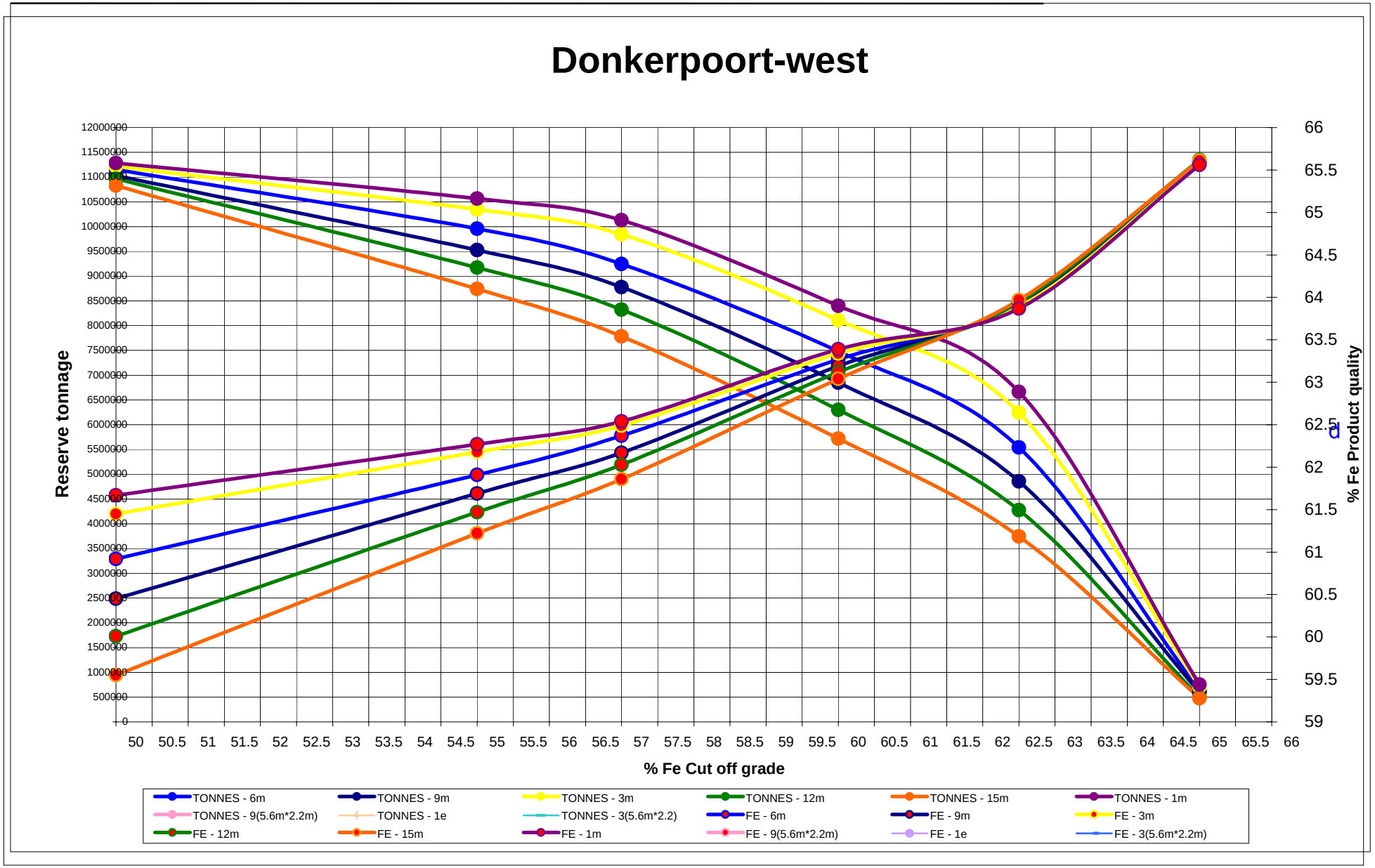
APPENDIX A – SENSITIVITY ANALYSES ON THE VOLUME OF THE EVALUATION BLOCK


Donkerpoort-west
Reserve tonnage
% Fe Product quality
% Fe Cut off grade
12000000
11500000
11000000
10500000
10000000
9500000
9000000
8500000
8000000
7500000
7000000
6500000
6000000
5500000
5000000
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
66
65.5
65
64.5
64
63.5
63
62.5
62
61.5
61
60.5
60
59.5
59
50 50.5 51 51.5 52 52.5 53 53.5 54 54.5 55 55.5 56 56.5 57 57.5 58 58.5 59 59.5 60 60.5 61 61.5 62 62.5 63 63.5 64 64.5 65 65.5 66
TONNES - 6m
TONNES - 9m
TONNES - 3m
TONNES - 12m
TONNES - 15m
TONNES - 1m
TONNES - 9(5.6m*2.2m)
TONNES - 1e
TONNES - 3(5.6m*2.2)
FE - 6m
FE - 9m
FE - 3m
FE - 12m
FE - 15m
FE - 1m
FE - 9(5.6m*2.2m)
FE - 1e
FE - 3(5.6m*2.2m)

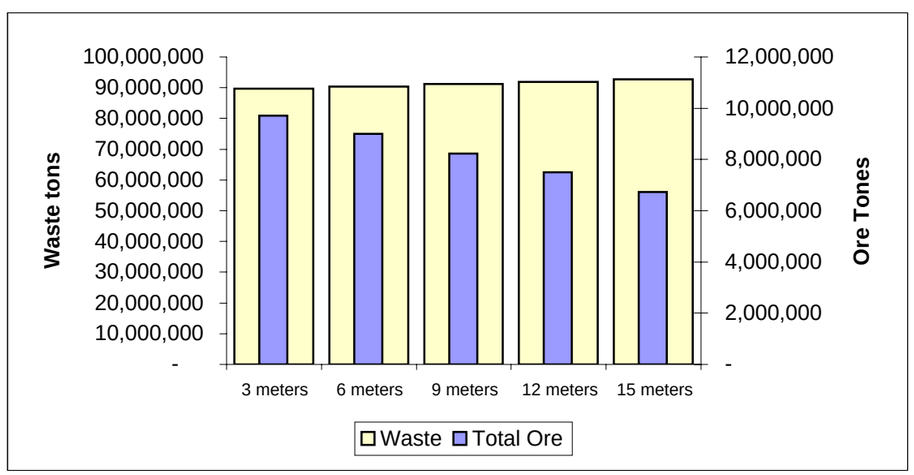
Donkerpoort-West

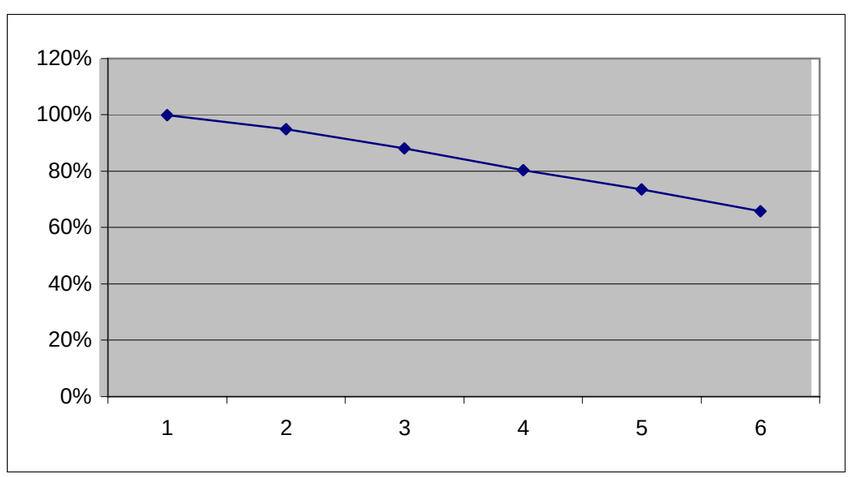
		Ore	Low Grade	Totaal tons
In situ		10,373,000	1,029,548	99,458,000
		Total Ore	% change	Waste
1 meters		10220000	100%	89,238,000
3 meters		9700000	95%	89,758,000
6 meters		9010000	88%	90,448,000
9 meters		8220000	80%	91,238,000
12 meters		7510000	73%	91,948,000
15 meters		6730000	66%	92,728,000

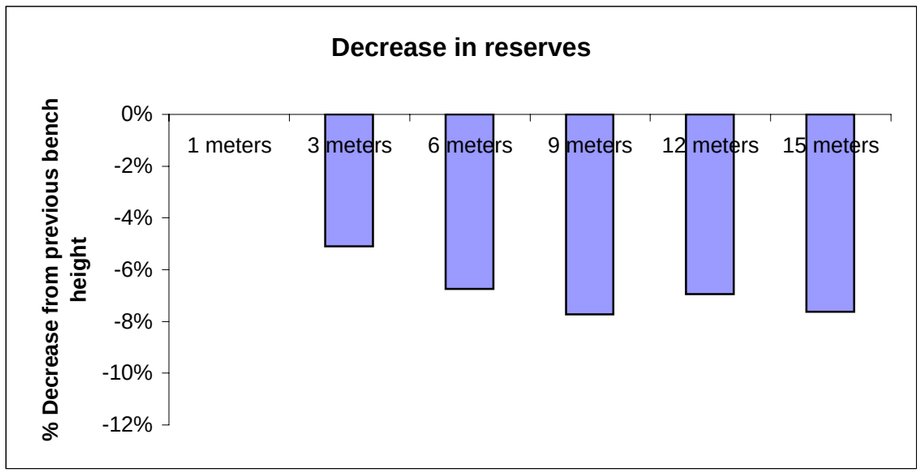
%Lae

9.9%

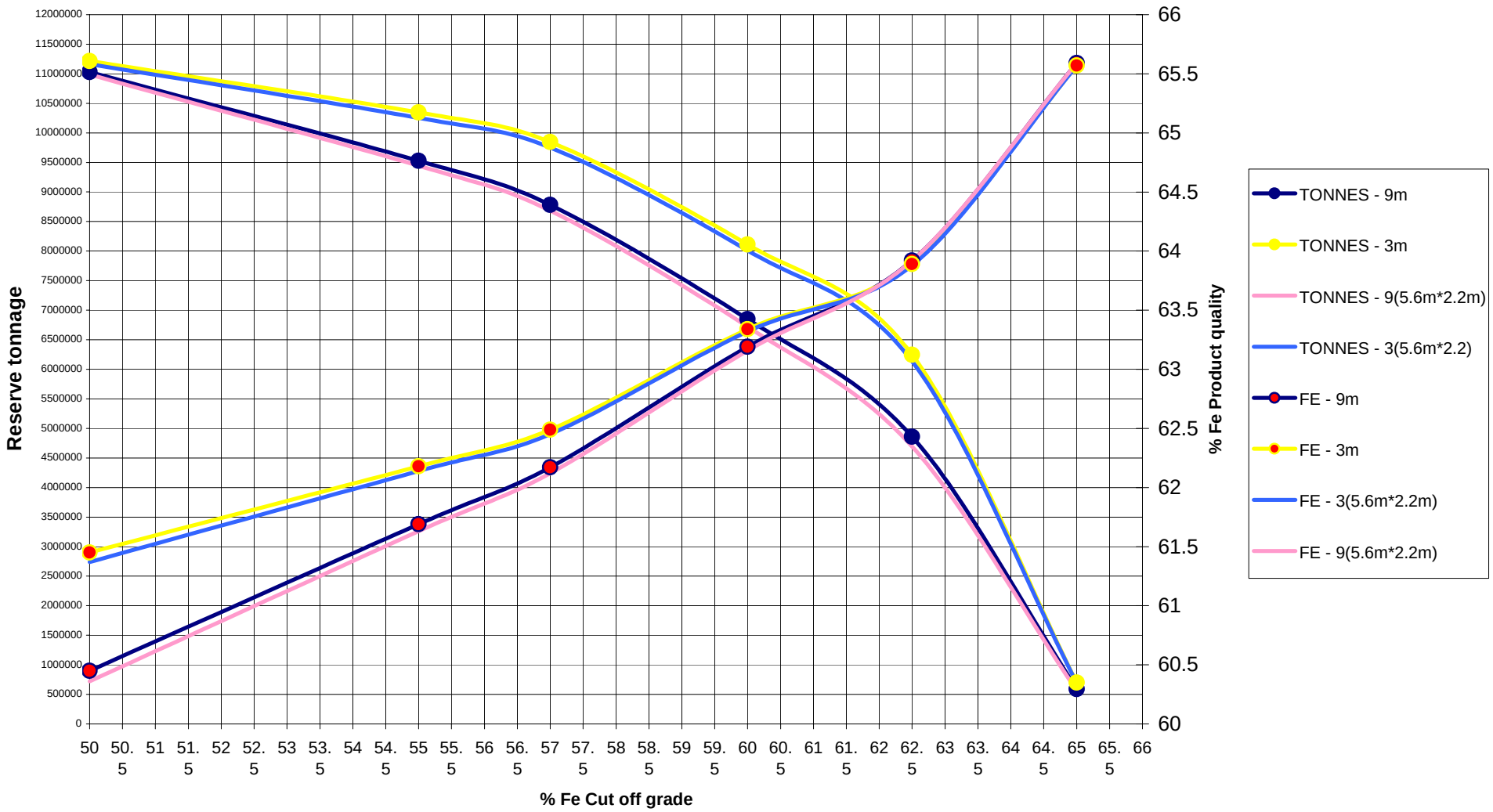
0%
-5.1%
-6.8%
-7.7%
-6.9%
-7.6%







Donkerpoort-west



ABOVE	FE - 3m	TONNES - 3m	FE - 6m	TONNES - 6m	FE - 9m	TONNES - 9m	FE - 12m	TONNES - 12m	FE - 15m	TONNES - 15m	FE - 1m	TONNES - 1m
50	61.45	11213536	60.92	11152535	60.45	11029470	60.01	10964432	59.55	10830029	61.67	11284350
55	62.18	10347820	61.91	9956295	61.69	9528024	61.47	9172198	61.22	8740682	62.27	10568036
57	62.49	9844501	62.37	9244650	62.17	8779753	62.03	8321542	61.86	7784983	62.54	10129211
60	63.34	8111536	63.27	7481641	63.19	6848458	63.12	6298984	63.04	5718482	63.39	8402101
62.5	63.89	6244649	63.9	5542745	63.92	4857303	63.94	4276479	63.97	3746052	63.87	6662942
65	65.57	701258	65.59	619573	65.59	588572	65.62	494910	65.61	478155	65.56	753916

