	UG2	4.22	4.45	5.38
THP03247	CR	UG2	4.20	4.42	5.18
THP03248	CR	UG2	4.11	4.3	4.49
THP03249	CR	UG2	3.44	3.77	9.19
THP03250	CR	UG2	3.19	3.33	4.40
THP03251	CR	UG2	3.65	3.9	6.71
THP03252	CR	UG2	3.95	4.09	3.48
THP03253	CR	UG2	3.93	4.11	4.55
THP03254	CR	UG2	4.13	4.18	1.19
THP03255	CR	UG2	3.96	4.05	2.16
THP03256	CR	UG2	3.80	3.97	4.43
THP03257	CR	UG2	4.09	4.1	0.28
THP03258	CR	UG2	4.12	4.41	6.84
THP03259	CR	UG2	4.16	4.39	5.50
THP03260	CR	UG2	4.01	4.13	2.89
THP03261	CR	UG2	3.95	4.07	2.98
THP03262	CR	UG2	4.01	4.29	6.64
THP03263	CR	UG2	4.08	4.36	6.63
THP03264	CR	UG2	3.92	4.08	4.05
THP03265	CR	UG2	4.11	4.3	4.56
THP03266	CR	UG2	4.09	4.29	4.86
THP03267	CR	UG2	4.11	4.27	3.93
THP03268	CR	UG2	3.99	4.07	2.01
THP03269	CR	UG2	3.89	4.08	4.76
THP03270	CR	UG2	4.18	4.17	-0.24
THP03271	CR	UG2	4.09	4.2	2.59
THP03272	CR	UG2	4.17	4.23	1.36
THP03273	CR	UG2	3.97	4.01	1.04
THP03274	CR	UG2	3.96	3.83	-3.38
THP03275	CR	UG2	4.10	4.04	-1.43
THP03276	CR	UG2	4.09	4.15	1.43
THP03277	CR	UG2	4.11	4.155	0.98
THP03278	CR	UG2	4.03	4.04	0.24
THP03279	CR	UG2	3.97	3.93	-1.12
THP03280	CR	UG2	3.91	3.93	0.44
THP03281	CR	UG2	4.12	4.15	0.78
THP03282	CR	UG2	3.91	3.94	0.77
THP03283	CR	UG2	4.02	3.96	-1.57
THP03284	CR	UG2	4.03	4.23	4.91
THP03285	CR	UG2	4.06	4.35	7.02
THP03286	CR	UG2	4.12	4.45	7.81

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03287	CR	UG2	3.55	3.92	9.86
THP03288	CR	UG2	3.65	3.84	5.02
THP03289	CR	UG2	3.98	4.03	1.18
THP03290	CR	UG2	3.98	4.025	1.05
THP03291	CR	UG2	3.49	3.54	1.37
THP03292	CR	UG2	3.81	3.69	-3.18
THP03293	CR	UG2	3.37	3.59	6.37
THP03294	CR	UG2	3.65	4.09	11.30
THP03295	CR	UG2	4.12	4.47	8.20
THP03296	CR	UG2	4.07	4.41	7.97
THP03297	CR	UG2	4.24	4.55	7.15
THP03298	CR	UG2	3.87	4.19	7.98
THP03299	CR	UG2	3.95	4.25	7.42
THP03300	CR	UG2	4.03	4.34	7.37
THP03301	CR	UG2	4.00	4.43	10.12
THP03302	CR	UG2	4.12	4.34	5.31
THP03303	CR	UG2	3.52	3.38	-3.94
THP03304	CR	UG2	3.75	4.19	11.21
THP03305	CR	UG2	4.09	4.51	9.78
THP03306	CR	UG2	4.12	4.58	10.51
THP03307	CR	UG2	4.24	4.23	-0.22
THP03308	CR	UG2	3.57	3.98	10.88
THP03309	CR	UG2	3.85	3.98	3.43
THP03310	CR	UG2	3.95	4.13	4.48
THP03311	CR	UG2	4.04	4.15	2.58
THP03312	CR	UG2	3.95	3.995	1.18
THP03313	CR	UG2	3.96	3.98	0.52
THP03314	CR	UG2	4.07	4.11	1.04
THP03315	CR	UG2	4.10	4.15	1.28
THP03316	CR	UG2	3.84	3.88	1.10
THP03317	CR	UG2	4.06	3.96	-2.47
THP03318	CR	UG2	4.08	4.07	-0.22
THP03319	CR	UG2	4.10	4.11	0.32
THP03320	CR	UG2	4.03	3.95	-1.97
THP03321	CR	UG2	4.03	3.94	-2.31
THP03322	CR	UG2	4.08	4.11	0.79
THP03323	CR	UG2	4.11	4.13	0.40
THP03324	CR	UG2	4.05	3.91	-3.47
THP03325	CR	UG2	3.42	3.75	9.07
THP03326	CR	UG2	4.15	4.32	4.02
THP03327	CR	UG2	4.08	4.26	4.42
THP03328	CR	UG2	4.09	4.34	5.82
THP03329	CR	UG2	3.86	3.97	2.78
THP03330	CR	UG2	3.98	4.2	5.29
THP03331	CR	UG2	3.77	4.23	11.45
THP03332	CR	UG2	3.86	4.36	12.28
THP03333	CR	UG2	3.56	3.95	10.29
THP03334	CR	UG2	3.82	3.91	2.40
THP03335	CR	UG2	3.97	4.25	6.76
THP03336	CR	UG2	4.09	4.34	5.86
THP03337	CR	UG2	3.96	4.12	3.84
THP03338	CR	UG2	3.58	3.8	5.90
THP03339	CR	UG2	3.78	3.9	3.00

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03340	CR	UG2	4.09	4.23	3.27
THP03341	CR	UG2	3.77	4.06	7.33
THP03342	CR	UG2	4.04	4.05	0.24
THP03343	CR	UG2	3.80	3.8	0.10
THP03344	CR	UG2	3.79	3.94	3.87
THP03345	CR	UG2	4.07	4.12	1.25
THP03346	CR	UG2	4.23	4.22	-0.24
THP03347	CR	UG2	4.19	4.17	-0.56
THP03348	CR	UG2	3.90	3.79	-2.96
THP03349	CR	UG2	3.83	3.92	2.21
THP03350	CR	UG2	4.04	4.08	0.87
THP03351	CR	UG2	4.15	4.15	0.09
THP03352	CR	UG2	4.16	3.935	-5.50
THP03353	CR	UG2	4.33	4.17	-3.75
THP03354	CR	UG2	4.35	4.35	-0.03
THP03355	CR	UG2	4.05	4.09	1.08
THP03356	CR	UG2	4.04	4.14	2.32
THP03357	CR	UG2	4.31	4.33	0.54
THP03358	CR	UG2	4.25	4.18	-1.60
THP03359	CR	UG2	4.11	4.03	-2.07
THP03360	CR	UG2	4.21	4.19	-0.57
THP03361	CR	UG2	4.11	3.97	-3.46
THP03362	CR	UG2	3.95	4.08	3.30
THP03363	CR	UG2	4.06	4.1	1.04
THP03364	CR	UG2	4.14	4.17	0.81
THP03365	CR	UG2	4.02	3.87	-3.77
THP03366	CR	UG2	4.20	4.36	3.77
THP03367	CR	UG2	4.20	4.36	3.77
THP03368	CR	UG2	4.13	4.22	2.27
THP03369	CR	UG2	4.13	4.22	2.27
THP03370	CR	UG2	4.06	4.08	0.38
THP03371	CR	UG2	4.06	4.08	0.38
THP03372	CR	UG2	4.17	4.08	-2.22
THP03373	CR	UG2	4.15	4.29	3.29
THP03374	CR	UG2	4.12	4.21	2.18
THP03375	CR	UG2	4.07	4.23	3.86
THP03376	CR	UG2	3.67	3.94	7.04
THP03377	CR	UG2	4.21	4.17	-1.02
THP03378	CR	UG2	4.18	4.4	5.02
THP03379	CR	UG2	4.20	4.33	2.97
THP03380	CR	UG2	3.84	4.21	9.07
THP03381	CR	UG2	3.68	4.21	13.53
THP03382	CR	UG2	3.93	4.41	11.41
THP03383	CR	UG2	4.12	4.545	9.93
THP03384	CR	UG2	3.73	4.15	10.67
THP03385	CR	UG2	4.03	4.26	5.55
THP03386	CR	UG2	3.49	3.8	8.57
THP03387	CR	UG2	4.07	4.36	6.81
THP03388	CR	UG2	4.11	4.4	6.76
THP03389	CR	UG2	3.99	3.91	-2.07
THP03390	CR	UG2	3.72	3.83	3.03
THP03391	CR	UG2	3.59	3.91	8.59
THP03392	CR	UG2	3.04	2.96	-2.61

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03393	CR	UG2	3.18	3.19	0.30
THP03394	CR	UG2	3.80	3.84	1.06
THP03395	CR	UG2	3.98	4.11	3.24
THP03396	CR	UG2	3.98	4.09	2.81
THP03397	CR	UG2	4.00	4.08	1.91
THP03398	CR	UG2	3.90	3.78	-3.15
THP03399	CR	UG2	3.86	3.84	-0.43
THP03400	CR	UG2	4.16	4.22	1.47
THP03401	CR	UG2	4.26	4.33	1.65
THP03402	CR	UG2	4.08	3.9	-4.39
THP03403	CR	UG2	4.04	3.94	-2.48
THP03404	CR	UG2	4.12	4.325	4.97
THP03405	CR	UG2	4.37	4.34	-0.74
THP03406	CR	UG2	4.00	3.84	-4.11
THP03407	CR	UG2	3.13	3.09	-1.22
THP03408	CR	UG2	4.13	3.99	-3.57
THP03409	CR	UG2	4.10	4.095	-0.16
THP03410	CR	UG2	4.25	4.3	1.13
THP03411	CR	UG2	3.79	3.815	0.60
THP03412	CR	UG2	4.12	3.98	-3.46
THP03413	CR	UG2	4.14	4.13	-0.28
THP03414	CR	UG2	4.21	4.24	0.81
THP03415	CR	UG2	4.06	3.88	-4.47
THP03416	CR	UG2	4.11	4.03	-1.90
THP03417	CR	UG2	4.12	4.18	1.47
THP03418	CR	UG2	4.18	4.18	0.03
THP03419	CR	UG2	4.10	3.92	-4.61
THP03420	CR	UG2	3.98	4.07	2.25
THP03421	CR	UG2	3.82	4.18	8.89
THP03422	CR	UG2	3.81	4.15	8.47
THP03423	CR	UG2	3.83	4.16	8.27
THP03424	CR	UG2	3.83	4	4.29
THP03425	CR	UG2	4.01	4.07	1.54
THP03426	CR	UG2	4.13	4.26	3.11
THP03427	CR	UG2	3.78	4.08	7.54
THP03428	CR	UG2	3.97	4.3	8.09
THP03429	CR	UG2	4.12	4.6	11.03
THP03430	CR	UG2	3.93	4.46	12.69
THP03431	CR	UG2	3.94	4.23	7.19
THP03432	CR	UG2	4.12	4.5	8.72
THP03433	CR	UG2	4.12	4.53	9.53
THP03434	CR	UG2	4.43	4.29	-3.21
THP03435	CR	UG2	3.87	4.32	10.94
THP03436	CR	UG2	4.19	4.69	11.22
THP03437	CR	UG2	3.94	4.31	8.97
THP03438	CR	UG2	3.67	4.27	15.09
THP03439	CR	UG2	4.13	4.62	11.13
THP03440	CR	UG2	4.09	4.36	6.40
THP03441	CR	UG2	4.08	4.49	9.46
THP03442	CR	UG2	4.14	4.6	10.51
THP03443	CR	UG2	4.09	4.59	11.60
THP03444	CR	UG2	3.99	4.16	4.20
THP03445	CR	UG2	4.07	4.37	7.11

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03446	CR	UG2	3.99	4.44	10.78
THP03447	CR	UG2	4.04	4.04	0.08
THP03448	CR	UG2	3.76	4.17	10.44
THP03449	CR	UG2	4.04	4.35	7.48
THP03450	CR	UG2	3.99	4.19	4.92
THP03451	CR	UG2	3.96	4.2	5.86
THP03452	CR	UG2	3.94	4.305	8.79
THP03453	CR	UG2	3.90	4.19	7.18
THP03454	CR	UG2	3.77	4.18	10.23
THP03455	CR	UG2	4.12	4.18	1.52
THP03456	CR	UG2	4.09	4.24	3.51
THP03457	CR	UG2	4.09	4.3	4.99
THP03458	CR	UG2	4.03	3.85	-4.56
THP03459	CR	UG2	3.99	4.09	2.54
THP03460	CR	UG2	4.15	4.29	3.32
THP03461	CR	UG2	4.08	4.26	4.20
THP03462	CR	UG2	4.12	4.26	3.45
THP03463	CR	UG2	4.16	4.3	3.28
THP03464	CR	UG2	4.11	4.29	4.36
THP03465	CR	UG2	3.51	3.875	9.98
THP03466	CR	UG2	3.86	4.19	8.14
THP03467	CR	UG2	4.02	4.5	11.29
THP03468	CR	UG2	3.98	4.52	12.81
THP03469	CR	UG2	3.75	4.26	12.69
THP03470	CR	UG2	3.98	4.43	10.70
THP03471	CR	UG2	4.07	4.52	10.36
THP03472	CR	UG2	4.06	4.31	5.88
THP03473	CR	UG2	3.80	4.27	11.78
THP03474	CR	UG2	3.92	4.46	12.94
THP03475	CR	UG2	4.08	4.49	9.60
THP03476	CR	UG2	3.90	4.36	11.05
THP03477	CR	UG2	3.72	3.93	5.61
THP03478	CR	UG2	4.09	4.18	2.21
THP03479	CR	UG2	4.16	4.55	9.04
THP03480	CR	UG2	3.52	4.02	13.35
THP03481	CR	UG2	3.53	3.99	12.33
THP03482	CR	UG2	3.83	4.28	11.09
THP03483	CR	UG2	4.15	4.6	10.27
THP03484	CR	UG2	3.94	4.11	4.20
THP03485	CR	UG2	3.43	3.92	13.22
THP03486	CR	UG2	3.98	4.36	9.12
THP03487	CR	UG2	4.16	4.61	10.20
THP03488	CR	UG2	3.76	4.17	10.44
THP03489	CR	UG2	4.16	4.35	4.48
THP03490	CR	UG2	4.23	4.74	11.43
THP03491	CR	UG2	4.18	4.55	8.59
THP03492	CR	UG2	4.08	4.68	13.68
THP03493	CR	UG2	4.22	4.81	12.98
THP03494	CR	UG2	4.09	4.62	12.20
THP03495	CR	UG2	4.16	4.6	9.98
THP03496	CR	UG2	4.30	4.79	10.79
THP03497	CR	UG2	4.16	4.77	13.64
THP03498	CR	UG2	4.22	4.62	8.94

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03499	CR	UG2	3.68	4.12	11.38
THP03500	CR	UG2	4.31	4.58	5.97
THP03501	CR	UG2	4.07	4.45	8.94
THP03502	CR	UG2	3.79	4.11	8.03
THP03503	CR	UG2	3.97	4.08	2.72
THP03504	CR	UG2	4.08	4.45	8.70
THP03505	CR	UG2	4.17	4.58	9.47
THP03506	CR	UG2	3.96	4.32	8.68
THP03507	CR	UG2	3.71	4.13	10.78
THP03508	CR	UG2	4.26	4.58	7.29
THP03509	CR	UG2	3.96	4.17	5.20
THP03510	CR	UG2	3.96	4.55	13.98
THP03511	CR	UG2	4.24	4.4	3.76
THP03512	CR	UG2	3.97	4.37	9.59
THP03513	CR	UG2	4.08	4.58	11.49
THP03514	CR	UG2	4.16	4.66	11.32
THP03515	CR	UG2	4.16	4.71	12.33
THP03516	CR	UG2	4.15	4.03	-3.03
THP03517	CR	UG2	3.39	3.62	6.58
THP03518	CR	UG2	3.61	3.76	4.14
THP03519	CR	UG2	3.99	4.35	8.74
THP03520	CR	UG2	3.65	3.83	4.75
THP03521	CR	UG2	4.10	4.38	6.56
THP03522	CR	UG2	4.04	4.52	11.23
THP03523	CR	UG2	4.11	4.61	11.44
THP03524	CR	UG2	4.17	4.5	7.53
THP03525	CR	UG2	4.00	3.88	-3.09
THP03526	CR	UG2	3.94	4.28	8.29
THP03527	CR	UG2	4.05	4.45	9.39
THP03528	CR	UG2	4.13	4.48	8.12
THP03529	CR	UG2	4.08	4.46	8.88
THP03530	CR	UG2	3.94	4.36	10.17
THP03531	CR	UG2	3.60	3.9	7.94
THP03532	CR	UG2	4.07	4.29	5.38
THP03533	CR	UG2	4.08	4.46	9.01
THP03534	CR	UG2	4.10	4.48	8.96
THP03535	CR	UG2	4.09	4.42	7.85
THP03536	CR	UG2	3.77	3.82	1.34
THP03537	CR	UG2	3.88	4.21	8.25
THP03538	CR	UG2	4.14	4.36	5.23
THP03539	CR	UG2	4.25	4.53	6.39
THP03540	CR	UG2	3.93	4.23	7.41
THP03541	CR	UG2	3.80	4.15	8.88
THP03542	CR	UG2	4.11	4.35	5.67
THP03543	CR	UG2	4.25	4.5	5.66
THP03544	CR	UG2	4.26	4.33	1.58
THP03545	CR	UG2	3.84	3.93	2.23
THP03546	CR	UG2	4.03	4.37	8.15
THP03547	CR	UG2	4.23	4.45	5.03
THP03548	CR	UG2	3.93	4.35	10.25
THP03549	CR	UG2	3.92	4.24	7.79
THP03550	CR	UG2	4.06	4.35	6.96
THP03551	CR	UG2	4.09	4.35	6.05

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03552	CR	UG2	4.03	4.2	4.06
THP03553	CR	UG2	3.74	4.03	7.36
THP03554	CR	UG2	4.16	4.24	1.94
THP03555	CR	UG2	4.08	4.34	6.16
THP03556	CR	UG2	4.06	4.36	7.21
THP03557	CR	UG2	3.79	4.18	9.74
THP03558	CR	UG2	3.68	4.02	8.71
THP03559	CR	UG2	3.82	4.3	11.89
THP03560	CR	UG2	4.31	4.38	1.71
THP03561	CR	UG2	4.32	4.41	2.06
THP03562	CR	UG2	4.26	4.1	-3.89
THP03563	CR	UG2	3.81	4.14	8.35
THP03564	CR	UG2	4.37	4.52	3.47
THP03565	CR	UG2	4.30	4.46	3.57
THP03566	CR	UG2	4.27	4.47	4.48
THP03567	CR	UG2	3.80	4.12	8.16
THP03568	CR	UG2	3.97	4.39	10.16
THP03569	CR	UG2	4.35	4.57	4.91
THP03570	CR	UG2	4.32	4.57	5.66
THP03571	CR	UG2	4.30	4.44	3.15
THP03572	CR	UG2	3.97	4.25	6.92
THP03573	CR	UG2	4.31	4.48	3.91
THP03574	CR	UG2	4.28	4.46	4.07
THP03575	CR	UG2	4.35	4.4	1.11
THP03576	CR	UG2	4.05	4.27	5.29
THP03577	CR	UG2	4.21	4.42	4.78
THP03578	CR	UG2	4.15	4.38	5.46
THP03579	CR	UG2	3.66	4.19	13.59
THP03580	CR	UG2	4.15	4.33	4.27
THP03581	CR	UG2	4.32	4.47	3.36
THP03582	CR	UG2	3.86	4.4	13.01
THP03583	CR	UG2	3.86	3.8	-1.45
THP03584	CR	UG2	4.10	4.22	2.83
THP03585	CR	UG2	4.18	4.52	7.73
THP03586	CR	UG2	4.22	4.22	0.04
THP03587	CR	UG2	3.80	3.96	4.00
THP03588	CR	UG2	4.17	4.48	7.23
THP03589	CR PP	UG2	3.41	3.42	0.35
THP03590	CR	UG2	4.11	4.49	8.90
THP03591	CR	UG2	4.18	4.58	9.08
THP03592	CR	UG2	4.17	4.35	4.17
THP03593	CR	UG2	3.97	4.28	7.54
THP03594	CR	UG2	3.87	4.2	8.28
THP03595	CR	UG2	4.23	4.425	4.46
THP03596	CR	UG2	4.01	4.3	7.01
THP03597	CR	UG2	2.71	2.85	5.12
THP03598	CR	UG2	2.83	2.82	-0.43
THP03599	CR	UG2	3.70	3.85	4.05
THP03600	CR	UG2	4.11	4.41	7.13
THP03601	CR	UG2	4.26	4.11	-3.53
THP03602	CR	UG2	4.25	4.26	0.15
THP03603	CR	UG2	2.76	2.83	2.60
THP03604	CR	UG2	3.82	3.93	2.81

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03605	CR	UG2	4.24	4.405	3.81
THP03606	CR	UG2	4.37	4.5	3.04
THP03607	CR	UG2	4.33	4.43	2.31
THP03608	CR	UG2	4.32	4.36	0.98
THP03609	CR	UG2	4.30	4.44	3.26
THP03610	CR	UG2	4.01	4.13	3.05
THP03611	CR	UG2	3.47	3.9	11.68
THP03612	CR	UG2	3.76	3.97	5.38
THP03613	CR	UG2	3.91	4.03	3.07
THP03614	CR	UG2	3.62	3.75	3.60
THP03615	CR	UG2	4.03	4.21	4.32
THP03616	CR	UG2	3.78	4.11	8.30
THP03617	CR	UG2	3.96	4.39	10.38
THP03618	CR	UG2	3.97	4.33	8.63
THP03619	CR	UG2	4.02	4.23	5.19
THP03620	CR	UG2	3.78	3.92	3.71
THP03621	CR	UG2	4.11	4.39	6.68
THP03622	CR	UG2	4.16	4.39	5.44
THP03623	CR	UG2	4.03	4.17	3.42
THP03624	CR	UG2	4.08	4.5	9.83
THP03625	CR	UG2	3.62	4.09	12.23
THP03626	CR	UG2	4.10	4.56	10.51
THP03627	CR	UG2	4.27	4.2	-1.66
THP03628	CR	UG2	4.29	4.4	2.56
THP03629	CR	UG2	4.18	4.43	5.70
THP03630	CR	UG2	3.39	3.76	10.39
THP03631	CR	UG2	3.64	3.78	3.78
THP03632	CR	UG2	4.04	4.21	4.19
THP03633	CR	UG2	3.95	4.35	9.76
THP03634	CR	UG2	4.23	4.18	-1.27
THP03635	CR	UG2	3.98	4.11	3.27
THP03636	CR	UG2	4.24	4.4	3.65
THP03637	CR	UG2	4.08	4.48	9.29
THP03638	CR	UG2	3.89	4.14	6.30
THP03639	CR	UG2	3.93	4.03	2.53
THP03640	CR	UG2	4.22	4.35	3.14
THP03641	CR	UG2	4.30	4.46	3.65
THP03642	CR	UG2	4.18	4.17	-0.22
THP03643	CR	UG2	4.04	4.16	2.85
THP03644	CR	UG2	4.09	4.395	7.09
THP03645	CR	UG2	4.12	4.435	7.43
THP03646	CR	UG2	4.16	4.46	6.94
THP03647	CR	UG2	3.76	4.11	8.81
THP03648	CR	UG2	3.65	4.05	10.34
THP03649	CR	UG2	4.09	4.09	-0.06
THP03650	CR	UG2	4.09	4.34	5.95
THP03651	CR	UG2	4.10	4.28	4.26
THP03652	CR	UG2	3.82	4.06	5.99
THP03653	CR	UG2	4.09	4.115	0.63
THP03654	CR	UG2	4.14	4.27	3.05
THP03655	CR	UG2	4.12	4.32	4.64
THP03656	CR	UG2	4.08	4.28	4.89
THP03657	CR	UG2	3.95	4.015	1.65

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03658	CR	UG2	4.09	4.24	3.61
THP03659	CR	UG2	3.90	4.28	9.29
THP03660	CR	UG2	3.98	4.33	8.44
THP03661	CR	UG2	4.09	4.27	4.28
THP03662	CR	UG2	3.70	3.98	7.20
THP03663	CR	UG2	4.07	4.25	4.21
THP03664	CR	UG2	4.20	4.34	3.24
THP03665	CR	UG2	3.97	4.37	9.70
THP03666	CR	UG2	4.00	4.29	7.06
THP03667	CR	UG2	3.48	3.99	13.68
THP03668	CR	UG2	4.02	4.01	-0.27
THP03669	CR	UG2	3.99	4.26	6.46
THP03670	CR	UG2	3.89	4.26	9.03
THP03671	CR	UG2	4.05	4.43	8.92
THP03672	CR	UG2	3.96	4.05	2.21
THP03673	CR	UG2	4.05	4.32	6.47
THP03674	CR	UG2	4.08	4.37	6.94
THP03675	CR	UG2	3.62	4.045	11.19
THP03676	UG 2	UG2	2.94	3.015	2.35
THP03677	CR	UG2	3.58	3.7	3.37
THP03678	CR	UG2	3.58	3.7	3.37
THP03679	CR	UG2	4.09	4.04	-1.16
THP03680	CR	UG2	4.09	4.04	-1.16
THP03681	CR	UG2	4.04	4.29	5.90
THP03682	CR	UG2	4.04	4.29	5.90
THP03683	CR	UG2	3.61	4.175	14.60
THP03684	CR	UG2	3.61	4.175	14.60
THP03685	CR	UG2	3.75	4.07	8.20
THP03686	CR	UG2	3.75	4.07	8.20
THP03687	CR	UG2	4.02	4.02	0.01
THP03688	CR	UG2	4.02	4.02	0.01
THP03689	CR	UG2	3.64	3.83	5.19
THP03690	CR	UG2	3.64	3.83	5.19
THP03691	CR	UG2	3.70	4.17	11.84
THP03692	CR	UG2	3.70	4.17	11.84
THP03693	CR	UG2	4.08	4.3	5.24
THP03694	CR	UG2	4.08	4.3	5.24
THP03695	CR	UG2	4.03	4.21	4.38
THP03696	CR	UG2	4.03	4.21	4.38
THP03697	CR	UG2	3.84	3.97	3.32
THP03698	CR	UG2	3.84	3.97	3.32
THP03699	CR	UG2	3.61	4.01	10.61
THP03700	CR	UG2	3.61	4.01	10.61
THP03701	CR	UG2	3.31	3.515	6.11
THP03702	CR	UG2	3.31	3.515	6.11
THP03703	CR	UG2	3.71	3.925	5.67
THP03704	CR	UG2	3.71	3.925	5.67
THP03705	CR	UG2	4.02	4.27	6.13
THP03706	CR	UG2	4.02	4.27	6.13
THP03707	CR	UG2	4.08	4.32	5.75
THP03708	CR	UG2	4.08	4.32	5.75
THP03709	CR	UG2	3.98	3.92	-1.54
THP03710	CR	UG2	3.98	3.92	-1.54

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03711	CR	UG2	3.86	4.14	7.03
THP03712	CR	UG2	4.00	4.34	8.11
THP03713	CR	UG2	4.09	4.45	8.44
THP03714	CR	UG2	3.87	4.04	4.19
THP03715	CR	UG2	4.16	4.31	3.54
THP03716	CR	UG2	4.21	4.51	6.81
THP03717	CR	UG2	4.21	4.46	5.79
THP03718	CR	UG2	4.27	4.38	2.64
THP03719	PEGFPYX	UG2	3.28	3.48	5.95
THP03720	CR	UG2	3.98	4.29	7.52
THP03721	CR	UG2	4.22	4.49	6.21
THP03722	CR	UG2	4.20	4.47	6.31
THP03723	CR	UG2	4.11	3.95	-3.98
THP03724	CR	UG2	3.91	3.96	1.27
THP03725	CR	UG2	3.98	4.14	3.94
THP03726	CR	UG2	4.11	4.21	2.40
THP03727	CR	UG2	4.20	4.33	3.12
THP03728	CR	UG2	3.21	3.49	8.39
THP03729	CR	UG2	3.93	3.92	-0.24
THP03730	CR	UG2	4.01	4.17	3.92
THP03731	CR	UG2	4.05	4.23	4.27
THP03732	CR	UG2	4.16	4.34	4.33
THP03733	CR	UG2	4.18	4.17	-0.16
THP03734	CR	UG2	4.15	4.48	7.60
THP03735	CR	UG2	4.15	4.49	7.87
THP03736	CR	UG2	4.07	4.22	3.70
THP03737	CR	UG2	3.27	3.47	5.87
THP03738	CR	UG2	4.13	4.44	7.14
THP03739	CR	UG2	4.26	4.44	4.06
THP03740	CR	UG2	4.04	4.21	4.07
THP03741	CR	UG2	3.88	3.99	2.74
THP03742	CR	UG2	4.17	4.37	4.58
THP03743	CR	UG2	4.30	4.43	2.92
THP03744	CR	UG2	3.44	3.99	14.87
THP03745	CR	UG2	3.98	4.01	0.82
THP03746	CR	UG2	4.13	4.22	2.20
THP03747	CR	UG2	4.22	4.33	2.51
THP03748	CR	UG2	3.90	4.11	5.21
THP03749	CR	UG2	3.70	3.85	3.84
THP03750	CR	UG2	4.02	4.14	2.97
THP03751	CR	UG2	4.10	4.26	3.88
THP03752	CR	UG2	4.12	4.27	3.53
THP03753	CR	UG2	3.88	4.07	4.88
THP03754	CR	UG2	3.93	4.05	2.93
THP03755	CR	UG2	4.09	4.17	1.99
THP03756	CR	UG2	3.86	4.22	9.01
THP03757	CR	UG2	4.18	4.26	1.90
THP03758	CR	UG2	3.77	3.87	2.56
THP03759	CR	UG2	4.05	4.05	0.12
THP03760	CR	UG2	4.12	4.29	4.14
THP03761	CR	UG2	4.13	4.3	4.03
THP03762	CR	UG2	4.07	4	-1.72
THP03763	CR	UG2	4.14	4.26	2.90

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03764	POIKFPYX	UG2	3.49	3.53	1.07
THP03765	CR	UG2	4.19	4.6	9.35
THP03766	CR	UG2	4.33	4.56	5.14
THP03767	CR	UG2	3.94	4.56	14.62
THP03768	CR	UG2	3.89	4.44	13.28
THP03769	CR	UG2	4.13	4.64	11.57
THP03770	CR	UG2	4.18	4.46	6.38
THP03771	CR	UG2	3.55	3.73	4.86
THP03772	CR	UG2	3.97	4.39	9.94
THP03773	CR	UG2	3.98	4.36	9.05
THP03774	CR	UG2	3.43	3.87	11.96
THP03775	CR	UG2	3.99	4.52	12.43
THP03776	CR	UG2	3.96	4.08	2.95
THP03777	CR	UG2	4.03	4.395	8.56
THP03778	CR	UG2	4.05	4.53	11.07
THP03779	CR	UG2	3.49	3.91	11.43
THP03780	CR	UG2	3.69	4.17	12.19
THP03781	CR	UG2	4.04	4.45	9.77
THP03782	CR	UG2	4.23	4.58	7.85
THP03783	CR	UG2	3.37	3.75	10.60
THP03784	CR	UG2	3.92	4.31	9.44
THP03785	CR	UG2	4.34	4.81	10.26
THP03786	CR	UG2	4.28	4.83	12.15
THP03787	CR	UG2	4.29	4.83	11.85
THP03788	CR	UG2	4.26	4.77	11.32
THP03789	CR	UG2	4.20	4.54	7.88
THP03790	CR	UG2	4.02	4.42	9.53
THP03791	CR	UG2	4.07	4.53	10.72
THP03792	CR	UG2	3.82	4.29	11.60
THP03793	CR	UG2	3.67	3.89	5.91
THP03794	CR	UG2	4.03	4.4	8.68
THP03795	CR	UG2	4.04	4.55	11.99
THP03796	CR	UG2	3.44	3.61	4.73
THP03797	CR	UG2	4.25	4.21	-1.04
THP03798	CR	UG2	4.25	4.22	-0.80
THP03799	CR	UG2	4.43	4.21	-5.14
THP03800	CR	UG2	4.33	4.14	-4.47
THP03801	CR	UG2	4.33	4.14	-4.47
THP03802	CR	UG2	4.06	4.05	-0.34
THP03803	CR	UG2	4.22	4.23	0.17
THP03804	CR	UG2	3.99	4.07	2.06
THP03805	CR	UG2	3.98	4.1	3.02
THP03806	CR	UG2	4.05	3.93	-3.11
THP03807	CR	UG2	3.78	3.99	5.31
THP03808	CR	UG2	4.05	3.93	-3.11
THP03809	CR	UG2	4.07	3.97	-2.37
THP03810	CR	UG2	3.79	4.05	6.75
THP03811	CR	UG2	3.19	3.36	5.23
THP03812	CR	UG2	3.95	3.91	-1.06
THP03813	CR	UG2	3.87	3.87	0.11
THP03814	CR	UG2	3.78	3.71	-1.84
THP03815	CR	UG2	3.84	3.95	2.92
THP03816	CR	UG2	3.86	3.95	2.43

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03817	CR	UG2	3.61	3.49	-3.45
THP03818	CR	UG2	3.18	3.33	4.64
THP03819	PEGFPYX	UG2F	3.08	3.54	13.74
THP03820	PEGFPYX	UG2F	3.13	3.43	9.21
THP03821	PEGFPYX	UG2FW	3.36	3.57	6.19
THP03822	PEGFPYX	UG2FW	2.80	3.24	14.58
THP03823	PEGFPYX	UG2FW	3.26	3.43	5.16
THP03824	POIKPYX	UG2FW	3.25	3.44	5.81
THP03825	POIKPYX	UG2FW	3.24	3.44	5.89
THP03826	POIKPYX	UG2FW	3.26	3.44	5.43
THP03827	POIKPYX	UG2FW	3.26	3.48	6.59
THP03828	POIKPYX	UG2FW	3.23	3.42	5.63
THP03829	POIKPYX	UG2FW	3.27	3.46	5.79
THP03830	PEGFPYX	UG2FW	3.21	3.39	5.50
THP03831	POIKPYX	UG2FW	3.24	3.41	5.08
THP03832	POIKPYX	UG2FW	3.27	3.42	4.59
THP03833	PEGFPYX	UG2FW	3.22	3.6	11.16
THP03834	PEGFPYX	UG2FW	3.35	3.49	4.17
THP03835	PEGFPYX	UG2FW	3.19	3.5	9.21
THP03836	POIKPYX	UG2FW	3.24	3.45	6.16
THP03837	POIKPYX	UG2FW	3.22	3.43	6.27
THP03838	PEGFPYX	UG2FW	3.05	3.38	10.14
THP03839	PEGFPYX	UG2FW	3.19	3.49	8.93
THP03840	PEGFPYX	UG2FW	3.22	3.42	6.16
THP03841	POIKFPYX	UG2FW	3.08	3.38	9.34
THP03842	POIKFPYX	UG2FW	3.20	3.36	4.87
THP03843	PEGFPYX	UG2FW	3.18	3.38	6.04
THP03844	PEGFPYX	UG2FW	3.33	3.52	5.52
THP03845	PEGFPYX	UG2FW	3.27	3.4	3.80
THP03846	POIKPYX	UG2FW	3.21	3.34	4.08
THP03847	POIKPYX	UG2FW	3.24	3.37	4.03
THP03848	PP /CR	UG2FW	3.34	3.74	11.23
THP03849	PEGFPYX	UG2FW	3.32	3.52	5.78
THP03850	PEGFPYX	UG2FW	3.33	3.47	4.12
THP03851	PEGFPYX	UG2FW	3.23	3.42	5.58
THP03852	POIKFPYX	UG2FW	3.22	3.38	4.71
THP03853	POIKFPYX	UG2FW	3.25	3.36	3.46
THP03854	POIKFPYX	UG2FW	3.23	3.36	3.88
THP03855	PEGFPYX	UG2FW	3.11	3.485	11.52
THP03856	PEGFPYX	UG2FW	3.12	3.47	10.47
THP03857	PEGFPYX	UG2FW	3.23	3.44	6.40
THP03858	POIKFPYX	UG2FW	3.24	3.36	3.77
THP03859	POIKFPYX	UG2FW	3.26	3.35	2.76
THP03860	PEGFPYX	UG2FW	3.15	3.31	5.05
THP03861	PEGFPYX	UG2FW	3.74	3.59	-4.18
THP03862	PEGFPYX	UG2FW	3.27	3.52	7.42
THP03863	PEGFPYX	UG2FW	3.34	3.46	3.66
THP03864	POIKPYX	UG2FW	3.32	3.43	3.15
THP03865	POIKPYX	UG2FW	3.57	3.42	-4.26
THP03866	POIKPYX	UG2FW	3.44	3.465	0.60
THP03867	PEGFPYX	UG2FW	3.19	3.37	5.60
THP03868	PEGFPYX	UG2FW	3.23	3.38	4.61
THP03869	PEGFPYX	UG2FW	3.25	3.4	4.66

