APPENDIX A

A1 Preparation of culture media and reagents used during the bacterial community study of the process- and ground water of the Sishen Iron Ore Mine

A1.1 Standard Nutrient Agar Medium (Merck, Darmstadt, Germany)

Composition

Special Peptone	15.6 g.ℓ^{-1}
Yeast Extract	2.8 g.ℓ^{-1}
Sodium Chloride	5.6 g.ℓ^{-1}
D (+) Glucose	1.0 g.ℓ^{-1}
Agar	12.0 g.ℓ^{-1}

Suspend 37 g in 1 ℓ of distilled water (dH_2O)
Boil to dissolve completely
Autoclave at 121°C for 15 min

A1.2 Oxidation-Fermentation (OF) Basal Medium (Merck, Darmstadt, Germany)

Composition

Peptone from Casein	2.0 g.ℓ^{-1}
Yeast Extract	1.0 g.ℓ^{-1}
Sodium Chloride	5.0 g.ℓ^{-1}
di-Potassium Hydrogen Phosphate	0.2 g.ℓ^{-1}
Bromothymol Blue	0.08 g.ℓ^{-1}
Agar	2.5 g.ℓ^{-1}

Suspend 11 g in 1 ℓ of dH_2O
Heat in a boiling water bath to dissolve completely

Autoclave at 121ºC for 15 min

A2 Preparation of culture media and reagents used during the microbial community study of the iron ore concentrate of the Sishen Iron Ore Mine

A2.1 Nutrient Broth (Sigma-Aldrich Chemie, Buchs, Switzerland)

Composition

Peptone	15.0 g.ℓ^{-1}
Yeast Extract	3.0 g.ℓ^{-1}
Sodium Chloride	6.0 g.ℓ^{-1}
D(+)-Glucose	1.0 g.ℓ^{-1}

Suspend 25 g in 1 ℓ of dH_2O
Heat in a boiling water bath to dissolve completely
Autoclave at 121ºC for 15 min

A2.2 Half-Strength Potato Dextrose Agar (PDA) Medium (Merck, Darmstadt, Germany)

Composition

Potato Extract	2.0 g.ℓ^{-1}
Dextrose	10.0 g.ℓ^{-1}
Agar	15.0 g.ℓ^{-1}

Suspend 27 g in 1 ℓ of dH_2O
Biol while stirring to dissolve completely
Autoclave at 121ºC for 15 min

Appendix A

A2.3 1 M Tris, pH 8.0 (Merck, Darmstadt, Germany)

Dissolve 121.1 g of Tris in 700 mℓ of dH_2O
Adjust the volume to 900 mℓ using dH_2O
Adjust the pH to 8.0 using 1 M Hydrochloric Acid
Adjust the volume to 1 ℓ using dH_2O

A2.4 0.5 M Ethylene Diamine Tetracetic Acid (EDTA) (Merck, Darmstadt, Germany)

Dissolve 186.12 g of EDTA in 750 mℓ dH_2O
Add 20 g of Sodium Hydroxide pellets and allow to dissolve
Adjust the pH to 8.0 using Sodium Hydroxide
Adjust the volume to 1 ℓ using dH_2O

A2.5 5 M Sodium Chloride (Merck, Darmstadt, Germany)

Dissolve 292.2 g of Sodium Chloride in 1 ℓ of dH_2O

A2.6 Tris-EDTA (TE) Buffer

Add 10 mℓ of 1 M Tris, pH 8.0 (A2.3) and 2 mℓ of 0.5 M EDTA (A2.4) to 988 mℓ of dH_2O

A2.7 Cetyltrimethyl Ammonium Bromide (CTAB)/NaCl Buffer

Add the following to 580 mℓ of dH_2O:

100 mℓ of 1 M Tris, pH 8.0 (A2.3)
280 mℓ of 5 M Sodium Chloride (A2.5)
40 mℓ of 0.5 M EDTA (A2.4)
20 g of CTAB (Merck, Darmstadt, Germany)

Appendix A

A3 Preparation of culture media and reagents used during the production and use of citric acid for the removal of phosphorous and potassium from the iron ore concentrate of the Sishen Iron Ore Mine

A3.1 Potato Dextrose Agar (PDA) Medium (Merck, Darmstadt, Germany)

Composition

Potato Extract	4.0 g.ℓ^{-1}
Dextrose	20.0 g.ℓ^{-1}
Agar	15.0 g.ℓ^{-1}

Suspend 39 g in 1 ℓ of dH_2O
Biol while stirring to dissolve completely
Autoclave at 121ºC for 15 min

A3.2 Basal Salt Solution for Solid Substrate Fermentation

Composition

$(NH_4)_2SO_4$	3.84 g.ℓ^{-1}
KH_2PO_4	10.98 g.ℓ^{-1}
NaCl	1.01 g.ℓ^{-1}
$MgSO_4.7H_2O$	1.01 g.ℓ^{-1}
$FeSO_4.7H_2O$	1.01 g.ℓ^{-1}