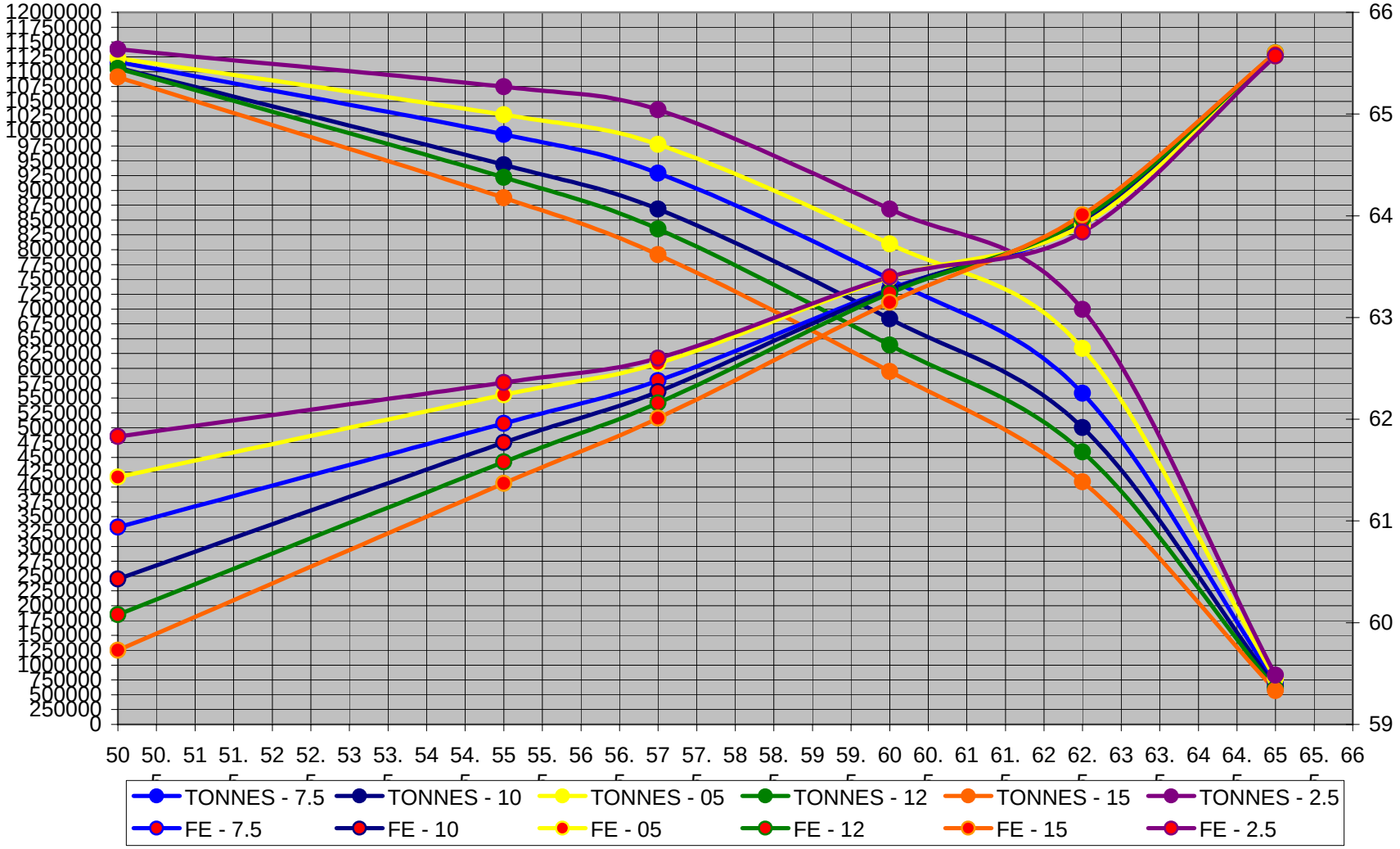
FE - 1e	TONNES - 1e

FE - 9(5.6m	TONNES - 9(5.6m*2.2m)	FE - 3(5.6m	TONNES - 3(5.6m*2.2)
60.36	10986364	62.85	10436686	61.37	11164653
61.63	9441491	62.99	10278426	62.14	10254640
62.12	8684731	63.14	10058410	62.45	9752498
63.16	6722574	63.48	9350870	63.32	8007932
63.92	4692069	63.86	7744329	63.88	6134613
65.59	558556	65.55	874482	65.57	692194

14

13.300
12.25
12.32

Donkerpoort-wes



ABOVE	FE - 05	TONNES - 05	FE - 7.5	TONNES - 7.5	FE - 10	TONNES - 10	FE - 12	TONNES -	FE - 15	TONNES -	FE - 2.5	TONNES - 2.5
50	61.43	11228876	60.94	11165457	60.43	11070146	60.08	11056095	59.73	10908178	61.83	11376521
55	62.24	10273559	61.96	9941708	61.77	9432149	61.58	9218260	61.37	8875306	62.36	10746687
57	62.55	9774291	62.38	9289032	62.27	8685656	62.16	8350877	62.01	7916928	62.6	10358416
60	63.39	8095649	63.28	7502677	63.27	6832789	63.24	6393862	63.15	5946976	63.4	8684881
62.5	63.91	6336559	63.93	5581827	63.95	5001369	63.97	4591680	64.01	4088413	63.84	6993264
65	65.57	764794	65.58	710695	65.59	634523	65.6	600906	65.6	570320	65.57	831381

6w x en y geruil

CUT-OFF ABOVE	GRADE	TABLE VOLUME	FE	TONNES	FILLVOL	TONNES	VOIDVOL	TON
50	2518137	60.86	11161008	69.1	11161008	4.82	11161	
55	2205469	61.88	9928706	68.88	9928706	5.04	9928	
57	2039031	62.32	9229046	68.71	9229046	5.21	9229	
60	1626829	63.23	7442485	68.17	7442486	5.75	7442	
62.5	1184724	63.88	5443163	67.48	5443163	6.44	5443	
65	134141	65.57	616898	65.6	616898	8.32	616	

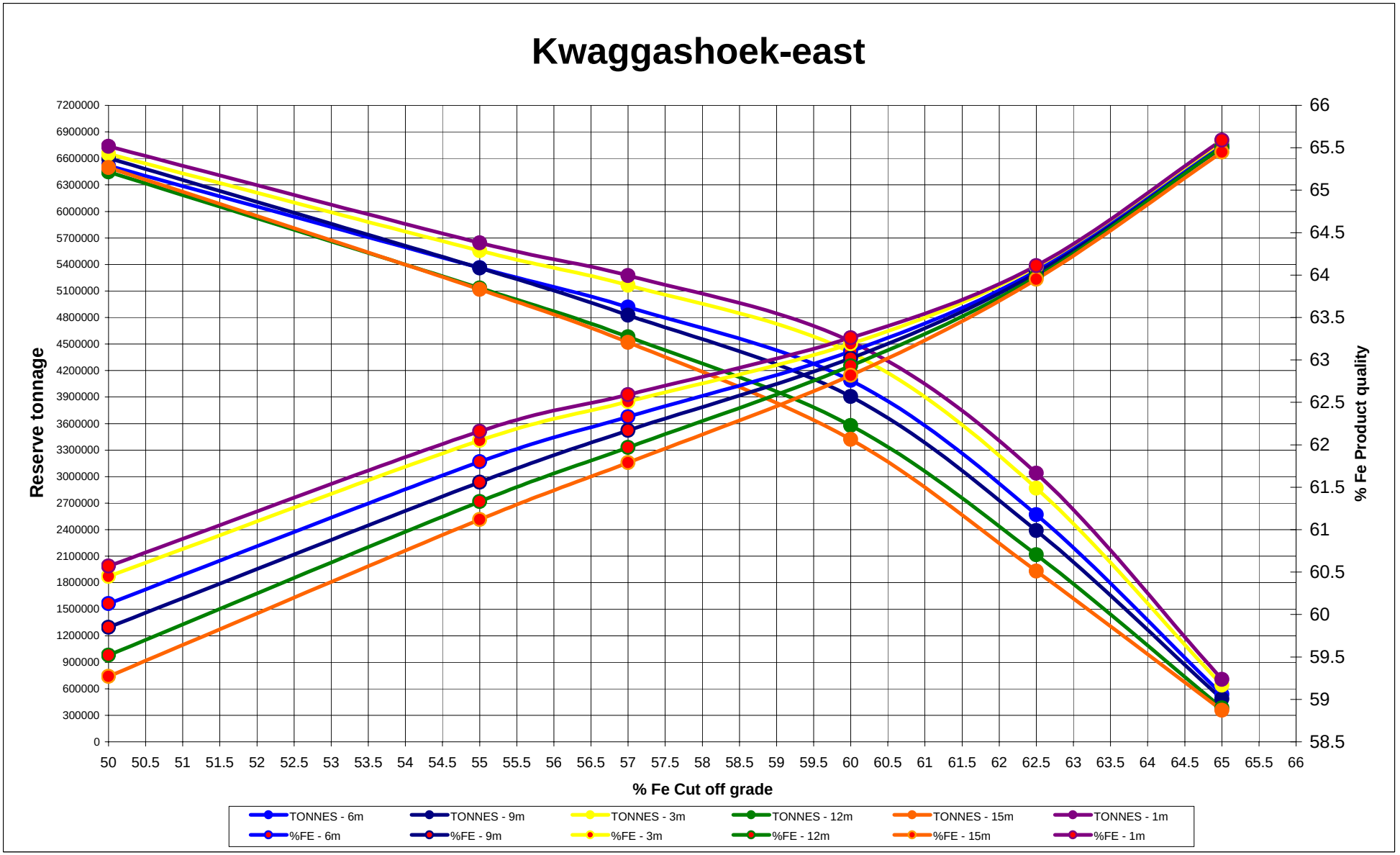
APPENDIX B – GEOLOGICAL DEPOSIT EVALUATION RESULTS

KWAGGASHOEK-EAST: GRADE TONNAGE CURVE EVALUATION RESULTS

DONKERPOORT-NECK: GRADE TONNAGE CURVE EVALUATION RESULTS

DONKERPOORT-WEST: GRADE TONNAGE CURVE EVALUATION RESULTS

BUFFELSHOEK-WEST: GRADE TONNAGE CURVE EVALUATION RESULTS

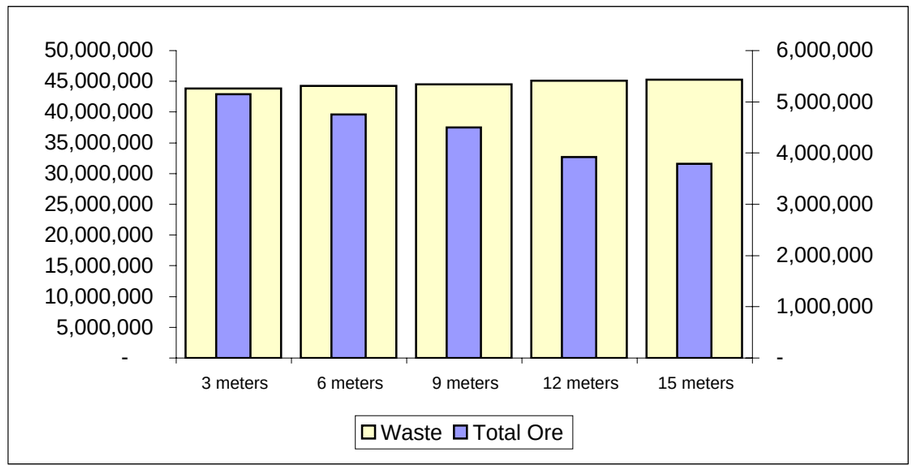

Kwaggashoek-east
Reserve tonnage
% Fe Product quality
% Fe Cut off grade
7200000
6900000
6600000
6300000
6000000
5700000
5400000
5100000
4800000
4500000
4200000
3900000
3600000
3300000
3000000
2700000
2400000
2100000
1800000
1500000
1200000
900000
600000
300000
0
66
65.5
65
64.5
64
63.5
63
62.5
62
61.5
61
60.5
60
59.5
59
58.5
50 50.5 51 51.5 52 52.5 53 53.5 54 54.5 55 55.5 56 56.5 57 57.5 58 58.5 59 59.5 60 60.5 61 61.5 62 62.5 63 63.5 64 64.5 65 65.5 66
TONNES - 6m
TONNES - 9m
TONNES - 3m
TONNES - 12m
TONNES - 15m
TONNES - 1m
%FE - 6m
%FE - 9m
%FE - 3m
%FE - 12m
%FE - 15m
%FE - 1m