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03870	POIKFPYX	UG2FW	3.22	3.39	5.05
THP03871	POIKFPYX	UG2FW	3.22	3.37	4.42
THP03872	POIKFPYX	UG2FW	3.23	3.39	4.94
THP03873	POIKFPYX	UG2FW	3.19	3.35	4.85
THP03874	PEGFPYX	UG2FW	3.16	3.355	5.92
THP03875	POIKFPYX	UG2FW	3.21	3.38	5.11
THP03876	POIKFPYX	UG2FW	3.22	3.38	4.81
THP03877	PEGFPYX	UG2FW	3.22	3.37	4.62
THP03878	POIKFPYX	UG2FW	3.26	3.43	5.16
THP03879	POIKFPYX	UG2FW	3.23	3.42	5.69
THP03880	POIKFPYX	UG2FW	3.26	3.42	4.92
THP03881	POIKFPYX	UG2FW	3.22	3.41	5.86
THP03882	POIKFPYX	UG2FW	3.23	3.38	4.50
THP03883	PEGFPYX	UG2FW	3.21	3.38	5.08
THP03884	PEGFPYX	UG2FW	3.23	3.37	4.26
THP03885	POIKPYX	UG2FW	3.23	3.38	4.51
THP03886	POIKPYX	UG2FW	3.22	3.38	4.76
THP03887	PEGFPYX	UG2FW	3.15	3.56	12.23
THP03888	PEGFPYX	UG2FW	3.11	3.52	12.38
THP03889	PEGFPYX	UG2FW	3.34	3.41	2.07
THP03890	PEGFPYX	UG2FW	3.19	3.42	6.80
THP03891	POIKPYX	UG2FW	3.22	3.48	7.80
THP03892	POIKPYX	UG2FW	3.23	3.46	6.96
THP03893	PEGFPYX	UG2FW	3.30	3.53	6.74
THP03894	PEGFPYX	UG2FW	3.33	3.37	1.15
THP03895	PEGFPYX	UG2FW	3.17	3.4	6.94
THP03896	PEGFPYX	UG2FW	3.32	3.48	4.83
THP03897	PEGFPYX	UG2FW	3.23	3.47	7.23
THP03898	PEGFPYX	UG2FW	3.23	3.49	7.76
THP03899	PEGFPYX	UG2FW	3.37	3.66	8.13
THP03900	PEGFPYX	UG2FW	3.26	3.37	3.37
THP03901	POIKPYX	UG2FW	3.25	3.46	6.31
THP03902	POIKPYX	UG2FW	3.23	3.45	6.55
THP03903	PEGFPYX	UG2FW	3.44	3.55	3.13
THP03904	PEGFPYX	UG2FW	3.22	3.54	9.42
THP03905	POIKPYX	UG2FW	3.25	3.44	5.70
THP03906	POIKPYX	UG2FW	3.23	3.42	5.79
THP03907	PEGFPYX	UG2FW	3.41	3.59	5.08
THP03908	PEGFPYX	UG2FW	3.30	3.52	6.57
THP03909	PEGFPYX	UG2FW	3.27	3.43	4.78
THP03910	PEGFPYX	UG2FW	3.25	3.38	4.02
THP03911	PEGFPYX	UG2FW	3.05	3.42	11.60
THP03912	PEGFPYX	UG2FW	3.23	3.49	7.58
THP03913	POIKPYX	UG2FW	3.25	3.42	5.10
THP03914	POIKPYX	UG2FW	3.21	3.41	5.97
THP03915	PEGFPYX	UG2FW	3.18	3.34	4.90
THP03916	PEGFPYX	UG2FW	3.23	3.43	5.97
THP03917	PEGFPYX	UG2FW	3.25	3.47	6.66
THP03918	POIKPYX	UG2FW	3.20	3.44	7.21
THP03919	POIKPYX	UG2FW	3.20	3.44	7.25
THP03920	PEGFPYX	UG2FW	3.16	3.465	9.11
THP03921	PEGFPYX	UG2FW	3.25	3.45	6.12
THP03922	PEGFPYX	UG2FW	3.26	3.43	4.97

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03923	PEGFPYX	UG2FW	3.24	3.44	5.95
THP03924	PEGFPYX	UG2FW	3.16	3.31	4.63
THP03925	POIKPYX	UG2FW	3.24	3.37	4.01
THP03926	POIKPYX	UG2FW	3.25	3.38	4.04
THP03927	PEGFPYX	UG2FW	3.28	3.53	7.22
THP03928	PEGFPYX	UG2FW	3.38	3.43	1.38
THP03929	POIKFPYX	UG2FW	3.27	3.3	0.96
THP03930	POIKFPYX	UG2FW	3.26	3.285	0.82
THP03931	PEGFPYX	UG2FW	3.39	3.5	3.21
THP03932	PEGFPYX	UG2FW	3.21	3.3	2.92
THP03933	POIKPYX	UG2FW	3.26	3.28	0.56
THP03934	POIKPYX	UG2FW	3.25	3.29	1.09
THP03935	PEGFPYX	UG2FW	3.20	3.33	4.01
THP03936	PEGFPYX	UG2FW	3.21	3.36	4.68
THP03937	PEGFPYX	UG2FW	3.20	3.41	6.28
THP03938	PEGFPYX	UG2FW	3.30	3.44	4.27
THP03939	PEGFPYX	UG2FW	3.24	3.35	3.40
THP03940	POIKPYX	UG2FW	3.19	3.29	3.15
THP03941	POIKPYX	UG2FW	3.23	3.28	1.67
THP03942	POIKPYX	UG2FW	3.24	3.35	3.26
THP03943	POIKPYX	UG2FW	3.14	3.13	-0.22
THP03944	POIKPYX	UG2FW	2.72	3.01	10.27
THP03945	POIKPYX	UG2FW	3.20	3.29	2.76
THP03946	POIKPYX	UG2FW	3.25	3.33	2.45
THP03947	PEGFPYX	UG2FW	3.26	3.365	3.05
THP03948	PEGFPYX	UG2FW	3.33	3.39	1.82
THP03949	PEGFPYX	UG2FW	3.35	3.38	0.85
THP03950	PEGFPYX	UG2FW	3.32	3.44	3.53
THP03951	PEGFPYX	UG2FW	3.37	3.44	2.04
THP03952	POIKPYX	UG2FW	3.22	3.315	3.00
THP03953	POIKPYX	UG2FW	3.23	3.33	3.02
THP03954	POIKPYX	UG2FW	3.20	3.3	2.94
THP03955	POIKPYX	UG2FW	3.32	3.3	-0.68
THP03956	POIKPYX	UG2FW	3.24	3.32	2.37
THP03957	POIKPYX	UG2FW	3.23	3.32	2.76
THP03958	POIKPYX	UG2FW	3.26	3.35	2.64
THP03959	POIKPYX	UG2FW	3.17	3.295	3.82
THP03960	POIKPYX	UG2FW	3.25	3.32	2.23
THP03961	POIKPYX	UG2FW	3.24	3.33	2.64
THP03962	PEGFPYX	UG2FW	3.30	3.41	3.36
THP03963	PEGFPYX	UG2FW	3.28	3.42	4.26
THP03964	PEGFPYX	UG2FW	3.29	3.4	3.32
THP03965	PEGFPYX	UG2FW	3.25	3.36	3.24
THP03966	POIKPYX	UG2FW	3.22	3.32	3.10
THP03967	POIKPYX	UG2FW	3.22	3.34	3.57
THP03968	PEGFPYX	UG2FW	3.36	3.47	3.34
THP03969	PEGFPYX	UG2FW	3.28	3.41	3.75
THP03970	PEGFPYX	UG2FW	3.35	3.42	2.14
THP03971	PEGFPYX	UG2FW	3.26	3.36	2.93
THP03972	POIKPYX	UG2FW	3.24	3.33	2.59
THP03973	POIKPYX	UG2FW	3.25	3.35	3.02
THP03974	PEGFPYX	UG2FW	3.24	3.36	3.50
THP03975	PEGFPYX	UG2FW	3.26	3.41	4.62

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP03976	PEGFPYX	UG2FW	3.32	3.43	3.13
THP03977	PEGFPYX	UG2FW	3.31	3.4	2.70
THP03978	POIKPYX	UG2FW	3.26	3.35	2.87
THP03979	POIKPYX	UG2FW	3.25	3.33	2.45
THP03980	PEGFPYX	UG2FW	3.24	3.3	1.81
THP03981	PEGFPYX	UG2FW	3.29	3.39	3.00
THP03982	PEGFPYX	UG2FW	3.09	3.38	8.85
THP03983	PEGFPYX	UG2FW	3.22	3.33	3.32
THP03984	PEGFPYX	UG2FW	3.26	3.4	4.09
THP03985	POIKFPYX	UG2FW	3.27	3.26	-0.21
THP03986	POIKFPYX	UG2FW	3.24	3.26	0.72
THP03987	POIKFPYX	UG2FW	3.21	3.26	1.51
THP03988	PEGFPYX	UG2FW	3.32	3.44	3.59
THP03989	PEGFPYX	UG2FW	3.26	3.32	1.87
THP03990	PEGFPYX	UG2FW	3.06	3.32	8.04
THP03991	PEGFPYX	UG2FW	3.29	3.32	0.83
THP03992	POIKPYX	UG2FW	3.26	3.28	0.63
THP03993	POIKPYX	UG2FW	3.26	3.3	1.31
THP03994	PEGFPYX	UG2FW	3.49	3.43	-1.62
THP03995	PEGFPYX	UG2FW	3.26	3.32	1.72
THP03996	PEGFPYX	UG2FW	3.33	3.4	2.08
THP03997	PEGFPYX	UG2FW	3.31	3.46	4.29
THP03998	PEGFPYX	UG2FW	3.36	3.39	0.98
THP03999	PEGFPYX	UG2FW	3.29	3.47	5.19
THP04000	PEGFPYX	UG2FW	3.34	3.53	5.45
THP04001	PEGFPYX	UG2FW	3.31	3.43	3.55
THP04002	PEGFPYX	UG2FW	3.24	3.41	5.01
THP04003	PEGFPYX	UG2FW	3.29	3.42	3.93
THP04004	PEGFPYX	UG2FW	3.34	3.41	2.11
THP04005	PEGFPYX	UG2FW	3.27	3.43	4.78
THP04006	PEGFPYX	UG2FW	3.26	3.39	4.00
THP04007	POIKPYX	UG2FW	3.05	3.33	8.66
THP04008	POIKPYX	UG2FW	3.22	3.38	4.71
THP04009	PEGFPYX	UG2FW	3.31	3.43	3.43
THP04010	PEGFPYX	UG2FW	3.34	3.35	0.27
THP04011	PEGFPYX	UG2FW	3.28	3.52	7.08
THP04012	PEGFPYX	UG2FW	3.34	3.5	4.62
THP04013	PEGFPYX	UG2FW	3.31	3.52	6.29
THP04014	PEGFPYX	UG2FW	3.28	3.465	5.36
THP04015	PEGFPYX	UG2FW	3.26	3.46	6.02
THP04016	PEGFPYX	UG2FW	3.24	3.46	6.60
THP04017	PEGFPYX	UG2FW	3.25	3.44	5.78
THP04018	PEGFPYX	UG2FW	3.27	3.4	3.95
THP04019	PEGFPYX	UG2FW	3.25	3.37	3.69
THP04020	PEGFPYX	UG2FW	3.27	3.41	4.08
THP04021	PEGFPYX	UG2FW	3.39	3.51	3.60
THP04022	PEGFPYX	UG2FW	3.30	3.41	3.13
THP04023	PEGFPYX	UG2FW	3.20	3.41	6.49
THP04024	PEGFPYX	UG2FW	3.27	3.41	4.14
THP04025	PEGFPYX	UG2FW	3.29	3.42	3.73
THP04026	PEGFPYX	UG2FW	3.28	3.36	2.33
THP04027	PEGFPYX	UG2FW	3.27	3.37	2.87
THP04028	PEGFPYX	UG2FW	3.28	3.37	2.77

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04029	PEGFPYX	UG2FW	3.23	3.4	5.03
THP04030	PEGFPYX	UG2FW	3.23	3.36	4.10
THP04031	PEGFPYX	UG2FW	3.26	3.36	3.11
THP04032	PEGFPYX	UG2FW	3.28	3.39	3.29
THP04033	PEGFPYX	UG2FW	3.29	3.37	2.36
THP04034	PEGFPYX	UG2FW	3.26	3.35	2.75
THP04035	PEGFPYX	UG2FW	3.20	3.31	3.28
THP04036	PEGFPYX	UG2FW	3.40	3.47	2.09
THP04037	PEGFPYX	UG2FW	3.25	3.48	6.72
THP04038	PEGFPYX	UG2FW	3.30	3.45	4.44
THP04039	PEGFPYX	UG2FW	3.23	3.44	6.37
THP04040	PEGFPYX	UG2FW	3.25	3.42	4.95
THP04041	PEGFPYX	UG2FW	3.16	3.44	8.51
THP04042	PEGFPYX	UG2FW	3.17	3.43	7.90
THP04043	PEGFPYX	UG2FW	3.19	3.33	4.19
THP04044	POIKFPYX	UG2FW	3.20	3.39	5.75
THP04045	POIKFPYX	UG2FW	3.21	3.4	5.62
THP04046	PEGFPYX	UG2FW	3.29	3.51	6.33
THP04047	PEGFPYX	UG2FW	3.22	3.45	6.86
THP04048	PEGFPYX	UG2FW	3.24	3.47	6.87
THP04049	PEGFPYX	UG2FW	3.26	3.46	5.82
THP04050	PEGFPYX	UG2FW	3.23	3.45	6.56
THP04051	PEGFPYX	UG2FW	3.22	3.49	8.19
THP04052	PEGFPYX	UG2FW	3.18	3.41	6.88
THP04053	PEGFPYX	UG2FW	3.15	3.32	5.39
THP04054	PP	UG2FW	3.22	3.37	4.51
THP04055	PP	UG2FW	3.21	3.36	4.69
THP04056	PEGFPYX	UG2FW	3.23	3.43	6.16
THP04057	PEGFPYX	UG2FW	3.24	3.47	6.73
THP04058	PEGFPYX	UG2FW	2.99	3.37	11.79
THP04059	PEGFPYX	UG2FW	3.15	3.37	6.69
THP04060	PEGFPYX	UG2FW	3.17	3.35	5.64
THP04061	PEGFPYX	UG2FW	3.20	3.34	4.22
THP04062	PEGFPYX	UG2FW	3.15	3.29	4.30
THP04063	PEGFPYX	UG2FW	3.11	3.14	0.91
THP04064	PEGFPYX	UG2FW	3.09	3.27	5.74
THP04065	POIKPYX	UG2FW	3.22	3.39	5.21
THP04066	POIKPYX	UG2FW	3.28	3.41	3.90
THP04067	PEGFPYX	UG2FW	3.26	3.5	7.09
THP04068	PEGFPYX	UG2FW	3.22	3.51	8.68
THP04069	PEGFPYX	UG2FW	3.48	3.62	3.96
THP04070	PEGFPYX	UG2FW	3.29	3.57	8.06
THP04071	PEGFPYX	UG2FW	3.24	3.5	7.59
THP04072	PEGFPYX	UG2FW	3.26	3.44	5.24
THP04073	PEGFPYX	UG2FW	3.26	3.49	6.96
THP04074	PEGFPYX	UG2FW	3.14	3.48	10.35
THP04075	PEGFPYX	UG2FW	3.19	3.47	8.33
THP04076	PEGFPYX	UG2FW	3.25	3.59	9.81
THP04077	PEGFPYX	UG2FW	3.24	3.51	7.93
THP04078	PEGFPYX	UG2FW	3.46	3.49	0.91
THP04079	PEGFPYX	UG2FW	3.04	3.43	11.93
THP04080	PEGFPYX	UG2FW	3.39	3.41	0.62
THP04081	PEGFPYX	UG2FW	3.49	3.435	-1.51

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04082	PEGFPYX	UG2FW	3.18	3.42	7.36
THP04083	PEGFPYX	UG2FW	3.36	3.48	3.59
THP04084	PEGFPYX	UG2FW	3.30	3.43	3.99
THP04085	PEGFPYX	UG2FW	3.39	3.64	7.11
THP04086	PEGFPYX	UG2FW	3.48	3.36	-3.63
THP04087	PEGFPYX	UG2FW	3.32	3.54	6.30
THP04088	PEGFPYX	UG2FW	3.29	3.57	8.04
THP04089	PEGFPYX	UG2FW	3.28	3.52	7.12
THP04090	PEGFPYX	UG2FW	3.23	3.49	7.62
THP04091	PEGFPYX	UG2FW	3.21	3.48	8.12
THP04092	PEGFPYX	UG2FW	3.23	3.5	8.03
THP04093	PEGFPYX	UG2FW	3.18	3.45	8.18
THP04094	POIKFPYX	UG2FW	3.25	3.51	7.65
THP04095	POIKFPYX	UG2FW	3.25	3.49	7.25
THP04096	POIKFPYX	UG2FW	3.25	3.5	7.50
THP04097	POIKFPYX	UG2FW	3.24	3.5	7.84
THP04098	PEGFPYX	UG2FW	3.16	3.38	6.71
THP04099	PEGFPYX	UG2FW	3.16	3.27	3.52
THP04100	PEGFPYX	UG2FW	3.29	3.52	6.82
THP04101	PEGFPYX	UG2FW	3.20	3.49	8.58
THP04102	PEGFPYX	UG2FW	3.14	3.39	7.64
THP04103	PEGFPYX	UG2FW	3.27	3.48	6.21
THP04104	PEGFPYX	UG2FW	3.27	3.47	5.97
THP04105	PYX	UG2FW	3.25	3.42	5.21
THP04106	PYX	UG2FW	3.25	3.4	4.41
THP04107	PYX	UG2FW	3.23	3.375	4.26
THP04108	PYX	UG2FW	3.20	3.39	5.68
THP04109	PYX	UG2FW	3.22	3.41	5.68
THP04110	PYX	UG2FW	3.23	3.38	4.39
THP04111	PYX	UG2FW	3.25	3.38	3.91
THP04112	PYX	UG2FW	3.25	3.36	3.37
THP04113	PYX	UG2FW	3.18	3.33	4.48
THP04114	PEGFPYX	UG2FW	3.27	3.37	3.01
THP04115	PEGFPYX	UG2FW	3.30	3.39	2.74
THP04116	PEGFPYX	UG2FW	3.33	3.42	2.76
THP04117	PEGFPYX	UG2FW	3.25	3.42	5.04
THP04118	POIKFPYX	UG2FW	3.23	3.34	3.34
THP04119	POIKFPYX	UG2FW	3.19	3.3	3.40
THP04120	PEGFPYX	UG2FW	3.21	3.32	3.41
THP04121	PEGFPYX	UG2FW	3.31	3.405	2.84
THP04122	PEGFPYX	UG2FW	3.30	3.4	3.04
THP04123	PEGFPYX	UG2FW	3.14	3.36	6.88
THP04124	POIKPYX	UG2FW	3.23	3.36	3.92
THP04125	POIKPYX	UG2FW	3.23	3.33	2.91
THP04126	POIKPYX	UG2FW	2.77	2.9	4.56
THP04127	POIKPYX	UG2FW	2.77	2.9	4.70
THP04128	POIKPYX	UG2FW	2.83	2.89	2.22
THP04129	POIKPYX	UG2FW	2.77	2.89	4.15
THP04130	CR	UG2FW	3.78	3.91	3.45
THP04131	PEGFPYX	UG2FW	3.35	3.48	3.75
THP04132	PEGFPYX	UG2FW	3.20	3.5	9.04
THP04133	PEGFPYX	UG2FW	3.23	3.39	4.75
THP04134	PEGFPYX	UG2FW	3.30	3.505	5.90

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04135	PEGFPYX	UG2FW	3.29	3.5	6.27
THP04136	PEGFPYX	UG2FW	3.22	3.44	6.46
THP04137	POIKFPYX	UG2FW	3.27	3.46	5.51
THP04138	POIKFPYX	UG2FW	3.20	3.41	6.30
THP04139	POIKAN	UG2FW	2.74	2.86	4.14
THP04140	POIKAN	UG2FW	2.77	2.9	4.52
THP04141	POIKAN	UG2FW	2.77	2.86	3.30
THP04142	POIKAN	UG2FW	2.81	2.86	1.90
THP04143	CR	UG2FW	4.01	3.84	-4.23
THP04144	PEGFPYX	UG2FW	3.22	3.51	8.53
THP04145	PEGFPYX	UG2FW	3.26	3.45	5.75
THP04146	PEGFPYX	UG2FW	3.35	3.53	5.27
THP04147	PEGFPYX	UG2FW	3.25	3.4	4.62
THP04148	POIKFPYX	UG2FW	3.29	3.51	6.35
THP04149	POIKFPYX	UG2FW	3.26	3.42	4.71
THP04150	POIKFPYX	UG2FW	3.20	3.39	5.81
THP04151	PEGFPYX	UG2FW	3.32	3.45	3.81
THP04152	PEGFPYX	UG2FW	3.31	3.41	3.12
THP04153	PEGFPYX	UG2FW	3.27	3.41	4.15
THP04154	PEGFPYX	UG2FW	3.28	3.38	2.86
THP04155	PEGFPYX	UG2FW	3.21	3.29	2.41
THP04156	POIKPYX	UG2FW	3.26	3.35	2.63
THP04157	POIKPYX	UG2FW	3.24	3.34	3.09
THP04158	PEGFPYX	UG2FW	3.40	3.44	1.17
THP04159	PEGFPYX	UG2FW	3.11	3.28	5.17
THP04160	PEGFPYX	UG2FW	3.19	3.39	6.19
THP04161	PEGFPYX	UG2FW	3.31	3.41	2.93
THP04162	PEGFPYX	UG2FW	3.16	3.33	5.17
THP04163	POIKFPYX	UG2FW	3.26	3.36	3.11
THP04164	POIKFPYX	UG2FW	3.23	3.33	3.01
THP04165	PEGFPYX	UG2FW	3.37	3.35	-0.46
THP04166	PEGFPYX	UG2FW	3.31	3.34	0.98
THP04167	PEGFPYX	UG2FW	3.27	3.4	4.00
THP04168	PEGFPYX	UG2FW	3.14	3.23	2.85
THP04169	PEGFPYX	UG2FW	3.29	3.32	1.05
THP04170	POIKPYX	UG2FW	3.29	3.34	1.51
THP04171	POIKPYX	UG2FW	3.11	3.33	6.82
THP04172	PEGFPYX	UG2FW	3.21	3.37	4.88
THP04173	PEGFPYX	UG2FW	3.28	3.46	5.43
THP04174	PEGFPYX	UG2FW	3.32	3.43	3.12
THP04175	PEGFPYX	UG2FW	3.26	3.45	5.57
THP04176	POIKFPYX	UG2FW	3.21	3.35	4.28
THP04177	POIKFPYX	UG2FW	3.23	3.35	3.59
THP04178	PEGFPYX	UG2FW	3.18	3.32	4.41
THP04179	PEGFPYX	UG2FW	3.15	3.37	6.90
THP04180	PEGFPYX	UG2FW	3.30	3.38	2.46
THP04181	PEGFPYX	UG2FW	3.27	3.44	5.17
THP04182	POIKFPYX	UG2FW	3.31	3.34	0.79
THP04183	POIKFPYX	UG2FW	3.26	3.325	2.11
THP04184	PEGFPYX	UG2FW	3.28	3.37	2.82
THP04185	PEGFPYX	UG2FW	3.22	3.34	3.67
THP04186	PEGFPYX	UG2FW	3.27	3.36	2.77
THP04187	PEGFPYX	UG2FW	3.34	3.4	1.71

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04188	POIKFPYX	UG2FW	3.27	3.41	4.34
THP04189	POIKFPYX	UG2FW	3.25	3.37	3.53
THP04190	PEGFPYX	UG2FW	3.35	3.47	3.50
THP04191	PEGFPYX	UG2FW	3.33	3.47	4.02
THP04192	PEGFPYX	UG2FW	3.26	3.41	4.35
THP04193	PEGFPYX	UG2FW	3.28	3.37	2.73
THP04194	PEGFPYX	UG2FW	3.32	3.39	2.10
THP04195	PEGFPYX	UG2FW	3.24	3.37	3.98
THP04196	PEGFPYX	UG2FW	3.27	3.38	3.36
THP04197	PEGFPYX	UG2FW	3.12	3.38	7.96
THP04198	PEGFPYX	UG2FW	3.25	3.4	4.52
THP04199	PEGFPYX	UG2FW	3.20	3.35	4.65
THP04200	PEGFPYX	UG2FW	3.23	3.35	3.49
THP04201	PEGFPYX	UG2FW	3.27	3.33	1.77
THP04202	PEGFPYX	UG2FW	3.28	3.35	1.99
THP04203	PEGFPYX	UG2FW	3.24	3.37	3.90
THP04204	PEGFPYX	UG2FW	3.18	3.31	4.01
THP04205	PEGFPYX	UG2FW	3.23	3.34	3.50
THP04206	PEGFPYX	UG2FW	3.19	3.3	3.47
THP04207	PEGFPYX	UG2FW	3.30	3.43	3.90
THP04208	PEGFPYX	UG2FW	3.20	3.27	2.30
THP04209	PEGFPYX	UG2FW	3.28	3.44	4.89
THP04210	PEGFPYX	UG2FW	3.29	3.38	2.75
THP04211	PEGFPYX	UG2FW	3.27	3.39	3.53
THP04212	PEGFPYX	UG2FW	3.26	3.39	4.02
THP04213	PEGFPYX	UG2FW	3.18	3.36	5.62
THP04214	PEGFPYX	UG2FW	3.26	3.34	2.51
THP04215	PEGFPYX	UG2FW	3.26	3.31	1.47
THP04216	PEGFPYX	UG2FW	3.30	3.36	1.84
THP04217	PEGFPYX	UG2FW	3.12	3.32	6.14
THP04218	PEGFPYX	UG2FW	3.26	3.29	0.85
THP04219	PEGFPYX	UG2FW	3.13	3.28	4.68
THP04220	PEGFPYX	UG2FW	2.91	3.2	9.56
THP04221	PEGFPYX	UG2FW	3.17	3.28	3.46
THP04222	PEGFPYX	UG2FW	3.15	3.31	4.91
THP04223	POIKPYX	UG2FW	3.23	3.305	2.37
THP04224	PEGFPYX	UG2FW	3.28	3.42	4.14
THP04225	PEGFPYX	UG2FW	3.33	3.46	3.88
THP04226	PEGFPYX	UG2FW	3.27	3.37	3.09
THP04227	PEGFPYX	UG2FW	3.26	3.37	3.24
THP04228	PEGFPYX	UG2FW	3.25	3.39	4.32
THP04229	POIKPYX	UG2FW	3.19	3.38	5.80
THP04230	POIKPYX	UG2FW	3.17	3.37	6.07
THP04231	PEGFPYX	UG2FW	3.27	3.31	1.07
THP04232	PEGFPYX	UG2FW	3.29	3.39	3.10
THP04233	PEGFPYX	UG2FW	3.31	3.4	2.68
THP04234	PEGFPYX	UG2FW	3.41	3.46	1.54
THP04235	PEGFPYX	UG2FW	3.29	3.39	3.04
THP04236	PEGFPYX	UG2FW	3.30	3.42	3.69
THP04237	PEGFPYX	UG2FW	3.28	3.4	3.74
THP04238	PEGFPYX	UG2FW	3.22	3.25	0.78
THP04239	PEGFPYX	UG2FW	3.17	3.28	3.30
THP04240	POIKPYX	UG2FW	3.23	3.31	2.59

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04241	POIKPYX	UG2FW	3.35	3.32	-0.92
THP04242	PEGFPYX	UG2FW	3.28	3.38	2.88
THP04243	PEGFPYX	UG2FW	3.25	3.3	1.57
THP04244	PEGFPYX	UG2FW	3.25	3.31	1.70
THP04245	POIKPYX	UG2FW	3.24	3.34	3.05
THP04246	POIKPYX	UG2FW	3.24	3.34	3.07
THP04247	PEGFPYX	UG2FW	3.30	3.45	4.58
THP04248	PEGFPYX	UG2FW	3.18	3.37	5.71
THP04249	PEGFPYX	UG2FW	3.23	3.48	7.59
THP04250	PEGFPYX	UG2FW	3.15	3.395	7.39
THP04251	PEGFPYX	UG2FW	3.23	3.46	6.91
THP04252	POIKPYX	UG2FW	3.15	3.41	8.07
THP04253	POIKPYX	UG2FW	3.23	3.42	5.83
THP04254	POIKPYX	UG2FW	3.21	3.45	7.10
THP04255	POIKPYX	UG2FW	3.26	3.48	6.43
THP04256	POIKPYX	UG2FW	3.26	3.52	7.76
THP04257	PEGFPYX	UG2FW	3.33	3.51	5.41
THP04258	PEGFPYX	UG2FW	3.06	3.51	13.74
THP04259	PEGFPYX	UG2FW	3.36	3.49	3.78
THP04260	PEGFPYX	UG2FW	3.36	3.54	5.17
THP04261	PEGFPYX	UG2FW	3.36	3.52	4.75
THP04262	PEGFPYX	UG2FW	3.17	3.44	8.32
THP04263	PEGFPYX	UG2FW	2.97	3.39	13.16
THP04264	POIKPYX	UG2FW	3.26	3.43	5.09
THP04265	POIKPYX	UG2FW	3.12	3.46	10.26
THP04266	PEGFPYX	UG2FW	3.27	3.405	3.94
THP04267	PEGFPYX	UG2FW	3.37	3.53	4.65
THP04268	PEGFPYX	UG2FW	3.35	3.49	4.16
THP04269	PEGFPYX	UG2FW	3.27	3.37	3.10
THP04270	POIKFPYX	UG2FW	3.25	3.34	2.76
THP04271	POIKFPYX	UG2FW	3.23	3.35	3.52
THP04272	POIKFPYX	UG2FW	3.23	3.36	3.89
THP04273	PEGFPYX	UG2FW	3.28	3.39	3.43
THP04274	PEGFPYX	UG2FW	3.28	3.44	4.72
THP04275	PEGFPYX	UG2FW	3.32	3.43	3.34
THP04276	PEGFPYX	UG2FW	3.29	3.38	2.64
THP04277	POIKPYX	UG2FW	3.25	3.34	2.81
THP04278	POIKPYX	UG2FW	3.24	3.32	2.52
THP04279	POIKPYX	UG2FW	3.27	3.32	1.66
THP04280	PEGFPYX	UG2FW	3.29	3.4	3.25
THP04281	PEGFPYX	UG2FW	3.38	3.47	2.74
THP04282	PEGFPYX	UG2FW	3.32	3.5	5.31
THP04283	PEGFPYX	UG2FW	3.29	3.38	2.67
THP04284	PEGFPYX	UG2FW	3.21	3.38	5.27
THP04285	PEGFPYX	UG2FW	3.23	3.37	4.33
THP04286	PEGFPYX	UG2FW	3.27	3.4	3.87
THP04287	PEGFPYX	UG2FW	3.21	3.35	4.35
THP04288	PEGFPYX	UG2FW	3.22	3.34	3.61
THP04289	PEGFPYX	UG2FW	3.18	3.33	4.73
THP04290	PEGFPYX	UG2FW	3.25	3.33	2.53
THP04291	PEGFPYX	UG2FW	3.24	3.32	2.46
THP04292	POIKFPYX	UG2FW	3.10	3.37	8.40
THP04293	POIKFPYX	UG2FW	3.22	3.36	4.26

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04294	PEGFPYX	UG2FW	3.37	3.47	2.87
THP04295	PEGFPYX	UG2FW	3.22	3.47	7.32
THP04296	PEGFPYX	UG2FW	3.33	3.53	5.88
THP04297	PEGFPYX	UG2FW	3.29	3.42	3.74
THP04298	POIKFPYX	UG2FW	3.22	3.395	5.22
THP04299	POIKFPYX	UG2FW	3.23	3.38	4.51
THP04300	POIKFPYX	UG2FW	3.25	3.36	3.48
THP04301	POIKFPYX	UG2FW	3.21	3.34	3.85
THP04302	POIKFPYX	UG2FW	3.20	3.325	3.87
THP04303	POIKFPYX	UG2FW	3.21	3.34	3.91
THP04304	PEGFPYX	UG2FW	3.20	3.38	5.55
THP04305	PEGFPYX	UG2FW	3.23	3.37	4.37
THP04306	POIKPYX	UG2FW	3.23	3.39	4.85
THP04307	POIKPYX	UG2FW	3.23	3.41	5.30
THP04308	PEGFPYX	UG2FW	3.12	3.27	4.65
THP04309	PEGFPYX	UG2FW	3.13	3.26	4.13
THP04310	PEGFPYX	UG2FW	3.21	3.44	6.88
THP04311	PEGFPYX	UG2FW	3.11	3.26	4.79
THP04312	PEGFPYX	UG2FW	3.08	3.45	11.18
THP04313	POIKPYX	UG2FW	3.12	3.42	9.12
THP04314	POIKPYX	UG2FW	3.32	3.41	2.53
THP04315	PEGFPYX	UG2FW	3.28	3.29	0.30
THP04316	PEGFPYX	UG2FW	3.36	3.33	-0.82
THP04317	PEGFPYX	UG2FW	3.29	3.34	1.54
THP04318	PEGFPYX	UG2FW	3.20	3.28	2.49
THP04319	PP	UG2FW	3.21	3.3	2.71
THP04320	PP	UG2FW	3.19	3.235	1.29
THP04321	PP	UG2FW	3.19	3.17	-0.64
THP04322	PP	UG2FW	3.04	3.09	1.54
THP04323	PP	UG2FW	3.15	3.18	0.89
THP04324	PP	UG2FW	3.25	3.21	-1.19
THP04325	PP	UG2FW	3.09	3.12	0.91
THP04326	PEGFPYX	UG2FW	3.11	3.12	0.22
THP04327	PEGFPYX	UG2FW	3.10	3.18	2.69
THP04328	POIKPYX	UG2FW	3.20	3.24	1.17
THP04329	POIKPYX	UG2FW	3.21	3.27	1.91
THP04330	PEGFPYX	UG2FW	3.26	3.47	6.26
THP04331	PEGFPYX	UG2FW	3.37	3.51	4.10
THP04332	PEGFPYX	UG2FW	3.11	3.46	10.72
THP04333	PEGFPYX	UG2FW	3.33	3.5	4.98
THP04334	POIKPYX	UG2FW	3.02	3.31	9.16
THP04335	POIKPYX	UG2FW	3.09	3.32	7.24
THP04336	POIKPYX	UG2FW	3.06	3.32	8.31
THP04337	PEGFPYX	UG2FW	3.34	3.4	1.82
THP04338	PEGFPYX	UG2FW	3.33	3.5	4.98
THP04339	PEGFPYX	UG2FW	3.31	3.45	4.21
THP04340	PEGFPYX	UG2FW	3.33	3.46	3.86
THP04341	POIKPYX	UG2FW	3.16	3.31	4.61
THP04342	POIKPYX	UG2FW	3.17	3.3	3.97
THP04343	POIKPYX	UG2FW	3.17	3.31	4.47
THP04344	POIKAN	UG2FW	2.77	2.855	3.08
THP04345	POIKAN	UG2FW	2.73	2.82	3.37
THP04346	PEGFPYX	UG2FW	3.46	3.5	1.17

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04347	PEGFPYX	UG2FW	3.08	3.13	1.50
THP04348	PEGFPYX	UG2FW	3.26	3.33	2.04
THP04349	PEGFPYX	UG2FW	3.19	3.47	8.32
THP04350	PEGFPYX	UG2FW	3.25	3.37	3.75
THP04351	PEGFPYX	UG2FW	3.26	3.42	4.70
THP04352	POIKPYX	UG2FW	3.19	3.38	5.70
THP04353	POIKPYX	UG2FW	3.19	3.34	4.73
THP04354	PEGFPYX	UG2FW	3.22	3.29	2.20
THP04355	PEGFPYX	UG2FW	3.13	3.13	0.05
THP04356	PEGFPYX	UG2FW	3.23	3.26	0.89
THP04357	PEGFPYX	UG2FW	3.28	3.3	0.74
THP04358	PEGFPYX	UG2FW	3.03	3.15	3.85
THP04359	PEGFPYX	UG2FW	3.04	3.27	7.16
THP04360	PEGFPYX	UG2FW	3.12	3.2	2.48
THP04361	PEGFPYX	UG2FW	3.12	3.2	2.52
THP04362	PEGFPYX	UG2FW	3.14	3.21	2.25
THP04363	PEGFPYX	UG2FW	3.16	3.17	0.22
THP04364	POIKPYX	UG2FW	3.15	3.21	1.78
THP04365	POIKPYX	UG2FW	3.28	3.22	-1.97
THP04366	PEGFPYX	UG2FW	3.24	3.49	7.55
THP04367	PEGFPYX	UG2FW	3.09	3.46	11.44
THP04368	PEGFPYX	UG2FW	3.23	3.51	8.34
THP04369	PEGFPYX	UG2FW	3.25	3.5	7.33
THP04370	POIKPYX	UG2FW	3.23	3.475	7.23
THP04371	POIKPYX	UG2FW	3.23	3.45	6.58
THP04372	POIKPYX	UG2FW	3.24	3.43	5.74
THP04373	PEGFPYX	UG2FW	3.24	3.47	6.87
THP04374	PEGFPYX	UG2FW	3.29	3.44	4.57
THP04375	PEGFPYX	UG2FW	3.27	3.42	4.47
THP04376	PEGFPYX	UG2FW	3.26	3.445	5.66
THP04377	POIKFPYX	UG2FW	3.25	3.45	5.92
THP04378	POIKFPYX	UG2FW	3.28	3.45	5.07
THP04379	POIKFPYX	UG2FW	3.27	3.46	5.58
THP04380	PP	UG2FW	2.87	2.98	3.63
THP04381	PP	UG2FW	3.18	3.29	3.47
THP04382	PP	UG2FW	3.15	3.26	3.50
THP04383	PP	UG2FW	3.00	3.17	5.45
THP04384	PEGFPYX	UG2FW	3.09	3.33	7.41
THP04385	PEGFPYX	UG2FW	3.29	3.49	5.88
THP04386	PEGFPYX	UG2FW	3.29	3.53	6.92
THP04387	PEGFPYX	UG2FW	3.16	3.27	3.29
THP04388	PFPYX	UG2FW	3.22	3.42	5.87
THP04389	PFPYX	UG2FW	3.22	3.43	6.24
THP04390	PFPYX	UG2FW	3.24	3.43	5.82
THP04391	PEGFPYX	UG2FW	3.27	3.45	5.31
THP04392	PEGFPYX	UG2FW	3.29	3.42	3.98
THP04393	PEGFPYX	UG2FW	3.35	3.52	5.06
THP04394	PEGFPYX	UG2FW	3.28	3.48	5.98
THP04395	POIKPYX	UG2FW	3.23	3.46	6.99
THP04396	POIKPYX	UG2FW	3.23	3.45	6.47
THP04397	POIKPYX	UG2FW	3.43	3.48	1.48
THP04398	PEGFPYX	UG2FW	3.41	3.56	4.32
THP04399	PEGFPYX	UG2FW	3.15	3.32	5.14