Add all the above to 1 ℓ of dH_2O
Biol while stirring to dissolve completely
Autoclave at 121ºC for 15 min

Appendix A

A3.3 Fermentation Medium for Submerged Fermentation

Composition	
D-glucose	15.0 g.ℓ^{-1}
$(NH_4)_2SO_4$	2.5 g.ℓ^{-1}
KH_2PO_4	2.0 g.ℓ^{-1}
$MgSO_4.7H_2O$	0.5 g.ℓ^{-1}
$Fe_2(SO)_4.24H_2O$	0.1×10^{-3} g.l^{-1}
$ZnSO_4.7H_2O$	0.1×10^{-3} g.l^{-1}
$CuSO_4.5H_2O$	0.06×10^{-3} g.l^{-1}

Add all the above to 1 ℓ of dH_2O

Biol while stirring to dissolve completely

Autoclave at 121ºC for 15 min

APPENDIX B

B1 16S Nucleotide Sequences Obtained from the Pure Bacterial Cultures Isolated from the Ground Water of the Sishen Iron Ore Mine

B1.1 KUMBA WATER SEQ 1

```
1    AACAGCAAGG TATTAACTTA CTGCCCTTCC TCCCAACTTA AAGTGCTTTA
51   CAATCCGAAG ACCTTCTTCA CACACGCGGC ATGGCTGGAT CAGGCTTTCG
101  CCCATTGTCC AATATTCCCC ACTGCTGCCT CCCGTAGGAG TCTGGACCGT
151  GTCTCAGTTC CAGTGTGACT GATCATCCTC TCAGACCAGT TACGGATCGT
201  CGCCTTGGTA GGCCTTTACC CCACCAACTA GCTAATCCGA CCTAGGCTCA
251  TCTGATAGCG TGAGGTCCGA AGATCCCCCA CTTTCTCCCT CAGGACGTAT
301  GCGGTATTAG CGCCCGTTTC CGGACGTTAT CCCCCACTAC CAGGCAGATT
351  CCTAGGCATT ACTCACCCGT CCGCCGCTGA ATCCAGGAGC AAGCTCCCTT
401  CATCCGCTCG ACTTGCATGT GTTAGGCCTG CCGCCAGCGT TCAATCTGAG
451  CCAGGATCAA ACTCTCCCCC CGTGCCCCCG CCCCGCCCGC CGCGCG
```

B1.2 KUMBA WATER SEQ 2

```
1    AACAGCAAGG TATTAACTTA CTGCCCTTCC TCCCAACTTA AAGTGTTTTA
51   CAATCCGAAG ACCTTCTTCA CACACGCGGC ATGGCTGGCT CAGGCTTTCG
101  CCCATTGTCC AATATTCCCC ACTGCTGCCT CCCGTAGGAG TCTGGACCGT
151  GTCTCAGTTC CAGTGTGACT GATCATCCTC TCAGACCAGT TACGGATCGT
201  CGCCTTGGTA GGCCTTTACC CCACCAACTA GCTAATCCGA CCTAGGCTCA
251  TCTGATAGCG TGAGGTCCGA AGATCCCCCA CTTTCTCCCT CAGGACGTAT
301  GCGGTATTAG CGCCCGTTTC CGGACGTTAT CCCCCACTAC CAGGCAGATT
351  CCTAGGCATT ACTCACCCGT CCGCCGCTGA ATCCAGGAGC AAGCTCCCTT
401  CATCCGCTCG ACTTGCATGT GTTAGGCCTG CCGCCAGCGT TCAATCTGAG
451  CCAGGATCAA ACTCTCCCCC CGTGCCCCCG CCCCGCCCGC CGCG
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B1.3 KUMBA WATER SEQ 3