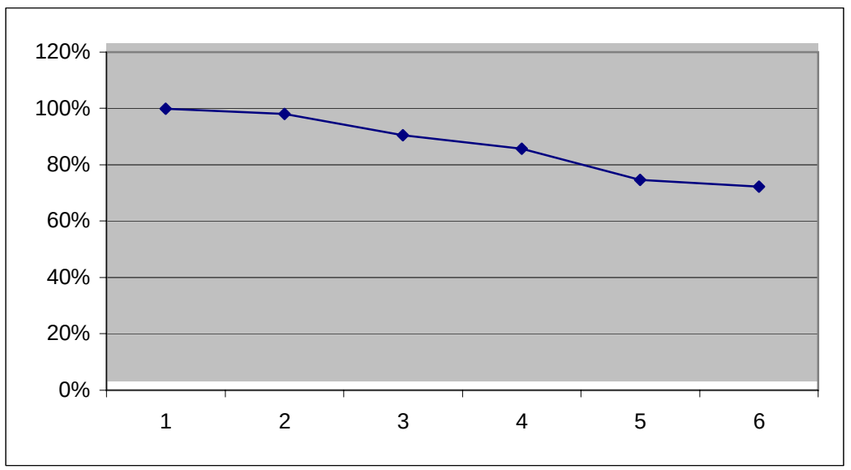
Kwaggashoek-East

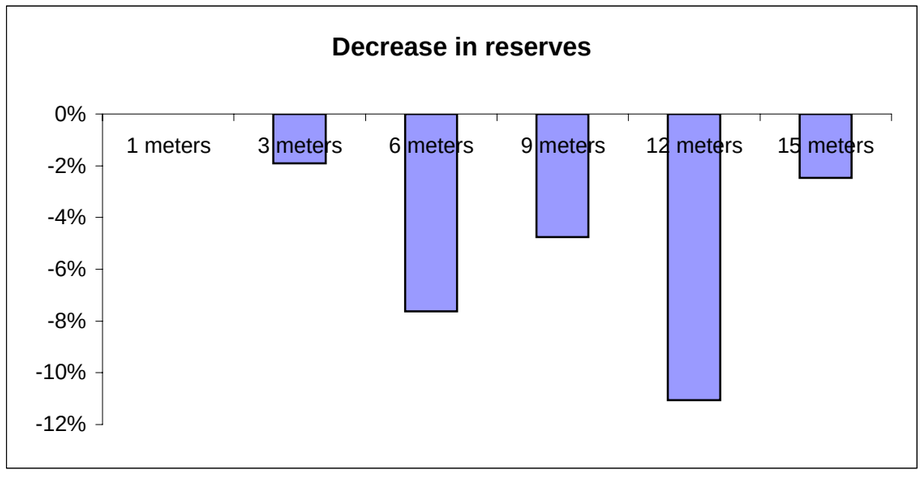
		Ore	Low Grade	Totaal tons
In situ		**5,239,073**	**572,849**	**49,024,858**
		Total Ore	**% change**	**Waste**
1 meters		5250000	100%	43,774,858
3 meters		5150000	98%	43,874,858
6 meters		4750000	90%	44,274,858
9 meters		4500000	86%	44,524,858
12 meters		3920000	75%	45,104,858
15 meters		3790000	72%	45,234,858

%Lae
10.9%

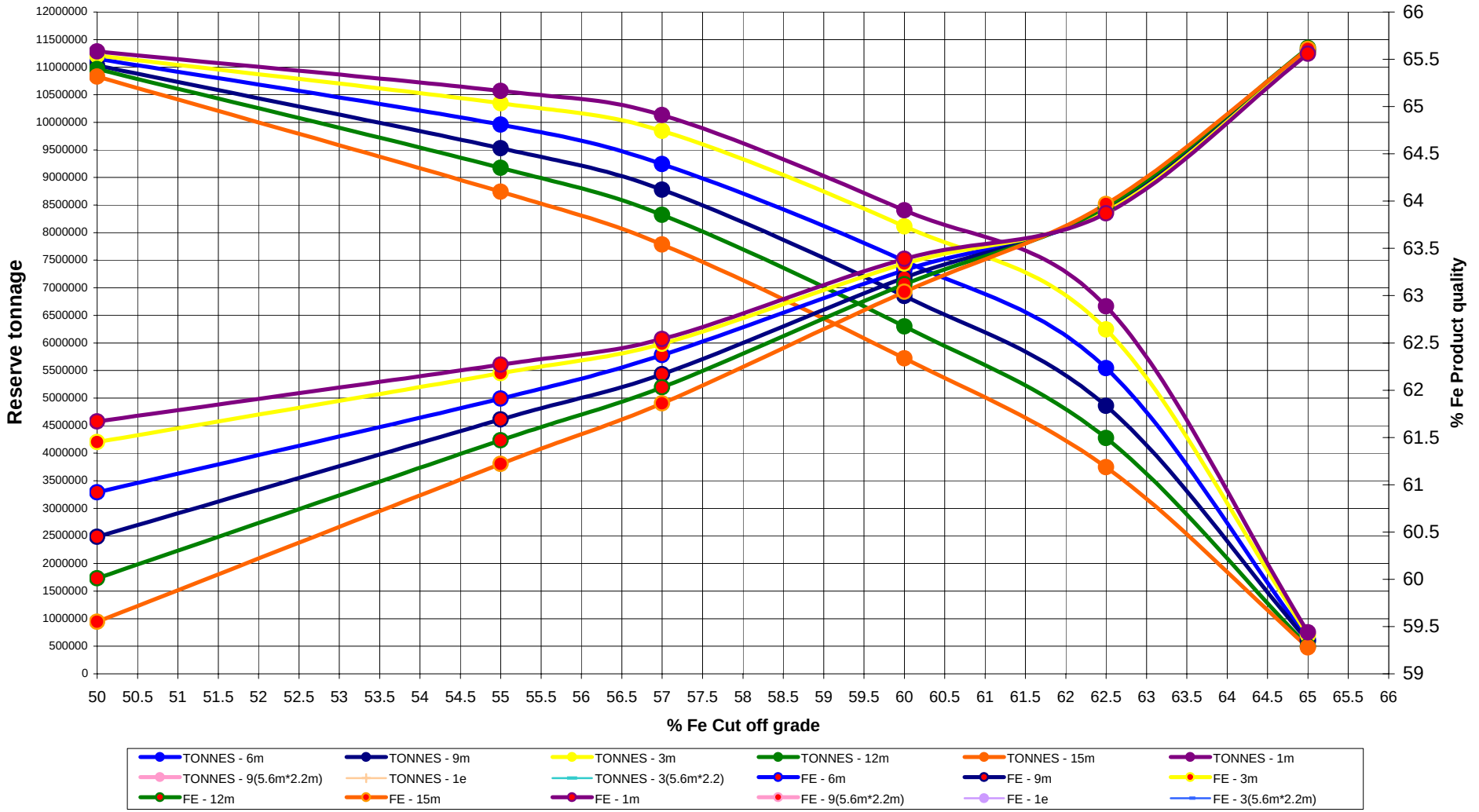
0%
-1.9%
-7.6%
-4.8%
-11.0%
-2.5%







Donkerpoort-west



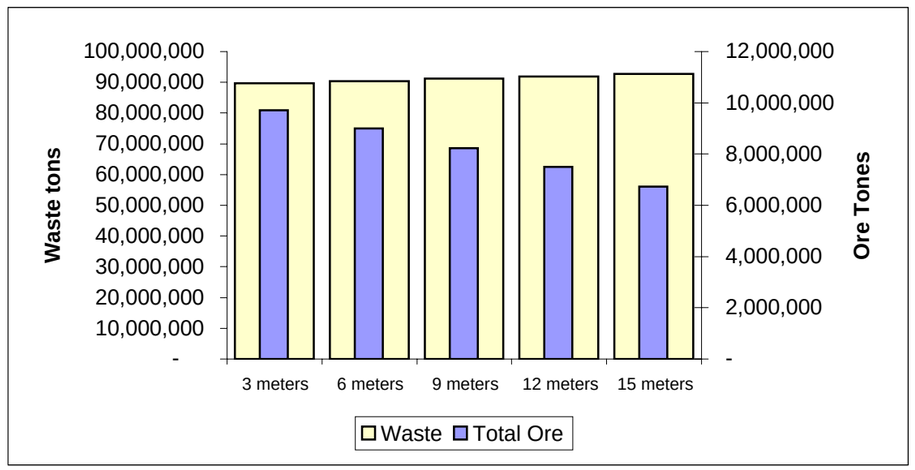
Donkerpoort-West

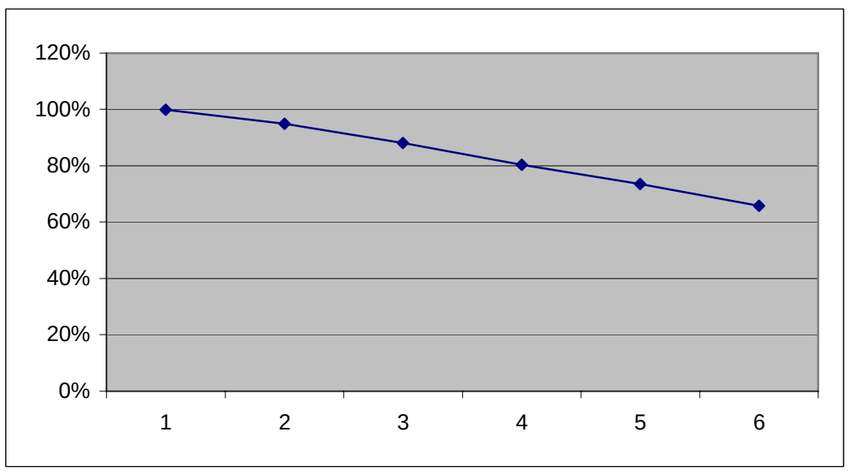
		Ore	Low Grade	Totaal tons
In situ		**10,373,000**	**1,029,548**	**99,458,000**
		Total Ore	**% change**	**Waste**
1 meters		10220000	100%	89,238,000
3 meters		9700000	95%	89,758,000
6 meters		9010000	88%	90,448,000
9 meters		8220000	80%	91,238,000
12 meters		7510000	73%	91,948,000
15 meters		6730000	66%	92,728,000