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04400	POIKFPYX	UG2FW	3.24	3.38	4.13
THP04401	POIKFPYX	UG2FW	3.24	3.39	4.63
THP04402	PEGFPYX	UG2FW	3.29	3.41	3.66
THP04403	PEGFPYX	UG2FW	3.26	3.41	4.63
THP04404	PEGFPYX	UG2FW	3.19	3.33	4.22
THP04405	PEGFPYX	UG2FW	3.18	3.32	4.19
THP04406	PEGFPYX	UG2FW	3.15	3.37	6.79
THP04407	PEGFPYX	UG2FW	3.27	3.4	4.04
THP04408	POIKPYX	UG2FW	3.09	3.415	9.86
THP04409	POIKPYX	UG2FW	3.25	3.39	4.28
THP04410	PEGFPYX	UG2FW	3.40	3.65	7.01
THP04411	PEGFPYX	UG2FW	3.39	3.52	3.64
THP04412	PEGFPYX	UG2FW	3.25	3.39	4.07
THP04413	POIKFPYX	UG2FW	3.25	3.38	4.01
THP04414	POIKFPYX	UG2FW	3.26	3.41	4.64
THP04415	POIKFPYX	UG2FW	3.27	3.415	4.21
THP04416	POIKFPYX	UG2FW	3.29	3.45	4.69
THP04417	PEGFPYX	UG2FW	3.29	3.42	4.02
THP04418	PEGFPYX	UG2FW	3.24	3.38	4.14
THP04419	PEGFPYX	UG2FW	3.24	3.365	3.81
THP04420	PEGFPYX	UG2FW	3.21	3.27	1.98
THP04421	PEGFPYX	UG2FW	3.27	3.375	3.19
THP04422	POIKFPYX	UG2FW	3.21	3.36	4.44
THP04423	PEGFPYX	UG2FW	3.42	3.53	3.22
THP04424	PEGFPYX	UG2FW	3.43	3.66	6.52
THP04425	PEGFPYX	UG2FW	3.34	3.55	6.20
THP04426	PEGFPYX	UG2FW	3.33	3.475	4.18
THP04427	PEGFPYX	UG2FW	3.23	3.42	5.56
THP04428	PEGFPYX	UG2FW	3.28	3.46	5.27
THP04429	PEGFPYX	UG2FW	3.24	3.45	6.30
THP04430	PEGFPYX	UG2FW	3.27	3.47	5.85
THP04431	PEGFPYX	UG2FW	3.22	3.41	5.77
THP04432	PEGFPYX	UG2FW	3.22	3.38	5.00
THP04433	POIKPYX	UG2FW	3.20	3.34	4.23
THP04434	POIKPYX	UG2FW	3.23	3.38	4.42
THP04435	POIKPYX	UG2FW	3.21	3.31	3.08
THP04436	PEGFPYX	UG2FW	3.34	3.52	5.26
THP04437	PEGFPYX	UG2FW	3.56	3.615	1.61
THP04438	PEGFPYX	UG2FW	3.21	3.5	8.67
THP04439	PEGFPYX	UG2FW	3.28	3.405	3.68
THP04440	PEGFPYX	UG2FW	3.28	3.46	5.22
THP04441	PEGFPYX	UG2FW	3.26	3.43	5.01
THP04442	PEGFPYX	UG2FW	3.34	3.52	5.30
THP04443	PEGFPYX	UG2FW	3.30	3.51	6.05
THP04444	PEGFPYX	UG2FW	3.30	3.44	4.30
THP04445	PEGFPYX	UG2FW	3.24	3.42	5.33
THP04446	POIKPYX	UG2FW	3.25	3.45	5.83
THP04447	PEGFPYX	UG2FW	3.56	3.44	-3.40
THP04448	PEGFPYX	UG2FW	3.11	3.21	3.20
THP04449	PEGFPYX	UG2FW	3.23	3.43	5.92
THP04450	POIKFPYX	UG2FW	3.19	3.4	6.46
THP04451	POIKFPYX	UG2FW	3.24	3.37	4.03
THP04452	PEGFPYX	UG2FW	3.27	3.34	2.06

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04453	PEGFPYX	UG2FW	3.28	3.4	3.44
THP04454	PEGFPYX	UG2FW	3.21	3.4	5.60
THP04455	PEGFPYX	UG2FW	3.22	3.42	5.92
THP04456	PEGFPYX	UG2FW	3.34	3.46	3.67
THP04457	PEGFPYX	UG2FW	3.29	3.34	1.48
THP04458	POIKPYX	UG2FW	3.20	3.31	3.29
THP04459	POIKPYX	UG2FW	3.23	3.32	2.65
THP04460	PEGFPYX	UG2FW	3.28	3.53	7.22
THP04461	PEGFPYX	UG2FW	3.28	3.53	7.22
THP04462	PEGFPYX	UG2FW	3.22	3.41	5.69
THP04463	PEGFPYX	UG2FW	3.22	3.41	5.69
THP04464	PEGFPYX	UG2FW	3.25	3.34	2.66
THP04465	PEGFPYX	UG2FW	3.21	3.34	3.93
THP04466	POIKAN	UG2FW	3.09	3.27	5.71
THP04467	POIKAN	UG2FW	2.76	2.87	3.95
THP04468	POIKAN	UG2FW	2.64	2.99	12.29
THP04469	PP	UG2FW	3.02	3.13	3.65
THP04470	PEGFPYX	UG2FW	3.25	3.43	5.28
THP04471	PEGFPYX	UG2FW	3.18	3.28	3.12
THP04472	PEGFPYX	UG2FW	3.17	3.46	8.81
THP04473	PEGFPYX	UG2FW	3.22	3.36	4.30
THP04474	PEGFPYX	UG2FW	3.07	3.47	12.16
THP04475	PEGFPYX	UG2FW	2.72	3	9.74
THP04476	PYX	UG2FW	3.02	3.19	5.50
THP04477	PEGFPYX	UG2FW	3.35	3.53	5.25
THP04478	PEGFPYX	UG2FW	3.30	3.37	2.01
THP04479	PEGFPYX	UG2FW	3.28	3.5	6.36
THP04480	PEGFPYX	UG2FW	3.25	3.45	6.11
THP04481	POIKPYX	UG2FW	3.28	3.41	3.88
THP04482	POIKPYX	UG2FW	3.27	3.46	5.62
THP04483	PP	UG2FW	3.23	3.4	5.19
THP04484	PEGFPYX	UG2FW	3.24	3.415	5.14
THP04485	PEGFPYX	UG2FW	3.26	3.44	5.43
THP04486	PEGFPYX	UG2FW	3.27	3.44	5.04
THP04487	PEGFPYX	UG2FW	3.26	3.47	6.26
THP04488	PEGFPYX	UG2FW	3.25	3.44	5.55
THP04489	PEGFPYX	UG2FW	3.24	3.42	5.55
THP04490	PEGFPYX	UG2FW	3.16	3.3	4.25
THP04491	PEGFPYX	UG2FW	2.84	2.83	-0.44
THP04492	PEGFPYX	UG2FW	3.13	3.29	4.98
THP04493	PEGFPYX	UG2FW	3.19	3.21	0.66
THP04494	PEGFPYX	UG2FW	3.04	3.2	5.27
THP04495	PEGFPYX	UG2FW	3.20	3.52	9.60
THP04496	PEGFPYX	UG2FW	3.21	3.43	6.67
THP04497	POIKFPYX	UG2FW	3.21	3.43	6.60
THP04498	POIKFPYX	UG2FW	3.24	3.45	6.35
THP04499	PEGFPYX	UG2FW	3.02	3.2	5.65
THP04500	PEGFPYX	UG2FW	3.24	3.34	3.01
THP04501	PEGFPYX	UG2FW	3.32	3.385	1.88
THP04502	PEGFPYX	UG2FW	3.34	3.48	4.02
THP04503	PEGFPYX	UG2FW	3.26	3.445	5.39
THP04504	PEGFPYX	UG2FW	3.27	3.44	5.10
THP04505	POIKPYX	UG2FW	3.25	3.44	5.66

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04506	POIKPYX	UG2FW	3.26	3.48	6.44
THP04507	PEGFPYX	UG2FW	3.34	3.53	5.64
THP04508	PEGFPYX	UG2FW	3.32	3.57	7.29
THP04509	PEGFPYX	UG2FW	3.21	3.22	0.29
THP04510	PEGFPYX	UG2FW	3.14	3.46	9.84
THP04511	PEGFPYX	UG2FW	3.23	3.49	7.63
THP04512	POIKPYX	UG2FW	3.29	3.48	5.74
THP04513	POIKPYX	UG2FW	3.21	3.45	7.20
THP04514	PEGFPYX	UG2FW	3.22	3.34	3.80
THP04515	PEGFPYX	UG2FW	3.17	3.32	4.69
THP04516	PEGFPYX	UG2FW	3.03	3.27	7.63
THP04517	PEGFPYX	UG2FW	3.27	3.35	2.43
THP04518	PEGFPYX	UG2FW	3.31	3.43	3.45
THP04519	PEGFPYX	UG2FW	3.20	3.35	4.73
THP04520	POIKPYX	UG2FW	3.25	3.37	3.66
THP04521	POIKPYX	UG2FW	3.27	3.39	3.62
THP04522	PEGFPYX	UG2FW	3.25	3.35	2.89
THP04523	PEGFPYX	UG2FW	3.30	3.37	2.06
THP04524	PEGFPYX	UG2FW	3.23	3.41	5.29
THP04525	PEGFPYX	UG2FW	3.26	3.32	1.98
THP04526	PEGFPYX	UG2FW	3.27	3.39	3.48
THP04527	PEGFPYX	UG2FW	3.23	3.38	4.46
THP04528	PP	UG2FW	3.23	3.35	3.74
THP04529	POIKPYX	UG2FW	3.25	3.37	3.67
THP04530	POIKPYX	UG2FW	3.26	3.35	2.85
THP04531	PEGFPYX	UG2FW	3.27	3.4	3.91
THP04532	PEGFPYX	UG2FW	3.19	3.31	3.55
THP04533	PEGFPYX	UG2FW	3.27	3.42	4.52
THP04534	PEGFPYX	UG2FW	3.22	3.37	4.40
THP04535	PEGFPYX	UG2FW	3.28	3.43	4.56
THP04536	PEGFPYX	UG2FW	3.26	3.38	3.61
THP04537	PEGFPYX	UG2FW	3.22	3.345	3.73
THP04538	POIKPYX	UG2FW	3.20	3.35	4.55
THP04539	POIKPYX	UG2FW	3.07	3.255	5.93
THP04540	PEGFPYX	UG2FW	3.26	3.65	11.25
THP04541	PEGFPYX	UG2FW	3.31	3.53	6.51
THP04542	PEGFPYX	UG2FW	3.00	3.3	9.61
THP04543	PEGFPYX	UG2FW	3.00	3.29	9.35
THP04544	PEGFPYX	UG2FW	3.24	3.63	11.27
THP04545	PEGFPYX	UG2FW	3.35	3.35	-0.03
THP04546	PEGFPYX	UG2FW	3.59	3.64	1.47
THP04547	PEGFPYX	UG2FW	3.09	3.44	10.56
THP04548	PEGFPYX	UG2FW	3.26	3.38	3.55
THP04549	PEGFPYX	UG2FW	3.20	3.28	2.59
THP04550	PEGFPYX	UG2FW	3.26	3.4	4.32
THP04551	PEGFPYX	UG2FW	3.25	3.41	4.67
THP04552	PEGFPYX	UG2FW	3.28	3.63	10.14
THP04553	PEGFPYX	UG2FW	3.30	3.78	13.69
THP04554	PEGFPYX	UG2FW	3.41	3.54	3.86
THP04555	PEGFPYX	UG2FW	3.38	3.51	3.79
THP04556	PEGFPYX	UG2FW	3.23	3.37	4.22
THP04557	PEGFPYX	UG2FW	3.24	3.41	5.15
THP04558	PEGFPYX	UG2FW	3.23	3.39	4.94

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04559	PEGFPYX	UG2FW	3.05	3.33	8.62
THP04560	PEGFPYX	UG2FW	3.03	3.25	6.94
THP04561	PEGFPYX	UG2FW	3.04	3.33	9.17
THP04562	PEGFPYX	UG2FW	3.09	3.52	13.12
THP04563	PEGFPYX	UG2FW	3.20	3.52	9.47
THP04564	PEGFPYX	UG2FW	3.34	3.62	8.17
THP04565	PEGFPYX	UG2FW	3.30	3.42	3.45
THP04566	PEGFPYX	UG2FW	3.17	3.29	3.59
THP04567	PEGFPYX	UG2FW	3.10	3.28	5.53
THP04568	PEGFPYX	UG2FW	3.13	3.24	3.59
THP04569	PEGFPYX	UG2FW	3.27	3.45	5.24
THP04570	PEGFPYX	UG2FW	3.48	3.49	0.42
THP04571	PEGFPYX	UG2FW	3.37	3.53	4.61
THP04572	PEGFPYX	UG2FW	3.26	3.44	5.49
THP04573	PEGFPYX	UG2FW	3.15	3.37	6.90
THP04574	PEGFPYX	UG2FW	3.09	3.48	11.84
THP04575	PEGFPYX	UG2FW	3.37	3.51	4.02
THP04576	PEGFPYX	UG2FW	3.42	3.57	4.31
THP04577	PEGFPYX	UG2FW	3.22	3.43	6.43
THP04578	PEGFPYX	UG2FW	3.07	3.22	4.81
THP04579	PEGFPYX	UG2FW	3.18	3.37	5.86
THP04580	PEGFPYX	UG2FW	3.23	3.53	8.91
THP04581	PEGFPYX	UG2FW	3.28	3.58	8.79
THP04582	PEGFPYX	UG2FW	3.28	3.53	7.43
THP04583	PEGFPYX	UG2FW	3.27	3.515	7.31
THP04584	PEGFPYX	UG2FW	3.24	3.49	7.45
THP04585	PEGFPYX	UG2FW	3.21	3.43	6.54
THP04586	PEGFPYX	UG2FW	3.00	3.47	14.57
THP04587	PEGFPYX	UG2FW	3.17	3.48	9.34
THP04588	PEGFPYX	UG2FW	3.10	3.45	10.64
THP04589	PEGFPYX	UG2FW	3.31	3.57	7.41
THP04590	PEGFPYX	UG2FW	3.24	3.58	9.99
THP04591	PEGFPYX	UG2FW	3.07	3.5	13.13
THP04592	PYX	UG2FW	3.21	3.45	7.27
THP04593	PYX	UG2FW	3.19	3.48	8.59
THP04594	PEGFPYX	UG2FW	3.37	3.55	5.10
THP04595	PEGFPYX	UG2FW	3.33	3.54	6.14
THP04596	PEGFPYX	UG2FW	3.31	3.57	7.45
THP04597	PEGFPYX	UG2FW	3.30	3.6	8.67
THP04598	PEGFPYX	UG2FW	3.22	3.45	6.91
THP04599	PEGFPYX	UG2FW	3.23	3.35	3.74
THP04600	PEGFPYX	UG2FW	3.17	3.34	5.08
THP04601	PEGFPYX	UG2FW	3.21	3.45	7.31
THP04602	PYX	UG2FW	3.23	3.44	6.32
THP04603	PYX	UG2FW	3.23	3.42	5.77
THP04604	PEGFPYX	UG2FW	3.22	3.07	-4.89
THP04605	PYX	UG2FW	3.25	3.08	-5.22
THP04606	PYX	UG2FW	3.25	3.09	-5.07
THP04607	PEGFPYX	UG2FW	3.23	3.17	-1.91
THP04608	PYX	UG2FW	3.21	3.06	-4.90
THP04609	PYX	UG2FW	3.22	3.07	-4.62
THP04610	PYX	UG2FW	3.23	3.07	-5.12
THP04611	PEGFPYX	UG2FW	3.14	3.5	10.93

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04612	PEGFPYX	UG2FW	3.31	3.49	5.20
THP04613	PEGFPYX	UG2FW	3.25	3.47	6.61
THP04614	PYX	UG2FW	3.23	3.4	5.03
THP04615	PYX	UG2FW	3.31	3.41	2.97
THP04616	PYX	UG2FW	3.25	3.4	4.60
THP04617	PYX	UG2FW	3.20	3.4	6.13
THP04618	PYX	UG2FW	3.05	3.37	9.95
THP04619	PYX	UG2FW	3.21	3.42	6.33
THP04620	PEGFPYX	UG2FW	3.28	3.43	4.55
THP04621	PEGFPYX	UG2FW	3.30	3.55	7.25
THP04622	PEGFPYX	UG2FW	3.38	3.53	4.24
THP04623	PEGFPYX	UG2FW	3.19	3.37	5.55
THP04624	PYX	UG2FW	3.23	3.38	4.63
THP04625	PYX	UG2FW	3.23	3.41	5.40
THP04626	PEGFPYX	UG2FW	3.20	3.32	3.72
THP04627	PEGFPYX	UG2FW	3.26	3.525	7.72
THP04628	PEGFPYX	UG2FW	3.28	3.39	3.25
THP04629	PEGFPYX	UG2FW	3.49	3.35	-4.23
THP04630	PYX	UG2FW	3.25	3.34	2.72
THP04631	PYX	UG2FW	3.28	3.33	1.48
THP04632	PEGFPYX	UG2FW	3.15	3.36	6.48
THP04633	PEGFPYX	UG2FW	3.28	3.505	6.75
THP04634	PEGFPYX	UG2FW	3.32	3.55	6.57
THP04635	PEGFPYX	UG2FW	3.25	3.45	5.83
THP04636	PEGFPYX	UG2FW	3.43	3.55	3.51
THP04637	PEGFPYX	UG2FW	3.22	3.43	6.43
THP04638	PYX	UG2FW	3.23	3.425	6.02
THP04639	PEGFPYX	UG2FW	3.03	3.22	6.05
THP04640	PEGFPYX	UG2FW	3.16	3.49	9.81
THP04641	PEGFPYX	UG2FW	3.33	3.49	4.62
THP04642	PEGFPYX	UG2FW	3.26	3.4	4.32
THP04643	PEGFPYX	UG2FW	3.23	3.5	8.11
THP04644	PYX	UG2FW	3.12	3.45	10.11
THP04645	PYX	UG2FW	3.24	3.43	5.66
THP04646	PEGFPYX	UG2FW	3.24	3.41	5.00
THP04647	PEGFPYX	UG2FW	3.21	3.46	7.54
THP04648	PEGFPYX	UG2FW	3.29	3.52	6.77
THP04649	PEGFPYX	UG2FW	3.24	3.54	8.76
THP04650	PEGFPYX	UG2FW	3.25	3.53	8.35
THP04651	PYX	UG2FW	3.25	3.48	6.87
THP04652	PYX	UG2FW	3.22	3.48	7.63
THP04653	PEGFPYX	UG2FW	3.43	3.605	4.96
THP04654	PEGFPYX	UG2FW	3.36	3.54	5.34
THP04655	PYX	UG2FW	3.29	3.51	6.37
THP04656	PYX	UG2FW	3.37	3.48	3.30
THP04657	PYX	UG2FW	3.27	3.46	5.67
THP04658	PYX	UG2FW	3.14	3.47	9.95
THP04659	PYX	UG2FW	3.29	3.45	4.84
THP04660	PEGFPYX	UG2FW	3.44	3.57	3.69
THP04661	PEGFPYX	UG2FW	3.16	3.45	8.62
THP04662	PEGFPYX	UG2FW	3.31	3.51	5.74
THP04663	PEGFPYX	UG2FW	3.22	3.48	7.87
THP04664	PEGFPYX	UG2FW	3.17	3.46	8.81

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04665	PEGFPYX	UG2FW	3.25	3.44	5.81
THP04666	PEGFPYX	UG2FW	3.36	3.56	5.89
THP04667	PEGFPYX	UG2FW	3.41	3.6	5.38
THP04668	PEGFPYX	UG2FW	3.26	3.46	5.98
THP04669	PEGFPYX	UG2FW	3.30	3.48	5.45
THP04670	PEGFPYX	UG2FW	3.26	3.47	6.30
THP04671	PYX	UG2FW	3.26	3.48	6.39
THP04672	PYX	UG2FW	3.23	3.41	5.37
THP04673	PEGFPYX	UG2FW	3.19	3.49	9.04
THP04674	PEGFPYX	UG2FW	3.25	3.55	8.91
THP04675	PEGFPYX	UG2FW	3.20	3.49	8.59
THP04676	PEGFPYX	UG2FW	3.13	3.48	10.62
THP04677	PYX	UG2FW	3.26	3.46	5.88
THP04678	PYX	UG2FW	3.21	3.46	7.46
THP04679	PEGFPYX	UG2FW	3.17	3.47	9.03
THP04680	PEGFPYX	UG2FW	3.29	3.46	4.94
THP04681	PEGFPYX	UG2FW	3.26	3.49	6.70
THP04682	PEGFPYX	UG2FW	3.21	3.48	7.94
THP04683	PYX	UG2FW	3.09	3.49	12.26
THP04684	PYX	UG2FW	3.14	3.48	10.20
THP04685	PEGFPYX	UG2FW	3.30	3.54	7.12
THP04686	PEGFPYX	UG2FW	3.17	3.58	12.18
THP04687	PEGFPYX	UG2FW	3.17	3.56	11.64
THP04688	PEGFPYX	UG2FW	3.25	3.46	6.26
THP04689	PYX	UG2FW	3.23	3.5	8.00
THP04690	PYX	UG2FW	3.24	3.51	7.88
THP04691	PEGFPYX	UG2FW	3.37	3.57	5.64
THP04692	PEGFPYX	UG2FW	3.29	3.42	3.83
THP04693	PYX	UG2FW	3.20	3.41	6.39
THP04694	PYX	UG2FW	3.21	3.45	7.35
THP04695	PYX	UG2FW	3.24	3.44	5.93
THP04696	PYX	UG2FW	3.29	3.45	4.73
THP04697	PEGFPYX	UG2FW	3.22	3.44	6.53
THP04698	PEGFPYX	UG2FW	3.22	3.44	6.59
THP04699	PYX	UG2FW	3.21	3.43	6.65
THP04700	PEGFPYX	UG2FW	3.31	3.49	5.35
THP04701	PEGFPYX	UG2FW	3.30	3.61	8.91
THP04702	PEGFPYX	UG2FW	3.34	3.43	2.76
THP04703	PEGFPYX	UG2FW	3.27	3.45	5.35
THP04704	PEGFPYX	UG2FW	3.26	3.43	4.96
THP04705	PEGFPYX	UG2FW	3.20	3.4	6.03
THP04706	PEGFPYX	UG2FW	3.21	3.4	5.84
THP04707	PEGFPYX	UG2FW	3.27	3.45	5.48
THP04708	PEGFPYX	UG2FW	3.38	3.52	3.91
THP04709	PEGFPYX	UG2FW	3.25	3.42	5.14
THP04710	POIKFPYX	UG2FW	3.22	3.37	4.60
THP04711	POIKFPYX	UG2FW	3.25	3.4	4.53
THP04712	PEGFPYX	UG2FW	3.24	3.44	6.11
THP04713	PEGFPYX	UG2FW	3.34	3.53	5.66
THP04714	PEGFPYX	UG2FW	3.33	3.52	5.55
THP04715	PEGFPYX	UG2FW	3.29	3.47	5.41
THP04716	POIKFPYX	UG2FW	3.24	3.385	4.48
THP04717	POIKFPYX	UG2FW	3.22	3.33	3.23

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04718	PEGFPYX	UG2FW	3.34	3.62	7.97
THP04719	PEGFPYX	UG2FW	3.34	3.535	5.78
THP04720	PP /UF2	UG2FW	3.23	3.44	6.42
THP04721	POIKPYX	UG2FW	3.24	3.45	6.38
THP04722	PEGFPYX	UG2FW	3.39	3.61	6.25
THP04723	PEGFPYX	UG2FW	3.36	3.6	7.03
THP04724	PEGFPYX	UG2FW	3.26	3.41	4.56
THP04725	POIKPYX	UG2FW	3.23	3.44	6.23
THP04726	POIKPYX	UG2FW	3.22	3.44	6.63
THP04727	PEGFPYX	UG2FW	3.38	3.67	8.08
THP04728	PEGFPYX	UG2FW	3.46	3.76	8.17
THP04729	PEGFPYX	UG2FW	3.47	3.74	7.59
THP04730	PEGFPYX	UG2FW	3.23	3.54	9.02
THP04731	POIKPYX	UG2FW	3.26	3.54	8.34
THP04732	POIKPYX	UG2FW	3.27	3.55	8.07
THP04733	PEGFPYX	UG2FW	3.12	3.4	8.44
THP04734	PEGFPYX	UG2FW	3.29	3.55	7.56
THP04735	PEGFPYX	UG2FW	3.33	3.58	7.22
THP04736	PEGFPYX	UG2FW	3.17	3.49	9.52
THP04737	POIKPYX	UG2FW	3.21	3.45	7.14
THP04738	POIKPYX	UG2FW	3.22	3.46	7.17
THP04739	POIKPYX	UG2FW	3.25	3.49	7.12
THP04740	POIKPYX	UG2FW	2.99	3.44	14.00
THP04741	POIKPYX	UG2FW	3.15	3.48	9.80
THP04742	POIKPYX	UG2FW	3.22	3.47	7.40
THP04743	POIKPYX	UG2FW	3.21	3.44	6.80
THP04744	POIKPYX	UG2FW	3.25	3.47	6.48
THP04745	POIKPYX	UG2FW	3.24	3.49	7.44
THP04746	POIKPYX	UG2FW	3.23	3.48	7.37
THP04747	POIKPYX	UG2FW	3.23	3.47	7.13
THP04748	PEGFPYX	UG2FW	3.34	3.54	5.87
THP04749	PEGFPYX	UG2FW	3.36	3.63	7.59
THP04750	PEGFPYX	UG2FW	3.33	3.57	6.94
THP04751	PEGFPYX	UG2FW	3.19	3.44	7.49
THP04752	POIKPYX	UG2FW	3.20	3.44	7.14
THP04753	POIKPYX	UG2FW	3.23	3.46	7.03
THP04754	POIKPYX	UG2FW	3.20	3.46	7.68
THP04755	POIKPYX	UG2FW	3.20	3.45	7.62
THP04756	POIKPYX	UG2FW	3.21	3.46	7.40
THP04757	POIKFPYX	UG2FW	3.24	3.46	6.52
THP04758	POIKFPYX	UG2FW	3.22	3.44	6.60
THP04759	POIKFPYX	UG2FW	3.24	3.47	6.81
THP04760	PEGFPYX	UG2FW	3.17	3.44	8.13
THP04761	PEGFPYX	UG2FW	3.25	3.46	6.30
THP04762	POIKPYX	UG2FW	3.23	3.47	7.32
THP04763	PEGFPYX	UG2FW	3.44	3.655	6.04
THP04764	PEGFPYX	UG2FW	3.30	3.53	6.66
THP04765	PEGFPYX	UG2FW	3.30	3.56	7.43
THP04766	PEGFPYX	UG2FW	3.25	3.47	6.68
THP04767	PEGFPYX	UG2FW	3.20	3.42	6.54
THP04768	PEGFPYX	UG2FW	3.21	3.45	7.20
THP04769	PEGFPYX	UG2FW	3.21	3.46	7.39
THP04770	PEGFPYX	UG2FW	3.29	3.45	4.71

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04771	POIKPYX	UG2FW	3.29	3.51	6.35
THP04772	POIKPYX	UG2FW	3.30	3.52	6.30
THP04773	POIKPYX	UG2FW	3.30	3.51	6.02
THP04774	PEGFPYX	UG2FW	3.28	3.52	6.92
THP04775	PEGFPYX	UG2FW	3.31	3.53	6.38
THP04776	PEGFPYX	UG2FW	3.32	3.54	6.54
THP04777	PEGFPYX	UG2FW	3.29	3.51	6.40
THP04778	PEGFPYX	UG2FW	3.29	3.49	5.98
THP04779	PEGFPYX	UG2FW	3.24	3.45	6.25
THP04780	PEGFPYX	UG2FW	3.17	3.49	9.48
THP04781	PEGFPYX	UG2FW	3.30	3.52	6.49
THP04782	PEGFPYX	UG2FW	3.33	3.51	5.33
THP04783	POIKFPYX	UG2FW	3.40	3.5	3.00
THP04784	PEGFPYX	UG2FW	3.60	3.79	5.19
THP04785	PEGFPYX	UG2FW	3.41	3.6	5.46
THP04786	PEGFPYX	UG2FW	3.30	3.51	6.12
THP04787	PEGFPYX	UG2FW	3.33	3.54	6.14
THP04788	PEGFPYX	UG2FW	3.35	3.56	6.12
THP04789	PEGFPYX	UG2FW	3.28	3.505	6.51
THP04790	PEGFPYX	UG2FW	3.27	3.47	5.85
THP04791	PEGFPYX	UG2FW	3.27	3.49	6.66
THP04792	PEGFPYX	UG2FW	3.26	3.34	2.35
THP04793	PEGFPYX	UG2FW	3.19	3.23	1.12
THP04794	PEGFPYX	UG2FW	3.10	3.2	3.02
THP04795	POIKPYX	UG2FW	3.31	3.43	3.70
THP04796	POIKPYX	UG2FW	3.30	3.45	4.59
THP04797	POIKPYX	UG2FW	3.51	3.46	-1.32
THP04798	CR PP	UG2FW	3.65	3.66	0.27
THP04799	PP	UG2FW	3.32	3.52	5.86
THP04800	POIKFPYX	UG2FW	3.31	3.54	6.81
THP04801	POIKFPYX	UG2FW	3.36	3.54	5.27
THP04802	PEGFPYX	UG2FW	3.06	3.35	9.15
THP04803	PEGFPYX	UG2FW	3.33	3.45	3.48
THP04804	PEGFPYX	UG2FW	3.35	3.46	3.32
THP04805	PEGFPYX	UG2FW	3.28	3.38	2.93
THP04806	PEGFPYX	UG2FW	3.26	3.36	2.98
THP04807	POIKPYX	UG2FW	2.90	3.37	15.01
THP04808	PEGFPYX	UG2FW	3.10	3.35	7.80
THP04809	PEGFPYX	UG2FW	3.29	3.42	3.75
THP04810	PEGFPYX	UG2FW	3.04	3.29	7.88
THP04811	PEGFPYX	UG2FW	3.35	3.5	4.29
THP04812	PEGFPYX	UG2FW	3.36	3.53	5.08
THP04813	PEGFPYX	UG2FW	3.23	3.42	5.67
THP04814	PEGFPYX	UG2FW	3.24	3.43	5.71
THP04815	PEGFPYX	UG2FW	3.23	3.44	6.17
THP04816	PEGFPYX	UG2FW	3.23	3.42	5.67
THP04817	PEGFPYX	UG2FW	3.23	3.42	5.66
THP04818	PEGFPYX	UG2FW	3.20	3.42	6.52
THP04819	PEGFPYX	UG2FW	3.24	3.43	5.70
THP04820	PEGFPYX	UG2FW	3.18	3.39	6.55
THP04821	POIKFPYX	UG2FW	3.29	3.52	6.63
THP04822	POIKFPYX	UG2FW	3.25	3.46	6.24
THP04823	POIKFPYX	UG2FW	3.27	3.48	6.36

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04824	POIKFPYX	UG2FW	3.29	3.48	5.69
THP04825	POIKFPYX	UG2FW	3.26	3.47	6.17
THP04826	PEGFPYX	UG2FW	3.28	3.45	5.05
THP04827	PEGFPYX	UG2FW	3.07	3.51	13.31
THP04828	PEGFPYX	UG2FW	3.37	3.5	3.88
THP04829	PEGFPYX	UG2FW	3.21	3.33	3.77
THP04830	PEGFPYX	UG2FW	3.27	3.43	4.63
THP04831	PEGFPYX	UG2FW	3.22	3.36	4.36
THP04832	PEGFPYX	UG2FW	3.22	3.37	4.68
THP04833	PEGFPYX	UG2FW	3.20	3.37	5.28
THP04834	PEGFPYX	UG2FW	3.24	3.28	1.26
THP04835	PEGFPYX	UG2FW	3.27	3.35	2.50
THP04836	PEGFPYX	UG2FW	3.24	3.35	3.28
THP04837	POIKPYX	UG2FW	3.25	3.34	2.67
THP04838	PEGFPYX	UG2FW	3.48	3.54	1.67
THP04839	PEGFPYX	UG2FW	3.35	3.49	3.97
THP04840	PEGFPYX	UG2FW	3.24	3.42	5.41
THP04841	PEGFPYX	UG2FW	3.20	3.33	3.95
THP04842	PEGFPYX	UG2FW	3.20	3.33	4.00
THP04843	POIKPYX	UG2FW	3.24	3.35	3.47
THP04844	POIKPYX	UG2FW	3.23	3.33	2.98
THP04845	PEGFPYX	UG2FW	3.28	3.34	1.93
THP04846	158.9	UG2FW	3.24	3.39	4.38
THP04847	POIKPYX	UG2FW	3.32	3.42	2.98
THP04848	POIKPYX	UG2FW	3.27	3.41	4.19
THP04849	PEGFPYX	UG2FW	3.40	3.57	4.80
THP04850	PEGFPYX	UG2FW	3.26	3.42	4.65
THP04851	POIKPYX	UG2FW	3.34	3.4	1.84
THP04852	POIKPYX	UG2FW	3.20	3.4	6.09
THP04853	PYX /CR	UG2FW	3.61	3.74	3.54
THP04854	PEGFPYX	UG2FW	3.44	3.65	6.02
THP04855	PEGFPYX	UG2FW	3.37	3.55	5.22
THP04856	POIKFPYX	UG2FW	3.31	3.56	7.30
THP04857	POIKFPYX	UG2FW	3.30	3.54	6.88
THP04858	PEGFPYX	UG2FW	3.43	3.68	7.03
THP04859	PEGFPYX	UG2FW	3.30	3.52	6.51
THP04860	PEGFPYX	UG2FW	3.35	3.56	6.21
THP04861	POIKFPYX	UG2FW	3.30	3.51	6.18
THP04862	PEGFPYX	UG2FW	3.24	3.53	8.57
THP04863	PEGFPYX	UG2FW	3.32	3.55	6.70
THP04864	PEGFPYX	UG2FW	3.27	3.53	7.63
THP04865	PEGFPYX	UG2FW	3.27	3.48	6.32
THP04866	PEGFPYX	UG2FW	3.23	3.37	4.31
THP04867	PEGFPYX	UG2FW	3.11	3.34	7.02
THP04868	PEGFPYX	UG2FW	3.21	3.43	6.68
THP04869	PEGFPYX	UG2FW	3.23	3.41	5.39
THP04870	PEGFPYX	UG2FW	3.10	3.27	5.43
THP04871	PEGFPYX	UG2FW	3.21	3.36	4.52
THP04872	PEGFPYX	UG2FW	3.21	3.41	6.19
THP04873	PEGFPYX	UG2FW	3.27	3.38	3.30
THP04874	PEGFPYX	UG2FW	3.14	3.335	6.00
THP04875	PEGFPYX	UG2FW	3.39	3.6	6.13
THP04876	PEGFPYX	UG2FW	3.31	3.51	5.99

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04877	PEGFPYX	UG2FW	3.32	3.56	6.95
THP04878	PEGFPYX	UG2FW	3.34	3.44	3.03
THP04879	PEGFPYX	UG2FW	3.31	3.47	4.63
THP04880	PEGFPYX	UG2FW	3.03	3.29	8.29
THP04881	PEGFPYX	UG2FW	2.95	3.21	8.49
THP04882	PEGFPYX	UG2FW	3.27	3.45	5.40
THP04883	PEGFPYX	UG2FW	3.24	3.37	3.93
THP04884	PEGFPYX	UG2FW	3.05	3.24	6.16
THP04885	PEGFPYX	UG2FW	3.13	3.26	4.13
THP04886	PEGFPYX	UG2FW	3.16	3.28	3.67
THP04887	PEGFPYX	UG2FW	3.19	3.29	3.16
THP04888	PEGFPYX	UG2FW	3.28	3.38	3.06
THP04889	PEGFPYX	UG2FW	3.31	3.44	3.80
THP04890	PEGFPYX	UG2FW	3.30	3.42	3.67
THP04891	PEGFPYX	UG2FW	3.31	3.42	3.42
THP04892	PEGFPYX	UG2FW	3.21	3.4	5.75
THP04893	PEGFPYX	UG2FW	3.28	3.37	2.77
THP04894	PEGFPYX	UG2FW	3.35	3.42	2.02
THP04895	PEGFPYX	UG2FW	3.33	3.47	4.11
THP04896	PEGFPYX	UG2FW	3.31	3.5	5.63
THP04897	PEGFPYX	UG2FW	3.11	3.37	7.95
THP04898	PEGFPYX	UG2FW	3.24	3.46	6.61
THP04899	PEGFPYX	UG2FW	3.29	3.34	1.43
THP04900	POIKPYX	UG2FW	3.25	3.3	1.40
THP04901	POIKPYX	UG2FW	3.16	3.24	2.36
THP04902	PEGFPYX	UG2FW	3.27	3.37	3.16
THP04903	PEGFPYX	UG2FW	3.29	3.47	5.33
THP04904	PEGFPYX	UG2FW	3.21	3.37	4.75
THP04905	PEGFPYX	UG2FW	3.27	3.51	7.18
THP04906	PEGFPYX	UG2FW	3.12	3.34	6.71
THP04907	PEGFPYX	UG2FW	3.30	3.48	5.18
THP04908	PEGFPYX	UG2FW	3.35	3.47	3.61
THP04909	PEGFPYX	UG2FW	3.28	3.46	5.40
THP04910	PEGFPYX	UG2FW	3.37	3.51	3.93
THP04911	PEGFPYX	UG2FW	3.45	3.5	1.41
THP04912	PEGFPYX	UG2FW	3.45	3.54	2.51
THP04913	PEGFPYX	UG2FW	3.29	3.49	5.94
THP04914	POIKPYX	UG2FW	3.24	3.39	4.43
THP04915	POIKPYX	UG2FW	3.21	3.37	4.74
THP04916	PEGFPYX	UG2FW	3.34	3.56	6.40
THP04917	PEGFPYX	UG2FW	3.46	3.675	6.08
THP04918	PEGFPYX	UG2FW	3.35	3.55	5.89
THP04919	POIKPYX	UG2FW	3.32	3.48	4.64
THP04920	POIKPYX	UG2FW	3.25	3.46	6.35
THP04921	PEGFPYX	UG2FW	3.31	3.495	5.33
THP04922	PEGFPYX	UG2FW	3.28	3.55	8.00
THP04923	PEGFPYX	UG2FW	3.30	3.63	9.42
THP04924	PEGFPYX	UG2FW	3.38	3.6	6.24
THP04925	PEGFPYX	UG2FW	3.24	3.6	10.45
THP04926	POIKPYX	UG2FW	3.25	3.47	6.59
THP04927	POIKPYX	UG2FW	3.25	3.48	6.91
THP04928	POIKPYX	UG2FW	3.28	3.49	6.29
THP04929	PEGFPYX	UG2FW	3.24	3.47	6.83