```
1    AACAGCAAGG TATTAACTTA CTGCCCTTCC TCCCAACTTA AAGTGCTTTA
51   CAATCCGAAG ACCTTCTTCA CACACGCGGC ATGGCTGGAT CAGGCTTTCG
101  CCCATTGTCC AATATTCCCC ACTGCTGCCT CCCGTAGGAG TCTGGACCGT
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151   GTCTCAGTTC CAGTGTGACT GATCATCCTC TCAGACCAGT TACGGATCGT
201   CGCCTTGGTA GGCCTTTACC CCACCAACTA GCTAATCCGA CCTAGGCTCA
251   TCTGATAGCG TGAGGTCCGA AGATCCCCCA CTTTCTCCCT CAGGACGTAT
301   CGCCCGTTTC CGGACGTTAT CCCCCACTAC CAGGCAGATT CCTAGGCATT
351   ACTCACCCGT CCGCCGCTGA ATCCAGGAGC AAGCTCCCTT CATCCGCTCG
401   ACTTGCATGT GTTAGGCNNN CCGCCAGCGT TCAATCTGAG CCAGGATCAA
451   ACTCTCCCCC CGTGCCCCCG CCCCGCCCGC CGCGCGCGGG CGGGCGA
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B1.4 KUMBA WATER SEQ 4

```
1     TACGTCAAAC AGCAAGGTAT TAACTTACTG CCCTTCCTCC CAACTTAAAG
51    TGCTTTACAA TCCGAAGACC TTCTTCACAC ACGCGGCATG GCTGGATCAG
101   GCTTTCGCCC ATTGTCCAAT ATTCCCCACT GCTGCCTCCC GTAGGAGTCT
151   GGACCGTGTC TCAGTTCCAG TGTGACTGAT CATCCTCTCA GACCAGTTAC
201   GGATCGTCGC CTTGGTAGGC CTTTACCCCA CCAACTAGCT AATCCGACCT
251   AGGCTCATCT GATAGCGTGA GGTCCGAAGA TCCCCCACTT TCTCCCTCAG
301   GACGTATGCG GTATTAGCGC CCGTTTCCGG ACGTTATCCC CCACTACCAG
351   GCAGATTCCT AGGCATTACT CACCCGTCCG CCGCTGAATC CAGGAGCAAG
401   CTCCCTTCAT CCGCTCGACT TGCATGTGTT AGGCCTGCCG CCAGCGTTCA
451   ATCTGAGCCA GGATCAAACT CTCCCCCCGT GCCCCCGCCC CGCCCGCCGC
501   GCG
```

B1.5 KUMBA WATER SEQ 5

```
1     GGTACGTCAA ACAGCAAGGT ATTAACTTAC TGCCCTTCCT CCCAACTTAA
51    AGTGCTTTAC AATCCGAAGA CCTTCTTCAC ACACGCGGCA TGGCTGGATC
101   CCATTGTCCA ATATTCCCCA CTGCTGCCTC CCGTAGGAGT CTGGACCGTG
151   TCTCAGTTCC AGTGTGACTG ATCATCCTCT CAGACCAGTT ACGGATCGTC
201   GCCTTGGTAG GCCTTTACCC CACCAACTAG CTAATCCGAC CTAGGCTCAT
251   CTGATAGCGT GAGGTCCGAA GATCCCCCAC TTTCTCCCTC AGGACGTATG
301   CGGTATTAGC GCCCGTTTCC GGACGTTATC CCCCACTACC AGGCAGATTC
351   CTAGGCATTA CTCACCCGTC CGCCGCTGAA TCCAGGAGCA AGCTCCCTTC
401   ATCCGCTCGA CTTGCATGTG TTAGGCCTGC CGCCAGCGTT CAATCTGAGC
451   CAGGATCAAA CTCTCCCCCC GTGCCCCCGC CCCGCCCGCC GCGCG
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B1.6 KUMBA WATER SEQ 6

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1    CTTTCCGGAC  AAAAGAGCTT  TACAACCCGA  AGGCCTTCTT  CACATCACGC
51   GATCAGGGTT  GCCCCCATTG  TCCAAAATTC  CCCACTGCTG  CCTCCCGTAG
101  GAGTCTGGGC  CGTGTCTCAG  TCCCAGTGTG  GCTGGTCGTC  CTCTCAGACC
151  AGCTACTGAT  CGTCGCCTTG  GTGGGCCTTT  ACCCCACCAA  CTAGNTAATC
201  AGATATCGGC  CGCTCCAAAA  GCATGAGGTC  TTGCGGTCCC  CCACTTTCAT
251  CCGTAGATCG  TATGCGGTAT  TAGCTAGTCT  TTCGACTAGT  TATCCCCCAC
301  TCCAGGGGAC  GTTCCGATAT  GTTACTCACC  CGTTCGCCAC  TCGCCGCCAG
351  GATGGATCCC  GCGCTGGCGT  TAGACTTGTA  TGTGTAAGGT  ATGCCGCCAG
401  CGTTCAATCT  GAGACAGGAT  CAAACT
```

B1.7 KUMBA WATER SEQ 7

```
1    GCTTTACAAC  CCGAAGGCCT  TCTTCACACA  CGCGGCATTG  CTGGATCAGG
51   GTTGCCCCCA  TTGTCCAAAA  TTCCCCACTG  CTGCCTCCCG  TAGGAGTCTG
101  GGCCGTGTCT  CAGTCCCAGT  GTGGCTGGTC  GTCCTCTCAG  ACCAGCTACT
151  GATCGTCGCC  TTGGTGGGCC  TTTACCCCAC  CAACTAGCTA  ATCAGATATC
201  GGCCGCTCCA  CGAGCATGAG  GTCTTGCGGT  CCCCCACTTT  CATCCGTAGA
251  TCGTATGCGG  TATTAGCTAG  TCTTTCGACT  AGTTATCCCC  CACTCCAGGG
301  CACGTTCCGA  TATGTTACTC  ACCCGTTCGC  CACTCGCCGC  CAGGATTGCT
351  CCCGCGCTGC  CGTTCGACTT  GCATGTGTAA  GGCATGCCGC  CAGCGTTCAA
401  TCTGAGCCAG  GATCAAACTC  TCCCCCCGTG
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B1.8 KUMBA WATER SEQ 8