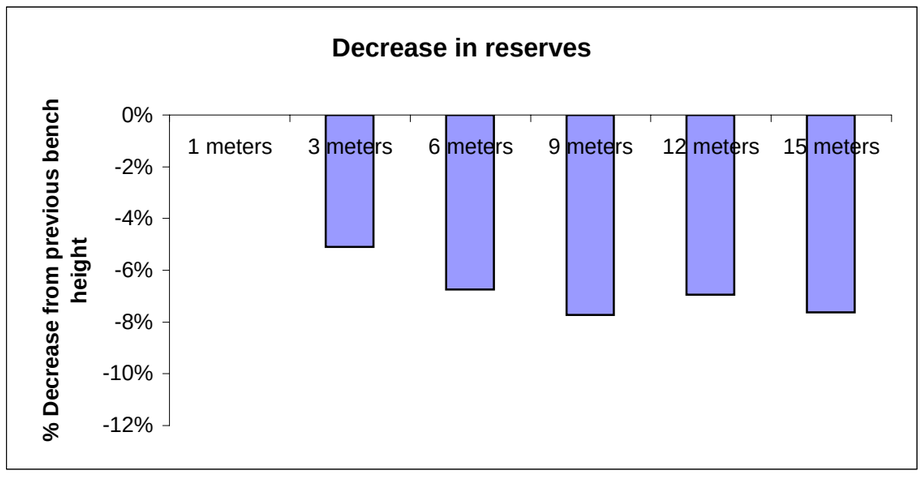
%Lae

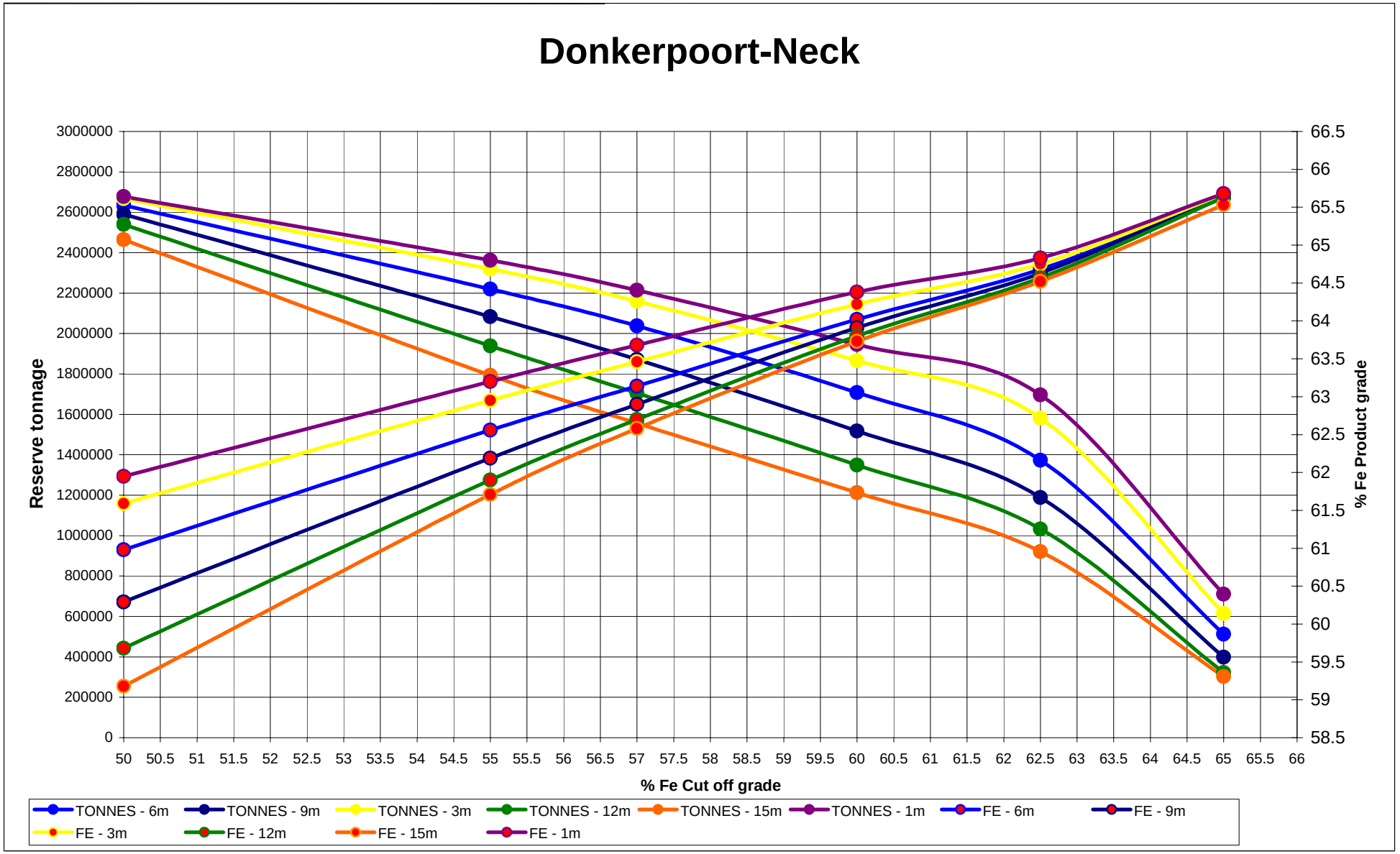
9.9%

0%
-5.1%
-6.8%
-7.7%
-6.9%
-7.6%








Donkerpoort-Neck
Reserve tonnage
% Fe Product grade
% Fe Cut off grade
3000000
2800000
2600000
2400000
2200000
2000000
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
66.5
66
65.5
65
64.5
64
63.5
63
62.5
62
61.5
61
60.5
60
59.5
59
58.5
50 50.5 51 51.5 52 52.5 53 53.5 54 54.5 55 55.5 56 56.5 57 57.5 58 58.5 59 59.5 60 60.5 61 61.5 62 62.5 63 63.5 64 64.5 65 65.5 66
TONNES - 6m
TONNES - 9m
TONNES - 3m
TONNES - 12m
TONNES - 15m
TONNES - 1m
FE - 6m
FE - 9m
FE - 3m
FE - 12m
FE - 15m
FE - 1m

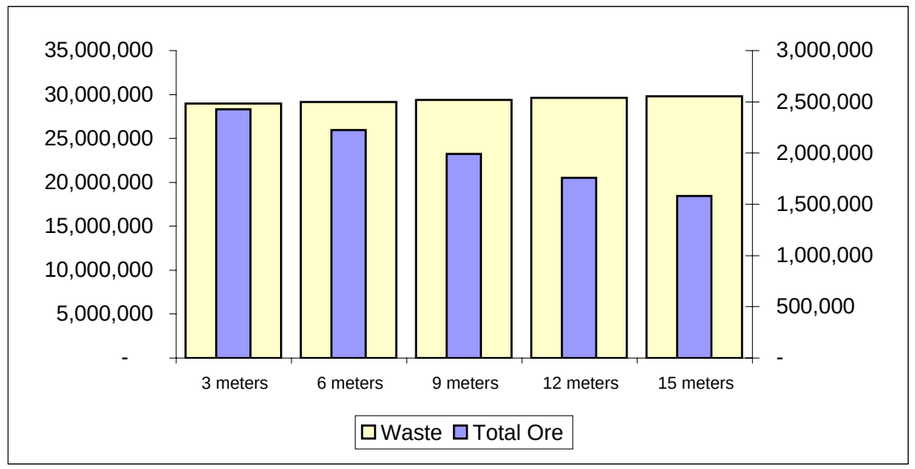
Donkerpoort-Neck

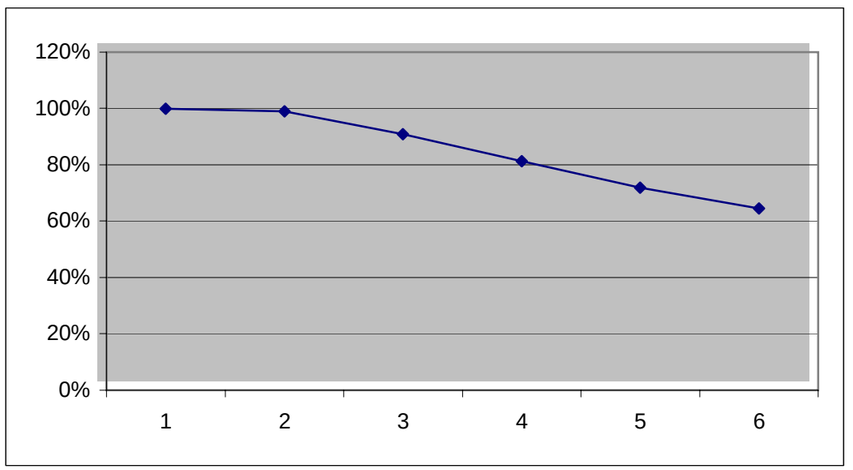
		Ore	Low Grade	Totaal tons
In situ		2,580,725	175,257	31,397,823
		Total Ore	% change	Waste
1 meters		2450000	100%	28,947,823
3 meters		2425000	99%	28,972,823
6 meters		2225000	91%	29,172,823
9 meters		1990000	81%	29,407,823
12 meters		1760000	72%	29,637,823
15 meters		1580000	64%	29,817,823