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04930	PEGFPYX	UG2FW	3.27	3.36	2.82
THP04931	PEGFPYX	UG2FW	3.34	3.54	5.71
THP04932	PEGFPYX	UG2FW	3.34	3.52	5.28
THP04933	PEGFPYX	UG2FW	3.30	3.45	4.37
THP04934	POIKPYX	UG2FW	3.24	3.395	4.53
THP04935	POIKPYX	UG2FW	3.22	3.38	4.81
THP04936	POIKPYX	UG2FW	3.26	3.26	-0.09
THP04937	PEGFPYX	UG2FW	3.27	3.3	1.01
THP04938	PEGFPYX	UG2FW	3.25	3.35	3.11
THP04939	PEGFPYX	UG2FW	3.29	3.42	3.92
THP04940	PEGFPYX	UG2FW	3.29	3.47	5.37
THP04941	PEGFPYX	UG2FW	3.22	3.48	7.73
THP04942	POIKPYX	UG2FW	3.24	3.43	5.55
THP04943	POIKPYX	UG2FW	3.23	3.41	5.34
THP04944	POIKPYX	UG2FW	3.24	3.42	5.32
THP04945	PEGFPYX	UG2FW	3.35	3.49	4.13
THP04946	PEGFPYX	UG2FW	3.29	3.38	2.81
THP04947	PEGFPYX	UG2FW	3.34	3.56	6.24
THP04948	PEGFPYX	UG2FW	3.30	3.54	6.99
THP04949	PEGFPYX	UG2FW	3.47	3.5	0.91
THP04950	POIKFPYX	UG2FW	3.21	3.44	6.80
THP04951	POIKFPYX	UG2FW	3.21	3.415	6.29
THP04952	PEGFPYX	UG2FW	3.31	3.54	6.61
THP04953	PEGFPYX	UG2FW	3.38	3.58	5.78
THP04954	PEGFPYX	UG2FW	3.29	3.56	7.87
THP04955	PEGFPYX	UG2FW	3.43	3.52	2.56
THP04956	POIKPYX	UG2FW	3.22	3.48	7.90
THP04957	POIKPYX	UG2FW	3.20	3.48	8.46
THP04958	PEGFPYX	UG2FW	3.24	3.49	7.42
THP04959	PEGFPYX	UG2FW	3.32	3.64	9.27
THP04960	POIKFPYX	UG2FW	3.43	3.56	3.70
THP04961	POIKFPYX	UG2FW	3.25	3.5	7.50
THP04962	POIKFPYX	UG2FW	3.25	3.47	6.47
THP04963	PEGFPYX	UG2FW	3.24	3.44	5.86
THP04964	PEGFPYX	UG2FW	3.27	3.59	9.31
THP04965	PEGFPYX	UG2FW	3.35	3.55	5.84
THP04966	POIKFPYX	UG2FW	3.24	3.52	8.26
THP04967	POIKFPYX	UG2FW	3.21	3.495	8.58
THP04968	PEGFPYX	UG2FW	3.01	3.49	14.77
THP04969	PEGFPYX	UG2FW	3.01	3.49	14.77
THP04970	PEGFPYX	UG2FW	3.27	3.54	7.86
THP04971	PEGFPYX	UG2FW	3.27	3.54	7.86
THP04972	PEGFPYX	UG2FW	3.38	3.62	7.01
THP04973	PEGFPYX	UG2FW	3.38	3.62	7.01
THP04974	PEGFPYX	UG2FW	3.30	3.58	8.15
THP04975	PEGFPYX	UG2FW	3.30	3.58	8.15
THP04976	PEGFPYX	UG2FW	3.32	3.56	6.89
THP04977	PEGFPYX	UG2FW	3.32	3.56	6.89
THP04978	POIKPYX	UG2FW	3.22	3.46	7.21
THP04979	POIKPYX	UG2FW	3.22	3.46	7.21
THP04980	POIKPYX	UG2FW	3.20	3.47	8.02
THP04981	POIKPYX	UG2FW	3.20	3.47	8.02
THP04982	PEGFPYX	UG2FW	3.23	3.52	8.54

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP04983	PEGFPYX	UG2FW	3.23	3.52	8.54
THP04984	PEGFPYX	UG2FW	3.17	3.37	6.05
THP04985	PEGFPYX	UG2FW	3.17	3.37	6.05
THP04986	PEGFPYX	UG2FW	3.28	3.55	8.04
THP04987	PEGFPYX	UG2FW	3.28	3.55	8.04
THP04988	PEGFPYX	UG2FW	3.29	3.56	7.96
THP04989	PEGFPYX	UG2FW	3.29	3.56	7.96
THP04990	PEGFPYX	UG2FW	3.22	3.5	8.32
THP04991	PEGFPYX	UG2FW	3.22	3.5	8.32
THP04992	POIKPYX	UG2FW	3.22	3.47	7.55
THP04993	POIKPYX	UG2FW	3.22	3.47	7.55
THP04994	POIKPYX	UG2FW	3.22	3.46	7.32
THP04995	POIKPYX	UG2FW	3.22	3.46	7.32
THP04996	PEGFPYX	UG2FW	3.25	3.52	7.86
THP04997	PEGFPYX	UG2FW	3.25	3.52	7.86
THP04998	PEGFPYX	UG2FW	3.24	3.53	8.68
THP04999	PEGFPYX	UG2FW	3.24	3.53	8.68
THP05000	PEGFPYX	UG2FW	3.29	3.51	6.32
THP05001	PEGFPYX	UG2FW	3.29	3.51	6.32
THP05002	PEGFPYX	UG2FW	3.28	3.5	6.41
THP05003	PEGFPYX	UG2FW	3.28	3.5	6.41
THP05004	PEGFPYX	UG2FW	3.20	3.46	7.85
THP05005	PEGFPYX	UG2FW	3.20	3.46	7.85
THP05006	POIKPYX	UG2FW	3.23	3.45	6.44
THP05007	POIKPYX	UG2FW	3.23	3.45	6.44
THP05008	POIKPYX	UG2FW	3.19	3.43	7.14
THP05009	POIKPYX	UG2FW	3.19	3.43	7.14
THP05010	PEGFPYX	UG2FW	3.10	3.52	12.81
THP05011	PEGFPYX	UG2FW	3.45	3.39	-1.68
THP05012	PEGFPYX	UG2FW	3.25	3.38	3.79
THP05013	PEGFPYX	UG2FW	3.28	3.35	2.25
THP05014	PEGFPYX	UG2FW	3.25	3.35	3.06
THP05015	PEGFPYX	UG2FW	3.27	3.39	3.48
THP05016	PEGFPYX	UG2FW	3.25	3.39	4.23
THP05017	PEGFPYX	UG2FW	3.26	3.38	3.57
THP05018	PEGFPYX	UG2FW	3.24	3.35	3.33
THP05019	PEGFPYX	UG2FW	3.38	3.54	4.59
THP05020	PEGFPYX	UG2FW	3.42	3.57	4.43
THP05021	POIKPYX	UG2FW	3.29	3.46	5.08
THP05022	POIKFPYX	UG2FW	3.28	3.43	4.58
THP05023	PEGFPYX	UG2FW	3.36	3.54	5.26
THP05024	PEGFPYX	UG2FW	3.31	3.58	7.93
THP05025	PEGFPYX	UG2FW	3.36	3.51	4.34
THP05026	POIKPYX	UG2FW	3.30	3.47	5.10
THP05027	POIKPYX	UG2FW	3.31	3.46	4.45
THP05028	CR	UG2FW	4.13	4.21	1.87
THP05029	PEGFPYX	UG2FW	3.50	3.67	4.64
THP05030	PEGFPYX	UG2FW	3.59	3.7	3.03
THP05031	PEGFPYX	UG2FW	3.38	3.66	7.96
THP05032	PEGFPYX	UG2FW	3.33	3.62	8.26
THP05033	PEGFPYX	UG2FW	3.19	3.445	7.55
THP05034	PEGFPYX	UG2FW	3.18	3.46	8.45
THP05035	PEGFPYX	UG2FW	3.21	3.43	6.61

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05036	PEGFPYX	UG2FW	3.22	3.47	7.62
THP05037	PEGFPYX	UG2FW	3.20	3.44	7.18
THP05038	PEGFPYX	UG2FW	3.28	3.53	7.32
THP05039	PEGFPYX	UG2FW	3.36	3.6	6.99
THP05040	PEGFPYX	UG2FW	3.41	3.63	6.16
THP05041	PEGFPYX	UG2FW	3.34	3.63	8.36
THP05042	PEGFPYX	UG2FW	3.31	3.58	7.78
THP05043	PEGFPYX	UG2FW	3.20	3.46	7.70
THP05044	PEGFPYX	UG2FW	3.22	3.44	6.70
THP05045	PEGFPYX	UG2FW	3.24	3.44	6.14
THP05046	PEGFPYX	UG2FW	3.22	3.47	7.44
THP05047	PEGFPYX	UG2FW	3.25	3.44	5.71
THP05048	PEGFPYX	UG2FW	3.27	3.47	5.81
THP05049	PEGFPYX	UG2FW	3.27	3.48	6.09
THP05050	PEGFPYX	UG2FW	3.28	3.5	6.46
THP05051	PEGFPYX	UG2FW	3.19	3.42	6.87
THP05052	PEGFPYX	UG2FW	3.44	3.6	4.50
THP05053	PEGFPYX	UG2FW	3.29	3.38	2.80
THP05054	PEGFPYX	UG2FW	3.15	3.33	5.69
THP05055	PEGFPYX	UG2FW	3.25	3.36	3.44
THP05056	POIKPYX	UG2FW	3.24	3.36	3.77
THP05057	PEGFPYX	UG2FW	3.25	3.39	4.33
THP05058	PEGFPYX	UG2FW	3.39	3.47	2.38
THP05059	PEGFPYX	UG2FW	3.29	3.4	3.21
THP05060	PEGFPYX	UG2FW	3.15	3.26	3.34
THP05061	POIKPYX	UG2FW	3.24	3.33	2.67
THP05062	POIKPYX	UG2FW	3.23	3.35	3.78
THP05063	PEGFPYX	UG2FW	3.35	3.56	6.08
THP05064	PEGFPYX	UG2FW	3.31	3.57	7.42
THP05065	PEGFPYX	UG2FW	3.38	3.65	7.66
THP05066	PEGFPYX	UG2FW	3.35	3.54	5.54
THP05067	PEGFPYX	UG2FW	3.22	3.61	11.49
THP05068	POIKPYX	UG2FW	3.21	3.5	8.55
THP05069	POIKPYX	UG2FW	3.24	3.535	8.57
THP05070	PEGFPYX	UG2FW	3.18	3.42	7.42
THP05071	PEGFPYX	UG2FW	3.31	3.5	5.52
THP05072	PEGFPYX	UG2FW	3.36	3.58	6.42
THP05073	PEGFPYX	UG2FW	3.37	3.61	6.85
THP05074	PEGFPYX	UG2FW	3.22	3.48	7.68
THP05075	POIKPYX	UG2FW	3.24	3.46	6.63
THP05076	POIKPYX	UG2FW	3.33	3.46	3.85
THP05077	PEGFPYX	UG2FW	3.25	3.53	8.35
THP05078	PEGFPYX	UG2FW	3.34	3.46	3.52
THP05079	PEGFPYX	UG2FW	3.33	3.56	6.76
THP05080	PEGFPYX	UG2FW	3.35	3.59	7.01
THP05081	PEGFPYX	UG2FW	3.28	3.52	7.18
THP05082	PEGFPYX	UG2FW	3.22	3.46	7.11
THP05083	PEGFPYX	UG2FW	3.06	3.45	11.88
THP05084	PEGFPYX	UG2FW	3.19	3.51	9.44
THP05085	PEGFPYX	UG2FW	3.08	3.505	12.92
THP05086	PEGFPYX	UG2FW	3.28	3.45	4.93
THP05087	PEGFPYX	UG2FW	3.17	3.47	8.91
THP05088	PEGFPYX	UG2FW	3.23	3.46	6.81

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05089	PEGFPYX	UG2FW	3.24	3.49	7.35
THP05090	PEGFPYX	UG2FW	3.23	3.48	7.42
THP05091	PEGFPYX	UG2FW	3.30	3.69	11.02
THP05092	PEGFPYX	UG2FW	3.18	3.46	8.43
THP05093	PEGFPYX	UG2FW	3.18	3.58	11.90
THP05094	PEGFPYX	UG2FW	3.27	3.56	8.61
THP05095	PEGFPYX	UG2FW	3.21	3.27	1.93
THP05096	PEGFPYX	UG2FW	3.23	3.485	7.51
THP05097	PEGFPYX	UG2FW	3.24	3.47	6.92
THP05098	PEGFPYX	UG2FW	3.25	3.51	7.59
THP05099	PEGFPYX	UG2FW	3.23	3.495	7.90
THP05100	PEGFPYX	UG2FW	3.23	3.46	6.81
THP05101	PEGFPYX	UG2FW	3.22	3.48	7.88
THP05102	PEGFPYX	UG2FW	3.23	3.48	7.38
THP05103	FPYX	UG2FW	3.21	3.47	7.79
THP05104	FPYX	UG2FW	3.26	3.48	6.46
THP05105	FPYX	UG2FW	3.25	3.51	7.59
THP05106	PEGFPYX	UG2FW	3.27	3.56	8.59
THP05107	PEGFPYX	UG2FW	3.31	3.53	6.49
THP05108	PEGFPYX	UG2FW	3.32	3.64	9.25
THP05109	PEGFPYX	UG2FW	3.30	3.65	10.03
THP05110	PEGFPYX	UG2FW	3.27	3.52	7.36
THP05111	PYX	UG2FW	3.22	3.54	9.40
THP05112	PYX	UG2FW	3.23	3.54	9.02
THP05113	PYX	UG2FW	3.27	3.54	7.94
THP05114	PYX	UG2FW	3.23	3.53	8.84
THP05115	PEGFPYX	UG2FW	3.22	3.5	8.38
THP05116	PEGFPYX	UG2FW	3.67	3.65	-0.66
THP05117	PEGFPYX	UG2FW	3.18	3.47	8.83
THP05118	PEGFPYX	UG2FW	3.20	3.5	9.00
THP05119	PEGFPYX	UG2FW	3.23	3.53	8.96
THP05120	PEGFPYX	UG2FW	3.22	3.515	8.87
THP05121	PEGFPYX	UG2FW	3.30	3.545	7.24
THP05122	PEGFPYX	UG2FW	3.42	3.675	7.22
THP05123	PEGFPYX	UG2FW	3.47	3.65	5.18
THP05124	PEGFPYX	UG2FW	3.43	3.6	4.84
THP05125	POIKPYX	UG2FW	3.29	3.44	4.44
THP05126	POIKPYX	UG2FW	3.28	3.45	5.06
THP05127	POIKPYX	UG2FW	3.26	3.42	4.67
THP05128	PEGFPYX	UG2FW	3.34	3.53	5.44
THP05129	PEGFPYX	UG2FW	3.45	3.62	4.67
THP05130	PEGFPYX	UG2FW	3.37	3.51	4.05
THP05131	POIKPYX	UG2FW	3.20	3.41	6.35
THP05132	POIKPYX	UG2FW	3.17	3.41	7.35
THP05133	POIKPYX	UG2FW	3.20	3.43	6.96
THP05134	PEGFPYX	UG2FW	3.25	3.4	4.55
THP05135	PEGFPYX	UG2FW	3.33	3.52	5.45
THP05136	PEGFPYX	UG2FW	3.21	3.46	7.46
THP05137	PEGFPYX	UG2FW	3.02	3.29	8.48
THP05138	PP	UG2FW	2.91	3.14	7.44
THP05139	PP	UG2FW	3.00	3.31	9.95
THP05140	PP	UG2FW	2.94	3.05	3.59
THP05141	PEGFPYX	UG2FW	3.35	3.54	5.52

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05142	PEGFPYX	UG2FW	3.33	3.61	8.22
THP05143	POIKPYX	UG2FW	3.27	3.45	5.31
THP05144	POIKPYX	UG2FW	3.26	3.42	4.68
THP05145	PEGFPYX	UG2FW	3.40	3.63	6.52
THP05146	PEGFPYX	UG2FW	3.36	3.57	6.07
THP05147	PEGFPYX	UG2FW	3.28	3.525	7.17
THP05148	POIKFPYX	UG2FW	3.26	3.42	4.64
THP05149	POIKFPYX	UG2FW	3.24	3.44	5.88
THP05150	PEGFPYX	UG2FW	3.08	3.035	-1.44
THP05151	PEGFPYX	UG2FW	3.29	3.5	6.21
THP05152	PEGFPYX	UG2FW	3.34	3.53	5.58
THP05153	PEGFPYX	UG2FW	3.37	3.47	2.96
THP05154	PEGFPYX	UG2FW	3.31	3.41	2.98
THP05155	PEGFPYX	UG2FW	3.32	3.42	2.87
THP05156	PEGFPYX	UG2FW	3.35	3.41	1.74
THP05157	PEGFPYX	UG2FW	3.34	3.39	1.43
THP05158	PEGFPYX	UG2FW	3.20	3.33	3.97
THP05159	PEGFPYX	UG2FW	3.24	3.37	3.85
THP05160	PEGFPYX	UG2FW	3.34	3.38	1.18
THP05161	PEGFPYX	UG2FW	3.33	3.46	3.83
THP05162	FPYX	UG2FW	3.20	3.3	2.93
THP05163	FPYX	UG2FW	3.22	3.31	2.85
THP05164	FPYX	UG2FW	3.18	3.31	3.96
THP05165	PEGFPYX	UG2FW	3.18	3.31	4.11
THP05166	PEGFPYX	UG2FW	3.29	3.44	4.44
THP05167	PEGFPYX	UG2FW	3.26	3.4	4.27
THP05168	PEGFPYX	UG2FW	3.30	3.43	3.94
THP05169	FPYX	UG2FW	3.21	3.33	3.67
THP05170	FPYX	UG2FW	3.20	3.32	3.65
THP05171	FPYX	UG2FW	3.11	3.32	6.51
THP05172	PYX	UG2FW	3.42	3.55	3.74
THP05173	PYX	UG2FW	3.53	3.54	0.16
THP05174	PYX	UG2FW	3.41	3.44	0.92
THP05175	PYX	UG2FW	3.31	3.4	2.54
THP05176	PYX	UG2FW	3.20	3.345	4.38
THP05177	PYX	UG2FW	3.16	3.37	6.54
THP05178	PYX	UG2FW	3.34	3.37	0.97
THP05179	PYX	UG2FW	3.35	3.39	1.13
THP05180	PYX	UG2FW	3.22	3.36	4.21
THP05181	PYX	UG2FW	3.30	3.41	3.24
THP05182	FPYX	UG2FW	3.38	3.69	8.64
THP05183	FPYX	UG2FW	3.47	3.7	6.40
THP05184	FPYX	UG2FW	3.46	3.63	4.77
THP05185	FPYX	UG2FW	3.31	3.56	7.19
THP05186	FPYX	UG2FW	3.32	3.59	7.81
THP05187	FPYX	UG2FW	3.34	3.58	6.94
THP05188	FPYX	UG2FW	3.25	3.5	7.41
THP05189	FPYX	UG2FW	3.28	3.52	7.20
THP05190	FPYX	UG2FW	3.22	3.5	8.30
THP05191	FPYX	UG2FW	3.28	3.53	7.37
THP05192	PYX	UG2FW	3.39	3.38	-0.20
THP05193	PYX	UG2FW	3.31	3.46	4.29
THP05194	PYX	UG2FW	3.54	3.47	-2.04

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05195	PYX	UG2FW	3.23	3.44	6.18
THP05196	PYX	UG2FW	3.27	3.38	3.39
THP05197	PYX	UG2FW	3.22	3.345	3.81
THP05198	PYX	UG2FW	3.20	3.32	3.67
THP05199	PYX	UG2FW	3.25	3.36	3.25
THP05200	PYX	UG2FW	3.32	3.44	3.68
THP05201	PYX	UG2FW	3.44	3.58	3.87
THP05202	PYX	UG2FW	3.48	3.575	2.83
THP05203	PYX	UG2FW	3.41	3.53	3.49
THP05204	PYX	UG2FW	3.23	3.35	3.70
THP05205	PYX	UG2FW	3.27	3.39	3.59
THP05206	PYX	UG2FW	3.30	3.43	3.95
THP05207	PYX	UG2FW	3.30	3.44	4.24
THP05208	PYX	UG2FW	3.04	3.22	5.77
THP05209	PYX	UG2FW	3.26	3.37	3.20
THP05210	PYX	UG2FW	3.33	3.38	1.53
THP05211	PYX	UG2FW	3.32	3.54	6.41
THP05212	PYX	UG2FW	3.46	3.54	2.15
THP05213	PYX	UG2FW	3.31	3.45	4.24
THP05214	PYX	UG2FW	3.31	3.42	3.25
THP05215	PYX	UG2FW	3.16	3.35	5.74
THP05216	PYX	UG2FW	3.28	3.38	3.00
THP05217	PYX	UG2FW	3.17	3.39	6.58
THP05218	PYX	UG2FW	3.31	3.54	6.57
THP05219	PYX	UG2FW	3.15	3.28	4.17
THP05220	PYX	UG2FW	3.25	3.28	0.90
THP05221	PYX	UG2FW	3.29	3.37	2.30
THP05222	PYX	UG2FW	3.31	3.36	1.48
THP05223	PYX	UG2FW	3.23	3.31	2.38
THP05224	PYX	UG2FW	3.18	3.28	3.15
THP05225	PYX	UG2FW	3.20	3.26	2.00
THP05226	PYX	UG2FW	3.20	3.28	2.48
THP05227	PYX	UG2FW	3.20	3.27	2.17
THP05228	POIKFPYX	UG2HW	3.30	3.44	4.21
THP05229	POIKFPYX	UG2HW	3.34	3.5	4.78
THP05230	POIKFPYX	UG2HW	3.31	3.53	6.54
THP05231	MOT	UG2HW	2.77	2.93	5.47
THP05232	MOT	UG2HW	2.75	2.9	5.36
THP05233	MOT	UG2HW	2.75	2.89	4.93
THP05234	N	UG2HW	2.99	3.18	6.18
THP05235	N	UG2HW	3.06	3.27	6.52
THP05236	N	UG2HW	3.11	3.3	6.03
THP05237	POIKFPYX	UG2HW	3.26	3.47	6.37
THP05238	POIKFPYX	UG2HW	3.25	3.48	6.75
THP05239	POIKPYX	UG2HW	3.25	3.46	6.28
THP05240	POIKPYX	UG2HW	3.25	3.45	6.04
THP05241	POIKPYX	UG2HW	3.31	3.49	5.32
THP05242	POIKPYX	UG2HW	3.24	3.4	4.79
THP05243	POIKPYX	UG2HW	3.03	3.17	4.36
THP05244	POIKPYX	UG2HW	3.26	3.23	-0.85
THP05245	POIKFPYX	UG2HW	3.25	3.4	4.60
THP05246	POIKFPYX	UG2HW	3.25	3.4	4.53
THP05247	POIKFPYX	UG2HW	3.87	4.11	5.99

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05248	POIKPYX	UG2HW	3.28	3.445	5.05
THP05249	POIKPYX	UG2HW	3.63	3.485	-4.18
THP05250	POIKPYX	UG2HW	3.28	3.45	5.12
THP05251	POIKPYX	UG2HW	3.30	3.48	5.20
THP05252	POIKFPYX	UG2HW	3.24	3.25	0.27
THP05253	POIKFPYX	UG2HW	3.26	3.48	6.45
THP05254	PYXAN	UG2HW	3.29	3.44	4.43
THP05255	PYXAN	UG2HW	3.32	3.49	4.89
THP05256	POIKPYX	UG2HW	3.30	3.49	5.61
THP05257	POIKPYX	UG2HW	3.30	3.49	5.59
THP05258	POIKPYX	UG2HW	3.26	3.49	6.82
THP05259	POIKPYX	UG2HW	3.17	3.505	10.08
THP05260	POIKPYX	UG2HW	3.30	3.55	7.18
THP05261	POIKFPYX	UG2HW	3.28	3.51	6.71
THP05262	POIKFPYX	UG2HW	3.27	3.535	7.68
THP05263	POIKFPYX	UG2HW	3.31	3.58	7.69
THP05264	POIKFPYX	UG2HW	3.26	3.48	6.38
THP05265	POIKFPYX	UG2HW	3.25	3.51	7.59
THP05266	POIKFPYX	UG2HW	3.24	3.46	6.59
THP05267	POIKFPYX	UG2HW	3.30	3.51	6.30
THP05268	POIKFPYX	UG2HW	3.29	3.48	5.58
THP05269	POIKFPYX	UG2HW	3.34	3.52	5.35
THP05270	POIKFPYX	UG2HW	3.30	3.39	2.62
THP05271	POIKFPYX	UG2HW	3.32	3.45	3.82
THP05272	POIKFPYX	UG2HW	3.27	3.47	6.02
THP05273	POIKFPYX	UG2HW	3.31	3.51	5.79
THP05274	POIKPYX	UG2HW	3.26	3.47	6.26
THP05275	POIKPYX	UG2HW	3.14	3.375	7.19
THP05276	POIKFPYX	UG2HW	3.30	3.31	0.34
THP05277	POIKFPYX	UG2HW	3.29	3.36	1.99
THP05278	POIKFPYX	UG2HW	3.24	3.4	4.82
THP05279	POIKPYX	UG2HW	3.29	3.33	1.09
THP05280	POIKPYX	UG2HW	3.33	3.36	0.81
THP05281	N	UG2HW	2.93	2.99	2.17
THP05282	N	UG2HW	2.96	2.95	-0.43
THP05283	N	UG2HW	2.90	2.98	2.64
THP05284	N	UG2HW	3.00	3.13	4.32
THP05285	POIKPYX	UG2HW	3.30	3.415	3.54
THP05286	POIKPYX	UG2HW	3.31	3.48	5.12
THP05287	POIKFPYX	UG2HW	3.30	3.4	2.85
THP05288	POIKFPYX	UG2HW	3.32	3.425	3.25
THP05289	POIKFPYX	UG2HW	3.36	3.44	2.43
THP05290	POIKPYX	UG2HW	3.34	3.34	-0.01
THP05291	POIKPYX	UG2HW	3.33	3.34	0.39
THP05292	POIKPYX	UG2HW	3.28	3.32	1.20
THP05293	POIKPYX	UG2HW	3.30	3.32	0.56
THP05294	POIKPYX	UG2HW	3.28	3.3	0.67
THP05295	POIKFPYX	UG2HW	3.31	3.42	3.34
THP05296	POIKFPYX	UG2HW	3.29	3.42	4.01
THP05297	POIKFPYX	UG2HW	3.22	3.45	6.76
THP05298	POIKFPYX	UG2HW	3.32	3.46	4.18
THP05299	POIKFPYX	UG2HW	3.30	3.43	3.91
THP05300	POIKFPYX	UG2HW	3.31	3.46	4.29

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05301	POIKFPYX	UG2HW	3.31	3.48	5.07
THP05302	POIKFPYX	UG2HW	3.29	3.51	6.56
THP05303	POIKFPYX	UG2HW	3.29	3.42	4.01
THP05304	POIKFPYX	UG2HW	3.54	3.46	-2.35
THP05305	POIKFPYX	UG2HW	3.29	3.43	4.04
THP05306	POIKFPYX	UG2HW	3.32	3.48	4.80
THP05307	POIKPYX	UG2HW	3.26	3.51	7.41
THP05308	POIKPYX	UG2HW	3.30	3.54	7.12
THP05309	POIKPYX	UG2HW	3.28	3.52	7.13
THP05310	POIKPYX	UG2HW	3.52	3.56	1.04
THP05311	POIKPYX	UG2HW	3.28	3.51	6.63
THP05312	POIKPYX	UG2HW	3.31	3.55	6.89
THP05313	POIKPYX	UG2HW	3.37	3.41	1.11
THP05314	POIKPYX	UG2HW	3.27	3.24	-1.04
THP05315	POIKPYX	UG2HW	3.31	3.4	2.74
THP05316	POIKPYX	UG2HW	3.21	3.29	2.39
THP05317	POIKPYX	UG2HW	3.30	3.59	8.34
THP05318	POIKPYX	UG2HW	3.20	3.28	2.42
THP05319	POIKPYX	UG2HW	3.21	3.52	9.34
THP05320	POIKPYX	UG2HW	3.11	3.27	5.07
THP05321	POIKFPYX	UG2HW	3.30	3.38	2.45
THP05322	POIKFPYX	UG2HW	3.33	3.41	2.51
THP05323	POIKPYX	UG2HW	3.28	3.38	2.89
THP05324	POIKPYX	UG2HW	3.36	3.44	2.28
THP05325	POIKFPYX	UG2HW	3.29	3.4	3.34
THP05326	POIKFPYX	UG2HW	3.31	3.44	3.89
THP05327	POIKFPYX	UG2HW	2.80	2.91	3.97
THP05328	POIKFPYX	UG2HW	2.92	3.05	4.28
THP05329	POIKFPYX	UG2HW	2.98	3.1	4.09
THP05330	POIKFPYX	UG2HW	2.85	2.96	3.67
THP05331	POIKPYX	UG2HW	3.26	3.31	1.48
THP05332	POIKPYX	UG2HW	3.30	3.46	4.63
THP05333	POIKPYX	UG2HW	3.29	3.37	2.54
THP05334	POIKPYX	UG2HW	3.33	3.42	2.69
THP05335	POIKFPYX	UG2HW	3.29	3.37	2.53
THP05336	POIKPYX	UG2HW	3.36	3.39	0.91
THP05337	POIKPYX	UG2HW	3.29	3.4	3.32
THP05338	POIKPYX	UG2HW	3.33	3.44	3.25
THP05339	POIKPYX	UG2HW	3.32	3.39	2.05
THP05340	POIKPYX	UG2HW	3.30	3.41	3.42
THP05341	POIKPYX	UG2HW	3.29	3.41	3.64
THP05342	POIKPYX	UG2HW	3.09	3.22	3.97
THP05343	POIKPYX	UG2HW	3.31	3.4	2.56
THP05344	POIKPYX	UG2HW	3.25	3.35	3.03
THP05345	POIKPYX	UG2HW	3.28	3.37	2.62
THP05346	POIKPYX	UG2HW	3.29	3.36	2.06
THP05347	POIKPYX	UG2HW	3.36	3.4	1.07
THP05348	POIKFPYX	UG2HW	3.32	3.5	5.15
THP05349	POIKPYX	UG2HW	3.27	3.16	-3.53
THP05350	POIKPYX	UG2HW	3.07	3.23	5.09
THP05351	POIKPYX	UG2HW	3.15	3.18	0.89
THP05352	POIKPYX	UG2HW	3.30	3.4	3.10
THP05353	POIKPYX	UG2HW	3.31	3.39	2.44

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05354	POIKPYX	UG2HW	3.43	3.44	0.41
THP05355	POIKPYX	UG2HW	3.29	3.35	1.89
THP05356	POIKPYX	UG2HW	3.22	3.35	3.88
THP05357	POIKFPYX	UG2HW	3.20	3.39	5.75
THP05358	POIKPYX	UG2HW	3.27	3.45	5.50
THP05359	POIKPYX	UG2HW	3.29	3.48	5.67
THP05360	POIKPYX	UG2HW	3.29	3.51	6.62
THP05361	POIKPYX	UG2HW	3.30	3.52	6.44
THP05362	POIKPYX	UG2HW	3.26	3.33	2.10
THP05363	POIKPYX	UG2HW	3.27	3.29	0.73
THP05364	POIKFPYX	UG2HW	3.28	3.42	4.28
THP05365	POIKFPYX	UG2HW	3.29	3.43	4.26
THP05366	POIKFPYX	UG2HW	3.35	3.5	4.36
THP05367	POIKFPYX	UG2HW	3.21	3.43	6.49
THP05368	POIKFPYX	UG2HW	3.22	3.43	6.17
THP05369	POIKFPYX	UG2HW	3.31	3.46	4.34
THP05370	POIKPYX	UG2HW	3.13	3.29	5.10
THP05371	POIKPYX	UG2HW	3.08	3.3	6.74
THP05372	POIKPYX	UG2HW	3.28	3.44	4.83
THP05373	POIKPYX	UG2HW	3.31	3.45	4.28
THP05374	POIKPYX	UG2HW	3.31	3.46	4.42
THP05375	POIKPYX	UG2HW	3.28	3.34	1.90
THP05376	POIKPYX	UG2HW	3.27	3.33	1.69
THP05377	POIKFPYX	UG2HW	3.30	3.32	0.72
THP05378	POIKFPYX	UG2HW	3.49	3.38	-3.14
THP05379	POIKPYX	UG2HW	3.27	3.5	6.80
THP05380	POIKPYX	UG2HW	3.29	3.5	6.03
THP05381	POIKPYX	UG2HW	3.30	3.585	8.23
THP05382	POIKPYX	UG2HW	3.31	3.51	5.95
THP05383	POIKPYX	UG2HW	3.30	3.49	5.57
THP05384	POIKYX	UG2HW	3.49	3.51	0.53
THP05385	PP	UG2HW	3.23	3.325	2.84
THP05386	PP	UG2HW	3.13	3.3	5.17
THP05387	POIKPYX	UG2HW	3.31	3.44	3.99
THP05388	POIKPYX	UG2HW	3.34	3.35	0.22
THP05389	POIKPYX	UG2HW	3.26	3.46	6.01
THP05390	POIKPYX	UG2HW	3.30	3.51	6.18
THP05391	POIKPYX	UG2HW	3.23	3.44	6.26
THP05392	POIKPYX	UG2HW	3.28	3.42	4.06
THP05393	POIKPYX	UG2HW	3.29	3.43	4.30
THP05394	POIKPYX	UG2HW	3.31	3.46	4.57
THP05395	POIKPYX	UG2HW	3.36	3.44	2.47
THP05396	POIKPYX	UG2HW	3.31	3.46	4.31
THP05397	POIKPYX	UG2HW	3.33	3.49	4.73
THP05398	POIKPYX	UG2HW	3.32	3.49	4.91
THP05399	POIKPYX	UG2HW	3.32	3.53	5.99
THP05400	POIKFPYX	UG2HW	3.23	3.47	7.32
THP05401	POIKFPYX	UG2HW	3.29	3.465	5.33
THP05402	POIKFPYX	UG2HW	3.34	3.51	5.06
THP05403	POIKPYX	UG2HW	3.29	3.455	4.74
THP05404	POIKPYX	UG2HW	3.29	3.47	5.36
THP05405	POIKPYX	UG2HW	3.62	3.49	-3.58
THP05406	POIKFPYX	UG2HW	3.48	3.39	-2.68