```
1    TCTTTCCGGA  CAAAAGTGCT  TTACAACCCG  AAGGCCTTCT  TCACACACGC
51   GGCATTGCTG  GATCAGGGTT  GCCCCCATTG  TCCAAAATTC  CCCACTGCTG
101  CCTCCCGTAG  GAGTCTGGGC  CGTGTCTCAG  TCCCAGTGTG  GCTGGTCGTC
151  CTCTCAGACC  AGCTACTGAT  CGTCGCCTTG  GTGGGCCTTT  ACCCCACCAA
201  CTAGCTAATC  AGATATCGGC  CGCTCCACGA  GCATGAGGTC  TTGCGATCCC
251  CCACTTTCAT  CCGTAGATCG  TATGCGGTAT  TAGCTAGTCT  TTCGACTAGT
301  TATCCCCCAC  TCCAGGGCAC  GTTCCGATAT  GTTACTCACC  CGTTCGCCAC
351  TCGCCGCCAG  GATTNATCCC  GCGCTGCCGT  TCGACTTGCA  TGTGTAAGGC
401  ATGCCGCCAG  CGTTCAATCT  GAGCCAGGAT  CAAACTCTC
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B1.9 KUMBA WATER SEQ 9

1 ACAAAAGTGC TTTACAACCC GAAGGCCTTC TTCACATCAC GCGGCATTGC
51 TGGATCAGGG TTGCCCCCAT TGTCCAAAAT TCCCCACTGC TGCCTCCCGT
101 AGGAGTCTGG GCCGTGTCTC AGTCCCAGTG TGGCTGGTCG TCCTCTCAGA
151 CCAGCTAAAG ATCGTCGCCT TGGTGGGCCT TTACCCCACC AACTAGCTAA
201 TCAGATATCG GCCGCTCCAC GAGCATGAGG TCTTGCGGTC CCCCACTTTC
251 ATCCGTAGAT CGTATGCGGT ATTAGCTAGT CTTTCGACTA GTTATCCCCC
301 ACTTCAGGGC ACGTTCCGAT ATGTTACTCA CCCGTTCGCC ACTCGCCGCC
351 AGGATGGCTC CCGCGCTGCC GTTCGACTTG CATGTGTAAG GCATGCCGCC
401 AGCGTTCAAT CTGAGCCAGG ATCAAACTCT C

B1.10 KUMBA WATER SEQ 10

1 CTTCCCTGAC AAAAGAGCTT TACAACCCGA AGGCCTTCTT CACTCACGCG
51 GCATTGCTGG ATCAGGCTTG CGCCCATTGT CCAAAATTCC CCACTGCTGC
101 CTCCCGTAGG AGTCTGGGCC GTGTCTCAGT CCCAGTGTGG CTGGTCGTCC
151 TCTCAGACCA GCTACTGATC GTCGCCTTGG TGGGCCTTTA CCTCACCAAC
201 TAGCTAATCA GATATCGGCC GCTCCACGAG CATGAGGTCT TGAGGTCCCC
251 CACTTTCATC CGTAGATCGT ATGCGGTATT AGCTAATCTT TCGATTNGTT
301 ATCCCCCACT TCTGGGTACG TTCCGATATA TTACTCACCC GTTCGCCACT
351 CGCCGCCAGG ATGGCTCGCG CTGTGGCGCT AGA

B1.11 KUMBA WATER SEQ 11

1 TCCGAACAAA AGTGCTTTAC AACCCGAAGG CCTTCTTCAC ACACGCGGCA
51 TGCTGGATCA GGGTTGCCCC CATTGTCCAA AATTCCCCAC TGCTGCCTCC
101 CGTAGGAGTC TGGGCCGTGT CTCAGTCCCA GTGTGGCTGG TCGTCCTCTC
151 AGACCAGCTA CTGATCGTCG CCTTGGTGGG CCTTTACCCC ACCAACTAGC
201 TAATCAGATA TCGGCCGCTC CACGAGCATG AGGTCTTGCG ATCCCCCACT
251 TTCATCCGTA GATCGTATGC GGTATTAGCT AGTCTTTCGA CTAGTTATCC
301 CCCACTCCAG GGCACGTTCC GATATGTTAC TCACCCGTTC GCCACTCGCC
351 GCCAGGATTG CTCCCGCGCT GCCGTTCGAC TTGCATGTGT AAGGCATGCC
401 GCCAGCGTTC AATCTGAGCC AGGATCAAAC TCTC