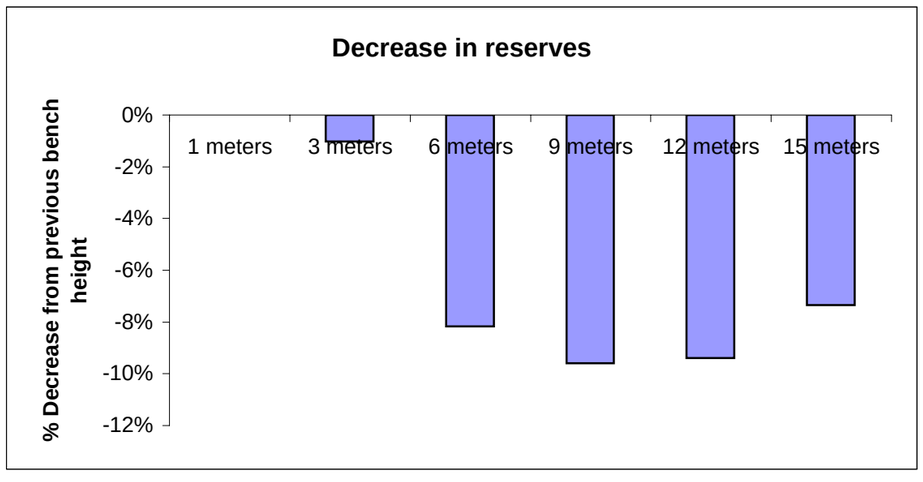
%Lae

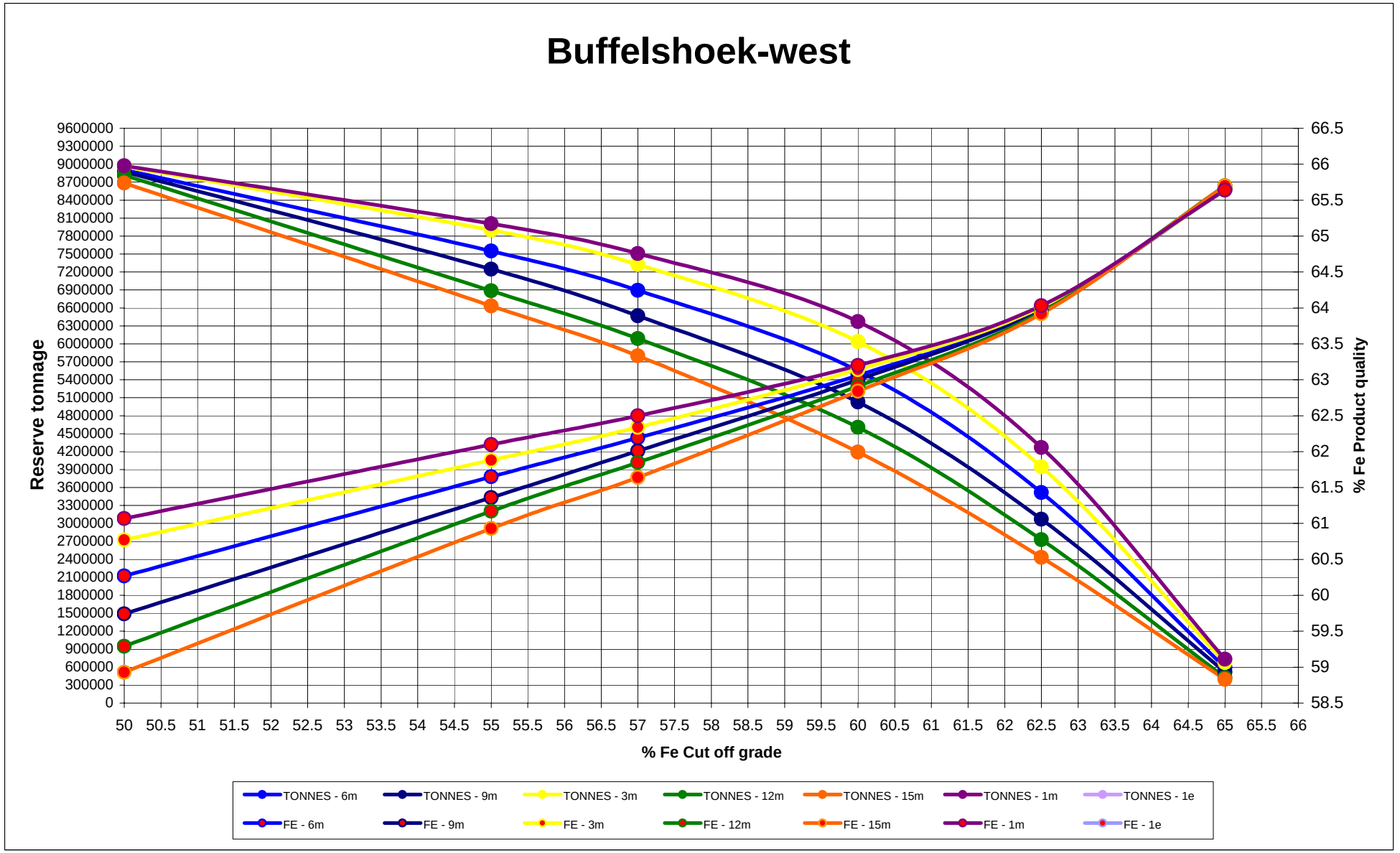
6.8%

0%
-1.0%
-8.2%
-9.6%
-9.4%
-7.3%








Buffelshoek-west
Reserve tonnage
% Fe Product quality
% Fe Cut off grade
9600000
9300000
9000000
8700000
8400000
8100000
7800000
7500000
7200000
6900000
6600000
6300000
6000000
5700000
5400000
5100000
4800000
4500000
4200000
3900000
3600000
3300000
3000000
2700000
2400000
2100000
1800000
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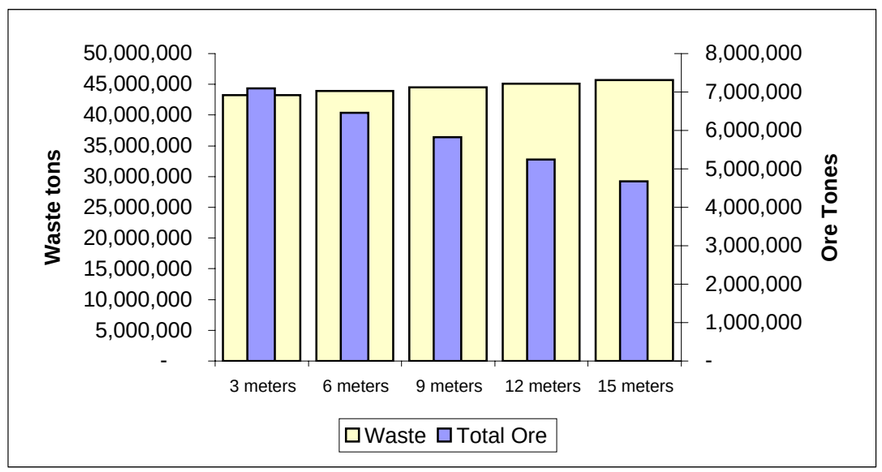
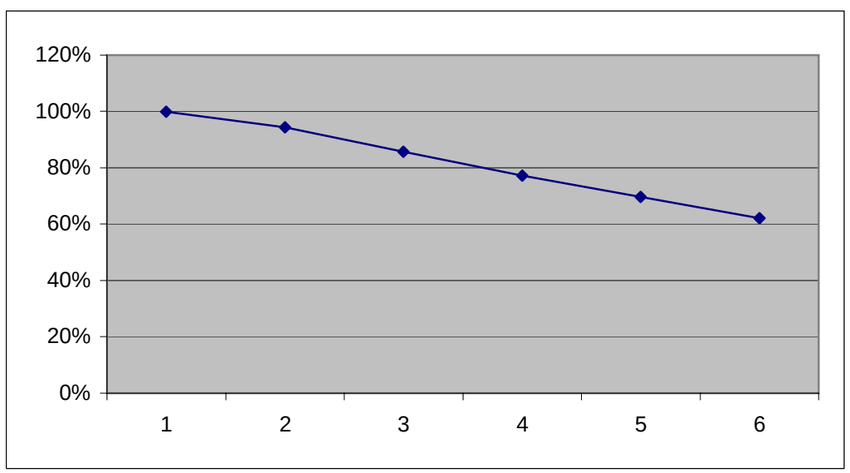
1200000
900000
600000
300000
0
66.5
66
65.5
65
64.5
64
63.5
63
62.5
62
61.5
61
60.5
60
59.5
59
58.5
50 50.5 51 51.5 52 52.5 53 53.5 54 54.5 55 55.5 56 56.5 57 57.5 58 58.5 59 59.5 60 60.5 61 61.5 62 62.5 63 63.5 64 64.5 65 65.5 66
TONNES - 6m
TONNES - 9m
TONNES - 3m
TONNES - 12m
TONNES - 15m
TONNES - 1m
TONNES - 1e
FE - 6m
FE - 9m
FE - 3m
FE - 12m
FE - 15m
FE - 1m
FE - 1e

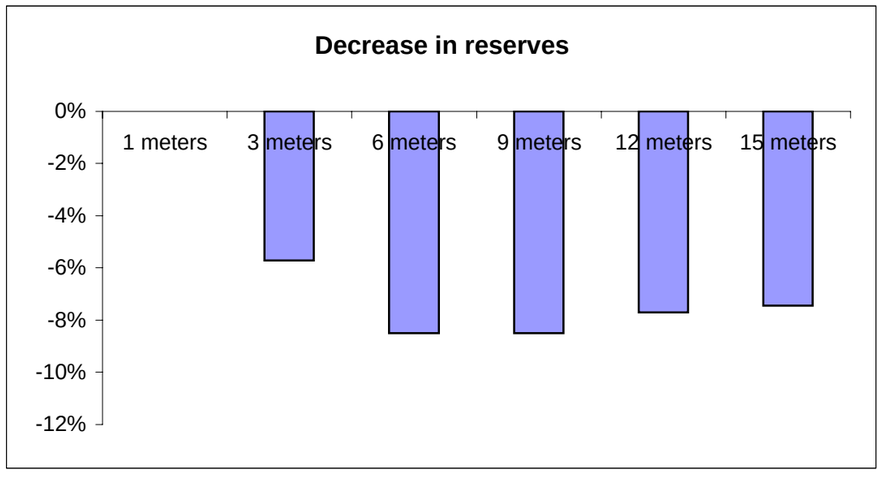
Buffelshoek-wes

		Ore	Low Grade	Totaal tons
In situ		8,408,119	578,220	50,357,000
		Total Ore	% change	Waste
1 meters		7530000	100%	42,827,000
3 meters		7100000	94%	43,257,000
6 meters		6460000	86%	43,897,000
9 meters		5820000	77%	44,537,000
12 meters		5240000	70%	45,117,000
15 meters		4680000	62%	45,677,000

%Lae
6.9%
0%
-5.7%
-8.5%
-8.5%
-7.7%
-7.4%







APPENDIX C – RESULTS OF PRODUCTIVITY SIMULATION

Equipment simulation results

Face Shovel	16m3	3 meter	6 meter	9 meter	12 meter	15 meter
% productive		50%	78%	100%	100%	80%
Prod rate		1318	2055	2635	2635	2108
Cycle time		60	38	30	30	37.5
bucket fill		100	100	100	100	100
Trucks/shovel		2	3	4	4	3

Rope Shovel	18m3	3 meter	6 meter	9 meter	12 meter	15 meter
% productive		44%	55%	89%	100%	100%
Prod rate		994	1245	2018	2267	2267
Cycle time		115	85	55	45	45
bucket fill		100	100	100	100	100
Trucks/shovel		2	2	3	3	3

Hydraulic Exc	15m3	3 meter	6 meter	9 meter	12 meter	15 meter
% productive		100%	90%	90%	80%	60%
Prod rate		2600	2122	2122	1948	1560
Cycle time		30	33	33.33333	37.5	50
bucket fill		100	100	100	100	100
Trucks/shovel		4	3	3	3	2

Wheel Loader	16m3	3 meter	6 meter	9 meter	12 meter	15 meter
% productive		75%	100%	100%	75%	75%
Prod rate		1284	1712	1712	1284	1284
Cycle time		50	45	45	50	50
bucket fill		100	100	100	100	100
Trucks/shovel		2	3	3	2	2

Results were obtained using TALPAC, by Runge (Australia) Pty Limted

APPENDIX D – ESCALATION RATES

Rope Shovel Model	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Macro Economic Indicators														
US PPI escalation	0.98	0.99	1.00	1.01	1.03	1.04	1.05	1.06	1.07	1.09	1.10	1.12	1.14	1.16
SA PPI escalation	1.09	1.17	1.24	1.31	1.39	1.47	1.56	1.65	1.75	1.86	1.97	2.09	2.21	2.35
R/$ exchange rates	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

APPENDIX E – DETAIL ECONOMIC EVALUATION

ROPE SHOVEL

HYDRAULIC FACE SHOVEL

HYDRAULIC EXCAVATOR

WHEEL LOADER

University of Pretoria etd – Swanepoel, W (2003)

	"Nominal terms"	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59
Rope Shovel Model			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Macro Economic Indicators																				
US PPI escalation			0.98	0.99	1.00	1.01	1.03	1.04	1.05	1.06	1.07	1.09	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24
SA PPI escalation			1.09	1.17	1.24	1.31	1.39	1.47	1.56	1.65	1.75	1.86	1.97	2.09	2.21	2.35	2.49	2.64	2.80	2.96
R/$ exchange rates	100%		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
			9.54	9.05	9.22	9.42	9.60	9.59	9.59	9.59										
STATISTICS																				
Income per ton - Nominal terms	Ave. R/ton	137.73	214.59	217.29	220.12	223.12	225.57	228.04	230.73	233.44	236.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Income per ton - Real terms	Ave. R/ton	91.12	197.78	186.29	178.04	170.25	162.38	154.86	147.82	141.09	134.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Profit margin based on cash cost - Real	Ave. %	8%	29%	25%	22%	20%	17%	14%	10%	7%	-1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Profit margin based on total cost - Real	Ave. %	-1%	17%	13%	10%	8%	5%	2%	-1%	-5%	-30%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cash production cost - Total tons		8.41	8.68	8.66	8.55	8.44	8.34	8.27	8.21	8.15	8.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash production cost - Real terms	Ave. R/ton	135.79	140.05	139.81	138.01	136.27	134.63	133.55	132.51	131.53	135.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Production cost - Nominal terms	R/ton	221.23	178.52	189.63	197.19	205.14	213.59	223.21	233.39	244.18	306.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Production cost - Real Terms	Ave. R/ton	157.80	164.53	162.58	159.50	156.53	153.75	151.58	149.52	147.58	174.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total distribution cost - Nominal	Ave. R/ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total distribution cost - Real	Ave. R/ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Production Schedule	100%				100%	100%	100%	100%	100%											
Waste (Over-burden)	t	213,456,000	25,441,716	25,441,716	25,441,716	25,441,716	25,441,716	25,441,716	25,441,716	25,441,716	9,922,269	0	0	0	0	0	0	0	0	0
Stripping Ratio	Ave.	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	0.0	0.0	0.0	0.0	0.0
R.O.M Tonnage's	t	1,161,897	2,000,135	2,000,135	2,000,135	2,000,135	2,000,135	2,000,135	2,000,135	2,000,135	780,053	0	0	0	0	0	0	0	0	0
Final Yield	%		85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	0%	0%	0%	0%	0%
Final product produced	t	14,263,962	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**663,045**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Closing stock calculation																				
Opening stock	t	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Production	t	14,263,962	1,700,115	1,700,115	1,700,115	1,700,115	1,700,115	1,700,115	1,700,115	1,700,115	663,045	-	-	-	-	-	-	-	-	-
Total product sold	t	-14,263,962	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(663,045)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
- Market	t	-14,263,962	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(663,045)	-	-	-	-	-	-	-	-	-
	t	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing stock	t	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stock value per ton	R/ton	0	**178.52**	**189.63**	**197.19**	**205.14**	**213.59**	**223.21**	**233.39**	**244.18**	**306.19**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Sales Schedule	100%																			
Sales Price																				
- Market	$/t	$23.30	21.46	21.73	22.01	22.31	22.56	22.80	23.07	23.34	23.64	23.94	24.26	24.61	25.01	25.43	25.89	0.00	0.00	0.00
	$/t	$23.30	21.46	21.73	22.01	22.31	22.56	22.80	23.07	23.34	23.64	23.94	24.26	24.61	25.01	25.43	25.89	0.00	0.00	0.00
Revenue																				
- Market	R	3,204,846,045	364,826,600	369,415,999	374,228,225	379,322,158	383,494,811	387,692,897	392,270,238	396,876,705	156,718,412	0	0	0	0	0	0	0	0	0
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross Revenue	R	3,204,846,045	364,826,600	369,415,999	374,228,225	379,322,158	383,494,811	387,692,897	392,270,238	396,876,705	156,718,412	0	0	0	0	0	0	0	0	0
LESS : Distribution Cost	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Sales	R	3,204,846,045	**364,826,600**	**369,415,999**	**374,228,225**	**379,322,158**	**383,494,811**	**387,692,897**	**392,270,238**	**396,876,705**	**156,718,412**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Distribution cost schedule	100%																			
Export via RBCT	100%																			
- Road	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution cost RBCT																				
- Road	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rail	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Port	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Export via BMA (Durban)	100%																			
- Road	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution cost BMA (Durban)	R																			
- Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rail		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Port		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total distribution cost	R	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total :																				
- Road	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost of Sales Schedule	100%																			
80% Variable cost	100%	2,588,177,246	251,832,077	270,252,019	282,788,498	295,964,645	309,960,558	325,903,075	342,768,860	360,657,781	148,049,732	0	0	0	0	0	0	0	0	0
- Mine		2,263,347,404	220,225,828	236,333,971	247,297,056	258,819,527	271,058,880	285,000,527	299,749,567	315,393,334	129,468,713	0	0	0	0	0	0	0	0	0
- Plant handling cost - discard		5,066,670	492,992	529,051	553,593	579,387	606,785	637,995	671,011	706,031	289,825	0	0	0	0	0	0	0	0	0
- Plant opex		315,259,465	30,675,042	32,918,730	34,445,767	36,050,721	37,755,529	39,697,447	41,751,827	43,930,832	18,033,571	0	0	0	0	0	0	0	0	0
- Laboratory cost		4,503,707	438,215	470,268	492,082	515,010	539,365	567,106	596,455	627,583	257,622	0	0	0	0	0	0	0	0	0
- Royalties		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80% Fixed cost	100%	72,858,905	6,507,052	6,983,002	7,306,930	7,647,387	8,009,025	8,420,962	8,856,754	9,318,983	9,808,808	0	0	0	0	0	0	0	0	0
- Mine		72,858,905	6,507,052	6,983,002	7,306,930	7,647,387	8,009,025	8,420,962	8,856,754	9,318,983	9,808,808	0	0	0	0	0	0	0	0	0
- Plant		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Maintenance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rehabilitation		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Outside services		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Head Office costs (fixed)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other costs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production cost		2,661,036,151	**258,339,129**	**277,235,021**	**290,095,429**	**303,612,032**	**317,969,584**	**334,324,037**	**351,625,614**	**369,976,764**	**157,858,540**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Change in stock value		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Cost of Sales		2,661,036,151	**258,339,129**	**277,235,021**	**290,095,429**	**303,612,032**	**317,969,584**	**334,324,037**	**351,625,614**	**369,976,764**	**157,858,540**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
EBITDA		543,809,895	**106,487,471**	**92,180,978**	**84,132,796**	**75,710,125**	**65,525,227**	**53,368,860**	**40,644,624**	**26,899,941**	**-1,140,128**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CAPEX Schedule																				
80% SA R related Capex	100%	322,028,000	322,028,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100% SA R related Land & Buildings	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20% US$ related Capex	100%	84,388,889	84,388,889	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total capital		406,416,889	**406,416,889**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Working Capital																				
		Opening Bal																		
Trade Debtors	365	-	29,985,748	30,362,959	30,758,484	31,177,164	31,520,121	31,865,170	32,241,389	32,620,003	12,880,965	0	0	0	0	0	0	0	0	0
Stock - Coal		-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital Creditors		-	(33,404,128)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trade Creditors		-	(21,233,353)	(22,786,440)	(23,843,460)	(24,954,414)	(26,134,486)	(27,478,688)	(28,900,735)	(30,409,049)	(12,974,675)	-	-	-	-	-	-	-	-	-
Total Working Capital	**($3,217,208.07)**	-	**(24,651,733)**	**7,576,519**	**6,915,024**	**6,222,750**	**5,385,635**	**4,386,482**	**3,340,654**	**2,210,954**	**(93,709)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Change in stock value		0	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Change in total working capital		0	**24,651,733**	**(32,228,252)**	**661,494**	**692,274**	**837,115**	**999,153**	**1,045,828**	**1,129,700**	**2,304,663**	**(93,709)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Taxation before financial items		46,503,814	-	-	-	-	-	5,285,913	21,296,571	12,193,387	8,069,982	(342,038)	-	-	-	-	-	-	-	-
Change to Cash ("Petty Cash")		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	$10,962,366.96		-246,575	-138,904,457	-41,737,114	36,248,235	43,807,019	58,470,951	79,596,245	56,344,652	58,302,157	56,844,013	56,223,025	50,604,335	84,278,224	2,690,518	-182,717	0	0	