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05407	POIKFPYX	UG2HW	3.35	3.42	2.01
THP05408	UG 3	UG2HW	3.91	3.83	-2.02
THP05409	POIKPYX	UG2HW	3.27	3.41	4.06
THP05410	POIKPYX	UG2HW	3.28	3.41	3.76
THP05411	POIKPYX	UG2HW	3.34	3.46	3.45
THP05412	POIKPYX	UG2HW	3.28	3.41	3.84
THP05413	POIKPYX	UG2HW	3.29	3.41	3.57
THP05414	POIKPYX	UG2HW	3.35	3.44	2.74
THP05415	POIKPYX	UG2HW	3.30	3.48	5.27
THP05416	POIKPYX	UG2HW	3.29	3.5	6.12
THP05417	POIKPYX	UG2HW	3.28	3.47	5.68
THP05418	POIKPYX	UG2HW	3.25	3.42	4.96
THP05419	POIKFPYX	UG2HW	3.24	3.38	4.14
THP05420	POIKFPYX	UG2HW	3.21	3.48	7.95
THP05421	POIKPYX	UG2HW	3.29	3.44	4.49
THP05422	POIKPYX	UG2HW	3.03	3.24	6.73
THP05423	POIKPYX	UG2HW	3.10	3.27	5.29
THP05424	POIKPYX	UG2HW	3.30	3.37	2.21
THP05425	POIKPYX	UG2HW	3.33	3.44	3.35
THP05426	POIKPYX	UG2HW	3.30	3.405	3.20
THP05427	POIKPYX	UG2HW	3.40	3.43	0.74
THP05428	POIKPYX	UG2HW	3.36	3.525	4.89
THP05429	POIKPYX	UG2HW	3.20	3.505	9.10
THP05430	POIKPYX	UG2HW	3.18	3.465	8.57
THP05431	PYX	UG2HW	3.29	3.43	4.14
THP05432	PYX	UG2HW	3.10	3.42	9.82
THP05433	PYX	UG2HW	3.29	3.42	3.76
THP05434	PYX	UG2HW	3.28	3.42	4.18
THP05435	PYX	UG2HW	3.08	3.4	9.89
THP05436	PYX	UG2HW	3.37	3.47	2.89
THP05437	PYX	UG2HW	3.14	3.48	10.13
THP05438	PYX	UG2HW	3.21	3.52	9.26
THP05439	PYX	UG2HW	3.31	3.54	6.57
THP05440	PYX	UG2HW	3.39	3.53	3.94
THP05441	PYX	UG2HW	3.63	3.52	-2.96
THP05442	PYX	UG2HW	3.47	3.62	4.34
THP05443	PYX	UG2HW	2.92	3.39	14.76
THP05444	PYX	UG2HW	3.18	3.32	4.27
THP05445	PYX	UG2HW	3.26	3.44	5.47
THP05446	PYX	UG2HW	3.16	3.45	8.72
THP05447	PYX	UG2HW	3.22	3.43	6.46
THP05448	PYX	UG2HW	3.26	3.44	5.51
THP05449	PYX	UG2HW	3.32	3.48	4.83
THP05450	FPYX	UG2HW	3.15	3.36	6.46
THP05451	FPYX	UG2HW	3.26	3.38	3.48
THP05452	FPYX	UG2HW	3.12	3.42	9.31
THP05453	FPYX	UG2HW	3.28	3.44	4.72
THP05454	FPYX	UG2HW	3.02	3.43	12.73
THP05455	FPYX	UG2HW	3.26	3.42	4.92
THP05456	FPYX	UG2HW	3.29	3.44	4.34
THP05457	FPYX	UG2HW	3.20	3.33	4.03
THP05458	FPYX	UG2HW	3.23	3.41	5.43
THP05459	FPYX	UG2HW	3.22	3.42	5.92

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05460	FPYX	UG2HW	3.16	3.41	7.60
THP05461	FPYX	UG2HW	3.13	3.43	9.01
THP05462	FPYX	UG2HW	3.18	3.42	7.42
THP05463	FPYX	UG2HW	3.33	3.46	3.69
THP05464	PYX	UG2HW	3.19	3.52	9.96
THP05465	PYX	UG2HW	3.26	3.53	7.92
THP05466	PYX	UG2HW	3.31	3.54	6.58
THP05467	PYX	UG2HW	3.21	3.56	10.43
THP05468	PYX	UG2HW	3.32	3.43	3.40
THP05469	PYX	UG2HW	3.13	3.55	12.59
THP05470	FPYX	UG2HW	3.29	3.17	-3.73
THP05471	FPYX	UG2HW	3.32	3.14	-5.47
THP05472	FPYX	UG2HW	3.30	3.15	-4.69
THP05473	FPYX	UG2HW	3.30	3.15	-4.55
THP05474	FPYX	UG2HW	3.28	3.45	5.02
THP05475	FPYX	UG2HW	3.21	3.45	7.29
THP05476	FPYX	UG2HW	3.34	3.445	2.97
THP05477	FPYX	UG2HW	3.25	3.42	4.97
THP05478	FPYX	UG2HW	3.28	3.45	5.07
THP05479	FPYX	UG2HW	3.27	3.42	4.53
THP05480	FPYX	UG2HW	3.26	3.52	7.64
THP05481	FPYX	UG2HW	3.28	3.46	5.33
THP05482	FPYX	UG2HW	3.21	3.46	7.45
THP05483	FPYX	UG2HW	3.24	3.43	5.65
THP05484	FPYX	UG2HW	3.31	3.45	4.27
THP05485	FPYX	UG2HW	3.25	3.46	6.21
THP05486	FPYX	UG2HW	3.32	3.46	4.10
THP05487	FPYX	UG2HW	3.27	3.47	5.83
THP05488	PYX	UG2HW	3.26	3.48	6.39
THP05489	PYX	UG2HW	3.29	3.455	4.84
THP05490	PYX	UG2HW	3.11	3.4	8.99
THP05491	PYX	UG2HW	3.32	3.39	2.21
THP05492	PYX	UG2HW	3.27	3.39	3.76
THP05493	PYX	UG2HW	3.32	3.41	2.62
THP05494	PYX	UG2HW	3.05	3.215	5.21
THP05495	PYX	UG2HW	3.11	3.39	8.73
THP05496	PYX	UG2HW	3.03	3.18	4.67
THP05497	PYX	UG2HW	3.24	3.34	3.07
THP05498	PYX	UG2HW	3.10	3.35	7.76
THP05499	PYX	UG2HW	3.05	3.53	14.46
THP05500	PYX	UG2HW	3.26	3.43	5.22
THP05501	PYX	UG2HW	3.26	3.43	5.04
THP05502	PYX	UG2HW	3.24	3.42	5.26
THP05503	PYX	UG2HW	3.24	3.41	5.14
THP05504	PYX	UG2HW	3.24	3.44	6.00
THP05505	FPYX	UG2HW	3.00	3.49	15.26
THP05506	FPYX	UG2HW	3.17	3.46	8.60
THP05507	FPYX	UG2HW	3.23	3.44	6.23
THP05508	FPYX	UG2HW	3.13	3.46	9.86
THP05509	FPYX	UG2HW	3.25	3.47	6.65
THP05510	FPYX	UG2HW	3.27	3.49	6.57
THP05511	FPYX	UG2HW	3.26	3.43	5.17
THP05512	FPYX	UG2HW	3.29	3.48	5.52

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05513	FPYX	UG2HW	3.30	3.47	4.89
THP05514	FPYX	UG2HW	3.29	3.49	5.75
THP05515	FPYX	UG2HW	3.30	3.48	5.44
THP05516	FPYX	UG2HW	3.22	3.48	7.65
THP05517	FPYX	UG2HW	3.23	3.5	7.88
THP05518	FPYX	UG2HW	3.25	3.46	6.24
THP05519	POIKFPYX	UG2HW	3.35	3.52	4.83
THP05520	POIKFPYX	UG2HW	3.25	3.57	9.34
THP05521	POIKFPYX	UG2HW	3.26	3.52	7.63
THP05522	POIKFPYX	UG2HW	3.32	3.55	6.62
THP05523	POIKFPYX	UG2HW	3.21	3.53	9.37
THP05524	PYX	UG2HW	3.35	3.49	3.95
THP05525	PYX	UG2HW	3.68	3.52	-4.52
THP05526	PYX	UG2HW	3.30	3.5	5.92
THP05527	PYX	UG2HW	3.10	3.55	13.47
THP05528	PYX	UG2HW	3.35	3.48	3.84
THP05529	PYX	UG2HW	3.31	3.53	6.52
THP05530	POIKFPYX	UG2HW	3.30	3.45	4.58
THP05531	POIKFPYX	UG2HW	3.29	3.455	4.95
THP05532	POIKFPYX	UG2HW	3.32	3.505	5.56
THP05533	POIKFPYX	UG2HW	3.29	3.45	4.64
THP05534	POIKFPYX	UG2HW	3.29	3.46	5.06
THP05535	POIKFPYX	UG2HW	3.33	3.505	5.17
THP05536	POIKFPYX	UG2HW	3.26	3.49	6.78
THP05537	POIKFPYX	UG2HW	3.24	3.46	6.62
THP05538	POIKPYX	UG2HW	3.30	3.5	5.96
THP05539	POIKPYX	UG2HW	3.24	3.465	6.77
THP05540	POIKPYX	UG2HW	3.24	3.49	7.40
THP05541	POIKPYX	UG2HW	3.30	3.54	7.10
THP05542	POIKPYX	UG2HW	3.24	3.58	9.88
THP05543	POIKFPYX	UG2HW	3.29	3.5	6.19
THP05544	POIKFPYX	UG2HW	3.33	3.56	6.55
THP05545	POIKFPYX	UG2HW	3.28	3.51	6.77
THP05546	POIKFPYX	UG2HW	3.26	3.55	8.45
THP05547	POIKFPYX	UG2HW	3.33	3.53	5.92
THP05548	POIKFPYX	UG2HW	3.33	3.53	5.89
THP05549	POIKFPYX	UG2HW	3.29	3.54	7.44
THP05550	POIKPYX	UG2HW	3.30	3.55	7.26
THP05551	POIKPYX	UG2HW	3.35	3.55	5.82
THP05552	POIKPYX	UG2HW	3.32	3.53	6.25
THP05553	POIKFPYX	UG2HW	3.33	3.54	5.98
THP05554	POIKFPYX	UG2HW	3.29	3.52	6.62
THP05555	POIKFPYX	UG2HW	3.18	3.4	6.69
THP05556	POIKFPYX	UG2HW	3.22	3.42	6.10
THP05557	POIKFPYX	UG2HW	3.22	3.44	6.47
THP05558	POIKFPYX	UG2HW	3.25	3.32	2.18
THP05559	POIKFPYX	UG2HW	3.07	3.28	6.63
THP05560	POIKFPYX	UG2HW	3.16	3.42	7.95
THP05561	POIKFPYX	UG2HW	3.22	3.4	5.49
THP05562	POIKFPYX	UG2HW	3.24	3.44	6.08
THP05563	POIKFPYX	UG2HW	3.22	3.41	5.79
THP05564	POIKFPYX	UG2HW	3.22	3.49	7.97
THP05565	POIKFPYX	UG2HW	3.26	3.43	5.14

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05566	CR PP	UG2HW	3.23	3.42	5.82
THP05567	UG 3B	UG2HW	3.52	3.78	7.00
THP05568	PP	UG2HW	3.36	3.58	6.28
THP05569	POIKPYX	UG2HW	3.20	3.39	5.78
THP05570	PEGFPYX	UG2HW	3.41	3.48	1.89
THP05571	PEGFPYX	UG2HW	3.42	3.82	11.18
THP05572	POIKFPYX	UG2HW	3.34	3.49	4.42
THP05573	POIKFPYX	UG2HW	3.32	3.52	5.81
THP05574	POIKFPYX	UG2HW	3.37	3.57	5.66
THP05575	POIKFPYX	UG2HW	3.35	3.52	5.06
THP05576	POIKFPYX	UG2HW	3.31	3.37	1.90
THP05577	POIKFPYX	UG2HW	3.00	3.44	13.78
THP05578	POIKPYX	UG2HW	3.26	3.37	3.18
THP05579	POIKPYX	UG2HW	3.24	3.35	3.27
THP05580	POIKPYX	UG2HW	3.26	3.39	3.83
THP05581	POIKPYX	UG2HW	3.24	3.4	4.89
THP05582	POIKPYX	UG2HW	3.30	3.48	5.22
THP05583	POIKPYX	UG2HW	3.28	3.475	5.81
THP05584	POIKPYX	UG2HW	3.29	3.5	6.09
THP05585	POIKPYX	UG2HW	3.30	3.49	5.51
THP05586	POIKPYX	UG2HW	3.16	3.45	8.86
THP05587	POIKPYX	UG2HW	3.28	3.42	4.17
THP05588	POIKPYX	UG2HW	3.31	3.44	3.94
THP05589	POIKPYX	UG2HW	3.27	3.37	3.13
THP05590	POIKFPYX	UG2HW	3.31	3.42	3.27
THP05591	POIKFPYX	UG2HW	3.32	3.48	4.67
THP05592	POIKFPYX	UG2HW	3.32	3.43	3.41
THP05593	POIKFPYX	UG2HW	3.38	3.44	1.71
THP05594	POIKFPYX	UG2HW	3.33	3.52	5.59
THP05595	POIKFPYX	UG2HW	3.31	3.53	6.53
THP05596	POIKPYX	UG2HW	3.28	3.47	5.52
THP05597	POIKPYX	UG2HW	3.31	3.46	4.50
THP05598	POIKPYX	UG2HW	3.29	3.45	4.75
THP05599	POIKPYX	UG2HW	3.34	3.47	3.74
THP05600	POIKPYX	UG2HW	3.33	3.41	2.35
THP05601	POIKPYX	UG2HW	3.28	3.42	4.28
THP05602	POIKFPYX	UG2HW	3.31	3.36	1.63
THP05603	POIKFPYX	UG2HW	3.31	3.37	1.74
THP05604	POIKFPEX	UG2HW	3.36	3.45	2.74
THP05605	POIKFPEX	UG2HW	3.27	3.44	5.11
THP05606	FPYX	UG2HW	3.29	3.46	5.05
THP05607	FPYX	UG2HW	3.32	3.5	5.26
THP05608	POIKFPYX	UG2HW	3.03	3.48	13.93
THP05609	POIKFPYX	UG2HW	3.35	3.5	4.50
THP05610	POIKFPYX	UG2HW	2.95	3.41	14.37
THP05611	POIKPYX	UG2HW	3.27	3.48	6.31
THP05612	POIKPYX	UG2HW	3.27	3.43	4.91
THP05613	POIKPYX	UG2HW	2.88	3.26	12.42
THP05614	POIKPYX	UG2HW	3.25	3.17	-2.61
THP05615	POIKPYX	UG2HW	3.23	3.37	4.31
THP05616	POIKPYX	UG2HW	3.07	3.31	7.37
THP05617	POIKPYX	UG2HW	3.25	3.425	5.20
THP05618	POIKPYX	UG2HW	3.26	3.38	3.54

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05619	POIKFPYX	UG2HW	3.19	3.41	6.61
THP05620	POIKFPYX	UG2HW	3.25	3.42	5.19
THP05621	POIKPYX	UG2HW	3.28	3.49	6.09
THP05622	POIKPYX	UG2HW	3.31	3.54	6.84
THP05623	POIKPYX	UG2HW	3.42	3.53	3.08
THP05624	POIKPYX	UG2HW	3.32	3.56	7.12
THP05625	POIKFPYX	UG2HW	3.30	3.53	6.71
THP05626	POIKFPYX	UG2HW	3.30	3.53	6.71
THP05627	POIKFPYX	UG2HW	3.22	3.47	7.47
THP05628	POIKFPYX	UG2HW	3.22	3.47	7.47
THP05629	POIKFPYX	UG2HW	3.29	3.55	7.55
THP05630	POIKFPYX	UG2HW	3.29	3.55	7.55
THP05631	POIKFPYX	UG2HW	3.28	3.54	7.48
THP05632	POIKFPYX	UG2HW	3.28	3.54	7.48
THP05633	POIKPYX	UG2HW	3.26	3.5	7.19
THP05634	POIKPYX	UG2HW	3.26	3.5	7.19
THP05635	POIKPYX	UG2HW	3.29	3.55	7.59
THP05636	POIKPYX	UG2HW	3.29	3.55	7.59
THP05637	POIKFPYX	UG2HW	3.30	3.39	2.56
THP05638	POIKFPYX	UG2HW	3.21	3.39	5.32
THP05639	POIKFPYX	UG2HW	3.34	3.49	4.38
THP05640	POIKFPYX	UG2HW	3.33	3.47	4.04
THP05641	POIKFPYX	UG2HW	3.32	3.47	4.48
THP05642	POIKFPYX	UG2HW	3.29	3.47	5.35
THP05643	POIKFPYX	UG2HW	3.21	3.42	6.39
THP05644	POIKFPYX	UG2HW	3.31	3.52	6.19
THP05645	POIKFPYX	UG2HW	3.25	3.49	7.03
THP05646	MOT	UG2HW	2.74	2.82	3.02
THP05647	POIKFPYX	UG2HW	3.30	3.44	4.15
THP05648	POIKFPYX	UG2HW	3.27	3.42	4.60
THP05649	POIKFPYX	UG2HW	4.09	4.2	2.59
THP05650	POIKPYX	UG2HW	3.28	3.4	3.44
THP05651	POIKPYX	UG2HW	3.81	4.1	7.36
THP05652	POIKPYX	UG2HW	3.30	3.61	8.88
THP05653	POIKPYX	UG2HW	3.26	3.5	7.03
THP05654	POIKPYX	UG2HW	3.30	3.59	8.46
THP05655	POIKPYX	UG2HW	3.25	3.43	5.25
THP05656	FPYX	UG2HW	3.30	3.49	5.57
THP05657	FPYX	UG2HW	3.33	3.49	4.56
THP05658	FPYX	UG2HW	3.25	3.55	8.74
THP05659	FPYX	UG2HW	3.29	3.54	7.39
THP05660	FPYX	UG2HW	3.10	3.59	14.54
THP05661	FPYX	UG2HW	3.28	3.555	7.95
THP05662	FPYX	UG2HW	3.27	3.57	8.74
THP05663	FPYX	UG2HW	3.31	3.59	8.04
THP05664	POIKFPYX	UG2HW	3.23	3.49	7.77
THP05665	POIKFPYX	UG2HW	3.24	3.48	7.10
THP05666	POIKFPYX	UG2HW	3.31	3.54	6.68
THP05667	POIKPYX	UG2HW	3.14	3.4	8.01
THP05668	POIKPYX	UG2HW	3.17	3.45	8.52
THP05669	POIKPYX	UG2HW	3.24	3.455	6.42
THP05670	POIKAN	UG2HW	2.86	3.17	10.39
THP05671	POIKAN	UG2HW	2.79	2.97	6.25

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05672	POIKPYX	UG2HW	3.05	3.41	11.31
THP05673	POIKFPYX	UG2HW	3.33	3.5	5.01
THP05674	POIKFPYX	UG2HW	3.30	3.49	5.60
THP05675	POIKFPYX	UG2HW	3.34	3.46	3.57
THP05676	POIKFPYX	UG2HW	3.39	3.47	2.32
THP05677	POIKPYX	UG2HW	3.03	3	-1.12
THP05678	POIKPYX	UG2HW	3.30	3.39	2.81
THP05679	POIKPYX	UG2HW	3.28	3.39	3.38
THP05680	POIKPYX	UG2HW	3.09	3.36	8.23
THP05681	POIKPYX	UG2HW	3.28	3.38	2.94
THP05682	POIKPYX	UG2HW	3.11	3.41	9.32
THP05683	FPYX	UG2HW	3.33	3.41	2.27
THP05684	FPYX	UG2HW	3.28	3.4	3.45
THP05685	FPYX	UG2HW	3.30	3.42	3.61
THP05686	FPYX	UG2HW	3.21	3.4	5.61
THP05687	FPYX	UG2HW	3.23	3.41	5.46
THP05688	FPYX	UG2HW	3.25	3.41	4.86
THP05689	FPYX	UG2HW	3.31	3.42	3.32
THP05690	PYX	UG2HW	3.24	3.36	3.61
THP05691	PYX	UG2HW	3.31	3.41	2.93
THP05692	PYX	UG2HW	3.28	3.41	3.99
THP05693	PYX	UG2HW	3.28	3.39	3.36
THP05694	PYX	UG2HW	3.29	3.4	3.31
THP05695	PYX	UG2HW	3.30	3.4	2.98
THP05696	PYX	UG2HW	3.29	3.44	4.34
THP05697	PYX	UG2HW	3.29	3.37	2.51
THP05698	PYX	UG2HW	3.27	3.38	3.31
THP05699	PYX	UG2HW	3.37	3.54	4.84
THP05700	PYX	UG2HW	3.34	3.72	10.89
THP05701	PYX	UG2HW	3.36	3.33	-0.97
THP05702	PYX	UG2HW	3.28	3.33	1.53
THP05703	PYX	UG2HW	3.32	3.38	1.73
THP05704	PYX	UG2HW	3.22	3.29	2.22
THP05705	PYX	UG2HW	3.27	3.38	3.16
THP05706	PYX	UG2HW	3.30	3.4	3.11
THP05707	PYX	UG2HW	3.26	3.305	1.41
THP05708	PYX	UG2HW	3.22	3.39	5.14
THP05709	PYX	UG2HW	3.26	3.45	5.61
THP05710	PYX	UG2HW	3.26	3.53	7.85
THP05711	PYX	UG2HW	3.22	3.27	1.57
THP05712	PYX	UG2HW	3.27	3.29	0.61
THP05713	UG 3 CR	UG3	3.63	3.87	6.35
THP05714	UG 3	UG3	3.80	3.98	4.67
THP05715	UG3	UG3	4.07	4.21	3.49
THP05716	UG3	UG3	3.74	3.74	0.08
THP05717	UG 3 CR	UG3	3.73	3.895	4.29
THP05718	UG 3 CR	UG3	3.85	3.99	3.56
THP05719	UG 3	UG3	3.76	3.91	3.97
THP05720	UG 3	UG3	3.79	3.98	4.82
THP05721	UG 3	UG3	3.88	4.05	4.25
THP05722	UG 3	UG3	3.81	3.93	3.13
THP05723	UG 3 CR	UG3	3.83	3.87	1.02
THP05724	UG 3	UG3	3.71	3.88	4.48

Table B 18. THP dataset, outliers removed.

THP dataset outliers removed					
Sample number	**Rock type**	**Stratigraphy**	**Driekop density**	**Grabner Milled density**	**AVRD**
THP05725	UG 3	UG3	3.41	3.81	11.13
THP05726	UG 3	UG3	3.72	3.95	5.94
THP05727	UG 3	UG3	3.63	3.71	2.19
THP05728	UG 3 CR	UG3	3.90	3.78	-3.04
THP05729	UG 3	UG3	3.90	4.1	4.89
THP05730	UG 3	UG3	3.79	4.08	7.42
THP05731	UG 3 / CR	UG3	3.95	3.8	-3.78
THP05732	UG 3 CR	UG3	3.91	3.85	-1.46
THP05733	UG 3	UG3	3.83	3.74	-2.34
THP05734	UG 3	UG3	3.87	3.98	2.84
THP05735	UG 3	UG3	3.91	3.85	-1.46
THP05736	UG 3	UG3	3.72	3.755	0.85
THP05737	UG 3 CR	UG3	3.89	3.78	-2.75
THP05738	UG 3 / CR	UG3	3.68	3.74	1.75
THP05739	UG 3	UG3	3.87	3.76	-2.89
THP05740	UG3	UG3	3.87	3.76	-2.89
THP05741	UG 3	UG3	3.89	3.97	2.08
THP05742	UG 3 CR	UG3	3.78	3.73	-1.29
THP05743	UG 3	UG3	3.56	3.74	5.02
THP05744	UG 3	UG3	3.71	3.88	4.61
THP05745	UG 3	UG3	3.78	4.05	6.84
THP05746	UG 3 CR	UG3	3.39	3.57	5.20
THP05747	UG 3	UG3	3.65	3.8	4.05
THP05748	UG 3	UG3	3.88	4.12	6.11
THP05749	UG 3	UG3	3.86	4.1	5.98
THP05750	UG 3	UG3	3.73	3.98	6.58
THP05751	UG 3	UG3	3.94	3.84	-2.68
THP05752	UG 3CR	UG3	3.97	3.92	-1.21
THP05753	UG 3 / CR	UG3	3.86	4.09	5.67
THP05754	UG 3 CR	UG3	3.75	3.95	5.12
THP05755	UG 3 CR	UG3	3.69	3.99	7.87
THP05756	UG 3	UG3	3.94	4.16	5.44
THP05757	UG 3	UG3	3.72	3.91	4.88
THP05758	UG 3	UG3	3.72	3.91	4.88
THP05759	UG 3	UG3	3.74	3.99	6.36
THP05760	UG 3 CR	UG3	3.76	3.91	3.95
THP05761	UG 3 CR	UG3	3.87	3.99	2.98
THP05762	UG 3 / CR	UG3	3.94	3.97	0.65
THP05763	UG 3 CR	UG3	3.77	4.075	7.68
THP05764	UG 3	UG3	3.77	4.08	8.03
THP05765	UG 3 CR	UG3	3.93	4.13	4.89
THP05766	POIKPYX	UG3FW	3.29	3.34	1.51
THP05767	POIKPYX	UG3FW	3.29	3.48	5.69
THP05768	UG 3 /CR	UG3REEF	3.70	3.84	3.84
THP05769	UG 3 CR	UG3REEF	3.75	3.98	5.97
THP05770	UG 1 CR	UG3REEF	3.75	3.96	5.37
THP05771	UG 3 CR	UG3REEF	3.83	3.99	4.20
THP05772	UG 3	UG3REEF	3.82	3.93	2.82
THP05773	POIKFPYX	UGHW	3.28	3.49	6.31
THP05774	POIKFPYX	UGHW	3.32	3.54	6.42

Table B 19. THP dataset descriptive statistics with the outliers removed.

THP descriptive statistics of dataset with outliers removed					
Driekop dataset statistics		**Grabner Milled dataset statistics**		**AVRD**	
Mean	3.309	Mean	3.477	Mean	4.918
Standard Error	0.004	Standard Error	0.004	Standard Error	0.039
Median	3.244	Median	3.410	Median	4.918
Mode	3.250	Mode	3.390	Mode	2.453
Standard Deviation	0.314	Standard Deviation	0.335	Standard Deviation	2.932
Sample Variance	0.099	Sample Variance	0.112	Sample Variance	8.594
Kurtosis	1.911	Kurtosis	2.157	Kurtosis	1.320
Skewness	1.403	Skewness	1.422	Skewness	-0.040
Range	1.940	Range	2.050	Range	20.813
Minimum	2.492	Minimum	2.780	Minimum	-5.497
Maximum	4.432	Maximum	4.830	Maximum	15.316
Count	5774	Count	5774	Count	5774
Confidence Level (95.0%)	0.008	Confidence Level (95.0%)	0.009	Confidence Level (95.0%)	0.076

THP– MR Sampling cut AVRD frequency histogram data						
Bin (%)	*MRHW AVRD Frequency (No. Samples)*	*MR AVRD Frequency (No. Samples)*	*MRFW AVRD Frequency (No. Samples)*	*MRHW AVRD Frequency (%)*	*MR AVRD Frequency (%)*	*MRFW AVRD Frequency (%)*
-20	0	0	0	0.00	0.00	0.00
-19	0	0	0	0.00	0.00	0.00
-18	0	0	0	0.00	0.00	0.00
-17	0	0	0	0.00	0.00	0.00
-16	0	0	0	0.00	0.00	0.00
-15	0	0	0	0.00	0.00	0.00
-14	0	0	0	0.00	0.00	0.00
-13	0	0	0	0.00	0.00	0.00
-12	0	0	0	0.00	0.00	0.00
-11	0	0	0	0.00	0.00	0.00
-10	0	0	0	0.00	0.00	0.00
-9	0	0	0	0.00	0.00	0.00
-8	0	0	0	0.00	0.00	0.00
-7	0	0	0	0.00	0.00	0.00
-6	0	0	0	0.00	0.00	0.00
-5	0	0	0	0.00	0.00	0.00
-4	3	5	2	0.55	0.45	0.16
-3	2	4	7	0.37	0.36	0.58
-2	4	8	4	0.73	0.73	0.33
-1	5	6	14	0.92	0.54	1.15
0	3	13	21	0.55	1.18	1.73
1	15	34	42	2.75	3.08	3.46
2	36	53	91	6.61	4.81	7.50
3	47	114	107	8.62	10.34	8.82
4	79	179	149	14.50	16.23	12.28
5	93	157	235	17.06	14.23	19.37
6	102	183	207	18.72	16.59	17.07
7	83	144	155	15.23	13.06	12.78
8	41	93	83	7.52	8.43	6.84
9	18	49	41	3.30	4.44	3.38
10	6	29	23	1.10	2.63	1.90
11	2	11	11	0.37	1.00	0.91
12	3	8	5	0.55	0.73	0.41
13	1	6	3	0.18	0.54	0.25
14	2	4	3	0.37	0.36	0.25
15	0	3	7	0.00	0.27	0.58
16	0	0	3	0.00	0.00	0.25
17	0	0	0	0.00	0.00	0.00
18	0	0	0	0.00	0.00	0.00
19	0	0	0	0.00	0.00	0.00
20	0	0	0	0.00	0.00	0.00
More	0	0	0	0.00	0.00	0.00
TOTAL	545	1103	1213	100	100	100

Table B 21. THP – UG2 sampling cut AVRD frequency histogram data.

THP UG2 Sampling cut AVRD histogram data						
Bin (%)	*UG2HW AVRD Frequency (No. Samples)*	*UG2 AVRD Frequency (No. Samples)*	*UG2FW AVRD Frequency (No. Samples)*	*UG2HW AVRD Frequency (%)*	*UG2 AVRD Frequency (%)*	*UG2FW AVRD Frequency (%)*
-20	0	0	0	0.00	0.00	0.00
-19	0	0	0	0.00	0.00	0.00
-18	0	0	0	0.00	0.00	0.00
-17	0	0	0	0.00	0.00	0.00
-16	0	0	0	0.00	0.00	0.00
-15	0	0	0	0.00	0.00	0.00
-14	0	0	0	0.00	0.00	0.00
-13	0	0	0	0.00	0.00	0.00
-12	0	0	0	0.00	0.00	0.00
-11	0	0	0	0.00	0.00	0.00
-10	0	0	0	0.00	0.00	0.00
-9	0	0	0	0.00	0.00	0.00
-8	0	0	0	0.00	0.00	0.00
-7	0	0	0	0.00	0.00	0.00
-6	0	0	0	0.00	0.00	0.00
-5	1	3	3	0.21	0.38	0.21
-4	4	8	7	0.82	1.01	0.50
-3	4	22	2	0.82	2.77	0.14
-2	5	11	1	1.03	1.39	0.07
-1	2	22	8	0.41	2.77	0.57
0	4	20	12	0.82	2.52	0.85
1	15	45	34	3.09	5.67	2.41
2	19	49	58	3.92	6.17	4.12
3	43	55	113	8.87	6.93	8.02
4	57	75	219	11.75	9.45	15.54
5	78	85	209	16.08	10.71	14.83
6	87	73	212	17.94	9.19	15.05
7	71	57	207	14.64	7.18	14.69
8	47	69	150	9.69	8.69	10.65
9	17	62	84	3.51	7.81	5.96
10	13	41	38	2.68	5.16	2.70
11	5	33	15	1.03	4.16	1.06
12	2	32	16	0.41	4.03	1.14
13	3	15	8	0.62	1.89	0.57
14	3	12	8	0.62	1.51	0.57
15	4	4	4	0.82	0.50	0.28
16	1	1	1	0.21	0.13	0.07
17	0	0	0	0.00	0.00	0.00
18	0	0	0	0.00	0.00	0.00
19	0	0	0	0.00	0.00	0.00
20	0	0	0	0.00	0.00	0.00
More	0	0	0	0.00	0.00	0.00
TOTAL	485	794	1409	100	100	100

Table B 22. Quality control raw dataset descriptive statistics.

Quality control raw dataset descriptive statistics											
Driekop check		**Grabner Milled original**		**Driekop original**		**AVRD Driekop check/Driekop original**		**AVRD Grabner Milled/Driekop check**		**AVRD Grabner Milled/Driekop original**	
Mean	3.28	Mean	3.45	Mean	3.27	Mean	0.52	Mean	4.86	Mean	5.38
Standard Error	0.01	Standard Error	0.01	Standard Error	0.01	Standard Error	0.08	Standard Error	0.08	Standard Error	0.11
Median	3.24	Median	3.40	Median	3.23	Median	0.24	Median	4.62	Median	4.95
Mode	3.27	Mode	3.38	Mode	3.10	Mode	0.20	Mode	3.65	Mode	3.85
Standard Deviation	0.31	Standard Deviation	0.34	Standard Deviation	0.31	Standard Deviation	2.14	Standard Deviation	2.29	Standard Deviation	3.03
Sample Variance	0.09	Sample Variance	0.11	Sample Variance	0.09	Sample Variance	4.57	Sample Variance	5.23	Sample Variance	9.20
Kurtosis	2.63	Kurtosis	2.80	Kurtosis	2.74	Kurtosis	92.19	Kurtosis	2.53	Kurtosis	25.86
Skewness	1.61	Skewness	1.60	Skewness	1.58	Skewness	7.71	Skewness	0.30	Skewness	3.03
Range	1.80	Range	1.81	Range	2.08	Range	35.71	Range	20.54	Range	43.16
Minimum	2.73	Minimum	2.83	Minimum	2.42	Minimum	-5.85	Minimum	-5.96	Minimum	-6.13
Maximum	4.53	Maximum	4.64	Maximum	4.50	Maximum	29.86	Maximum	14.58	Maximum	37.03
Count	811.00	Count	811.00	Count	811.00	Count	811.00	Count	811.00	Count	811.00
Confidence Level (95.0%)	0.02	Confidence Level (95.0%)	0.02	Confidence Level (95.0%)	0.02	Confidence Level (95.0%)	0.15	Confidence Level (95.0%)	0.16	Confidence Level (95.0%)	0.21

Table B 23. Outlier parameters for the quality control dataset.