B1.12 KUMBA WATER SEQ 12

```
1     TCCACCCAGG  GATATTAACC  CAGGCGATTT  CTTTCCGAAC AAAAGTGCTT
51    TACAACCCGA  AGGCCTTCTT  CACACACGCG  GCATTGCTGG  ATCAGGGTTG
101   CCCCCATTGT  CCAAAATTCC  CCACTGCTGC  CTCCCGTAGG  AGTCTGGGCC
151   GTGTCTCAGT  CCCAGTGTGG  CTGGTCGTCC  TCTCAGACCA  GCTACTGATC
201   GTCGCCTTGG  TGGGCCTTTA  CCCCACCAAC  TAGCTAATCA  GATATCGGCC
251   GCTCCACGAG  CATGAGGTCT  TGCGATCCCC  CACTTTCATC  CGTAGATCGT
301   ATGCGGTATT  AGCTAGTCTT  TCGACTAGTT  ATCCCCCACT  CCAGGGCACG
351   TTCCGATATG  TTACTCACCC  GTTCGCCACT  CGCCGCCAGG  ATTGCTCCCG
401   CGCTGCCGTT  CGACTTGCAT  GTGTAAGGCA  TGCCGCCAGC  GTTCAATCTG
451   AGCCAGGATC AAACTCTC
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B1.13 KUMBA WATER SEQ 13

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1     TATCCTCCCT GATAAAAGAG CTTTACATCC AAAAGGGCCT TCATCACTCA
51    CGCGATATTG CTGGATCAGG CTTGCGCCCA TTGTCCAAGA TTCCCCACTG
101   CTGCCTCCCG TAGGAGTCTG GGCCGTGTCT CAGTCCCAGT GTGGCTGATC
151   ATCCTCTAAG ACCAGCTAAG GATCATCGGC TTGGTAGGCC ATTACCCTAC
201   CAACTACCTA ATCCTACGCA GGCTCATCTT TTAGCGGATT ACTCCTTTCG
251   ATATATACGG TATTCTATTT TCAGTTTCCC GAAAATATTA TCCCATGCTA
301   AAAGGCAGAT TCCTACGCAT TACTCACCCG TGTGCCATGG AAAATAAATT
351   TCCCATACGA CTTGCATGTG TTAAGCATAT CGCTAGCGTT CATTCTGAGC
401   CAGGATCAAA CTCTCCCCCC GTG
```

B2 16S Nucleotide Sequences Obtained from the Enriched Iron Ore Concentrate of the Sishen Iron Ore Mine

B2.1 KS1

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1     CTTTCCGGAC AAAAGAGCTT TACAACCCGA AGGCCTTCTT CACATCACGC
51    GGCATTGCTG GATCAGGGTT GCCCCCATTG TCCAAAATTC CCCACTGCTG
101   CCTCCCGTAG GAGTCTGGGC CGTGTCTCAG TCCCAGTGTG GCTGGTCGTC
151   CTCTCAGACC AGCTACTGAT CGTCGCCTTG GTGGGCCTTT ACCCCACCAA
201   CTAGNTAATC AGATATCGGC CGCTCCAAAA GCATGAGGTC TTGCGGTCCC
251   CCACTTTCAT CCGTAGATCG TATGCGGTAT TAGCTAGTCT TTCGACTAGT
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301   TATCCCCCAC TCCAGGGGAC GTTCCGATAT GTTACTCACC CGTTCGCCAC
351   TCGCCGCCAG GATGGATCCC GCGCTGGCGT TAGACTTGTA TGTGTAAGGT
401   ATGCCGCCAG CGTTCAATCT GAGACAGGAT CAAACT
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B2.2 KS2

```
1     TATCCTCCCT GATAAAAGAG CTTTACATCC AAAAGGGCCT TCATCACTCA
51    CGCGATATTG CTGGATCAGG CTTGCGCCCA TTGTCCAAGA TTCCCCACTG
101   CTGCCTCCCG TAGGAGTCTG GGCCGTGTCT AGTCCCAGTC GTGGCTGATC
151   ATCCTCTAAG ACCAGCTAAG GATCATCGGC TTGGTAGGCC ATTACCCTAC
201   CAACTACCTA ATCCTACGCA GGCTCATCTT TTAGCGGATT ACTCCTTTCG
251   ATATATACGG TATTCTATTT TCAGTTTCCC GAAAATATTA TCCCATGCTA
301   AAAGGCAGAT TCCTACGCAT TACTCACCCG TGTGCCATGG AAAATAAATT
351   TCCCATACGA CTTGCATGTG TTAAGCATAT CGCTAGCGTT CATTCTGAGC
401   CAGGATCAAA CTCTCCCCCC GTG
```