University of Pretoria etd – Swanepoel, W (2003)

	"Nominal terms"	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59		
Rope Shovel Model			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Stand alone cash flow	($50,664,787.93)	90,889,191	-275,277,685	59,952,726	84,794,291	76,402,400	66,362,342	49,082,101	20,393,881	15,836,254	-6,905,447	248,329	0	0	0	0	0	0	0	0	0	0
Cummulative cash flow		0	-275,277,685	-215,324,959	-130,530,668	-54,128,269	12,234,074	61,316,174	81,710,055	97,546,309	90,640,862	90,889,191	90,889,191	90,889,191	90,889,191	90,889,191	90,889,191	90,889,191	90,889,191			
Interest (payable)/received		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Loan repayment		-																				
Investment Income received		-																				
Change in taxation due to interest charge		5,285,913	0	0	0	0	0	0	0	-10,724,745	3,817,271	4,123,405	8,412,021	-342,038	0	0	0	0	0	0		
Dividends and STC paid		-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Net Cash Flow after financing		96,175,104	-275,277,685	59,952,726	84,794,291	76,402,400	66,362,342	49,082,101	20,393,881	5,111,509	-3,088,177	4,371,734	8,412,021	-342,038	0	0	0	0	0	0		
		0																				

Depreciation Schedule

ACCOUNTING DEPRECIATION

Period of depreciation of new assets	9.00
Historical per - P & M	9
Historical per - Buildings	9
Commence depreciation	2005
Life of mine (from commence date)	9

10

		TOTAL DEPR	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	PERIODS	
Opening Bal - Buildings		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	
Opening Bal - Plant & machinery	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	
2004	406,416,889	406,416,889	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0.00
2005	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0.00
2006	0	0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0.00
2007	0	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	0.00
2008	0	0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.00
2009	0	0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0.00
2010	0	0						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.00
2011	0	0							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0.00
2012	0	0								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.00
2013	0	0									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.00
2014	0	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
2015	0	0											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
2016	0	0												-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
2017	0	0													-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
2018	0	0														-	-	-	-	-	-	-	-	-	-	-	-	0.00
2019	0	0															-	-	-	-	-	-	-	-	-	-	-	0.00
2020	0	0																-	-	-	-	-	-	-	-	-	-	0.00
2021	0	0																	-	-	-	-	-	-	-	-	-	0.00
	406,416,889	406,416,889	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	45,157,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Check	0.00																										

TAX DEPRECIATION

Period of depreciation of new assets	1
Historical per - P & M	-
Historical tax value	-

		TOTAL DEPR	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	-21	-22	PERIODS	
Opening Bal - Buildings		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Opening Bal - Plant & machinery	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	406,416,889	406,416,889	406,416,889	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	########
2005	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2006	0	0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2007	0	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2008	0	0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2009	0	0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2010	0	0						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2011	0	0							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2012	0	0								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2013	0	0									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2014	0	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2015	0	0											-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2016	0	0												-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2017	0	0													-	-	-	-	-	-	-	-	-	-	-	-	1	-
2018	0	0														-	-	-	-	-	-	-	-	-	-	-	1	-
2019	0	0															-	-	-	-	-	-	-	-	-	-	1	-
2020	0	0																-	-	-	-	-	-	-	-	-	1	-
2021	0	0																	-	-	-	-	-	-	-	-	1	-
2022	0	0																		-	-	-	-	-	-	-	1	-
2023	0	0																			-	-	-	-	-	-	1	-
2024	0	0																				-	-	-	-	-	1	-
2025	0	0																					-	-	-	-	1	-
2026	0	0																						-	-	-	1	-
2027	0	0																							-	-	1	-
2028	0	0																								-		
	406,416,889	406,416,889	406,416,889	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Check	-																										

Taxation Schedule

RING FENCED MINE

Tax rate	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
STC Rate	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
TFreceived - (Tax Factor) to be applied	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
TFpaid - (Tax Factor) to be applied	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%

TAX CALCULATION - Income Statement

OPERATING PROFIT (excl depr)	106,487,471	92,180,978	84,132,796	75,710,125	65,525,227	53,368,860	40,644,624	26,899,941	-1,140,128	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTEREST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LESS DEPRECIATION	-45,157,432	-45,157,432	-45,157,432	-45,157,432	-45,157,432	-45,157,432	-45,157,432	-45,157,432	-45,157,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	61,330,039	47,023,546	38,975,364	30,552,693	20,367,795	8,211,428	-4,512,808	-18,257,491	-46,297,560	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	61,330,039	47,023,546	38,975,364	30,552,693	20,367,795	8,211,428	-4,512,808	-18,257,491	-46,297,560	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TAX PAYABLE - FINANCIAL : (Dr) / Cr.	18,399,012	14,107,064	11,692,609	9,165,808	6,110,339	2,463,428	(1,353,842)	(5,477,247)	(13,889,268)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TAX CALCULATION - Actual tax paid

OPERATING PROFIT (excl depr)	106,487,471	92,180,978	84,132,796	75,710,125	65,525,227	53,368,860	40,644,624	26,899,941	-1,140,128	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit available for Unredeemed capital	106,487,471	92,180,978	84,132,796	75,710,125	65,525,227	53,368,860	40,644,624	26,899,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital brought forward	-	-299,929,418	-207,748,440	-123,615,644	-47,905,519	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit /loss before Wear and Tear	106,487,471	-207,748,440	-123,615,644	-47,905,519	17,619,709	53,368,860	40,644,624	26,899,941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LESS Wear and Tear	-406,416,889	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital before Group application	-299,929,418	-207,748,440	-123,615,644	-47,905,519	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital utilized by Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital carried forward	-299,929,418	-207,748,440	-123,615,644	-47,905,519	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	0	0	0	0	17,619,709	53,368,860	40,644,624	26,899,941	-1,140,128	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TAX PAYABLE - BEFORE INTEREST	-	-	-	-	5,285,913	16,010,658	12,193,387	8,069,982	(342,038)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TAX CALCULATION - Actual tax afteInter.

OPERATING PROFIT (excl depr)	106,487,471	92,180,978	84,132,796	75,710,125	65,525,227	53,368,860	40,644,624	26,899,941	(1,140,128)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INTEREST RECEIVED /(PAYABLE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit available for Unredeemed capital	106,487,471	92,180,978	84,132,796	75,710,125	65,525,227	53,368,860	40,644,624	26,899,941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital brought forward	-	-299,929,418	-207,748,440	-123,615,644	-47,905,519	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit available for Wear and Tear	106,487,471	-207,748,440	-123,615,644	-47,905,519	17,619,709	53,368,860	40,644,624	26,899,941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LESS Wear and Tear	-406,416,889	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital before Group application	-299,929,418	-207,748,440	-123,615,644	-47,905,519	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital utilized by Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital carried forward	-299,929,418	-207,748,440	-123,615,644	-47,905,519	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	0	0	0	0	17,619,709	53,368,860	40,644,624	26,899,941	-1,140,128	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TAX PAYABLE - AFTER INTEREST	-	-	-	-	5,285,913	16,010,658	12,193,387	8,069,982	(342,038)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TAXATION CASHFLOW - before Interest

First and second payment		-	-	-	-	-	5,285,913	16,010,658	12,193,387	8,069,982	(342,038)	-	-	-	-	-	-	-	-	-	-	-	-
Third payment		-	-	-	-	5,285,913	16,010,658	6,907,475	(7,940,676)	(8,412,021)	342,038	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	5,285,913	21,296,571	12,193,387	8,069,982	(342,038)	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in Taxation credit	-	-	-	-	(5,285,913)	(10,724,745)	9,103,183	4,123,405	8,412,021	(342,038)	-	-	-	-	-	-	-	-	-	-	-	-	-

TAXATION CASHFLOW - AfteInterest

First and second payment	-	-	-	-	-	-	5,285,913	16,010,658	12,193,387	8,069,982	(342,038)	-	-	-	-	-	-	-	-	-	-	-	-
Third payment		-	-	-	-	5,285,913	16,010,658	6,907,475	(7,940,676)	(12,535,426)	(8,069,982)	342,038	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	5,285,913	21,296,571	22,918,133	4,252,712	(4,465,443)	(8,412,021)	342,038	-	-	-	-	-	-	-	-	-	-	-

University of Pretoria etd – Swanepoel, W (2003)

"Nominal terms"