Quality control data standard deviations from mean						
Number of standard deviations from the mean	Driekop check	Grabner Milled original	Driekop original	AVRD Driekop check/Driekop original	AVRD Grabner Milled/Driekop check	AVRD Grabner Milled/Driekop original
3	4.20	4.37	4.19	6.93	11.72	14.48
2	3.90	4.06	3.88	4.79	9.44	11.45
1	3.59	3.76	3.57	2.66	7.15	8.42
0	3.28	3.45	3.27	0.52	4.86	5.38
-1	2.98	3.14	2.96	-1.62	2.58	2.35
-2	2.67	2.84	2.65	-3.75	0.29	-0.68
-3	2.37	2.53	2.35	-5.89	-1.99	-3.72

Table B 24. List of outliers that were removed from the quality control dataset

Quality control ouliers											
Sample number	Rock Type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC785	CR	UG2	164.5	128.2		4.53	4.42	4.499	0.73	-2.50	-1.76
QC786	CR	UG2	106.4	78.9	23	3.87	3.93	3.416	12.43	1.56	13.99
QC787	CR	UG2	91.5	69		4.07	4.64	4.129	-1.52	13.17	11.66
QC788	CR	UG2	144.9	105.5	24	3.68	4.15	3.668	0.25	12.07	12.32
QC789	PEGFPY	UG2FW	126.3	94.4	24	3.96	3.73	3.966	-0.16	-5.96	-6.13
QC790	PYX	MRFW	80	54	23	3.08	3.42	2.956	4.01	10.56	14.56
QC791	PYX	MRFW	160.2	108.4	23	3.09	3.34	2.837	8.61	7.69	16.27
QC792	CR	UG2	177.4	127.3	24	3.54	3.455	3.529	0.35	-2.46	-2.11
QC793	PYX	UG2	112.3	77.8	24	3.26	3.73	3.139	3.65	13.60	17.22
QC794	FPYX	MRFW	191.5	132.9		3.27	3.39	2.423	29.69	3.67	33.26
QC795	FPYX	UG2FW	157.8	111.9	21	3.44	3.51	3.180	7.79	2.08	9.86
QC796	CR	UG2	142.4	107.8		4.12	4.47	3.509	15.91	8.26	24.08
QC797	PYX	UG2FW	225.3	158.5	17	3.37	3.52	3.080	9.07	4.27	13.33
QC798	CR	UG2	102.8	77.6	20	4.08	3.88	4.063	0.40	-5.01	-4.61
QC799	PYX	UG2FW	225.4	155.9	20	3.24	3.38	2.988	8.19	4.13	12.31
QC800	N	MRHW	154.6	103.7	20	3.04	3.18	2.755	9.75	4.59	14.33
QC801	FPYX	UG2FW	228	157.7	20	3.24	3.41	3.003	7.71	5.01	12.71
QC802	N	UG2	259.8	171.8	20	2.95	3	3.130	-5.85	1.60	-4.25
QC803	PYX	MRHW	140.7	97.3	16	3.24	3.53	2.885	11.66	8.51	20.12
QC804	PYX	UG2HW	89	62	16	3.30	3.24	3.322	-0.77	-1.72	-2.49
QC805	CR	UG2	261.8	196.1		3.98	4.29	2.949	29.86	7.38	37.03
QC806	N	MRFW	229.5	155.3	15	3.09	3.48	3.058	1.13	11.78	12.90
QC807	N	MRFW	202.1	134.7	15	3.00	3.47	3.021	-0.74	14.58	13.84
QC808	N	MRFW	225.1	148.3	15	2.93	3.35	2.950	-0.66	13.34	12.68
QC809	CR	UG2	275.8	205.9	15	3.95	3.865	3.671	7.22	-2.06	5.15
QC810	CR	UG2	169.7	129.3	17	4.20	4.09	4.184	0.39	-2.67	-2.28
QC811	PYX	UG2FW	112.8	76.5	17	3.11	3.56	3.104	0.12	13.58	13.69

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC1	FPYX	UG2HW	76.2	53.1	23	3.30	3.490	3.27	0.74	5.64	6.38
QC2	FPYX	UG2HW	116	80.9	23	3.30	3.440	3.30	0.18	4.01	4.19
QC3	FPYX	UG2HW	112.2	78.2	23	3.30	3.480	3.30	0.03	5.31	5.34
QC4	FPYX	UG2HW	219.8	151.7	23	3.23	3.400	3.22	0.15	5.20	5.36
QC5	FPYX	UG2HW	202.8	141.5	23	3.31	3.470	3.29	0.49	4.77	5.26
QC6	CR	UG2	172.6	126.6	23	3.75	4.060	3.86	-2.86	7.88	5.02
QC7	CR	UG2	127.8	96.6	23	4.10	4.450	4.16	-1.55	8.28	6.73
QC8	CR	UG2	258.9	192.4	23	3.89	4.150	3.91	-0.37	6.38	6.01
QC9	CR	UG2	239.4	182.5	23	4.21	4.400	4.13	1.85	4.48	6.33
QC10	FPYX	UG2FW	220.9	158.4	23	3.53	3.735	3.49	1.20	5.52	6.72
QC11	FPYX	UG2FW	259.2	181.6	23	3.34	3.540	3.34	-0.11	5.81	5.70
QC12	FPYX	UG2FW	141.9	98.8	23	3.29	3.470	3.29	0.14	5.25	5.39
QC13	FPYX	UG2FW	116.2	81.4	23	3.34	3.485	3.31	0.98	4.28	5.26
QC14	FPYX	UG2FW	150.1	104.5	23	3.29	3.470	3.29	0.20	5.27	5.47
QC15	FPYX	UG2FW	256.2	179.3	23	3.33	3.500	3.32	0.25	4.93	5.18
QC16	FPYX	UG2FW	92.1	64.1	23	3.29	3.460	3.29	0.11	5.06	5.17
QC17	FPYX	UG2FW	171	119	23	3.29	3.500	3.33	-1.31	6.23	4.92
QC18	FPYX	UG2FW	200.3	140.9	23	3.37	3.540	3.32	1.50	4.86	6.36
QC19	FPYX	UG2FW	149.7	103.8	23	3.26	3.440	3.26	-0.01	5.33	5.32
QC20	LN	MRHW	77.8	52.1	23	3.03	3.170	3.12	-2.93	4.61	1.67
QC21	LN	MRHW	115.3	78.1	23	3.10	3.220	3.10	-0.17	3.81	3.64
QC22	PYX	MR	235.4	161.8	23	3.20	3.380	3.22	-0.67	5.52	4.85
QC23	PYX	MR	153.7	106.4	23	3.25	3.390	3.25	-0.13	4.23	4.10
QC24	PYX	MR	242.4	167.8	23	3.25	3.370	3.25	-0.08	3.65	3.56
QC25	PYX	MR	163.4	113.7	23	3.29	3.400	3.31	-0.67	3.36	2.69
QC26	N	MRFW	70.1	44.4	23	2.73	2.830	2.75	-0.66	3.68	3.02
QC27	N	MRFW	187.6	121.3	23	2.83	2.920	2.82	0.40	3.15	3.54
QC28	POIKFPYX	UG2HW	156.3	108.5	23	3.27	3.430	3.27	0.08	4.78	4.86
QC29	POIKFPYX	UG2HW	166	115.5	23	3.29	3.400	3.29	-0.12	3.38	3.26
QC30	POIKFPYX	UG2HW	179.3	123.8	23	3.23	3.310	3.23	0.12	2.43	2.55
QC31	POIKFPYX	UG2HW	188.9	123.8	23	2.90	3.070	3.00	-3.38	5.64	2.25

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC32	ANCR	UG2HW	124.4	79.9	23	2.80	2.940	2.85	-1.77	5.04	3.27
QC33	CR	UG2	158.9	120.2	23	4.11	4.500	4.10	0.07	9.16	9.23
QC34	CR	UG2	74	55.6	23	4.02	4.400	4.03	-0.27	8.98	8.72
QC35	PEGFPYX	UG2FW	155.5	109.8	23	3.40	3.600	3.43	-0.89	5.64	4.74
QC36	PEGFPYX	UG2FW	256.1	181.8	23	3.45	3.560	3.44	0.25	3.23	3.48
QC37	PEGFPYX	UG2FW	149.6	104	23	3.28	3.400	3.28	-0.10	3.57	3.47
QC38	PYX	UG2FW	117.4	81.7	23	3.29	3.370	3.28	0.11	2.45	2.56
QC39	PYX	UG2FW	200.3	139.6	23	3.30	3.400	3.31	-0.28	2.99	2.71
QC40	POIKFPYX	UG2FW	105.6	73.1	23	3.25	3.380	3.25	0.02	3.95	3.97
QC41	POIKFPYX	UG2FW	161.3	112.9	23	3.33	3.420	3.34	-0.12	2.59	2.46
QC42	POIKFPYX	UG2FW	184.6	128.9	23	3.31	3.410	3.29	0.66	2.85	3.51
QC43	POIKFPYX	UG2FW	152.4	105.7	23	3.26	3.415	3.26	0.23	4.54	4.77
QC44	POIKFPYX	UG2FW	205.2	142.9	23	3.29	3.400	3.29	0.20	3.17	3.38
QC45	N	MRHW	199.2	131.9	23	2.96	3.080	2.95	0.25	3.98	4.22
QC46	N	MRHW	261.1	173.9	23	2.99	3.100	2.99	0.00	3.47	3.47
QC47	N	MRHW	157.7	105.7	23	3.03	3.150	3.02	0.32	3.79	4.12
QC48	POIKPYX	MRHW	215.9	147.2	23	3.14	3.300	3.13	0.30	4.88	5.19
QC49	POIKPYX	MRHW	141.4	96.9	23	3.18	3.300	3.17	0.17	3.78	3.95
QC50	POIKPYX	MRHW	263.4	182.4	23	3.25	3.370	3.24	0.36	3.57	3.93
QC51	PYX	MR	209.2	145.7	23	3.29	3.420	3.28	0.51	3.74	4.25
QC52	PYX	MR	187.4	129.3	23	3.23	3.380	3.19	1.00	4.68	5.68
QC53	PYX	MR	269.1	185.6	23	3.22	3.380	3.21	0.42	4.76	5.18
QC54	PYX	MRFW	135.5	92.5	23	3.15	3.160	3.14	0.48	0.28	0.76
QC55	PYX	MRFW	169.3	117.3	23	3.26	3.330	3.24	0.49	2.25	2.74
QC56	PYX	MRFW	331.3	223.1	23	3.06	3.410	3.05	0.50	10.76	11.25
QC57	GN	MRFW	131.2	86.7	23	2.95	3.220	2.93	0.59	8.81	9.39
QC58	GN	MRFW	176	116.4	23	2.95	3.090	2.95	0.22	4.53	4.75
QC59	PYX	MRFW	245.3	162.8	23	2.97	3.120	2.96	0.48	4.81	5.29
QC60	PYX	MRFW	238.5	160.9	23	3.07	3.195	3.05	0.77	3.88	4.65
QC61	PYX	MRFW	82.4	55.4	23	3.05	3.270	3.02	1.11	6.90	8.01
QC62	PYX	MRFW	161.9	110.2	23	3.13	3.310	3.10	1.03	5.54	6.57

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC63	PYX	MRFW	295.9	200	23	3.09	3.270	3.06	0.98	5.81	6.78
QC64	PYX	MRFW	166.6	110.3	23	2.96	3.110	2.93	0.93	4.97	5.90
QC65	PYX	MRFW	141.1	93.3	23	2.95	3.090	2.92	1.16	4.57	5.74
QC66	PYX	MRFW	236.4	158.4	23	3.03	3.230	3.00	0.94	6.36	7.30
QC67	POIKFPYX	UG2HW	117	81.5	23	3.30	3.410	3.26	1.06	3.41	4.46
QC68	POIKFPYX	UG2HW	74.8	51.6	23	3.22	3.370	3.05	5.62	4.42	10.04
QC69	POIKFPYX	UG2HW	174.1	121.1	23	3.28	3.320	3.27	0.39	1.06	1.45
QC70	POIKFPYX	UG2HW	80	55.4	23	3.25	3.380	3.24	0.41	3.86	4.26
QC71	POIKFPYX	UG2HW	132.9	91.9	23	3.24	3.510	3.23	0.34	7.95	8.29
QC72	CR	UG2	340.7	244.3	23	3.53	3.880	3.52	0.34	9.33	9.67
QC73	CR	UG2	368.8	277.7	23	4.05	4.230	4.04	0.17	4.39	4.56
QC74	CR	UG2	289.2	216.9	23	4.00	4.210	4.01	-0.28	5.12	4.84
QC75	CR	UG2	116.5	87.7	23	4.05	4.350	4.03	0.26	7.26	7.52
QC76	N	MRHW	213.5	142.2	23	2.99	3.175	3.01	-0.56	5.86	5.29
QC77	N	MRHW	218.8	145.8	23	3.00	3.180	3.00	-0.18	5.92	5.73
QC78	N	MRHW	220	147.9	23	3.05	3.250	3.06	-0.36	6.31	5.94
QC79	PYX	MRHW	230.1	155.8	23	3.10	3.270	3.11	-0.53	5.44	4.91
QC80	POIKPYX	MRHW	264.4	180.7	23	3.16	3.330	3.17	-0.26	5.27	5.02
QC81	POIKPYX	MRHW	197.6	136.6	23	3.24	3.420	3.25	-0.35	5.43	5.07
QC82	POIKPYX	MRHW	160.5	110.9	23	3.24	3.400	3.24	-0.17	4.95	4.77
QC83	POIKPYX	MR	152.7	106.1	23	3.28	3.410	3.29	-0.54	3.98	3.44
QC84	POIKPYX	MR	139.7	96.3	23	3.22	3.390	3.24	-0.66	5.18	4.52
QC85	POIKPYX	MR	228.7	158.3	23	3.25	3.410	3.26	-0.44	4.85	4.41
QC86	POIKPYX	MR	172.8	117.1	23	3.10	3.345	3.12	-0.46	7.53	7.07
QC87	AN	MRFW	190.3	121.9	23	2.78	2.915	2.77	0.29	4.66	4.95
QC88	AN	MRFW	200.2	127.9	23	2.77	2.900	2.78	-0.27	4.62	4.35
QC89	AN	MRFW	121.9	77.5	23	2.75	2.890	2.74	0.10	5.13	5.23
QC90	AN	MRFW	164.4	104.9	23	2.76	2.890	2.77	-0.38	4.49	4.11
QC91	AN	MRFW	194.8	124.6	23	2.77	2.900	2.78	-0.14	4.41	4.27
QC92	AN	MRFW	168.8	107.6	23	2.76	2.850	2.76	-0.15	3.27	3.13
QC93	AN	MRFW	104.6	66.7	23	2.76	2.870	2.77	-0.31	3.91	3.60

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC94	AN	MRFW	200.6	128.2	23	2.77	2.860	2.76	0.27	3.17	3.44
QC95	LN	MRFW	175.7	114.7	23	2.88	3.000	2.89	-0.30	4.07	3.77
QC96	LN	MRFW	98.9	65.8	23	2.99	3.070	2.90	3.03	2.71	5.74
QC97	GN	MRFW	150.4	100.6	23	3.02	3.170	3.02	0.00	4.84	4.85
QC98	GN	MRFW	196.5	133.2	23	3.10	3.220	3.10	0.12	3.66	3.78
QC99	GN	MRFW	236.1	157.8	23	3.02	3.155	3.02	-0.08	4.53	4.45
QC100	POIKFPYX	UG2HW	168.2	116.9	23	3.28	3.440	3.30	-0.75	4.80	4.05
QC101	POIKFPYX	UG2HW	123.3	85.7	23	3.28	3.460	3.29	-0.38	5.36	4.98
QC102	POIKFPYX	UG2HW	167.8	116.3	23	3.26	3.410	3.27	-0.42	4.55	4.14
QC103	POIKFPYX	UG2HW	190.2	132.8	23	3.31	3.430	3.32	-0.12	3.45	3.33
QC104	POIKFPYX	UG2HW	141.7	98.2	23	3.26	3.390	3.27	-0.26	3.99	3.72
QC105	CR	UG2	180.9	137.6	23	4.18	4.275	4.17	0.08	2.30	2.38
QC106	CR	UG2	219.7	166.4	23	4.12	4.440	4.12	-0.03	7.43	7.40
QC107	CR	UG2	210.2	160	23	4.19	4.440	4.17	0.42	5.86	6.28
QC108	CR	UG2	289.9	216.5	23	3.95	4.170	3.85	2.64	5.43	8.07
QC109	PEGFPYX	UG2FW	206.9	143.7	23	3.27	3.450	3.25	0.58	5.24	5.83
QC110	PEGFPYX	UG2FW	147.4	104	23	3.40	3.540	3.40	-0.20	4.14	3.94
QC111	PEGFPYX	UG2FW	218.6	153.5	23	3.36	3.480	3.36	-0.01	3.57	3.56
QC112	PEGFPYX	UG2FW	220.1	152.5	23	3.26	3.400	3.24	0.41	4.33	4.73
QC113	PEGFPYX	UG2FW	200.9	138.8	23	3.24	3.385	3.23	0.15	4.53	4.67
QC114	PEGFPYX	UG2FW	154.1	106.9	23	3.26	3.400	3.25	0.51	4.06	4.57
QC115	PEGFPYX	UG2FW	119.3	82	23	3.20	3.320	3.18	0.47	3.73	4.20
QC116	PEGFPYX	UG2FW	194.8	135.1	23	3.26	3.400	3.24	0.59	4.11	4.70
QC117	PEGFPYX	UG2FW	230.2	160.2	23	3.29	3.430	3.28	0.36	4.21	4.57
QC118	PEGFPYX	UG2FW	140.5	97.9	23	3.30	3.400	3.27	0.74	3.04	3.78
QC119	N	MRHW	93.6	61.7	23	2.93	3.030	2.93	0.30	3.21	3.51
QC120	N	MRHW	145.8	96.2	24	2.94	3.055	2.92	0.51	3.85	4.36
QC121	N	MRHW	107.5	71.3	24	2.97	3.080	2.94	1.01	3.65	4.66
QC122	N	MRHW	136.8	91.1	24	2.99	3.090	2.98	0.50	3.17	3.67
QC123	PYX	MRHW	67.6	45.2	24	3.02	3.100	3.00	0.74	2.69	3.42
QC124	PYX	MRHW	118.1	79.3	24	3.04	3.160	2.86	6.31	3.75	10.05

Table B 25. Quality control dataset, outliers removed.

Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC125	PYX	MRHW	63	43.3	24	3.20	3.280	3.18	0.49	2.53	3.03
QC126	PYX	MRHW	90.1	62.5	24	3.26	3.360	3.23	1.07	2.88	3.96
QC127	PYX	MRHW	121.6	84	24	3.23	3.340	3.28	-1.47	3.22	1.76
QC128	PYX	MRHW	97.2	67	24	3.22	3.240	3.20	0.52	0.66	1.19
QC129	MR	MR	168.3	116.6	24	3.26	3.280	3.23	0.85	0.76	1.61
QC130	MR	MR	226.2	155.4	24	3.19	3.280	3.13	1.90	2.63	4.53
QC131	MR	MR	240.4	166.1	24	3.24	3.370	3.21	0.73	4.07	4.80
QC132	AN	MRFW	145.4	94.3	24	2.85	2.910	2.79	2.12	2.24	4.36
QC133	AN	MRFW	153.1	99.1	24	2.84	2.940	2.75	2.95	3.63	6.58
QC134	AN	MRFW	170.5	110.1	24	2.82	2.930	2.82	-0.02	3.73	3.70
QC135	AN	MRFW	109.3	70.6	24	2.82	2.920	2.82	-0.02	3.33	3.32
QC136	AN	MRFW	195.9	125.9	24	2.80	2.900	2.78	0.78	3.56	4.34
QC137	AN	MRFW	97.5	62.8	24	2.81	2.890	2.75	2.30	2.81	5.12
QC138	AN	MRFW	156.4	100.5	24	2.80	2.860	2.78	0.61	2.20	2.80
QC139	AN	MRFW	162.9	104.3	24	2.78	2.860	2.74	1.56	2.84	4.40
QC140	N	MRFW	212.7	136.8	24	2.80	2.880	2.79	0.37	2.73	3.11
QC141	N	MRFW	140.9	91.3	24	2.84	2.910	2.82	0.83	2.41	3.24
QC142	N	MRFW	124.3	81	24	2.87	2.940	2.84	1.22	2.39	3.60
QC143	N	MRFW	136.9	89.3	24	2.88	2.940	2.87	0.13	2.20	2.33
QC144	N	MRFW	62.3	40.5	24	2.86	2.920	2.80	2.14	2.15	4.29
QC145	PYX	UG2HW	220.6	154.1	24	3.32	3.405	3.22	3.02	2.61	5.63
QC146	PYX	UG2HW	194.7	135.9	24	3.31	3.410	3.30	0.29	2.94	3.22
QC147	PYX	UG2HW	179.4	125.4	24	3.32	3.440	3.30	0.57	3.48	4.05
QC148	PYX	UG2HW	199.6	139.4	24	3.32	3.450	3.31	0.17	3.97	4.14
QC149	PYX	UG2HW	125.3	87.5	24	3.31	3.460	3.31	0.26	4.29	4.55
QC150	CR	UG2	151.9	113.6	24	3.97	4.245	3.95	0.32	6.79	7.11
QC151	CR	UG2	259.1	194	24	3.98	4.470	3.97	0.15	11.60	11.75
QC152	CR	UG2	72.5	55	24	4.14	4.490	4.18	-0.98	8.04	7.06
QC153	CR	UG2	253.5	192.6	24	4.16	4.620	4.15	0.22	10.42	10.64
QC154	CR	UG2	115.6	87.4	24	4.10	4.590	4.13	-0.86	11.29	10.44
QC155	PEGFPYX	UG2FW	114.7	83.5	24	3.68	3.880	3.53	3.96	5.39	9.35

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC156	PEGFPYX	UG2FW	233.8	161.8	24	3.25	3.460	3.22	0.74	6.34	7.09
QC157	PEGFPYX	UG2FW	87	59.5	24	3.16	3.440	3.16	-0.04	8.37	8.33
QC158	PEGFPYX	UG2FW	99.3	68.7	24	3.25	3.375	3.25	-0.15	3.92	3.77
QC159	PEGFPYX	UG2FW	106.3	73.9	24	3.28	3.400	3.27	0.24	3.57	3.81
QC160	PEGFPYX	UG2FW	209.9	146.5	24	3.31	3.430	3.30	0.41	3.54	3.95
QC161	PEGFPYX	UG2FW	95.8	66.3	24	3.25	3.380	3.25	-0.17	4.00	3.83
QC162	PEGFPYX	UG2FW	202.6	140.6	24	3.27	3.410	3.25	0.56	4.26	4.82
QC163	PEGFPYX	UG2FW	208.8	145.1	24	3.28	3.430	3.26	0.46	4.54	5.00
QC164	PYX	MRHW	164.6	107.2	23	2.87	3.150	2.87	-0.02	9.39	9.37
QC165	PYX	MRHW	94.1	62.7	23	3.00	3.160	2.98	0.63	5.30	5.93
QC166	PYX	MRHW	72	48.2	23	3.03	3.110	3.02	0.29	2.76	3.05
QC167	PYX	MRHW	162.4	109.6	23	3.08	3.160	3.01	2.10	2.70	4.80
QC168	PYX	MRHW	155.2	105.4	23	3.12	3.230	3.11	0.35	3.58	3.93
QC169	PYX	MRHW	180.2	124.4	23	3.23	3.390	3.23	-0.03	4.85	4.82
QC170	PYX	MRHW	215.2	148.8	23	3.24	3.430	3.24	0.07	5.67	5.74
QC171	PYX	MRHW	120.6	83.7	23	3.27	3.420	3.26	0.22	4.54	4.75
QC172	PYX	MRHW	142.8	98.7	23	3.24	3.480	3.25	-0.28	7.20	6.92
QC173	PYX	MRFW	95	66.1	23	3.29	3.510	3.11	5.43	6.56	11.97
QC174	PYX	MRFW	209.3	145.1	23	3.26	3.450	3.25	0.18	5.66	5.84
QC175	PYX	MRFW	223.5	150.7	23	3.07	3.260	3.06	0.42	6.00	6.42
QC176	PYX	MRFW	115.9	77.1	23	2.99	3.170	3.03	-1.46	5.94	4.48
QC177	PYX	MRFW	130.6	86.2	23	2.94	3.040	2.91	1.17	3.30	4.46
QC178	PYX	MRFW	170.8	113	24	2.96	3.100	2.95	0.24	4.79	5.03
QC179	PYX	MRFW	142	93.9	24	2.95	3.100	2.92	0.99	4.88	5.87
QC180	PYX	MRFW	91.6	60	24	2.90	3.060	2.86	1.20	5.41	6.61
QC181	PYX	UG2HW	109.4	74.1	24	3.10	3.410	3.09	0.39	9.55	9.94
QC182	PYX	UG2HW	138.8	93.4	24	3.06	3.195	3.05	0.16	4.41	4.56
QC183	PYX	UG2HW	121.8	81.5	24	3.02	3.110	3.02	-0.08	2.86	2.78
QC184	PYX	UG2HW	226.2	157.7	24	3.30	3.470	3.31	-0.09	4.96	4.86
QC185	PYX	UG2HW	114.5	79.4	24	3.26	3.440	3.27	-0.26	5.31	5.05
QC186	PYX	UG2	201.6	140.1	24	3.28	3.450	3.28	-0.17	5.11	4.94

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC187	PYX	UG2	104.4	72	24	3.22	3.500	3.21	0.23	8.26	8.50
QC188	PYX	UG2	96.5	66.1	24	3.17	3.415	3.22	-1.28	7.30	6.03
QC189	PYX	UG2	185.6	127.5	24	3.19	3.470	3.18	0.33	8.27	8.60
QC190	PYX	UG2	114.4	79	24	3.23	3.475	3.23	0.06	7.26	7.32
QC191	CR	UG2	114.9	86.8	24	4.09	4.490	3.98	2.72	9.35	12.06
QC192	CR	UG2	146.4	110.3	24	4.06	4.490	4.03	0.69	10.17	10.86
QC193	PYX	UG2FW	157.3	108.8	24	3.24	3.580	3.22	0.64	9.87	10.51
QC194	PYX	UG2FW	210.7	146.2	24	3.27	3.550	3.25	0.44	8.31	8.75
QC195	PYX	UG2FW	145.1	100.1	24	3.22	3.470	3.21	0.32	7.34	7.66
QC196	PYX	UG2FW	146.7	101	24	3.21	3.485	3.20	0.18	8.21	8.39
QC197	PYX	UG2FW	190.1	131.7	24	3.26	3.510	3.26	-0.13	7.53	7.40
QC198	PYX	UG2FW	125	86.7	24	3.26	3.500	3.24	0.60	6.99	7.58
QC199	PYX	UG2FW	204.5	141.1	24	3.23	3.440	3.21	0.40	6.43	6.83
QC200	PYX	UG2FW	228.2	157.5	24	3.23	3.535	3.22	0.09	9.09	9.18
QC201	PYX	UG2FW	225.3	155.1	24	3.21	3.530	3.20	0.43	9.51	9.94
QC202	AN	MRHW	179.5	113.7	24	2.73	2.850	2.70	1.12	4.38	5.49
QC203	AN	MRHW	166	106.1	24	2.77	2.920	2.75	0.64	5.23	5.86
QC204	AN	MRHW	153.4	99.6	24	2.85	3.010	2.85	-0.02	5.42	5.40
QC205	N	MRHW	137.5	89.3	24	2.85	3.000	2.85	0.26	5.03	5.29
QC206	AN	MRHW	127.2	80.7	24	2.74	2.870	2.75	-0.51	4.80	4.29
QC207	FPYX	MRHW	135.6	93.7	24	3.24	3.290	3.21	0.73	1.65	2.38
QC208	FPYX	MR	163.3	113.2	24	3.26	3.420	3.23	0.95	4.81	5.75
QC209	FPYX	MR	157.7	108.9	24	3.23	3.430	3.22	0.50	5.96	6.46
QC210	FPYX	MR	212.8	146.3	24	3.20	3.390	3.20	-0.13	5.77	5.64
QC211	FPYX	MR	235.9	161.2	24	3.16	3.320	3.14	0.64	5.00	5.64
QC212	FPYX	MRFW	167.4	116	24	3.26	3.400	3.21	1.42	4.30	5.73
QC213	FPYX	MRFW	214	148.4	24	3.26	3.390	3.25	0.49	3.84	4.33
QC214	FPYX	MRFW	121.9	84.5	24	3.26	3.390	3.25	0.25	3.93	4.18
QC215	FPYX	MRFW	153	106	24	3.26	3.410	3.23	0.73	4.64	5.37
QC216	FPYX	MRFW	137.3	94.9	24	3.24	3.390	3.21	0.72	4.58	5.30
QC217	FPYX	MRFW	257.6	178.5	24	3.26	3.420	3.25	0.16	4.89	5.05

Table B 25. Quality control dataset, outliers removed.

Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC218	FPYX	MRFW	212	146.3	24	3.23	3.400	3.23	-0.18	5.23	5.05
QC219	FPYX	MRFW	258.3	178.7	24	3.24	3.400	3.22	0.87	4.67	5.54
QC220	FPYX	MRFW	171.2	118.8	24	3.27	3.420	3.25	0.43	4.57	5.00
QC221	FPYX	MRFW	223.8	154.7	24	3.24	3.440	3.23	0.13	6.03	6.16
QC222	FPYX	MRFW	241.5	166.8	24	3.23	3.430	3.23	-0.05	5.92	5.87
QC223	FPYX	MRFW	181.9	126	24	3.25	3.430	3.24	0.49	5.27	5.76
QC224	FPYX	MRFW	234.8	162.5	24	3.25	3.420	3.22	0.76	5.17	5.93
QC225	FPYX	UG2HW	177.5	123.3	24	3.27	3.320	3.27	0.17	1.37	1.54
QC226	FPYX	UG2HW	92	63.3	24	3.21	3.300	3.19	0.63	2.90	3.53
QC227	FPYX	UG2HW	92.5	64.2	24	3.27	3.300	3.18	2.86	0.96	3.82
QC228	CR	UG2	292.6	219.9	24	4.02	4.180	4.01	0.38	3.78	4.16
QC229	CR	UG2	252.6	189.6	24	4.01	4.240	4.04	-0.88	5.59	4.71
QC230	CR	UG2	152.5	114	24	3.96	3.980	3.82	3.60	0.48	4.08
QC231	FPYX	UG2FW	206.2	142.2	24	3.22	3.310	3.15	2.34	2.70	5.04
QC232	FPYX	UG2FW	107.9	74.3	24	3.21	3.280	3.20	0.43	2.12	2.54
QC233	FPYX	UG2FW	112	77.4	24	3.24	3.280	3.21	0.70	1.32	2.02
QC234	FPYX	UG2FW	199.4	136.5	24	3.17	3.230	3.14	0.93	1.87	2.80
QC235	FPYX	UG2FW	229.6	156.4	24	3.14	3.230	3.14	0.03	2.93	2.96
QC236	FPYX	UG2FW	161.7	111	24	3.19	3.230	3.18	0.42	1.27	1.68
QC237	FPYX	UG2FW	127.9	88.4	24	3.24	3.230	3.23	0.11	-0.25	-0.13
QC238	FPYX	UG2FW	239.4	164.5	24	3.20	3.240	3.20	0.01	1.36	1.37
QC239	FPYX	UG2FW	117	80.3	24	3.19	3.240	3.18	0.39	1.62	2.01
QC240	FPYX	UG2FW	180.7	124.1	24	3.19	3.220	3.16	1.14	0.86	2.00
QC241	FPYX	UG2FW	208	141.4	24	3.12	3.210	3.13	-0.08	2.74	2.67
QC242	FPYX	UG2FW	212.3	144.9	24	3.15	3.140	3.15	-0.09	-0.31	-0.40
QC243	N	MRHW	73.6	50.5	24	3.19	3.220	3.20	-0.33	1.06	0.73
QC244	FPYX	MRHW	101.3	70.3	21	3.27	3.380	3.25	0.65	3.38	4.02
QC245	FPYX	MRHW	156.1	108.1	21	3.25	3.370	3.25	-0.06	3.56	3.50
QC246	FPYX	MRHW	101.9	70.7	21	3.27	3.370	3.25	0.59	3.13	3.72
QC247	FPYX	MRHW	126.2	87.4	21	3.25	3.350	3.26	-0.18	2.95	2.77
QC248	FPYX	MR	131.7	91.6	21	3.28	3.450	3.26	0.67	4.92	5.59

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC249	FPYX	MR	233.5	161.7	21	3.25	3.430	3.25	0.14	5.33	5.46
QC250	FPYX	MRFW	191.6	129.7	21	3.10	3.180	3.09	0.08	2.70	2.78
QC251	FPYX	MRFW	171.9	116.9	21	3.13	3.310	3.12	0.33	5.74	6.07
QC252	FPYX	MRFW	88.8	61.4	21	3.24	3.370	3.16	2.42	3.91	6.32
QC253	FPYX	MRFW	214.7	148.5	21	3.24	3.385	3.22	0.79	4.28	5.07
QC254	FPYX	MRFW	179.9	125.2	21	3.29	3.390	3.24	1.41	3.03	4.44
QC255	FPYX	MRFW	179.7	124.1	21	3.23	3.370	3.22	0.28	4.18	4.46
QC256	FPYX	MRFW	157.7	109.2	21	3.25	3.380	3.22	0.87	3.87	4.75
QC257	FPYX	MRFW	133.3	91.9	21	3.22	3.380	3.24	-0.52	4.85	4.33
QC258	FPYX	MRFW	224.5	154.6	21	3.21	3.400	3.21	0.09	5.69	5.79
QC259	FPYX	MRFW	229.6	158	21	3.21	3.390	3.20	0.28	5.56	5.84
QC260	FPYX	UG2HW	212.7	147.6	21	3.27	3.420	3.26	0.14	4.57	4.71
QC261	FPYX	UG2HW	159.3	110.7	21	3.28	3.440	3.27	0.26	4.83	5.09
QC262	FPYX	UG2HW	207	143.6	21	3.26	3.410	3.32	-1.63	4.35	2.71
QC263	FPYX	UG2HW	136.8	95.7	21	3.33	3.650	3.31	0.42	9.21	9.63
QC264	CR	UG2	193.2	142.1	21	3.78	3.950	3.77	0.35	4.38	4.73
QC265	CR	UG2	200.5	151.9	21	4.13	4.470	4.11	0.34	8.02	8.36
QC266	CR	UG2	148.9	112.4	21	4.08	4.490	4.04	0.89	9.58	10.47
QC267	CR	UG2	261.7	196.8	21	4.03	4.110	4.02	0.42	1.91	2.33
QC268	FPYX	UG2FW	188.2	130.8	21	3.28	3.395	3.26	0.57	3.48	4.05
QC269	FPYX	UG2FW	84.7	59.8	21	3.40	3.580	3.30	2.96	5.11	8.07
QC270	FPYX	UG2FW	233.5	161.5	21	3.24	3.390	3.23	0.32	4.43	4.75
QC271	FPYX	UG2FW	151	104.3	21	3.23	3.380	3.23	0.24	4.43	4.68
QC272	FPYX	UG2FW	219.3	151.4	21	3.23	3.380	3.22	0.27	4.55	4.81
QC273	FPYX	UG2FW	217.9	150.3	21	3.22	3.370	3.19	0.92	4.45	5.37
QC274	FPYX	UG2FW	207.5	143.4	21	3.24	3.400	3.22	0.40	4.91	5.31
QC275	FPYX	UG2FW	261.8	180.9	21	3.24	3.360	3.22	0.56	3.76	4.32
QC276	FPYX	UG2FW	217	150.8	21	3.28	3.420	3.26	0.53	4.24	4.78
QC277	FPYX	UG2FW	159.8	110.6	21	3.25	3.390	3.25	0.01	4.28	4.29
QC278	FPYX	UG2FW	181.7	125.8	21	3.25	3.370	3.24	0.45	3.61	4.06
QC279	N	MRHW	188.9	127.1	21	3.06	3.230	3.06	-0.15	5.52	5.36

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC280	N	MRHW	168.3	114.3	21	3.12	3.280	3.11	0.20	5.11	5.31
QC281	N	MRHW	90.9	62.4	21	3.19	3.330	3.18	0.28	4.31	4.59
QC282	FPYX	MRHW	191.1	132.3	21	3.25	3.410	3.25	-0.13	4.80	4.67
QC283	FPYX	MRHW	203.9	141.1	21	3.25	3.410	3.25	-0.16	4.90	4.74
QC284	FPYX	MRHW	125.2	86.8	21	3.26	3.430	3.27	-0.36	5.07	4.71
QC285	FPYX	MRHW	99.5	68.9	21	3.25	3.400	3.27	-0.55	4.46	3.91
QC286	FPYX	MR	104.9	73.8	21	3.37	3.480	3.35	0.75	3.12	3.87
QC287	PYX	MR	93.7	65	21	3.26	3.400	3.27	-0.18	4.06	3.87
QC288	PYX	MRFW	193.3	134.2	21	3.27	3.450	3.24	0.83	5.33	6.17
QC289	PYX	MRFW	217.4	151.1	21	3.28	3.430	3.26	0.45	4.50	4.95
QC290	PYX	MRFW	216.3	149.6	21	3.24	3.370	3.23	0.31	3.84	4.15
QC291	PYX	MRFW	195.8	136.3	21	3.29	3.440	3.28	0.47	4.43	4.91
QC292	PYX	MRFW	142.4	98.6	21	3.25	3.390	3.21	1.28	4.18	5.46
QC293	PYX	MRFW	162.9	112.5	21	3.23	3.380	3.23	0.01	4.47	4.48
QC294	PYX	MRFW	193.7	134	21	3.24	3.380	3.24	0.13	4.09	4.22
QC295	PYX	MRFW	202	139.7	21	3.24	3.370	3.19	1.61	3.86	5.47
QC296	PYX	MRFW	198.4	137.2	21	3.24	3.340	3.21	0.89	2.98	3.87
QC297	PYX	MRFW	148	102.1	21	3.22	3.330	3.22	0.11	3.22	3.33
QC298	PYX	MRFW	67.6	46.6	21	3.22	3.330	3.20	0.64	3.39	4.03
QC299	PYX	MRFW	146.7	101.2	21	3.22	3.330	3.23	-0.13	3.23	3.10
QC300	PYX	MRFW	197.4	136.3	21	3.23	3.330	3.21	0.60	3.02	3.63
QC301	PYX	MRFW	211.4	146.2	21	3.24	3.330	3.23	0.50	2.67	3.17
QC302	PYX	UG2HW	181.2	125.4	21	3.25	3.380	3.31	-1.91	4.00	2.09
QC303	PYX	UG2HW	157.9	108.3	21	3.18	3.400	3.17	0.43	6.58	7.01
QC304	PYX	UG2HW	179	122.4	21	3.16	3.345	3.17	-0.20	5.61	5.40
QC305	PYX	UG2HW	112.8	77.1	21	3.16	3.390	3.10	1.78	7.03	8.81
QC306	PYX	UG2HW	131	89.5	21	3.16	3.420	3.12	1.24	8.01	9.25
QC307	CR	UG2	223.7	165.1	21	3.82	4.090	3.79	0.60	6.89	7.49
QC308	CR	UG2	164.4	126	22	4.28	4.590	4.26	0.57	6.96	7.53
QC309	CR	UG2	199.1	152	22	4.23	4.570	4.16	1.57	7.79	9.36
QC310	CR	UG2	255.8	193.5	21	4.11	4.430	4.03	1.81	7.59	9.40

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC311	CR	UG2	198.7	140.2	21	3.40	3.700	3.33	2.10	8.55	10.64
QC312	PYX	UG2FW	209.9	146.8	21	3.33	3.490	3.31	0.37	4.80	5.17
QC313	PYX	UG2FW	89.3	60.8	21	3.13	3.310	3.12	0.31	5.48	5.79
QC314	PYX	UG2FW	120.7	83.8	21	3.27	3.380	3.28	-0.26	3.28	3.02
QC315	PYX	UG2FW	193.2	132.4	21	3.18	3.380	3.26	-2.69	6.17	3.48
QC316	PYX	UG2FW	202.2	140.3	21	3.27	3.410	3.25	0.40	4.30	4.69
QC317	PYX	UG2FW	211.2	147.9	21	3.34	3.500	3.31	0.75	4.78	5.53
QC318	PYX	UG2FW	177.4	124.2	21	3.33	3.480	3.31	0.80	4.27	5.07
QC319	PYX	UG2FW	172.6	118.4	21	3.18	3.380	3.13	1.75	5.96	7.70
QC320	PYX	UG2FW	98.1	66.6	21	3.11	3.310	3.13	-0.50	6.09	5.59
QC321	PYX	UG2FW	142.7	98.3	21	3.21	3.350	3.21	0.25	4.14	4.40
QC322	PYX	MRHW	230.6	156	15	3.09	3.270	3.12	-0.86	5.62	4.77
QC323	PYX	MRHW	193.6	131.7	15	3.13	3.320	3.12	0.18	5.97	6.15
QC324	PYX	MRHW	201.4	139.9	15	3.27	3.330	3.27	0.25	1.67	1.92
QC325	PYX	MRHW	165.7	114.8	15	3.26	3.360	3.20	1.72	3.16	4.88
QC326	PYX	MRHW	200.9	138.5	15	3.22	3.370	3.21	0.19	4.57	4.76
QC327	PYX	MR	138	95.8	15	3.27	3.380	3.28	-0.27	3.30	3.03
QC328	PYX	MR	213.7	148.6	15	3.28	3.440	3.28	-0.07	4.68	4.61
QC329	PYX	MRFW	219	149.7	15	3.16	3.330	3.16	0.07	5.23	5.30
QC330	PYX	MRFW	230.5	159.6	15	3.25	3.400	3.24	0.40	4.48	4.88
QC331	PYX	MRFW	123.8	85.1	15	3.20	3.300	3.20	-0.14	3.11	2.96
QC332	PYX	MRFW	160.8	111	15	3.23	3.380	3.05	5.58	4.57	10.14
QC333	PYX	MRFW	192.4	133.7	15	3.28	3.380	3.28	0.06	3.07	3.13
QC334	PYX	MRFW	255.9	176	15	3.20	3.330	3.20	0.16	3.90	4.05
QC335	N	MRFW	177.3	118.4	15	3.01	3.110	2.90	3.71	3.26	6.97
QC336	N	MRFW	177.3	118.4	15	3.01	3.150	2.90	3.71	4.54	8.24
QC337	N	MRFW	218.5	144.5	17	2.95	3.040	2.95	0.17	2.91	3.08
QC338	PYX	MRFW	203.8	135.1	17	2.97	3.055	2.96	0.14	2.94	3.08
QC339	PYX	MRFW	197.3	134.7	17	3.15	3.195	3.05	3.26	1.36	4.62
QC340	PYX	MRFW	124.7	85.5	17	3.18	3.300	3.22	-1.21	3.67	2.46
QC341	PYX	MRFW	213.8	147.1	17	3.21	3.300	3.21	-0.18	2.91	2.73