B2.3 KS3

```
1     TCTTTCCGGA CAAAAGTGCT TTACAACCCG AAGGCCTTCT TCACACACGC
51    GGCATTGCTG GATCAGGGTT GCCCCCATTG TCCAAAATTC CCCACTGCTG
101   CCTCCCGTAG GAGTCTGGGC CGTGTCTCAG TCCCAGTGTG GCTGGTCGTC
151   CTCTCAGACC AGCTACTGAT CGTCGCCTTG GTGGGCCTTT ACCCCACCAA
201   CTAGCTAATC AGATATCGGC CGCTCCACGA GCATGAGGTC TTGCGATCCC
251   CCACTTTCAT CCGTAGATCG TATGCGGTAT TAGCTAGTCT TTCGACTAGT
301   TATCCCCCAC TCCAGGGCAC GTTCCGATAT GTTACTCACC CGTTCGCCAC
351   TCGCCGCCAG GATTNATCCC GCGCTGCCGT TCGACTTGCA TGTGTAAGGC
401   ATGCCGCCAG CGTTCAATCT GAGCCAGGAT CAAACTCTC
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B2.4 KS5

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1     ACAAAAGTGC TTTACAACCC GAAGGCCTTC TTCACATCAC GCGGCATTGC
51    TGGATCAGGG TTGCCCCCAT TGTCCAAAAT TCCCCACTGC TGCCTCCCGT
101   AGGAGTCTGG GCCGTGTCTC AGTCCCAGTG TGGCTGGTCG TCCTCTCAGA
151   CCAGCTAAAG ATCGTCGCCT TGGTGGGCCT TTACCCCACC AACTAGCTAA
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201   TCAGATATCG GCCGCTCCAC GAGCATGAGG TCTTGCGGTC CCCCACTTTC
251   ATCCGTAGAT CGTATGCGGT ATTAGCTAGT CTTTCGACTA GTTATCCCCC
301   ACTTCAGGGC ACGTTCCGAT ATGTTACTCA CCCGTTCGCC ACTCGCCGCC
351   AGGATGGCTC CCGCGCTGCC GTTCGACTTG CATGTGTAAG GCATGCCGCC
401   AGCGTTCAAT CTGAGCCAGG ATCAAACTCT C
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B2.5 KS6

```
1     CTTCCCTGAC AAAAGAGCTT TACAACCCGA AGGCCTTCTT CACTCACGCG
51    GCATTGCTGG ATCAGGCTTG CGCCCATTGT CCAAAATTCC CCACTGCTGC
101   CTCCCGTAGG AGTCTGGGCC GTGTCTCAGT CCCAGTGTGG CTGGTCGTCC
151   TCTCAGACCA GCTACTGATC GTCGCCTTGG TGGGCCTTTA CCTCACCAAC
201   TAGCTAATCA GATATCGGCC GCTCCACGAG CATGAGGTCT TGAGGTCCCC
251   CACTTTCATC CGTAGATCGT ATGCGGTATT AGCTAATCTT TCGATTNGTT
301   ATCCCCCACT TCTGGGTACG TTCCGATATA TTACTCACCC GTTCGCCACT
351   CGCCGCCAGG ATGGCTCGCG CTGTGGCGCT AGA
```

B2.6 KS7

```
1     TCCACCCAGG GATATTAACC CAGGCGATTT CTTTCCGAAC AAAAGTGCTT
51    TACAACCCGA AGGCCTTCTT CACACACGCG GCATTGCTGG ATCAGGGTTG
101   CCCCCATTGT CCAAAATTCC CCACTGCTGC CTCCCGTAGG AGTCTGGGCC
151   GTGTCTCAGT CCCAGTGTGG CTGGTCGTCC TCTCAGACCA GCTACTGATC
201   GTCGCCTTGG TGGGCCTTTA CCCCACCAAC TAGCTAATCA GATATCGGCC
251   GCTCCACGAG CATGAGGTCT TGCGATCCCC CACTTTCATC CGTAGATCGT
301   ATGCGGTATT AGCTAGTCTT TCGACTAGTT ATCCCCCACT CCAGGGCACG
351   TTCCGATATG TTACTCACCC GTTCGCCACT CGCCGCCAGG ATTGCTCCCG
401   CGCTGCCGTT CGACTTGCAT GTGTAAGGCA TGCCGCCAGC GTTCAATCTG
451   AGCCAGGATC AAACTCTC
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B2.7 KS8

```
1     TCCGAACAAA AGTGCTTTAC AACCCGAAGG CCTTCTTCAC ACACGCGGCA
51    TTGCTGGATC AGGGTTGCCC CCATTGTCCA AAATTCCCCA CTGCTGCCTC
101   CCGTAGGAGT CTGGGCCGTG TCTCAGTCCC AGTGTGGCTG GTCGTCCTCT
151   CAGACCAGCT ACTGATCGTC GCCTTGGTGG GCCTTTACCC CACCAACTAG
```