Rope Shovel Model	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59		
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Change in Taxation credit		-	-	-	-	(5,285,913)	(10,724,745)	9,103,183	14,848,150	4,594,750	(4,465,443)	(8,412,021)	342,038	-	-	-	-	-	-	-	-
Change to Deferred Taxation		18,399,012	14,107,064	11,692,609	9,165,808	824,426	-13,547,230	-13,547,230	-13,547,230	-13,547,230	-	-	-	-	-	-	-	-	-	-	-
STC TAXATION	**Capitalise=0 Cash=1**																				
Opening balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STC Taxation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STC Taxation Paid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Creditor STC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change to STC Balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIVIDEND / SHAREHOLDERS ACCOUNT	**Capitalise=0 Cash=1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividend Rate		33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Opening balance Shareholders Account		-	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Dividends capitilized for the period		#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Share Holder's Loan Balance		#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Dividends opening balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends to be paid out		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends paid in cash		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing balance cash dividends		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REPAYMENT OF INTERGROUP LOAN																					
Interest payable on Loan		15.0%	12.6%	11.1%	10.5%	9.6%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	0.0%	0.0%
Interest receivable on Loan		12.0%	9.6%	8.1%	7.5%	6.6%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	0.0%	0.0%
Balance brought forward	-	**-**	**(275,277,685)**	**(215,324,959)**	**(130,530,668)**	**(54,128,269)**	**12,234,074**	**61,316,174**	**81,710,055**	**86,821,564**	**83,733,387**	**88,105,122**	**96,517,142**	**96,175,104**	**96,175,104**	**96,175,104**	**96,175,104**	**96,175,104**	**96,175,104**	**96,175,104**	**96,175,104**
Amount drawn	-	-275,277,685	59,952,726	84,794,291	76,402,400	66,362,342	49,082,101	20,393,881	15,836,254	-6,905,447	248,329	-	-	-	-	-	-	-	-	-	-
Balance before interest	-	(275,277,685)	(215,324,959)	(130,530,668)	(54,128,269)	12,234,074	61,316,174	81,710,055	97,546,309	79,916,117	83,981,717	88,105,122	96,517,142	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104
Amount (paid)/received - Interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	(275,277,685)	(215,324,959)	(130,530,668)	(54,128,269)	12,234,074	61,316,174	81,710,055	97,546,309	79,916,117	83,981,717	88,105,122	96,517,142	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104
Taxation movement - Interest	5,285,913	-	-	-	-	-	-	-	(10,724,745)	3,817,271	4,123,405	8,412,021	(342,038)	-	-	-	-	-	-	-	-
Balance at end of period	5,285,913	(275,277,685)	(215,324,959)	(130,530,668)	(54,128,269)	12,234,074	61,316,174	81,710,055	86,821,564	83,733,387	88,105,122	96,517,142	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104
Average Cashflow	(90,889,191)	-137,638,843	-245,301,322	-172,927,814	-92,329,468	-20,947,097	36,775,124	71,513,115	89,628,182	83,368,840	83,857,552	88,105,122	96,517,142	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104	96,175,104
Net cashflow (Interest-taxation)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest portion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxation Portion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DCF VALUATION

VALUATION BEFORE FINANCING

Discount Rate	NPV - R 'M	IRR
10.0%	-0.9	
12.0%	260.3	9.9%
14.0%	-24.4	

81.39959387
88.6733183

VALUATION AFTER FINANCING AND DIVIDENDS

Discount Rate	NPV - R 'M	IRR
#REF!	#REF!	
#REF!	#REF!	

CASH FLOW IN US$-TERMS US$ #REF!

VALUATION BEFORE FINANCING

Discount Rate	NPV - US$ 'M	IRR
4.0%	#REF!	
6.0%	#REF!	

University of Pretoria etd – Swanepoel, W (2003)

		"Nominal terms"	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59
Face Shovel Model				2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Macro Economic Indicators																					
US PPI escalation				0.98	0.99	1.00	1.01	1.03	1.04	1.05	1.06	1.07	1.09	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24
SA PPI escalation				1.09	1.17	1.24	1.31	1.39	1.47	1.56	1.65	1.75	1.86	1.97	2.09	2.21	2.35	2.49	2.64	2.80	2.96
R/$ exchange rates		100%		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
				9.54	9.05	9.22	9.42	9.60	9.59	9.59	9.59										
STATISTICS																					
Income per ton - Nominal terms	Ave.	R/ton	235.54	214.59	217.29	220.12	223.12	225.57	228.04	230.73	233.44	236.36	239.43	242.56	246.10	250.07	0.00	0.00	0.00	0.00	0.00
Income per ton - Real terms	Ave.	R/ton	139.38	197.78	186.29	178.04	170.25	162.38	154.86	147.82	141.09	134.77	128.80	123.09	117.82	112.94	0.00	0.00	0.00	0.00	0.00
Profit margin based on cash cost - Real	Ave.	%	34%	49%	46%	44%	43%	40%	38%	36%	33%	30%	30%	27%	25%	22%	0%	0%	0%	0%	0%
Profit margin based on total cost - Real	Ave.	%	27%	44%	41%	39%	38%	36%	33%	31%	28%	26%	26%	23%	20%	-2%	0%	0%	0%	0%	0%
Cash production cost - Total tons			8.51	9.04	9.03	8.91	8.80	8.69	8.62	8.55	8.49	8.43	8.08	8.03	7.98	7.94	0.00	0.00	0.00	0.00	0.00
Cash production cost - Real terms	Ave.	R/ton	94.58	100.51	100.34	99.05	97.80	96.63	95.85	95.10	94.40	93.74	89.84	89.27	88.75	88.26	0.00	0.00	0.00	0.00	0.00
Total Production cost - Nominal terms		R/ton	164.61	120.32	128.29	133.72	139.43	145.49	152.39	159.70	167.44	175.65	178.27	187.17	196.64	255.46	0.00	0.00	0.00	0.00	0.00
Total Production cost - Real Terms	Ave.	R/ton	103.67	110.89	109.99	108.16	106.39	104.73	103.49	102.31	101.20	100.16	95.89	94.98	94.14	115.38	0.00	0.00	0.00	0.00	0.00
Total distribution cost - Nominal	Ave.	R/ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total distribution cost - Real	Ave.	R/ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Production Schedule		100%				100%	100%	100%	100%	100%											
Waste (Over-burden)		t	205,861,000	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	3,167,092	0	0	0	0	0
Stripping Ratio		Ave.	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	0.0	0.0	0.0	0.0	0.0
R.O.M Tonnage's		t	1,851,304	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	374,804	0	0	0	0	0
Final Yield		%		85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	0%	0%	0%	0%	0%
Final product produced		t	20,707,911	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**318,583**	**0**	**0**	**0**	**0**	**0**
Closing stock calculation																					
Opening stock		t	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Production		t	20,707,911	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	318,583	-	-	-	-	-
Total product sold		t	-20,707,911	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(318,583)**	-	-	-	-	-
- Market		t	-20,707,911	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(318,583)	-	-	-	-	-
		t	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing stock		t	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stock value per ton		R/ton	0	**120.32**	**128.29**	**133.72**	**139.43**	**145.49**	**152.39**	**159.70**	**167.44**	**175.65**	**178.27**	**187.17**	**196.64**	**255.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Sales Schedule		100%																			
Sales Price																					
- Market		$/t	$23.30	21.46	21.73	22.01	22.31	22.56	22.80	23.07	23.34	23.64	23.94	24.26	24.61	25.01	25.43	25.89	0.00	0.00	0.00
		$/t	$23.30	21.46	21.73	22.01	22.31	22.56	22.80	23.07	23.34	23.64	23.94	24.26	24.61	25.01	25.43	25.89	0.00	0.00	0.00
Revenue																					
- Market		R	4,764,722,969	364,611,147	369,197,836	374,007,219	379,098,144	383,268,333	387,463,939	392,038,578	396,642,324	401,604,769	406,825,631	412,140,457	418,157,708	79,666,884	0	0	0	0	0
		R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross Revenue		R	4,764,722,969	364,611,147	369,197,836	374,007,219	379,098,144	383,268,333	387,463,939	392,038,578	396,642,324	401,604,769	406,825,631	412,140,457	418,157,708	79,666,884	0	0	0	0	0
LESS : Distribution Cost		R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Sales		R	4,764,722,969	**364,611,147**	**369,197,836**	**374,007,219**	**379,098,144**	**383,268,333**	**387,463,939**	**392,038,578**	**396,642,324**	**401,604,769**	**406,825,631**	**412,140,457**	**418,157,708**	**79,666,884**	**0**	**0**	**0**	**0**	**0**
Distribution cost schedule		100%																			
Export via RBCT		100%																			
- Road		R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail		R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port		R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution cost RBCT																					
- Road		R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rail		R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Port		R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Export via BMA (Durban)		100%																			
- Road		R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail		R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port		R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution cost BMA (Durban)		R																			
- Road			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rail			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Port			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total distribution cost		R	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total :																					
- Road		R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail		R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port		R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost of Sales Schedule		100%																			
80% Variable cost		100%	2,961,856,260	178,795,333	191,873,094	200,773,723	210,128,503	220,065,299	231,384,141	243,358,484	256,059,231	269,518,233	283,763,640	298,900,770	314,980,364	62,255,443	0	0	0	0	0
- Mine			2,438,588,233	147,207,750	157,975,077	165,303,241	173,005,322	181,186,594	190,505,749	200,364,597	210,821,517	221,902,730	233,631,416	246,094,286	259,333,115	51,256,839	0	0	0	0	0
- Plant handling cost - discard			8,161,893	492,701	528,739	553,266	579,044	606,427	637,618	670,615	705,614	742,703	781,958	823,671	867,981	171,555	0	0	0	0	0
- Plant opex			507,851,117	30,656,927	32,899,289	34,425,425	36,029,431	37,733,232	39,674,003	41,727,169	43,904,888	46,212,619	48,655,191	51,250,661	54,007,729	10,674,555	0	0	0	0	0
- Laboratory cost			7,255,016	437,956	469,990	491,792	514,706	539,046	566,771	596,102	627,213	660,180	695,074	732,152	771,539	152,494	0	0	0	0	0
- Royalties			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80% Fixed cost		100%	72,858,905	6,507,052	6,983,002	7,306,930	7,647,387	8,009,025	8,420,962	8,856,754	9,318,983	9,808,808	0	0	0	0	0	0	0	0	0
- Mine			72,858,905	6,507,052	6,983,002	7,306,930	7,647,387	8,009,025	8,420,962	8,856,754	9,318,983	9,808,808	0	0	0	0	0	0	0	0	0
- Plant			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Maintenance			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rehabilitation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Outside services			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Head Office costs (fixed)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other costs			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production cost			3,034,715,165	**185,302,385**	**198,856,096**	**208,080,654**	**217,775,890**	**228,074,324**	**239,805,103**	**252,215,239**	**265,378,215**	**279,327,041**	**283,763,640**	**298,900,770**	**314,980,364**	**62,255,443**	**0**	**0**	**0**	**0**	**0**
Change in stock value			0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Cost of Sales			3,034,715,165	**185,302,385**	**198,856,096**	**208,080,654**	**217,775,890**	**228,074,324**	**239,805,103**	**252,215,239**	**265,378,215**	**279,327,041**	**283,763,640**	**298,900,770**	**314,980,364**	**62,255,443**	**0**	**0**	**0**	**0**	**0**
EBITDA			1,730,007,804	**179,308,761**	**170,341,739**	**165,926,566**	**161,322,254**	**155,194,009**	**147,658,836**	**139,823,339**	**131,264,110**	**122,277,728**	**123,061,992**	**113,239,687**	**103,177,344**	**17,411,441**	**0**	**0**	**0**	**0**	**0**
CAPEX Schedule																					
80% SA R related Capex		100%	197,036,000	197,036,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100% SA R related Land & Buildings		100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20% US$ related Capex		100%	51,634,172	51,634,172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total capital			248,670,172	**248,670,172**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Working Capital																					
			Opening Bal																		
Trade Debtors		365	-	29,968,039	30,345,028	30,740,319	31,158,752	31,501,507	31,846,351	32,222,349	32,600,739	33,008,611	33,437,723	33,874,558	34,369,127	6,547,963	0	0	0	0	0
Stock - Coal			-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital Creditors			-	(20,438,644)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trade Creditors			-	(15,230,333)	(16,344,337)	(17,102,519)	(17,899,388)	(18,745,835)	(19,710,008)	(20,730,020)	(21,811,908)	(22,958,387)	(23,323,039)	(24,567,187)	(25,888,797)	(5,116,886)	-	-	-	-	-
Total Working Capital	$40,084,543.77		-	**(5,700,938)**	**14,000,691**	**13,637,800**	**13,259,363**	**12,755,672**	**12,136,343**	**11,492,329**	**10,788,831**	**10,050,224**	**10,114,684**	**9,307,371**	**8,480,330**	**1,431,077**	**-**	**-**	**-**	**-**	**-**
Change in stock value			0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in total working capital			0	**5,700,938**	**(19,701,629)**	**362,891**	**378,437**	**503,691**	**619,329**	**644,013**	**703,498**	**738,607**	**(64,460)**	**807,313**	**827,042**	**7,049,252**	**1,431,077**	**-**	**-**	**-**	**-**
Taxation before financial items			490,959,492	-	-	30,294,099	80,072,068	67,880,547	45,176,909	42,459,177	41,947,002	39,379,233	36,683,318	36,918,598	33,971,906	30,953,203	5,223,432	-	-	-	-
Change to Cash ("Petty Cash")			0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	$10,962,366.96			-246,575	-138,904,457	-41,737,114	36,248,235	43,807,019	58,470,951	79,596,245	56,344,652	58,302,157	56,844,013	56,223,025	50,604,335	84,278,224	2,690,518	-182,717	0	0	

University of Pretoria etd – Swanepoel, W (2003)

"Nominal terms"