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC342	PYX	UG2HW	81.4	56.5	17	3.27	3.410	3.19	2.36	4.22	6.58
QC343	PYX	UG2HW	122	84.7	17	3.27	3.410	3.25	0.58	4.17	4.74
QC344	PYX	UG2HW	133.8	92.7	17	3.26	3.420	3.24	0.55	4.93	5.48
QC345	CR	UG2	228.3	172.6	17	4.10	4.195	4.09	0.28	2.32	2.60
QC346	CR	UG2	173.2	130.4	17	4.05	4.150	4.02	0.59	2.52	3.11
QC347	PYX	UG2FW	96.2	66.4	17	3.23	3.430	3.27	-1.25	6.06	4.82
QC348	PYX	UG2FW	174.1	122.7	17	3.39	3.530	3.36	0.87	4.13	5.00
QC349	PYX	UG2FW	135.8	95.9	17	3.40	3.560	3.39	0.28	4.49	4.77
QC350	PYX	UG2FW	162.2	111.7	17	3.21	3.380	3.21	0.11	5.10	5.21
QC351	PYX	UG2FW	138.4	95.4	17	3.22	3.370	3.14	2.45	4.60	7.05
QC352	PYX	UG2FW	98.7	68.3	17	3.25	3.390	3.25	-0.17	4.32	4.14
QC353	PYX	UG2FW	148.7	102.2	17	3.20	3.380	3.20	0.04	5.54	5.58
QC354	PYX	UG2FW	95	65.2	17	3.19	3.330	3.19	0.07	4.36	4.43
QC355	PYX	UG2FW	180.5	124.8	17	3.24	3.410	3.22	0.57	5.10	5.67
QC356	PYX	UG2FW	50.3	34.7	17	3.22	3.400	3.08	4.59	5.30	9.88
QC357	PYX	UG2FW	242.9	167.6	17	3.23	3.405	3.21	0.51	5.41	5.91
QC358	N	MRHW	223	148.9	20	3.01	3.180	3.01	-0.09	5.51	5.42
QC359	N	MRHW	215.2	144.5	20	3.04	3.230	3.06	-0.42	5.93	5.52
QC360	N	MRHW	145.3	98.6	20	3.11	3.300	3.10	0.22	5.88	6.11
QC361	PYX	MR	209.8	143.3	20	3.15	3.375	3.16	-0.13	6.74	6.61
QC362	PYX	MR	174.5	120.8	20	3.25	3.480	3.25	-0.04	6.85	6.81
QC363	PYX	MR	103	71.4	20	3.26	3.490	3.25	0.24	6.83	7.07
QC364	PYX	MR	150.6	105.1	20	3.31	3.550	3.28	0.81	7.00	7.81
QC365	PYX	MR	118.5	82.3	20	3.27	3.520	3.26	0.30	7.26	7.56
QC366	PYX	MR	157.7	109.2	20	3.25	3.540	3.25	-0.06	8.49	8.43
QC367	PYX	MRFW	74.5	51.2	20	3.20	3.450	3.19	0.29	7.60	7.89
QC368	PYX	MRFW	221.3	153	20	3.24	3.460	3.24	0.11	6.56	6.68
QC369	PYX	MRFW	127	86	20	3.10	3.225	3.09	0.25	4.03	4.28
QC370	N	MRFW	195.4	129.2	20	2.95	3.140	2.95	0.10	6.18	6.28
QC371	N	MRFW	110	72.8	20	2.96	3.180	2.95	0.35	7.27	7.62
QC372	N	MRFW	219.4	147.1	20	3.03	3.240	3.03	0.19	6.55	6.74

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC373	N	MRFW	159.6	106.7	20	3.02	3.210	3.00	0.52	6.20	6.72
QC374	N	MRFW	209.1	143.4	20	3.18	3.350	3.17	0.47	5.12	5.59
QC375	N	MRFW	105.5	71.3	20	3.08	3.300	3.08	0.28	6.74	7.03
QC376	N	MRFW	141.5	94.8	20	3.03	3.260	3.03	-0.14	7.31	7.17
QC377	N	MRFW	182.8	123.8	20	3.10	3.310	3.10	0.07	6.61	6.67
QC378	N	MRFW	219.7	149.5	20	3.13	3.350	3.12	0.25	6.80	7.05
QC379	N	MRFW	113.1	77.5	20	3.18	3.340	3.16	0.38	5.00	5.39
QC380	PYX	UG2HW	102.7	71.4	20	3.28	3.550	3.29	-0.17	7.87	7.70
QC381	PYX	UG2HW	134	92.8	20	3.25	3.480	3.26	-0.13	6.76	6.63
QC382	PYX	UG2HW	102	71	20	3.29	3.505	3.28	0.38	6.32	6.69
QC383	CR	UG2	161.4	121	20	4.00	4.050	4.05	-1.33	1.37	0.04
QC384	CR	UG2	93.6	70	20	3.97	4.020	3.99	-0.53	1.35	0.82
QC385	CR	UG2	177	129.9	20	3.76	3.920	3.72	1.08	4.22	5.30
QC386	CR	UG2	344.4	255.1	20	3.86	3.850	3.72	3.68	-0.17	3.51
QC387	PYX	UG2FW	167.5	117.6	20	3.36	3.435	3.35	0.30	2.31	2.61
QC388	PYX	UG2FW	222.9	156.6	20	3.36	3.510	3.34	0.62	4.31	4.93
QC389	PYX	UG2FW	136.4	92.2	20	3.09	3.100	3.05	1.06	0.45	1.51
QC390	PYX	UG2FW	172.4	119.2	20	3.24	3.320	3.23	0.41	2.42	2.84
QC391	PYX	UG2FW	176.2	122.1	20	3.26	3.385	3.24	0.41	3.86	4.27
QC392	PYX	UG2FW	146.9	101.7	20	3.25	3.380	3.22	1.08	3.92	5.00
QC393	FPYX	MRHW	146.4	100.8	20	3.21	3.320	3.22	-0.19	3.35	3.16
QC394	FPYX	MRHW	154.8	107.5	20	3.27	3.430	3.25	0.75	4.69	5.44
QC395	FPYX	MRHW	177	122.9	20	3.27	3.420	3.27	0.14	4.43	4.57
QC396	FPYX	MR	121.7	85.1	20	3.33	3.470	3.31	0.40	4.26	4.66
QC397	FPYX	MRFW	162.8	112.7	20	3.25	3.410	3.23	0.56	4.82	5.38
QC398	FPYX	MRFW	142	98.5	20	3.26	3.430	3.24	0.65	4.95	5.59
QC399	FPYX	MRFW	185.4	128.5	20	3.26	3.415	3.25	0.22	4.69	4.91
QC400	FPYX	MRFW	116	79	20	3.14	3.350	3.13	0.29	6.63	6.92
QC401	N	MRFW	217.9	145.9	20	3.03	3.160	3.02	0.05	4.32	4.37
QC402	N	MRFW	131.1	86.5	20	2.94	3.060	2.95	-0.23	4.02	3.79
QC403	N	MRFW	185.5	122.9	20	2.96	3.110	2.97	-0.38	4.83	4.46

Table B 25. Quality control dataset, outliers removed.

Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC404	N	MRFW	199.2	133.5	20	3.03	3.150	3.03	0.15	3.82	3.97
QC405	N	MRFW	160.4	107.5	20	3.03	3.160	3.04	-0.12	4.13	4.01
QC406	N	MRFW	224.9	150.4	20	3.02	3.150	3.01	0.14	4.25	4.39
QC407	FPYX	UG2HW	221.3	153.8	20	3.28	3.490	3.26	0.54	6.25	6.78
QC408	FPYX	UG2HW	187.7	130	20	3.25	3.490	3.25	0.05	7.03	7.08
QC409	FPYX	UG2HW	193.6	134	20	3.25	3.530	3.25	0.05	8.31	8.36
QC410	CR	UG2	146	109.3	20	3.98	4.190	3.95	0.74	5.19	5.92
QC411	CR	UG2	175.6	133.1	20	4.13	4.400	4.15	-0.40	6.29	5.88
QC412	CR	UG2	248.4	189.1	20	4.19	4.490	4.14	1.10	6.94	8.04
QC413	CR	UG2	249.8	189.2	20	4.12	4.160	4.10	0.46	0.91	1.38
QC414	FPYX	UG2FW	96.5	69	20	3.51	3.490	3.42	2.50	-0.55	1.95
QC415	FPYX	UG2FW	194.8	134.4	20	3.23	3.370	3.21	0.37	4.39	4.77
QC416	FPYX	UG2FW	206.2	142.8	20	3.25	3.370	3.23	0.66	3.55	4.21
QC417	FPYX	UG2FW	109.5	75.8	20	3.25	3.390	3.19	1.82	4.24	6.06
QC418	FPYX	UG2FW	105.1	72.7	20	3.24	3.420	3.21	1.18	5.29	6.46
QC419	FPYX	UG2FW	222.2	154.2	20	3.27	3.350	3.23	1.18	2.49	3.66
QC420	FPYX	UG2FW	149.8	103.1	20	3.21	3.460	3.21	0.04	7.57	7.61
QC421	FPYX	UG2FW	217.1	150.1	20	3.24	3.390	3.21	0.93	4.52	5.45
QC422	FPYX	UG2FW	154	105.8	20	3.20	3.390	3.17	0.72	5.92	6.64
QC423	FPYX	UG2FW	142.1	97.8	20	3.21	3.410	3.20	0.34	6.11	6.45
QC424	FPYX	UG2FW	209	144.1	20	3.22	3.410	3.18	1.22	5.72	6.94
QC425	FPYX	UG2FW	253.9	174.2	20	3.19	3.340	3.18	0.32	4.73	5.05
QC426	N	MRHW	179	118.5	20	2.96	3.105	2.92	1.19	4.83	6.01
QC427	N	MRHW	218.8	145	20	2.96	3.110	2.97	-0.05	4.78	4.73
QC428	N	MRHW	203.8	135.7	20	2.99	3.160	2.96	0.96	5.44	6.40
QC429	N	MRHW	215.9	142.9	20	2.96	3.130	2.99	-1.01	5.67	4.65
QC430	N	MRHW	99.2	66.9	20	3.07	3.160	3.09	-0.70	2.85	2.15
QC431	FPYX	MR	217.8	151.3	20	3.28	3.320	3.18	2.98	1.36	4.34
QC432	FPYX	MR	139	96.7	20	3.29	3.400	3.26	0.83	3.41	4.24
QC433	FPYX	MR	230.8	159.6	20	3.24	3.460	3.23	0.32	6.52	6.84
QC434	FPYX	MR	231.1	160.8	20	3.29	3.470	3.22	2.00	5.41	7.40

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC435	FPYX	MR	271.6	193.6	20	3.48	3.530	3.28	6.07	1.37	7.43
QC436	FPYX	MRFW	164	111.6	20	3.13	3.310	3.16	-0.87	5.60	4.73
QC437	FPYX	MRFW	156.8	108.3	20	3.23	3.380	3.21	0.77	4.45	5.22
QC438	FPYX	MRFW	226	156.2	20	3.24	3.290	3.24	-0.21	1.60	1.39
QC439	FPYX	MRFW	323	206.1	20	2.76	2.840	2.74	0.93	2.75	3.67
QC440	FPYX	MRFW	209.2	141.2	20	3.08	3.130	3.08	-0.27	1.72	1.45
QC441	FPYX	MRFW	286.5	193.4	20	3.08	3.160	3.06	0.41	2.65	3.06
QC442	FPYX	MRFW	341.9	230.3	20	3.06	3.260	3.05	0.34	6.21	6.55
QC443	FPYX	UG2HW	177.4	123.2	20	3.27	3.360	3.24	0.92	2.62	3.54
QC444	FPYX	UG2HW	241.9	167.5	20	3.25	3.360	3.24	0.28	3.29	3.56
QC445	FPYX	UG2HW	252.2	175.8	20	3.30	3.340	3.25	1.44	1.17	2.61
QC446	CR	UG2	177.8	135.7	20	4.22	4.170	4.19	0.78	-1.27	-0.49
QC447	CR	UG2	171.7	129.5	20	4.07	4.280	4.09	-0.62	5.06	4.44
QC448	CR	UG2	140.7	106.9	20	4.16	4.110	4.18	-0.31	-1.27	-1.59
QC449	N	UG2	108.9	72.2	20	2.97	2.960	2.89	2.57	-0.25	2.32
QC450	CR	UG2	185.3	132.6	20	3.52	3.810	3.46	1.53	8.02	9.55
QC451	FPYX	UG2FW	115.1	79.2	20	3.21	3.300	3.20	0.33	2.89	3.21
QC452	FPYX	UG2FW	79.6	54.8	20	3.21	3.280	3.18	1.00	2.17	3.16
QC453	FPYX	UG2FW	148.6	102.6	20	3.23	3.335	3.26	-0.89	3.19	2.30
QC454	FPYX	UG2FW	114.6	79.6	20	3.27	3.345	3.27	0.24	2.14	2.38
QC455	FPYX	UG2FW	146.7	99.3	20	3.09	3.200	3.08	0.43	3.34	3.77
QC456	FPYX	UG2FW	223.9	155.1	20	3.25	3.340	3.25	0.13	2.60	2.73
QC457	FPYX	UG2FW	182.5	127	20	3.29	3.360	3.27	0.59	2.16	2.75
QC458	FPYX	UG2FW	139.3	95.5	23	3.18	3.270	3.17	0.32	2.78	3.10
QC459	N	MRHW	214	139.3	16	2.86	2.940	2.87	-0.05	2.59	2.54
QC460	N	MRHW	185.7	122.1	16	2.92	3.120	2.94	-0.73	6.63	5.90
QC461	N	MRHW	141	92.3	16	2.90	2.980	2.90	-0.28	2.88	2.60
QC462	N	MRHW	189.9	124.8	16	2.92	3.160	2.93	-0.47	8.00	7.53
QC463	N	MRHW	144	94.8	16	2.93	3.020	2.95	-0.65	3.13	2.49
QC464	N	MRHW	204.6	135.2	16	2.95	3.170	2.95	-0.20	7.25	7.06
QC465	PYX	MR	120.7	83.1	16	3.21	3.290	3.20	0.20	2.46	2.66

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC466	N	MRHW	208.7	138.9	16	2.99	3.215	2.99	-0.14	7.25	7.11
QC467	PYX	MR	168.4	116.4	16	3.24	3.340	3.23	0.15	3.09	3.23
QC468	N	MRHW	110.1	73.3	16	2.99	3.230	2.99	0.09	7.66	7.75
QC469	PYX	MR	146.3	101.3	16	3.25	3.355	3.37	-3.73	3.15	-0.59
QC470	N	MRHW	162	108.8	16	3.05	3.290	3.05	-0.19	7.73	7.55
QC471	PYX	MR	208.1	143.6	16	3.23	3.365	3.24	-0.30	4.21	3.91
QC472	PYX	MRHW	145.5	100.9	16	3.26	3.500	3.31	-1.56	7.03	5.47
QC473	PYX	MR	140.7	97.4	16	3.25	3.380	3.25	0.02	3.94	3.96
QC474	PYX	MRFW	179.6	124.2	16	3.24	3.360	3.25	-0.10	3.58	3.48
QC475	PYX	MRHW	109.9	76.3	16	3.27	3.510	3.23	1.18	7.05	8.24
QC476	PYX	MRFW	254.4	175.4	16	3.22	3.330	3.22	-0.03	3.35	3.32
QC477	PYX	MR	114	79.2	16	3.28	3.610	3.28	-0.09	9.71	9.62
QC478	PYX	MRFW	106.8	73.4	16	3.20	3.360	3.22	-0.69	4.95	4.26
QC479	PYX	MR	177.9	123.1	16	3.25	3.490	3.26	-0.28	7.23	6.95
QC480	PYX	MRFW	230.4	158.6	16	3.21	3.350	3.21	-0.04	4.30	4.26
QC481	PYX	MR	104.4	72.2	16	3.24	3.520	3.22	0.64	8.22	8.85
QC482	PYX	MRFW	190.1	131.2	16	3.23	3.380	3.23	0.01	4.62	4.63
QC483	PYX	MR	250.5	173.7	16	3.26	3.520	3.26	-0.08	7.62	7.54
QC484	PYX	MRFW	184.3	126.9	16	3.21	3.370	3.21	-0.10	4.84	4.74
QC485	PYX	MRFW	128.4	88.3	16	3.20	3.410	3.20	-0.08	6.29	6.21
QC486	PYX	MRFW	235.5	162.5	16	3.23	3.360	3.23	-0.21	4.07	3.86
QC487	PYX	MRFW	209.9	145.1	16	3.24	3.480	3.25	-0.30	7.17	6.87
QC488	PYX	MRFW	174.9	120.6	16	3.22	3.360	3.22	0.03	4.22	4.25
QC489	PYX	MRFW	258.8	177.6	16	3.19	3.390	3.19	0.01	6.17	6.18
QC490	PYX	MRFW	175.5	120.8	16	3.21	3.370	3.22	-0.23	4.91	4.69
QC491	PYX	MRFW	231.3	159.1	16	3.20	3.480	3.20	0.25	8.27	8.52
QC492	PYX	MRFW	166.1	113.6	16	3.16	3.275	3.17	-0.05	3.45	3.40
QC493	PYX	MRFW	239.7	165.4	16	3.23	3.370	3.23	-0.03	4.36	4.33
QC494	PYX	MRFW	232.9	159.6	16	3.18	3.290	3.18	0.02	3.48	3.50
QC495	PYX	UG2HW	162.5	113.1	16	3.29	3.450	3.27	0.51	4.76	5.27
QC496	PYX	MRFW	225.1	154.9	16	3.21	3.300	3.21	-0.12	2.87	2.75

Table B 25. Quality control dataset, outliers removed.

Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC497	PYX	UG2HW	156.8	109.3	16	3.30	3.420	3.35	-1.38	3.54	2.16
QC498	PYX	MRFW	169	116.2	16	3.20	3.320	3.22	-0.62	3.66	3.04
QC499	PYX	UG2HW	160.3	111.6	16	3.29	3.440	3.28	0.30	4.41	4.71
QC500	PYX	MRFW	240.6	165.9	16	3.22	3.320	3.21	0.19	3.03	3.22
QC501	PYX	UG2HW	233.9	162.4	16	3.27	3.400	3.28	-0.17	3.86	3.69
QC502	PYX	UG2HW	272.1	189.5	16	3.29	3.420	3.30	-0.23	3.75	3.52
QC503	PYX	UG2HW	195	136.1	16	3.31	3.420	3.30	0.35	3.25	3.60
QC504	CR	UG2	207.7	155.9	16	4.01	4.290	4.06	-1.31	6.76	5.45
QC505	PYX	UG2HW	159.7	111.5	16	3.31	3.410	3.31	0.14	2.88	3.02
QC506	CR	UG2	283.1	214.6	16	4.13	4.440	4.14	-0.10	7.17	7.07
QC507	PYX	UG2HW	127.8	88.5	16	3.25	3.410	3.31	-1.82	4.75	2.93
QC508	CR	UG2	127.7	97.5	16	4.23	4.460	4.30	-1.62	5.33	3.71
QC509	PYX	UG2HW	176.7	122.7	16	3.27	3.400	3.28	-0.17	3.83	3.66
QC510	CR	UG2	157.3	119.5	16	4.16	4.410	4.22	-1.32	5.80	4.48
QC511	CR	UG2	200.2	151	16	4.07	4.240	4.06	0.21	4.11	4.32
QC512	PYX	UG2FW	140.1	97.6	16	3.30	3.420	3.30	-0.21	3.68	3.46
QC513	CR	UG2	144.7	109.4	16	4.10	4.430	4.13	-0.71	7.76	7.05
QC514	PYX	UG2FW	200.2	141.9	16	3.43	3.590	3.43	0.11	4.44	4.55
QC515	CR	UG2	69.3	52.3	16	4.08	4.435	4.12	-0.98	8.42	7.45
QC516	CR	UG2	132.6	101.1	16	4.21	4.390	4.24	-0.62	4.20	3.58
QC517	PYX	UG2FW	111.9	78.5	16	3.35	3.520	3.38	-0.99	4.94	3.95
QC518	PYX	UG2FW	155.4	108.6	16	3.32	3.420	3.32	0.02	2.95	2.97
QC519	PYX	UG2FW	147.3	102.6	16	3.30	3.430	3.46	-4.96	4.01	-0.95
QC520	PYX	UG2FW	209.7	145.3	16	3.26	3.390	3.24	0.52	4.03	4.55
QC521	PYX	UG2FW	252.1	178.9	16	3.44	3.600	3.45	-0.12	4.43	4.31
QC522	PYX	UG2FW	145.4	100.7	16	3.25	3.380	3.23	0.67	3.84	4.50
QC523	PYX	UG2FW	177	125.2	16	3.42	3.590	3.41	0.08	4.94	5.02
QC524	PYX	UG2FW	130.8	90.7	16	3.26	3.370	3.27	-0.25	3.26	3.01
QC525	PYX	UG2FW	228.3	158.3	16	3.26	3.400	3.26	-0.04	4.16	4.12
QC526	PYX	UG2FW	173.2	120	16	3.26	3.390	3.26	-0.05	4.04	4.00
QC527	PYX	UG2FW	194.6	134.4	16	3.23	3.390	3.23	0.06	4.75	4.82

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC528	PYX	UG2FW	227.3	158.2	16	3.29	3.430	3.29	0.11	4.18	4.30
QC529	PYX	UG2FW	163.5	113.2	16	3.25	3.390	3.27	-0.58	4.20	3.62
QC530	PYX	UG2FW	250.1	172.7	15	3.23	3.380	3.23	0.10	4.50	4.60
QC531	PYX	UG2FW	253.1	174.7	16	3.23	3.380	3.24	-0.50	4.59	4.09
QC532	PYX	UG2FW	156.8	107.4	15	3.17	3.300	3.18	-0.13	3.89	3.76
QC533	PYX	UG2FW	234.2	162.5	15	3.27	3.430	3.26	0.07	4.89	4.95
QC534	PYX	UG2FW	139.3	96.3	15	3.24	3.390	3.22	0.71	4.54	5.25
QC535	N	MRHW	119.2	80	15	3.04	3.230	3.05	-0.34	6.03	5.70
QC536	N	MRHW	215.3	145.8	15	3.10	3.280	3.09	0.30	5.71	6.02
QC537	PYX	MRHW	160.5	110.1	15	3.18	3.390	3.19	-0.11	6.25	6.14
QC538	PYX	MRHW	240.7	167.2	15	3.27	3.480	3.27	0.17	6.07	6.24
QC539	PYX	MRHW	107.4	74.5	15	3.26	3.510	3.27	-0.07	7.25	7.18
QC540	PYX	MR	206.7	143.9	15	3.29	3.570	3.28	0.45	8.12	8.57
QC541	PYX	MR	257.8	178.4	15	3.25	3.490	3.25	-0.18	7.22	7.03
QC542	PYX	MR	286.8	199.9	15	3.30	3.510	3.29	0.22	6.16	6.37
QC543	PYX	MR	310.8	216.2	15	3.29	3.540	3.29	-0.25	7.46	7.21
QC544	PYX	MRFW	208.7	143.9	15	3.22	3.410	3.21	0.23	5.71	5.94
QC545	PYX	MRFW	134.4	92	15	3.17	3.250	3.06	3.43	2.50	5.92
QC546	PYX	MRFW	99.5	67.7	15	3.13	3.380	3.17	-1.43	7.71	6.28
QC547	PYX	MRFW	113	75.2	15	2.99	3.240	3.09	-3.43	8.05	4.62
QC548	PYX	MRFW	150.1	100.9	15	3.05	3.405	3.13	-2.72	10.97	8.26
QC549	PYX	MRFW	164.2	110.8	15	3.07	3.190	3.05	0.84	3.67	4.52
QC550	PYX	MRFW	167.3	112.2	15	3.04	3.180	3.01	0.76	4.62	5.38
QC551	PYX	MRFW	131.3	85.9	15	2.89	3.050	2.90	-0.16	5.32	5.16
QC552	PYX	MRFW	250.5	163.4	15	2.88	3.000	2.88	-0.24	4.22	3.98
QC553	PYX	MRFW	169.3	111.1	15	2.91	3.020	2.80	3.96	3.75	7.70
QC554	PYX	MRFW	97.3	63.5	15	2.88	2.990	2.89	-0.32	3.79	3.47
QC555	PYX	MRFW	213	138	15	2.84	3.000	2.85	-0.52	5.48	4.96
QC556	PYX	MRFW	147.4	97.9	15	2.98	3.050	2.94	1.15	2.40	3.54
QC557	PYX	MRFW	108.2	73.3	15	3.10	3.200	2.96	4.66	3.17	7.82
QC558	PYX	MRFW	197.9	133.4	15	3.07	3.300	3.06	0.16	7.28	7.44

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC559	PYX	MRFW	171	117.4	15	3.19	3.330	3.18	0.19	4.29	4.47
QC560	PYX	MRFW	254.5	175	15	3.20	3.340	3.02	5.67	4.24	9.90
QC561	CR	UG3	301.4	223.1	15	3.85	3.890	3.92	-1.91	1.05	-0.86
QC562	PYX	UG2HW	212.3	148	15	3.30	3.410	3.24	1.94	3.23	5.17
QC563	PYX	UG2HW	271	188.8	15	3.30	3.440	3.31	-0.52	4.25	3.73
QC564	PYX	UG2HW	132.1	91.9	15	3.29	3.430	3.11	5.50	4.29	9.78
QC565	PYX	UG2HW	266.8	185.6	15	3.29	3.460	3.28	0.32	5.17	5.49
QC566	PYX	UG2HW	185.3	129.1	15	3.30	3.470	3.30	-0.04	5.11	5.07
QC567	CR	UG2	277.2	206.7	15	3.93	4.130	3.93	0.17	4.91	5.09
QC568	CR	UG2	123.6	93.8	15	4.15	4.310	4.12	0.77	3.84	4.61
QC569	CR	UG2	245.9	186.6	15	4.15	4.350	4.18	-0.80	4.79	3.99
QC570	CR	UG2	279.2	210.3	15	4.05	4.280	4.05	0.04	5.47	5.51
QC571	CR	UG2	194.5	146.6	15	4.06	4.190	4.04	0.58	3.14	3.71
QC572	PYX	UG2FW	120.6	84.1	15	3.30	3.460	3.30	0.22	4.61	4.82
QC573	PYX	UG2FW	134.1	90.9	15	3.10	3.330	3.12	-0.61	7.02	6.41
QC574	PYX	UG2FW	138.2	96.9	15	3.35	3.520	3.33	0.46	5.06	5.52
QC575	PYX	UG2FW	289.4	201	15	3.27	3.420	3.27	0.14	4.37	4.51
QC576	PYX	UG2FW	191.4	132.6	15	3.26	3.460	3.30	-1.42	6.10	4.68
QC577	PYX	UG2FW	107.3	72.1	15	3.05	3.350	3.05	-0.09	9.43	9.34
QC578	PYX	UG2FW	270.8	189.3	15	3.32	3.470	3.33	-0.22	4.34	4.12
QC579	PYX	UG2FW	267.6	187.4	15	3.34	3.500	3.34	-0.04	4.78	4.74
QC580	PYX	UG2FW	125.8	87.5	15	3.28	3.440	3.28	0.02	4.62	4.64
QC581	PYX	UG2FW	206	141.2	15	3.18	3.310	3.15	0.78	4.04	4.82
QC582	N	MRHW	194.7	130.1	15	3.01	3.090	3.00	0.57	2.49	3.06
QC583	N	MRHW	307.8	207.4	15	3.07	3.160	3.05	0.60	3.03	3.63
QC584	N	MRHW	249.4	169.3	15	3.11	3.200	3.10	0.47	2.74	3.21
QC585	PYX	MRHW	316.2	216.6	15	3.17	3.250	3.16	0.42	2.34	2.77
QC586	PYX	MRHW	174.3	120.6	15	3.25	3.380	3.24	0.14	4.05	4.19
QC587	PYX	MR	339.6	238	15	3.34	3.540	3.32	0.75	5.74	6.49
QC588	PYX	MR	395.2	277.3	15	3.35	3.670	3.33	0.74	9.06	9.80
QC589	PYX	MRFW	345.2	237.6	15	3.21	3.570	3.20	0.38	10.68	11.05

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC590	N	MRFW	188.3	124.5	15	2.95	3.100	2.95	0.04	4.91	4.95
QC591	N	MRFW	323.4	216.5	15	3.03	3.240	3.03	-0.09	6.86	6.77
QC592	N	MRFW	169.8	114.2	15	3.05	3.390	3.01	1.37	10.43	11.80
QC593	N	MRFW	313.7	209.6	15	3.01	3.360	3.01	0.07	10.87	10.94
QC594	PYX	UG2HW	103.5	71.7	15	3.25	3.340	3.26	-0.03	2.59	2.56
QC595	PYX	UG2HW	147.8	102.3	15	3.25	3.350	3.26	-0.49	3.08	2.59
QC596	PYX	UG2HW	224.3	155.9	15	3.28	3.390	3.28	-0.01	3.32	3.31
QC597	CR	UG2	403.8	306.1	15	4.13	4.150	4.13	0.01	0.41	0.42
QC598	CR	UG2	338.1	257	15	4.17	4.210	4.19	-0.55	0.98	0.43
QC599	PYX	UG2FW	281.2	202.2	15	3.56	3.560	3.57	-0.33	0.01	-0.32
QC600	PYX	UG2FW	246.7	171.3	15	3.27	3.460	3.29	-0.44	5.59	5.14
QC601	PYX	UG2FW	282.9	195.9	15	3.25	3.400	3.24	0.45	4.46	4.91
QC602	PYX	UG2FW	190.8	133.5	15	3.33	3.420	3.34	-0.38	2.67	2.29
QC603	PYX	UG2FW	228.4	158	15	3.24	3.340	3.25	-0.08	2.91	2.83
QC604	PYX	UG2FW	204.6	141.5	15	3.24	3.330	3.25	-0.31	2.66	2.36
QC605	PYX	UG2FW	146.8	101.4	15	3.23	3.330	3.23	0.17	2.94	3.11
QC606	PYX	UG2FW	143.8	98.9	15	3.20	3.310	3.10	3.19	3.30	6.48
QC607	PYX	UG2FW	142.6	98.5	15	3.23	3.300	3.20	1.02	2.03	3.06
QC608	PYX	UG2FW	152.2	105	15	3.22	3.380	3.24	-0.36	4.71	4.34
QC609	PYX	UG2FW	298.7	206.3	15	3.23	3.360	3.25	-0.58	3.86	3.28
QC610	PYX	UG2FW	175.1	120.8	15	3.22	3.340	3.24	-0.47	3.51	3.04
QC611	PYX	MRHW	167.2	115.9	15	3.26	3.380	3.26	-0.06	3.64	3.58
QC612	PYX	MRHW	212	147	15	3.26	3.400	3.25	0.32	4.16	4.48
QC613	PYX	MRHW	122.8	85	15	3.25	3.360	3.25	-0.18	3.37	3.19
QC614	PYX	MRHW	138.7	96.1	15	3.26	3.360	3.26	-0.16	3.15	2.99
QC615	PYX	MR	237.7	164.6	15	3.25	3.380	3.24	0.42	3.87	4.29
QC616	PYX	MR	240.6	166.8	15	3.26	3.400	3.25	0.46	4.20	4.66
QC617	PYX	MR	172	119	15	3.25	3.380	3.23	0.42	4.07	4.48
QC618	PYX	MR	174.5	120.6	15	3.24	3.370	3.22	0.47	4.01	4.48
QC619	PYX	MR	133.7	92.5	15	3.25	3.370	3.24	0.20	3.77	3.98
QC620	PYX	MR	173.9	120.3	15	3.24	3.380	3.23	0.47	4.09	4.56

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC621	PYX	MR	153.2	105.8	15	3.23	3.390	3.22	0.46	4.77	5.23
QC622	PYX	MR	149	103.2	15	3.25	3.35	3.23	0.70	2.93	3.63
QC623	N	MRFW	235.5	157.7	15	3.03	3.14	3.02	0.34	3.66	4.01
QC624	N	MRFW	206.6	136	15	2.93	3.030	2.91	0.46	3.48	3.94
QC625	N	MRFW	186.5	123	15	2.94	3.030	2.92	0.41	3.12	3.53
QC626	PYX	MRFW	160.4	109.1	15	3.13	3.280	3.11	0.47	4.79	5.25
QC627	PYX	MRFW	108.7	75	15	3.23	3.300	3.19	1.07	2.28	3.35
QC628	N	MRFW	187.2	129	15	3.22	3.290	3.22	0.03	2.26	2.29
QC629	N	MRFW	222.1	148.8	15	3.03	3.150	3.01	0.50	3.88	4.38
QC630	N	MRFW	158.9	106.5	15	3.03	3.130	3.01	0.64	3.17	3.80
QC631	N	MRFW	199	131.5	15	2.95	3.040	2.95	-0.10	3.07	2.97
QC632	N	MRFW	119.7	79.1	15	2.95	3.090	2.93	0.56	4.69	5.26
QC633	N	MRFW	123.6	84.4	15	3.15	3.300	3.14	0.45	4.55	5.00
QC634	N	MRFW	181.8	121.3	15	3.00	3.130	3.00	0.17	4.08	4.24
QC635	N	MRFW	109.4	74.3	15	3.12	3.270	3.16	-1.28	4.80	3.52
QC636	N	MRFW	94.4	63.3	15	3.04	3.140	2.95	3.00	3.39	6.38
QC637	N	MRFW	200.2	133	15	2.98	3.090	2.97	0.20	3.65	3.85
QC638	N	MRFW	200.2	133	15	2.98	3.090	2.97	0.20	3.65	3.85
QC639	PYX	UG2HW	165.2	114.8	15	3.28	3.410	3.30	-0.60	3.95	3.35
QC640	PYX	UG2HW	219.9	152.9	15	3.28	3.415	3.28	0.20	3.97	4.17
QC641	CR	UG2	287.2	216.3	15	4.05	4.200	4.02	0.71	3.62	4.32
QC642	CR	UG2	210.6	159.6	15	4.13	4.470	3.99	3.37	7.92	11.29
QC643	CR	UG2	237.1	179.2	15	4.09	4.330	4.02	1.76	5.58	7.33
QC644	CR	UG2	263.2	191.2	15	3.66	4.030	3.66	-0.24	9.74	9.50
QC645	PYX	UG2FW	255.1	175	15	3.18	3.300	3.14	1.46	3.55	5.02
QC646	PYX	UG2FW	103.8	72.9	15	3.36	3.380	3.35	0.39	0.62	1.01
QC647	PYX	UG2FW	154.1	108.2	15	3.36	3.500	3.36	-0.08	4.16	4.08
QC648	PYX	UG2FW	260.8	183.2	15	3.36	3.500	3.30	1.86	4.06	5.92
QC649	PYX	UG2FW	115.3	79.6	15	3.23	3.370	3.11	3.86	4.25	8.10
QC650	PYX	UG2FW	123.9	85.5	15	3.23	3.370	3.26	-0.90	4.35	3.44
QC651	PYX	UG2FW	251.6	173.9	15	3.24	3.360	3.13	3.40	3.70	7.09

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC652	PYX	UG2FW	213.4	147.2	15	3.22	3.360	3.24	-0.36	4.14	3.78
QC653	PYX	UG2FW	122.9	84.8	15	3.23	3.350	3.24	-0.59	3.78	3.19
QC654	PYX	UG2FW	206.6	142.3	15	3.21	3.350	3.12	3.03	4.17	7.20
QC655	PYX	UG2FW	206.6	142.3	15	3.21	3.330	3.12	3.03	3.57	6.60
QC656	PYX	UG2HW	140.2	96.5	20	3.21	3.430	3.19	0.63	6.68	7.31
QC657	PYX	UG2HW	169	116.4	20	3.21	3.400	3.22	-0.11	5.66	5.55
QC658	PYX	UG2HW	119.2	82.3	20	3.23	3.450	3.24	-0.25	6.58	6.32
QC659	PYX	UG2HW	85.6	59.4	20	3.27	3.510	3.27	-0.09	7.17	7.08
QC660	PYX	UG2HW	130.4	90.6	20	3.28	3.460	3.21	2.16	5.45	7.61
QC661	CR	UG2	153	114.7	20	3.99	4.160	3.90	2.37	4.05	6.42
QC662	CR	UG2	180.5	136.9	20	4.14	4.270	4.12	0.49	3.09	3.58
QC663	CR	UG2	136.2	104.4	20	4.28	4.490	4.28	0.16	4.72	4.88
QC664	CR	UG2	144.8	110	20	4.16	4.470	4.17	-0.23	7.16	6.93
QC665	CR	UG2	288.5	218.9	20	4.15	4.490	4.14	0.09	7.99	8.08
QC666	CR	UG2	147.6	110	20	3.93	4.080	3.90	0.53	3.86	4.39
QC667	PYX	UG2FW	147.1	103.6	20	3.38	3.590	3.37	0.25	5.98	6.23
QC668	PYX	UG2FW	162.5	113.3	20	3.30	3.660	3.29	0.36	10.26	10.62
QC669	PYX	UG2FW	158.4	110.2	20	3.29	3.520	3.27	0.64	6.87	7.50
QC670	PYX	UG2FW	163.6	112.9	20	3.23	3.465	3.22	0.14	7.12	7.25
QC671	PYX	UG2FW	155.6	107.1	20	3.21	3.420	3.20	0.35	6.39	6.74
QC672	PYX	UG2FW	157.9	108.6	20	3.20	3.430	3.23	-0.86	6.85	5.99
QC673	PYX	UG2FW	137.4	94.3	19	3.19	3.380	3.18	0.32	5.85	6.17
QC674	PYX	UG2HW	186.5	129.9	17	3.30	3.570	3.29	0.19	8.01	8.20
QC675	PYX	UG2HW	260.1	181.1	17	3.29	3.580	3.29	-0.02	8.37	8.35
QC676	PYX	UG2HW	161.3	112.6	17	3.31	3.590	3.29	0.59	8.05	8.64
QC677	PYX	UG2HW	143	99.4	17	3.28	3.560	3.27	0.16	8.19	8.35
QC678	PYX	UG2HW	215.4	149.7	17	3.28	3.560	3.27	0.32	8.23	8.55
QC679	CR	UG2	324.7	244.4	17	4.04	4.160	4.04	0.10	2.84	2.93
QC680	CR	UG2	123.2	82.3	17	3.01	3.260	3.02	-0.33	7.90	7.58
QC681	CR	UG2	173.6	130.4	17	4.02	4.200	4.03	-0.35	4.42	4.07
QC682	CR	UG2	166.4	124.7	17	3.99	4.095	4.00	-0.24	2.59	2.35

Table B 25. Quality control dataset, outliers removed.