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201   CTAATCAGAT ATCGGCCGCT CCACGAGCAT GAGGTCTTGC GATCCCCCAC
251   TTTCATCCGT AGATCGTATG CGGTATTAGC TAGTCTTTCG ACTAGTTATC
301   CCCCACTCCA GGGCACGTTC CGATATGTTA CTCACCCGTT CGCCACTCGC
351   CGCCAGGATT GCTCCCGCGC TGCCGTTCGA CTTGCATGTG TAAGGCATGC
401   CGCCAGCGTT CAATCTGAGC CAGGATCAAA CTCTC
```

B2.8 KS10

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1     GCTTTACAAC CCGAAGGCCT TCTTCACACA CGCGGCATTG CTGGATCAGG
51    GTTGCCCCCA TTGTCCAAAA TTCCCCACTG CTGCCTCCCG TAGGAGTCTG
101   GGCCGTGTCT CAGTCCCAGT GTGGCTGGTC GTCCTCTCAG ACCAGCTACT
151   GATCGTCGCC TTGGTGGGCC TTTACCCCAC CAACTAGCTA ATCAGATATC
201   GGCCGCTCCA CGAGCATGAG GTCTTGCGGT CCCCCACTTT CATCCGTAGA
251   TCGTATGCGG TATTAGCTAG TCTTTCGACT AGTTATCCCC CACTCCAGGG
301   CACGTTCCGA TATGTTACTC ACCCGTTCGC CACTCGCCGC CAGGATTGCT
351   CCCGCGCTGC CGTTCGACTT GCATGTGTAA GGCATGCCGC CAGCGTTCAA
401   TCTGAGCCAG GATCAAACTC TCCCCCCGTG
```

B3 ITS Region Nucleotide Sequences Obtained from the Iron Ore Concentrate/Soil of the Sishen Iron Ore Mine

B3.1 KIOL1

```
1     TAGTAGAGGG ATAGCTCAGC GCCCGACCTC TCAACCCTTT GTTGTTAAAA
51    CTACCTTGTT GCTTTGGCGG GACCGCTCGG TCTCGAGCCG CTGGGGATTC
101   GTCCCAGGCG AGCGCCCGCC AGAGTTAAAC CAAACTCTTG TTATTAAACC
151   GGTCGTCTGA GTTAAAATTT TGAATAAATC AAAACTTTCA ACAACGGATC
201   TCTTGGTTCT CGCATCGATG AAGAACGCAG CGAAATGCGA TAAGTAATGT
251   GAATTGCAGA ATTCAGTGAA TCATCGAATC TTTGAACGCA CATTGCGCCC
301   CTTGGTATTC CGAGGGGCAT GCCTGTTCGA GCGTCATTAC ACCACTCAAG
351   CTAAGCTTGG ATTGGGTGCC GTCCTTAGTT GGGCGCGCCT TAAAGACCTC
401   GGCGAGGCCT CACCGGCTTT AGGCGAGTAG AATTTATTCG AACGTCTGTC
451   AAAGGAGAGG ACTTCTGCCG ACTGAAACCT TTATTTTTCT AGGTTGACCT
501   CGGATCAGGT AGGGATACCC GCTGAACTTA AGCATATCAT AAAAGCGGA
```

B3.2 KIOL2

```
1     CTCTACATTA CACTACCGTG ATCCGAGCTC TTACCTAGGA AAAATGGCGG
51    TTTCAGTCGG GAGGAAGTCC TCTCCTTTGA CAGACGTTCG AATAAATTCT
101   ACTACGCCTA AAGCCGGTGA GGCCTCGCCG AGGTCTTTAA GGGGCGCCCA
151   ACTAAGGACG GCACCCAATA CCAAGCTTAG CTTGAGTGGT GTAATGACGC
201   TCGAACAGGC ATGCCCCTCG GAATACCAAG GGGCGCAATG TGCGTTCAAA
251   GATTCGATGA TTCACTGAAT TCTGCAATTC ACATTACTTA TCGCATTTCG
301   CTGCGTTCTT CATCGATGCG AGAACCAAGA GATCCGTTGT TGAAAGTTTT
351   GATTTATTCA AAATTTTAAC TCACGACGAC CGGTTTAATA ACAAGAGTTT
401   GGTTTAACTC TGGCGGGCGC TCGCCTGGGA CGAATCCCCA ACGGCTCGAG
451   ACCGAGCGGT CCCGCCAAAG CAACAAGGTA GTTTTAACAA CAAAAGGGTT
501   GGAGGTCGGG CGCTGAGCAC CCTTACTCTT TAATGATCCT TCCGCAGGTT
551   CACCTACAA
```