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Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC683	PYX	UG2	278	195.7	17	3.38	3.380	3.29	2.68	0.06	2.75
QC684	PYX	UG2FW	139.9	97	17	3.26	3.610	3.26	-0.05	10.16	10.10
QC685	PYX	UG2FW	178.5	125.6	17	3.37	3.775	3.37	0.04	11.21	11.25
QC686	PYX	UG2FW	111	77.7	17	3.33	3.520	3.34	-0.27	5.45	5.18
QC687	PYX	UG2FW	77.3	53.6	17	3.26	3.540	3.26	-0.04	8.19	8.15
QC688	PYX	UG2FW	193.6	134.5	17	3.28	3.580	3.27	0.31	8.87	9.19
QC689	PYX	UG2FW	121.8	85.1	17	3.32	3.605	3.27	1.58	8.27	9.85
QC690	PYX	UG2FW	116.8	81.5	17	3.31	3.630	3.31	0.03	9.26	9.28
QC691	PYX	UG2FW	224.9	156.4	17	3.28	3.550	3.27	0.32	7.81	8.12
QC692	PYX	UG2FW	172.6	120.7	17	3.33	3.560	3.31	0.34	6.81	7.15
QC693	PYX	UG2FW	200	139.7	17	3.32	3.550	3.30	0.36	6.79	7.15
QC694	PYX	UG2FW	195.2	136.4	17	3.32	3.560	3.32	0.13	6.98	7.12
QC695	PYX	UG2FW	176.1	122.9	17	3.31	3.530	3.25	1.71	6.43	8.13
QC696	PYX	UG2FW	152.3	105.1	17	3.23	3.450	3.22	0.18	6.69	6.86
QC697	PYX	UG2FW	219.8	151.8	16	3.23	3.470	3.23	-0.07	7.09	7.02
QC698	N	MRHW	207.1	136.4	15	2.93	3.040	2.94	-0.48	3.71	3.23
QC699	N	MRHW	168.1	111.3	15	2.96	3.090	2.96	-0.06	4.31	4.25
QC700	N	MRHW	142.95	95	15	2.98	3.140	2.97	0.27	5.19	5.46
QC701	PYX	MRHW	223.4	154.8	15	3.26	3.370	3.29	-1.10	3.42	2.32
QC702	PYX	MRHW	247.6	171.6	15	3.26	3.405	3.24	0.56	4.42	4.98
QC703	PYX	MRHW	247.1	171.8	15	3.28	3.400	3.27	0.38	3.55	3.92
QC704	PYX	MR	165.9	115.1	15	3.27	3.440	3.26	0.30	5.20	5.50
QC705	PYX	MR	233.6	164.5	15	3.38	3.550	3.37	0.24	4.89	5.12
QC706	PYX	MRFW	122.3	84.2	16	3.21	3.340	3.17	1.10	3.97	5.07
QC707	PYX	MRFW	271.5	188.3	16	3.26	3.440	3.26	-0.05	5.27	5.22
QC708	PYX	MRFW	234.6	162.5	16	3.25	3.410	3.17	2.53	4.69	7.22
QC709	PYX	MRFW	171.6	118.3	16	3.22	3.400	3.13	2.93	5.45	8.38
QC710	PYX	MRFW	280.2	193.5	16	3.23	3.400	3.23	0.02	5.07	5.10
QC711	PYX	MRFW	148.4	102.6	16	3.24	3.420	3.23	0.18	5.40	5.58
QC712	PYX	MRFW	241.6	167.1	16	3.24	3.430	3.22	0.61	5.61	6.22
QC713	PYX	MRFW	274.4	189.8	16	3.24	3.450	3.23	0.40	6.17	6.57

Table B 25. Quality control dataset, outliers removed.

Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC714	PYX	MRFW	189.4	131.1	16	3.25	3.420	3.23	0.67	5.14	5.80
QC715	PYX	MRFW	119	82.4	16	3.25	3.430	3.24	0.31	5.35	5.66
QC716	PYX	MRFW	187.8	129.8	16	3.24	3.420	3.23	0.33	5.47	5.80
QC717	PYX	MRFW	148	102.4	16	3.25	3.420	3.23	0.47	5.23	5.70
QC718	PYX	MRFW	158.1	109.5	16	3.25	3.420	3.23	0.60	5.00	5.60
QC719	PYX	MRFW	149.3	103.3	16	3.25	3.400	3.24	0.18	4.65	4.83
QC720	PYX	MRFW	214	148.1	16	3.25	3.405	3.22	0.74	4.74	5.48
QC721	PYX	MRFW	147.3	101.8	16	3.24	3.380	3.24	-0.04	4.31	4.28
QC722	PYX	MRFW	138.6	95.6	16	3.22	3.390	3.18	1.27	5.04	6.31
QC723	PYX	MRFW	220	151.8	16	3.23	3.390	3.20	0.76	4.96	5.72
QC724	PYX	MRFW	170.5	117.8	16	3.24	3.390	3.21	0.78	4.67	5.45
QC725	PYX	MRFW	195.1	134.1	16	3.20	3.390	3.24	-1.21	5.82	4.61
QC726	PYX	MRFW	249.2	171.9	16	3.22	3.390	3.22	0.23	5.03	5.25
QC727	PYX	MRFW	234.2	161.4	16	3.22	3.400	3.22	-0.08	5.53	5.45
QC728	PYX	MRFW	167.8	115.8	16	3.23	3.410	3.23	0.03	5.52	5.54
QC729	PYX	MRFW	219.6	151.7	16	3.23	3.415	3.23	0.18	5.44	5.62
QC730	PYX	MRFW	158	109.3	16	3.24	3.420	3.21	1.21	5.27	6.48
QC731	PYX	MRFW	173.9	120.2	16	3.24	3.420	3.25	-0.34	5.46	5.11
QC732	PYX	MRFW	231.8	160.1	16	3.23	3.420	3.23	0.22	5.62	5.85
QC733	PYX	MRFW	233.1	161	16	3.23	3.430	3.23	0.14	5.91	6.05
QC734	PYX	MRFW	237.5	164.2	16	3.24	3.425	3.26	-0.62	5.55	4.93
QC735	PYX	MRFW	198.7	137.6	16	3.25	3.400	3.24	0.46	4.45	4.91
QC736	PYX	MRFW	179.4	123.5	16	3.21	3.390	3.28	-2.07	5.48	3.41
QC737	N	MRFW	126.8	84.6	16	3.00	3.160	2.99	0.39	5.04	5.43
QC738	N	MRFW	225.2	152.1	15	3.08	3.250	3.09	-0.41	5.35	4.94
QC739	PYX	UG2HW	100.8	70.2	15	3.29	3.450	3.25	1.44	4.62	6.06
QC740	PYX	UG2HW	116.5	80	15	3.19	3.410	3.20	-0.12	6.61	6.49
QC741	PYX	UG2HW	182.7	126.1	15	3.23	3.420	3.23	-0.04	5.78	5.74
QC742	PYX	UG2HW	78.2	53.6	15	3.18	3.320	3.13	1.49	4.34	5.83
QC743	PYX	UG2HW	114.7	77.4	15	3.08	3.280	3.06	0.53	6.45	6.98
QC744	CR	UG2	133.5	94.2	15	3.40	3.570	3.37	0.66	4.97	5.62

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC745	CR	UG2	134.6	100.9	15	3.99	4.320	4.00	-0.24	7.84	7.60
QC746	CR	UG2	217.9	162	15	3.90	4.170	3.96	-1.67	6.74	5.07
QC747	CR	UG2	131.5	96	15	3.70	4.000	3.71	-0.10	7.68	7.58
QC748	PYX	UG2FW	160.6	109.3	15	3.13	3.425	3.15	-0.73	8.98	8.26
QC749	PYX	UG2FW	191.4	134	15	3.33	3.510	3.41	-2.38	5.13	2.75
QC750	PYX	UG2FW	124.7	86.7	15	3.28	3.480	3.24	1.15	5.87	7.01
QC751	PYX	UG2FW	143.7	99.1	15	3.22	3.420	3.24	-0.59	5.96	5.37
QC752	PYX	UG2FW	132.6	90.6	15	3.16	3.340	3.14	0.57	5.63	6.20
QC753	PYX	UG2FW	173.8	119.9	15	3.22	3.400	3.29	-1.90	5.30	3.40
QC754	PYX	UG2FW	231.8	160.3	15	3.24	3.460	3.32	-2.27	6.51	4.24
QC755	PYX	UG2FW	250	172	15	3.21	3.450	3.23	-0.91	7.36	6.45
QC756	PYX	UG2FW	256.5	177.5	15	3.25	3.470	3.34	-2.97	6.64	3.68
QC757	PYX	UG2FW	226.1	156.3	15	3.24	3.450	3.30	-1.94	6.30	4.36
QC758	N	MRHW	203.5	135.1	15	2.98	3.190	2.96	0.62	6.97	7.59
QC759	N	MR	196.9	137.2	15	3.30	3.500	3.29	0.31	5.94	6.25
QC760	N	MRFW	132.8	89.4	15	3.06	3.280	3.04	0.62	6.94	7.56
QC761	PYX	UG2HW	230.5	159.6	15	3.25	3.470	3.25	-0.11	6.52	6.41
QC762	PYX	UG2HW	93.2	64.6	15	3.26	3.470	3.25	0.19	6.28	6.47
QC763	PYX	UG2HW	156.4	108.4	15	3.26	3.470	3.24	0.56	6.29	6.85
QC764	PYX	UG2HW	88.3	60.4	15	3.16	3.440	3.20	-1.22	8.33	7.11
QC765	PYX	UG2HW	141.3	97.9	15	3.26	3.440	3.24	0.52	5.50	6.02
QC766	CR	CR	120	90.7	15	4.10	4.170	4.06	0.94	1.80	2.74
QC767	CR	CR	140.9	105.8	15	4.01	4.410	3.89	3.20	9.40	12.58
QC768	CR	CR	161.6	120.7	15	3.95	4.400	3.99	-0.98	10.75	9.77
QC769	CR	CR	184.4	138.5	15	4.02	4.460	4.06	-1.13	10.44	9.31
QC770	CR	CR	123.8	92.7	15	3.98	4.190	3.92	1.54	5.12	6.66
QC771	PYX	UG2FW	143.4	99.3	15	3.25	3.470	3.26	-0.17	6.50	6.32
QC772	PYX	UG2FW	100.7	69.8	15	3.26	3.520	3.28	-0.59	7.70	7.11
QC773	PYX	UG2FW	214	150.4	15	3.36	3.565	3.35	0.40	5.78	6.17
QC774	PYX	UG2FW	189.8	130.6	15	3.21	3.410	3.15	1.71	6.16	7.87
QC775	PYX	UG2FW	94.7	65.3	15	3.22	3.420	3.22	-0.06	5.99	5.93

Table B 25. Quality control dataset, outliers removed.

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Quality control dataset outliers removed											
Sample number	Rock type	Stratigraphy	Mass Dry Sample in air (g)	Mass Sample in H_20 (g)	T (°C)	Driekop check values (g/cc)	Grabner Milled origianl values (g/cc)	Driekop original values (g/cc)	AVRD Driekop check/Driekop original (%)	AVRD Grabner Milled/Driekop check (%)	AVRD Grabner Milled/Driekop original (%)
QC776	PYX	UG2FW	198.1	136.9	15	3.24	3.430	3.22	0.50	5.79	6.29
QC777	PYX	UG2FW	239.5	165.2	15	3.22	3.420	3.21	0.52	5.92	6.44
QC778	PYX	UG2FW	214.1	147.4	15	3.21	3.390	3.18	0.88	5.46	6.34
QC779	PYX	UG2FW	112.2	77.5	15	3.23	3.390	3.21	0.70	4.73	5.43
QC780	PYX	UG2FW	166.7	115.3	16	3.24	3.420	3.27	-0.75	5.31	4.56
QC781	PYX	UG2FW	253.1	174.7	16	3.23	3.410	3.22	0.39	5.47	5.86
QC782	PYX	UG2FW	207	142.6	16	3.21	3.415	3.21	0.05	6.06	6.11
QC783	PYX	UG2FW	199.6	136.7	16	3.17	3.270	3.16	0.57	3.00	3.57
QC784	PYX	UG2FW	148.2	99.7	16	3.06	3.27	3.07	-0.48	6.78	6.29

Table B 26. Quality control dataset outliers removed descriptive statistics.

Quality control dataset oultiers removed descriptive statistics											
Driekop check		**Grabner Milled original**		**Driekop original**		**AVRD Driekop check/Driekop original**		**AVRD Grabner Milled/Driekop check**		**AVRD Grabner Milled/Driekop original**	
Mean	3.28	Mean	3.44	Mean	3.27	Mean	0.33	Mean	4.85	Mean	5.19
Standard Error	0.01	Standard Error	0.01	Standard Error	0.01	Standard Error	0.04	Standard Error	0.07	Standard Error	0.08
Median	3.24	Median	3.39	Median	3.23	Median	0.23	Median	4.63	Median	4.93
Mode	3.27	Mode	3.38	Mode	3.25	Mode	3.71	Mode	3.65	Mode	3.85
Standard Deviation	0.30	Standard Deviation	0.33	Standard Deviation	0.30	Standard Deviation	1.10	Standard Deviation	2.01	Standard Deviation	2.12
Sample Variance	0.09	Sample Variance	0.11	Sample Variance	0.09	Sample Variance	1.22	Sample Variance	4.05	Sample Variance	4.48
Kurtosis	2.88	Kurtosis	3.06	Kurtosis	2.90	Kurtosis	7.10	Kurtosis	0.77	Kurtosis	0.83
Skewness	1.65	Skewness	1.64	Skewness	1.64	Skewness	1.28	Skewness	0.42	Skewness	0.47
Range	1.56	Range	1.79	Range	1.60	Range	11.27	Range	12.87	Range	14.17
Minimum	2.73	Minimum	2.83	Minimum	2.70	Minimum	-4.96	Minimum	-1.27	Minimum	-1.59
Maximum	4.28	Maximum	4.62	Maximum	4.30	Maximum	6.31	Maximum	11.60	Maximum	12.58
Count	784.00	Count	784.00	Count	784.00	Count	784.00	Count	784.00	Count	784.00
Confidence Level (95.0%)	0.02	Confidence Level (95.0%)	0.02	Confidence Level (95.0%)	0.02	Confidence Level (95.0%)	0.08	Confidence Level (95.0%)	0.14	Confidence Level (95.0%)	0.15

Table B 27. Quality control AVRD frequency histogram data.

Quality control AVRD frequency histogram data						
Bin (%)	*Frequency (No. Samples)*	AVRD Driekop Check/Driekop Original Frequency (%)	*Frequency (No. Samples)*	AVRD Grabner Milled/Driekop Check Frequency (%)	Frequency	AVRD Grabner Milled/Driekop Original Frequency (%)
-14	0	0.00	0	0.00	0	0.00
-13	0	0.00	0	0.00	0	0.00
-12	0	0.00	0	0.00	0	0.00
-11	0	0.00	0	0.00	0	0.00
-10	0	0.00	0	0.00	0	0.00
-9	0	0.00	0	0.00	0	0.00
-8	0	0.00	0	0.00	0	0.00
-7	0	0.00	0	0.00	0	0.00
-6	0	0.00	0	0.00	0	0.00
-5	0	0.00	0	0.00	0	0.00
-4	1	0.13	0	0.00	0	0.00
-3	3	0.38	0	0.00	0	0.00
-2	8	1.02	0	0.00	0	0.00
-1	29	3.70	2	0.26	1	0.13
0	223	28.44	5	0.64	7	0.89
1	413	52.68	13	1.66	6	0.77
2	58	7.40	21	2.68	16	2.04
3	23	2.93	75	9.57	59	7.53
4	17	2.17	143	18.24	133	16.96
5	2	0.26	201	25.64	183	23.34
6	5	0.64	140	17.86	145	18.49
7	2	0.26	73	9.31	89	11.35
8	0	0.00	51	6.51	66	8.42
9	0	0.00	30	3.83	33	4.21
10	0	0.00	16	2.04	25	3.19
11	0	0.00	11	1.40	12	1.53
12	0	0.00	3	0.38	7	0.89
13	0	0.00	0	0.00	2	0.26
14	0	0.00	0	0.00	0	0.00
More	0	0.00	0	0.00	0	0.00
TOTAL	784	100	784	100	784	100

APPENDIX C

Table C 1. Density experiment raw dataset descriptive statistics.

AVRD of Driekop & Grabner Solid		AVRD of Lab water solid & Grabner Solid		AVRD of Driekop & Lab water solid	
Mean	0.861	Mean	0.854	Mean	0.008
Standard Error	0.287	Standard Error	0.256	Standard Error	0.339
Median	0.968	Median	0.941	Median	0.068
Mode	#N/A	Mode	0.000	Mode	0.000
Standard Deviation	2.601	Standard Deviation	2.315	Standard Deviation	3.069
Sample Variance	6.766	Sample Variance	5.360	Sample Variance	9.422
Kurtosis	-0.154	Kurtosis	0.887	Kurtosis	-0.688
Skewness	-0.244	Skewness	-0.405	Skewness	-0.154
Range	12.283	Range	12.673	Range	12.558
Minimum	-5.795	Minimum	-6.342	Minimum	-6.748
Maximum	6.488	Maximum	6.331	Maximum	5.809
Count	82	Count	82	Count	82
Confidence Level(95.0%)	0.572	Confidence Level(95.0%)	0.509	Confidence Level(95.0%)	0.674

AVRD of Grabner Milled & Lab water solid		AVRD of Grabner Milled & Driekop		AVRD of Grabner Milled & Grabner Solid	
Mean	2.567	Mean	2.559	Mean	3.420
Standard Error	0.273	Standard Error	0.288	Standard Error	0.217
Median	2.361	Median	2.239	Median	3.486
Mode	2.281	Mode	#N/A	Mode	#N/A
Standard Deviation	2.475	Standard Deviation	2.611	Standard Deviation	1.968
Sample Variance	6.127	Sample Variance	6.817	Sample Variance	3.874
Kurtosis	-0.480	Kurtosis	-0.492	Kurtosis	1.586
Skewness	0.238	Skewness	0.357	Skewness	-0.268
Range	10.564	Range	11.623	Range	11.524
Minimum	-2.614	Minimum	-2.666	Minimum	-2.735
Maximum	7.949	Maximum	8.957	Maximum	8.789
Count	82	Count	82	Count	82
Confidence Level(95.0%)	0.544	Confidence Level(95.0%)	0.574	Confidence Level(95.0%)	0.432

Table C 2. Density experiment dataset.

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Density experiment dataset										
Sample Number	Driekop	Grabner Solid	Lab water solid	Grabner Milled	AVRD of Driekop & Grabner Solid	AVRD of Lab water solid & Grabner Solid	AVRD of Driekop & Lab water solid	AVRD of Grabner Milled & Lab water solid	AVRD of Grabner Milled & Driekop	AVRD of Grabner Milled & Grabner Solid
DE001	3.41	3.30	3.41	3.32	3.452	3.400	0.052	-2.614	-2.666	0.786
DE002	3.30	3.26	3.38	3.31	1.015	3.659	-2.644	-2.169	0.475	1.490
DE003	3.17	3.14	3.29	3.24	0.941	4.761	-3.820	-1.624	2.197	3.138
DE004	3.11	3.04	3.17	3.13	1.993	4.055	-2.063	-1.302	0.761	2.754
DE005	3.30	3.37	3.47	3.43	-2.158	2.865	-5.022	-1.247	3.776	1.618
DE006	3.33	3.17	3.33	3.30	4.897	4.897	0.000	-1.157	-1.157	3.741
DE007	2.90	2.91	3.00	2.98	-0.249	2.977	-3.226	-0.635	2.591	2.342
DE008	3.00	2.95	3.09	3.07	1.579	4.534	-2.956	-0.552	2.404	3.983
DE009	4.39	4.25	4.53	4.51	3.168	6.331	-3.164	-0.531	2.633	5.800
DE010	4.36	4.32	4.54	4.53	0.968	5.012	-4.045	-0.132	3.913	4.880
DE011	3.05	3.06	3.11	3.10	-0.241	1.460	-1.701	-0.129	1.572	1.331
DE012	3.00	3.04	3.14	3.14	-1.390	3.170	-4.560	-0.032	4.528	3.139
DE013	3.15	3.34	3.37	3.37	-5.795	0.954	-6.748	0.059	6.808	1.013
DE014	3.32	3.20	3.27	3.27	3.501	2.039	1.463	0.061	-1.402	2.100
DE015	4.12	4.06	4.25	4.26	1.516	4.622	-3.106	0.165	3.271	4.787
DE016	3.44	3.39	3.44	3.45	1.303	1.376	-0.073	0.348	0.421	1.724
DE017	3.17	3.21	3.29	3.30	-1.209	2.430	-3.639	0.364	4.003	2.794
DE018	3.28	3.26	3.28	3.29	0.544	0.612	-0.068	0.365	0.433	0.977
DE019	3.22	3.40	3.41	3.43	-5.457	0.205	-5.663	0.439	6.101	0.644
DE020	3.28	3.26	3.32	3.34	0.520	1.732	-1.212	0.481	1.693	2.212
DE021	3.16	3.30	3.33	3.36	-4.310	0.996	-5.305	0.867	6.172	1.863
DE022	3.12	3.18	3.25	3.28	-2.012	2.146	-4.157	0.888	5.045	3.034
DE023	3.18	3.22	3.12	3.15	-1.454	-3.248	1.794	0.925	-0.869	-2.323
DE024	3.04	2.93	3.00	3.03	3.719	2.395	1.325	0.962	-0.362	3.357
DE025	3.30	3.31	3.42	3.46	-0.536	3.148	-3.684	1.018	4.701	4.166
DE026	3.26	3.26	3.32	3.36	-0.035	1.762	-1.797	1.108	2.905	2.871
DE027	3.19	3.28	3.35	3.40	-2.615	2.264	-4.878	1.334	6.211	3.598
DE028	3.29	3.20	3.29	3.33	2.612	2.612	0.000	1.369	1.369	3.980
DE029	3.28	3.33	3.28	3.33	-1.581	-1.513	-0.068	1.423	1.491	-0.090
DE030	3.32	3.38	3.48	3.53	-1.846	2.915	-4.761	1.427	6.186	4.342
DE031	3.36	3.22	3.27	3.32	4.301	1.562	2.740	1.434	-1.306	2.996
DE032	3.05	2.99	3.05	3.10	1.842	1.920	-0.078	1.465	1.543	3.384
DE033	4.44	4.30	4.44	4.51	3.273	3.273	0.000	1.498	1.498	4.771
DE034	4.08	3.97	4.08	4.15	2.607	2.607	0.000	1.728	1.728	4.335
DE035	3.22	3.16	3.19	3.25	1.887	0.731	1.156	1.953	0.797	2.683
DE036	3.27	3.27	3.27	3.34	0.083	0.000	0.083	1.998	1.915	1.998

Table C 2. Density experiment dataset.

Density experiment dataset										
Sample Number	Driekop	Grabner Solid	Lab water solid	Grabner Milled	AVRD of Driekop & Grabner Solid	AVRD of Lab water solid & Grabner Solid	AVRD of Driekop & Lab water solid	AVRD of Grabner Milled & Lab water solid	AVRD of Grabner Milled & Driekop	AVRD of Grabner Milled & Grabner Solid
DE037	3.37	3.31	3.32	3.40	1.901	0.453	1.448	2.263	0.815	2.716
DE038	3.30	3.30	3.25	3.33	0.061	-1.466	1.527	2.281	0.755	0.815
DE039	3.25	3.22	3.25	3.33	0.927	0.927	0.000	2.281	2.281	3.209
DE040	3.35	3.31	3.35	3.43	1.227	1.292	-0.065	2.302	2.366	3.593
DE041	4.08	4.04	4.00	4.10	1.067	-0.995	2.062	2.347	0.285	1.352
DE042	3.18	3.28	3.33	3.41	-3.100	1.452	-4.551	2.374	6.923	3.825
DE043	3.21	3.28	3.30	3.39	-2.118	0.699	-2.817	2.543	5.359	3.242
DE044	3.13	3.15	3.21	3.29	-0.372	1.949	-2.321	2.649	4.969	4.598
DE045	3.37	3.29	3.32	3.42	2.416	0.969	1.448	2.821	1.373	3.789
DE046	4.32	4.14	4.32	4.45	4.134	4.231	-0.098	2.875	2.972	7.104
DE047	3.07	2.95	3.00	3.09	4.067	1.715	2.353	2.956	0.603	4.670
DE048	3.21	3.13	3.13	3.22	2.632	0.000	2.632	2.963	0.332	2.963
DE049	2.71	2.73	2.67	2.75	-0.541	-2.310	1.770	3.077	1.307	0.767
DE050	3.26	3.19	3.21	3.32	2.424	0.782	1.642	3.218	1.576	4.000
DE051	3.31	3.24	3.24	3.35	2.302	0.197	2.105	3.236	1.131	3.433
DE052	3.29	3.09	3.14	3.25	6.172	1.638	4.535	3.381	-1.154	5.018
DE053	3.33	3.29	3.33	3.45	1.400	1.300	0.100	3.540	3.440	4.839
DE054	3.21	3.18	3.17	3.29	0.968	-0.113	1.081	3.609	2.528	3.496
DE055	4.19	4.26	4.00	4.15	-1.763	-6.342	4.580	3.609	-0.972	-2.735
DE056	3.47	3.29	3.29	3.41	5.381	0.162	5.220	3.631	-1.589	3.793
DE057	3.38	3.29	3.33	3.46	2.642	1.300	1.342	3.685	2.343	4.984
DE058	4.24	4.04	4.04	4.19	4.831	-0.038	4.869	3.779	-1.091	3.741
DE059	3.05	3.15	3.21	3.34	-3.226	1.887	-5.112	3.850	8.957	5.735
DE060	3.23	3.22	3.19	3.32	0.427	-0.771	1.198	3.891	2.694	3.121
DE061	3.44	3.23	3.25	3.38	6.488	0.679	5.809	4.040	-1.770	4.719
DE062	3.20	3.22	3.20	3.33	-0.685	-0.685	0.000	4.102	4.102	3.417
DE063	3.21	3.32	3.33	3.47	-3.323	0.331	-3.653	4.233	7.883	4.564
DE064	3.31	3.18	3.19	3.33	3.811	0.037	3.774	4.325	0.552	4.363
DE065	3.23	3.24	3.20	3.34	-0.113	-1.150	1.036	4.341	3.305	3.192
DE066	2.94	3.06	3.00	3.14	-3.849	-1.980	-1.869	4.433	6.301	2.453
DE067	3.21	3.19	3.13	3.27	0.636	-1.996	2.632	4.626	1.995	2.631
DE068	3.04	2.95	2.92	3.06	2.971	-0.951	3.922	4.642	0.721	3.692
DE069	2.92	2.87	2.88	3.03	1.832	0.508	1.325	4.784	3.460	5.292
DE070	3.24	3.25	3.19	3.37	-0.367	-1.863	1.496	5.339	3.844	3.477
DE071	3.29	3.22	3.16	3.34	2.357	-1.725	4.082	5.598	1.518	3.874
DE072	3.41	3.25	3.22	3.41	4.795	-0.989	5.783	5.732	-0.052	4.743

Table C 2. Density experiment dataset.

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Density experiment dataset										
Sample Number	Driekop	Grabner Solid	Lab water solid	Grabner Milled	AVRD of Driekop & Grabner Solid	AVRD of Lab water solid & Grabner Solid	AVRD of Driekop & Lab water solid	AVRD of Grabner Milled & Lab water solid	AVRD of Grabner Milled & Driekop	AVRD of Grabner Milled & Grabner Solid
DE073	3.25	3.29	3.10	3.29	-1.284	-6.008	4.724	5.856	1.132	-0.152
DE074	4.11	4.12	4.07	4.34	-0.191	-1.064	0.873	6.340	5.467	5.276
DE075	3.42	3.33	3.25	3.46	2.758	-2.372	5.128	6.375	1.248	4.005
DE076	3.24	3.13	3.20	3.42	3.358	2.116	1.242	6.676	5.435	8.789
DE077	3.17	3.19	3.17	3.40	-0.568	-0.692	0.123	6.884	6.761	6.193
DE078	3.23	3.21	3.18	3.41	0.568	-0.908	1.476	6.951	5.477	6.044
DE079	3.14	3.22	3.14	3.37	-2.394	-2.485	0.091	7.185	7.094	4.702
DE080	3.53	3.39	3.42	3.69	3.824	0.763	3.061	7.649	4.591	8.411
DE081	3.32	3.25	3.17	3.42	2.076	-2.492	4.568	7.704	3.139	5.214
DE082	4.24	4.27	4.24	4.59	-0.769	-0.658	-0.111	7.949	8.060	7.292
Average					0.861	0.854	0.008	2.567	2.559	3.420

Table C 3. Density experiment AVRD data frequency data.

AVRD	Driekop vs Grabner Solid AVRD Frequency (No. Samples)	AARL water solid vs AARL Grabner Solid AVRD Frequency (No. Samples)	Driekop vs AARL Water solid AVRD Frequency (No. Samples)	Grabner milled vs AARL water solid AVRD Frequency (No. Samples)	Grabner milled vs Driekop AVRD Frequency (No. Samples)	Grabner solid vs Grabner milled AVRD Frequency (No. Samples)
-10	0	0	0	0	0	0
-9	0	0	0	0	0	0
-8	0	0	0	0	0	0
-7	0	0	0	0	0	0
-6	0	2	1	0	0	0
-5	2	0	4	0	0	0
-4	1	0	6	0	0	0
-3	4	1	7	0	0	0
-2	5	4	5	2	1	2
-1	7	8	4	4	7	0
0	12	12	13	6	4	2
1	11	17	6	12	12	5
2	12	14	17	12	16	8
3	11	11	6	12	11	12
4	8	5	3	12	8	25
5	6	6	6	9	6	16
6	1	1	4	4	5	6
7	2	1	0	5	8	2
8	0	0	0	4	2	2
9	0	0	0	0	2	2
10	0	0	0	0	0	0
More	0	0	0	0	0	0
Total	82	82	82	82	82	82

Table C 3. Density experiment AVRD data frequency data.

AVRD	Driekop vs Grabner Solid AVRD Frequency (%)	AARL water solid vs AARL Grabner Solid AVRD Frequency (%)	Driekop vs AARL Water solid AVRD Frequency (%)	Grabner milled vs AARL water solid AVRD Frequency (%)	Grabner milled vs Driekop AVRD Frequency (%)	Grabner milled vs Grabner solid AVRD (%)
-10	0.00	0.00	0.00	0.00	0.00	0.00
-9	0.00	0.00	0.00	0.00	0.00	0.00
-8	0.00	0.00	0.00	0.00	0.00	0.00
-7	0.00	0.00	0.00	0.00	0.00	0.00
-6	0.00	2.44	1.22	0.00	0.00	0.00
-5	2.44	0.00	4.88	0.00	0.00	0.00
-4	1.22	0.00	7.32	0.00	0.00	0.00
-3	4.88	1.22	8.54	0.00	0.00	0.00
-2	6.10	4.88	6.10	2.44	1.22	2.44
-1	8.54	9.76	4.88	4.88	8.54	0.00
0	14.63	14.63	15.85	7.32	4.88	2.44
1	13.41	20.73	7.32	14.63	14.63	6.10
2	14.63	17.07	20.73	14.63	19.51	9.76
3	13.41	13.41	7.32	14.63	13.41	14.63
4	9.76	6.10	3.66	14.63	9.76	30.49
5	7.32	7.32	7.32	10.98	7.32	19.51
6	1.22	1.22	4.88	4.88	6.10	7.32
7	2.44	1.22	0.00	6.10	9.76	2.44
8	0.00	0.00	0.00	4.88	2.44	2.44
9	0.00	0.00	0.00	0.00	2.44	2.44
10	0.00	0.00	0.00	0.00	0.00	0.00
More	0.00	0.00	0.00	0.00	0.00	0.00
Total	100	100	100	100	100	100

APPENDIX D

Table D 1. Weighted average density and AVRD of each stratigraphic unit that make up the optimal mining cut plus 10 cm dilution.

LPM 10cm dilution								
Stratigraphic unit	**Grabner Milled (g/cc)**	**Driekop (g/cc)**	**Thickness (m)**	**Grade (g/t)**	**Percentage thickness**	**Weighted average Grabner Milled (g/cc)**	**Weighted average Driekop (g/cc)**	**Weighted average grade (g/t)**
MRHW	3.28	3.12	0.05	0	4.55	0.15	0.14	0.00
MR mining cut	3.37	3.20	1	6	90.91	3.06	2.91	5.38
MRFW	3.27	3.11	0.05	0	4.55	0.15	0.14	0.00
UG2HW	3.42	3.25	0.05	0	4.55	0.16	0.15	0.00
UG2 mining cut	3.92	3.70	1	7	90.91	3.56	3.36	6.14
UG2FW	3.4	3.22	0.05	0	4.55	0.15	0.15	0.00

Table D 2. Weighted average density and AVRD of each stratigraphic unit that make up the optimal mining cut plus 20 cm dilution.

LPM 20cm dilution								
Stratigraphic unit	**Grabner Milled (g/cc)**	**Driekop (g/cc)**	**Thickness (m)**	**Grade (g/t)**	**Percentage thickness**	**Weighted average Grabner Milled (g/cc)**	**Weighted average Driekop (g/cc)**	**Weighted average grade (g/t)**
MRHW	3.28	3.12	0.1	0	8.33	0.27	0.26	0.00
MR mining cut	3.37	3.20	1	6	83.33	2.81	2.66	4.93
MRFW	3.27	3.11	0.1	0	8.33	0.27	0.26	0.00
UG2HW	3.42	3.25	0.1	0	8.33	0.29	0.27	0.00
UG2 mining cut	3.92	3.70	1	7	83.33	3.26	3.08	5.63
UG2FW	3.4	3.22	0.1	0	8.33	0.28	0.27	0.00

Table D 3. Weighted average density and AVRD of each stratigraphic unit that make up the optimal mining cut plus 30 cm dilution.

LPM 30cm dilution								
Stratigraphic unit	**Grabner Milled (g/cc)**	**Driekop (g/cc)**	**Thickness (m)**	**Grade (g/t)**	**Percentage thickness**	**Weighted average Grabner Milled (g/cc)**	**Weighted average Driekop (g/cc)**	**Weighted average grade (g/t)**
MRHW	3.28	3.12	0.15	0	11.54	0.38	0.36	0.00
MR mining cut	3.37	3.20	1	6	76.92	2.59	2.46	4.55
MRFW	3.27	3.11	0.15	0	11.54	0.38	0.36	0.00
UG2HW	3.42	3.25	0.15	0	11.54	0.39	0.38	0.00
UG2 mining cut	3.92	3.70	1	7	76.92	3.01	2.85	5.19
UG2FW	3.4	3.22	0.15	0	11.54	0.39	0.37	0.00

Table D 4. Weighted Resource calculation for the LPM area, based on the optimal mining cut plus 10 cm dilution.

LPM 10cm dilution										
Method	**Mining cut**	**Dip (°)**	**Dip area (m^2)**	**Thickness (m)**	**Density (g/cc)**	**Tonnage after geo loss (tons)**	**Grade (g/t)**	**Content 4E (Oz)**	**% difference Content 4E (Oz)**	**% difference Tonnage after geo loss (tons)**
Grabner Milled	MR	19.5	17,879,544	1.1	3.36	52,866,236	5.38	9,147,416	5.11	5.11
Driekop	MR	19.5	17,879,544	1.1	3.19	50,162,849	5.38	8,679,650		
Grabner Milled	UG2	19.5	40,997,559	1.1	3.87	148,365,041	6.14	29,270,739	5.52	5.52
Driekop	UG2	19.5	40,997,559	1.1	3.66	140,175,778	6.14	27,655,090		

Table D 5. Weighted Resource calculation for the LPM area, based on the optimal mining cut plus 20 cm dilution.

LPM 20cm dilution										
Method	**Mining cut**	**Dip (°)**	**Dip area (m2)**	**Thickness (m)**	**Density (g/cc)**	**Tonnage after geo loss (tons)**	**Grade (g/t)**	**Content 4E (Oz)**	**% difference Content 4E (Oz)**	**% difference Tonnage after geo loss (tons)**
Grabner Milled	MR	19.5	17,879,544	1.2	3.35	57,550,676	4.93	9,128,132	5.10	5.10
Driekop	MR	19.5	17,879,544	1.2	3.18	54,618,431	4.93	8,663,048		
Grabner Milled	UG2	19.5	40,997,559	1.2	3.83	160,248,183	5.63	28,980,552	5.49	5.49
Driekop	UG2	19.5	40,997,559	1.2	3.62	151,449,082	5.63	27,389,253		

Table D 6. Weighted Resource calculation for the LPM area, based on the optimal mining cut plus 30 cm dilution.

LPM 30cm dilution										
Method	**Mining cut**	**Dip (°)**	**Dip area (m2)**	**Thickness (m)**	**Density (g/cc)**	**Tonnage after geo loss (tons)**	**Grade (g/t)**	**Content 4E (Oz)**	**% difference Content 4E (Oz)**	**% difference Tonnage after geo loss (tons)**
Grabner Milled	MR	19.5	17,879,544	1.3	3.35	62,235,117	4.55	9,111,815	5.08	5.08
Driekop	MR	19.5	17,879,544	1.3	3.18	59,074,013	4.55	8,648,999		
Grabner Milled	UG2	19.5	40,997,559	1.3	3.80	172,131,326	5.19	28,735,010	5.47	5.47
Driekop	UG2	19.5	40,997,559	1.3	3.59	162,722,386	5.19	27,164,314		