B3.3 KIOL3

```
1     GATGAAAAGG CTTAACTGCA TTTCTTTCTA CACATGTGTT TTTCTTTTTT
51    TGAAAACTTT GCTTTGGTAG GCCTTCTATA TGGGGCCTGC CAGAGATTAA
101   ACTCAACCAA ATTTTATTTA ATGTCAACCG ATTATTTAAT AGTCAAAACT
151   TTCAACAACG GATCTCTTGG TTCTCGCATC GATGAAGAAC GCAGCGAAAT
201   GCGATAAGTA ATATGAATTG CAGATATTCG TGAATCATCG AATCTTTGAA
251   CGCACATTGC GCCCTTTGGT ATTCCAAAGG GCATGCCTGT TTGAGCGTCA
301   TTTCTCCCTC AAACCCTCGG GTTTGGTGTT GAGCGATACG CTGGGTTTGC
351   TTGAAAGAAA GGCGGAGTAT AAACTAATGG ATAGGTTTTT TCCACTCATT
401   GGTACAAACT CCAAAACTTC TTCCAAATTC GACCTCAAAT CAGGGTAGGA
451   CTACCCGCTG AACTTAAGCA TATCAATAAA ACGCGGAA
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B3.4 KIOL4

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1     TATGCTACGA TCCATACCCT GATTTGAGTC TGAATTTGGA AGAAGTTTTG
51    GAGTTTGTAC CAGATGAGTG GAAAAAACCT ATCCATTAGT TTATACTCCG
101   CCTTTCTTTC AAGCAAACCC ACGCGTATCG CTCAACACCA AACCCGAGGG
151   TTTGAGGGAG AAATGACGCT CAAACAGGCA TGCCCTTTGG AATACCAAAG
201   GGCGCAATGT GCGTTCAAAG ATTCGATGAT TCACGAATAT CTGCAATTCA
251   TATTACTTAT CGCATTTCGC TGCGTTCTTC ATCGATGCGA GAACCAAGAG
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301   ATCCGTTGTT GAAAGTTTTG ACTATTAAAT AATCGGTTGA CATTAAATAA
351   AATTTGGTTG AGTTTAATCT CTGGCAGGCC CCATATAGAA GGCCTACCAA
401   AGCAAAGTTT TCAAAAAAAG AAAAACACAT GTGTAAGAAA AAATGCAGTT
451   AAGCACTTTT CATTCTGTAA TGATCCTTCC GCAGGTTCAC CTACA
```

B3.5 KIOL5

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1     AAAAGTGCTT AACTGCATTC TTTCTTACAC ATGTGTTTTT CTTTTTTTGA
51    AAACTTTGCT TTGGTAGGCC TTCTATATGG GGCCTGCCAG AGATTAAACT
101   CAACCAAATT TTATTTAATG TCAACCGATT ATTTAATAGT CAAAACTTTC
151   AACAACGGAT CTCTTGGTTC TCGCATCGAT GAAGAACGCA GCGAAATGCG
201   ATAAGTAATA TGAATTGCAG ATATTCGTGA ATCATCGAAT CTTTGAACGC
251   ACATTGCGCC CTTTGTATTC CAAAGGGCAT GCCTGTTTGA GCGTCATTTC
301   TCCCTCAAAC CCTCGGGTTT GGTGTTGAGC GATACGCTGG GTTTGCTTGA
351   AAGAAAGGCG GAGTATAAAC TAATGGATAG GTTTTTTCCA CTCATTGGTA
401   CAAACTCCAA AACTTCTTCC AAATTCGACC TCAAATCAGG TAGGGACTAC
451   CCGCTGAACT TAAGCATATC AATAAAGGCG GAA
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B3.6 KIOL6

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1     CAGACAGATA CACAATACCT GATTTAGACG CTTAATTTGG AAGAAGTCTT
51    TGGAGTTTGA CCAATGAGTG GAAAAAACCT ATCCATTAGT TTATACTCCG
101   CCTTTCTTTC AAGCAAACCC GGCGTATCGC TCAACACCAT AACCCGAGGG
151   TTTGAGGGAG AAATGACGCT CAAACAAGGC ATGCCCTTTG GAATACCAAA
201   GGGCGCAATG TGCGTTCAAA GATTCGATGA TTCACGAATA TCTGCAATTC
251   ATATTACTTA TCGCATTTCG CTGCGTTCTT CATCGATGCG AGAACCAAGA
301   GATCCGTTGT TGAAAGTTTT GACTATTAAA TAATCGGTTG ACATTAAATA
351   AAATTTGGTT GAGTTTAATC TCTGGCAGGC CCCATATAGA AGGCCTACCA
401   AAGCAAAGTT TTCAAAAAAA GAAAAACACA TGTGTAAGAA AAAATGAGTT
451   AAGCACTTTT CATTCTGTAA TGATCCTTCC GCAGGTTCAC CTACAA
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