Face Shovel Model		Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59
Stand alone cash flow	$335,218,445.61		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
		990,378,140	-63,660,473	150,640,111	135,995,358	81,628,622	87,817,153	103,101,256	98,008,175	90,020,606	83,637,102	86,314,213	77,128,402	70,032,480	-6,492,510	-3,792,355	0	0	0	0
Cummulative cash flow		0	-63,660,473	86,979,638	222,974,996	304,603,618	392,420,771	495,522,027	593,530,202	683,550,809	767,187,911	853,502,124	930,630,526	1,000,663,005	994,170,495	990,378,140	990,378,140	990,378,140	990,378,140	
Interest (payable)/received		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment		-																		
Investment Income received		-																		
Change in taxation due to interest charge		46,558,203	0	0	0	0	0	0	0	2,260,552	2,350,649	2,567,769	2,695,914	-235,279	2,946,692	3,018,703	25,729,771	5,223,432	0	0
Dividends and STC paid		-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow after financing		1,036,936,343	-63,660,473	150,640,111	135,995,358	81,628,622	87,817,153	103,101,256	98,008,175	92,281,158	85,987,751	88,881,982	79,824,316	69,797,200	-3,545,818	-773,652	25,729,771	5,223,432	0	0
		0																		

Depreciation Schedule

ACCOUNTING DEPRECIATION

Period of depreciation of new assets	13.00
Historical per - P & M	13
Historical per - Buildings	13
Commence depreciation	2005
Life of mine (from commence date)	13

14

		TOTAL DEPR	13	12	11	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	PERIODS	
Opening Bal - Buildings		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	
Opening Bal - Plant & machinery	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	
2004	248,670,172	248,670,172	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	-	-	-	-	-	-	-	-	-	-	-	13	0.00
2005	0	0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	0.00
2006	0	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0.00
2007	0	0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	0.00
2008	0	0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	0.00
2009	0	0						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0.00
2010	0	0							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0.00
2011	0	0								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	0.00
2012	0	0									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.00
2013	0	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0.00
2014	0	0											-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.00
2015	0	0												-	-	-	-	-	-	-	-	-	-	-	-	-	3	0.00
2016	0	0													-	-	-	-	-	-	-	-	-	-	-	-	2	0.00
2017	0	0														-	-	-	-	-	-	-	-	-	-	-	1	0.00
2018	0	0															-	-	-	-	-	-	-	-	-	-	-	0.00
2019	0	0																-	-	-	-	-	-	-	-	-	-	0.00
2020	0	0																	-	-	-	-	-	-	-	-	-	0.00
2021	0	0																		-	-	-	-	-	-	-	-	0.00
	248,670,172	248,670,172	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	19,128,475	0	0	0	0	0	0	0	0	0	0	0		
	Check	0.00																										

TAX DEPRECIATION

Period of depreciation of new assets	1
Historical per - P & M	-
Historical tax value	-

		TOTAL DEPR	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	-21	-22	PERIODS	
Opening Bal - Buildings		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Opening Bal - Plant & machinery		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	248,670,172	248,670,172	248,670,172	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	########
2005	0	0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2006	0	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2007	0	0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2008	0	0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2009	0	0						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2010	0	0							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2011	0	0								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2012	0	0									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2013	0	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2014	0	0											-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2015	0	0												-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2016	0	0													-	-	-	-	-	-	-	-	-	-	-	-	1	-
2017	0	0														-	-	-	-	-	-	-	-	-	-	-	1	-
2018	0	0															-	-	-	-	-	-	-	-	-	-	1	-
2019	0	0																-	-	-	-	-	-	-	-	-	1	-
2020	0	0																	-	-	-	-	-	-	-	-	1	-
2021	0	0																		-	-	-	-	-	-	-	1	-
2022	0	0																			-	-	-	-	-	-	1	-
2023	0	0																				-	-	-	-	-	1	-
2024	0	0																					-	-	-	-	1	-
2025	0	0																						-	-	-	1	-
2026	0	0																							-	-	1	-
2027	0	0																								-	1	-
2028	0	0																										
	248,670,172	248,670,172	248,670,172	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Check	-																										

Taxation Schedule

RING FENCED MINE

Tax rate	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
STC Rate	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
TFreceived - (Tax Factor) to be applied	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
TFpaid - (Tax Factor) to be applied	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%

TAX CALCULATION - Income Statement

OPERATING PROFIT (excl depr)	179,308,761	170,341,739	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	0	0	0	0	0	0	0	0
INTEREST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LESS DEPRECIATION	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	-19,128,475	0	0	0	0	0	0
TOTAL	160,180,287	151,213,265	146,798,091	142,193,779	136,065,534	128,530,361	120,694,865	112,135,635	103,149,253	103,933,517	94,111,212	84,048,869	-1,717,034	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	160,180,287	151,213,265	146,798,091	142,193,779	136,065,534	128,530,361	120,694,865	112,135,635	103,149,253	103,933,517	94,111,212	84,048,869	-1,717,034	0	0	0	0	0	0	0	0
TAX PAYABLE - FINANCIAL : (Dr) / Cr.	48,054,086	45,363,979	44,039,427	42,658,134	40,819,660	38,559,108	36,208,459	33,640,690	30,944,776	31,180,055	28,233,364	25,214,661	(515,110)	-	-	-	-	-	-	-	-

TAX CALCULATION - Actual tax paid

OPERATING PROFIT (excl depr)	179,308,761	170,341,739	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	0	0	0	0	0	0	0	0
Profit available for Unredeemed capital	179,308,761	170,341,739	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	0	0	0	0	0	0	0	0
Unredeemed Capital brought forward	-	-69,361,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit /loss before Wear and Tear	179,308,761	100,980,329	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	-	-	-	-	-	-	-	-
LESS Wear and Tear	-248,670,172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital before Group application	-69,361,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital utilized by Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital carried forward	-69,361,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	0	100,980,329	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	0	0	0	0	0	0	0	0
TAX PAYABLE - BEFORE INTEREST	-	30,294,099	49,777,970	48,396,676	46,558,203	44,297,651	41,947,002	39,379,233	36,683,318	36,918,598	33,971,906	30,953,203	5,223,432	-	-	-	-	-	-	-	-

TAX CALCULATION - Actual tax aftelnter.

OPERATING PROFIT (excl depr)	179,308,761	170,341,739	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	-	-	-	-	-	-	-	-
INTEREST RECEIVED /(PAYABLE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit available for Unredeemed capital	179,308,761	170,341,739	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	0	0	0	0	0	0	0	0
Unredeemed Capital brought forward	-	-69,361,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit available for Wear and Tear	179,308,761	100,980,329	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	-	-	-	-	-	-	-	-
LESS Wear and Tear	-248,670,172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital before Group application	-69,361,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital utilized by Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital carried forward	-69,361,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	0	100,980,329	165,926,566	161,322,254	155,194,009	147,658,836	139,823,339	131,264,110	122,277,728	123,061,992	113,239,687	103,177,344	17,411,441	0	0	0	0	0	0	0	0
TAX PAYABLE - AFTER INTEREST	-	30,294,099	49,777,970	48,396,676	46,558,203	44,297,651	41,947,002	39,379,233	36,683,318	36,918,598	33,971,906	30,953,203	5,223,432	-	-	-	-	-	-	-	-

TAXATION CASHFLOW - before Interest

First and second payment		-	-	30,294,099	49,777,970	48,396,676	46,558,203	44,297,651	41,947,002	39,379,233	36,683,318	36,918,598	33,971,906	30,953,203	5,223,432	-	-	-	-	-	-
Third payment		-	30,294,099	49,777,970	18,102,577	(3,219,767)	(4,099,025)	(4,611,201)	(4,918,418)	(2,695,914)	235,279	(2,946,692)	(3,018,703)	(25,729,771)	(5,223,432)	-	-	-	-	-	-
	-	-	30,294,099	80,072,068	67,880,547	45,176,909	42,459,177	41,947,002	39,379,233	36,683,318	36,918,598	33,971,906	30,953,203	5,223,432	-	-	-	-	-	-	-
Change in Taxation credit	-	(30,294,099)	(19,483,871)	31,675,392	21,322,345	879,258	512,176	2,567,769	2,695,914	(235,279)	2,946,692	3,018,703	25,729,771	5,223,432	-	-	-	-	-	-	-

TAXATION CASHFLOW - Aftelnterest

First and second payment	-	-	-	30,294,099	49,777,970	48,396,676	46,558,203	44,297,651	41,947,002	39,379,233	36,683,318	36,918,598	33,971,906	30,953,203	5,223,432	-	-	-	-	-	-
Third payment		-	30,294,099	49,777,970	18,102,577	(3,219,767)	(4,099,025)	(4,611,201)	(4,918,418)	(5,263,683)	(2,460,635)	(2,711,413)	(5,965,394)	(28,748,474)	(30,953,203)	(5,223,432)	-	-	-	-	-
	-	-	30,294,099	80,072,068	67,880,547	45,176,909	42,459,177	39,686,450	37,028,584	34,115,550	34,222,683	34,207,185	28,006,512	2,204,729	(25,729,771)	(5,223,432)	-	-	-	-	-

University of Pretoria etd – Swanepoel, W (2003)

"Nominal terms"

Face Shovel Model	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59		
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Change in Taxation credit		-	(30,294,099)	(19,483,871)	31,675,392	21,322,345	879,258	512,176	307,217	345,265	(2,803,048)	250,777	3,253,982	22,783,079	2,204,729	(25,729,771)	(5,223,432)	-	-	-	-
Change to Deferred Taxation		48,054,086	15,069,881	-5,738,542	-5,738,542	-5,738,542	-5,738,542	-5,738,542	-5,738,542	-5,738,542	-5,738,542	-5,738,542	-5,738,542	-5,738,542	-	-	-	-	-	-	-
STC TAXATION	**Capitalise=0 Cash=1**																				
Opening balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STC Taxation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STC Taxation Paid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Creditor STC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change to STC Balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIVIDEND / SHAREHOLDERS ACCOUNT	**Capitalise=0 Cash=1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividend Rate		33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Opening balance Shareholders Account		-	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Dividends capitilized for the period		#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Share Holder's Loan Balance		#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Dividends opening balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends to be paid out		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends paid in cash		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing balance cash dividends		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REPAYMENT OF INTERGROUP LOAN																					
Interest payable on Loan		15.0%	12.6%	11.1%	10.5%	9.6%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	0.0%	0.0%
Interest receivable on Loan		12.0%	9.6%	8.1%	7.5%	6.6%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	0.0%	0.0%
Balance brought forward	-	**-**	**(63,660,473)**	**86,979,638**	**222,974,996**	**304,603,618**	**392,420,771**	**495,522,027**	**593,530,202**	**685,811,360**	**771,799,111**	**860,681,094**	**940,505,410**	**1,010,302,610**	**1,006,756,792**	**1,005,983,140**	**1,031,712,911**	**1,036,936,343**	##########	##########	##########
Amount drawn	-	-63,660,473	150,640,111	135,995,358	81,628,622	87,817,153	103,101,256	98,008,175	90,020,606	83,637,102	86,314,213	77,128,402	70,032,480	-6,492,510	-3,792,355	-	-	-	-	-	-
Balance before interest	-	(63,660,473)	86,979,638	222,974,996	304,603,618	392,420,771	495,522,027	593,530,202	683,550,809	769,448,462	858,113,325	937,809,495	1,010,537,889	1,003,810,100	1,002,964,437	1,005,983,140	1,031,712,911	1,036,936,343	##########	##########	##########
Amount (paid)/received - Interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	(63,660,473)	86,979,638	222,974,996	304,603,618	392,420,771	495,522,027	593,530,202	683,550,809	769,448,462	858,113,325	937,809,495	1,010,537,889	1,003,810,100	1,002,964,437	1,005,983,140	1,031,712,911	1,036,936,343	##########	##########	##########
Taxation movement - Interest	46,558,203	-	-	-	-	-	-	-	2,260,552	2,350,649	2,567,769	2,695,914	(235,279)	2,946,692	3,018,703	25,729,771	5,223,432	-	-	-	-
Balance at end of period	46,558,203	(63,660,473)	86,979,638	222,974,996	304,603,618	392,420,771	495,522,027	593,530,202	685,811,360	771,799,111	860,681,094	940,505,410	1,010,302,610	1,006,756,792	1,005,983,140	1,031,712,911	1,036,936,343	1,036,936,343	##########	##########	##########
	(990,378,140)																				
Average Cashflow		-31,830,236	11,659,583	154,977,317	263,789,307	348,512,194	443,971,399	544,526,115	638,540,505	727,629,911	814,956,218	899,245,294	975,521,649	1,007,056,355	1,004,860,614	1,005,983,140	1,031,712,911	1,036,936,343	##########	##########	##########
Net cashflow (Interest-taxation)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest portion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxation Portion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DCF VALUATION

VALUATION BEFORE FINANCING

Discount Rate	NPV - R 'M	IRR
10.0%	544.8	
12.0%	613.0	221.7%
14.0%	443.5	

81.39959387
88.6733183

VALUATION AFTER FINANCING AND DIVIDENDS

Discount Rate	NPV - R 'M	IRR
#REF!	#REF!	
#REF!	#REF!	

CASH FLOW IN US$-TERMS

US$ #REF!

VALUATION BEFORE FINANCING

Discount Rate	NPV - US$ 'M	IRR
4.0%	#REF!	
6.0%	#REF!	

University of Pretoria etd – Swanepoel, W (2003)

	"Nominal terms"	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59
Hydr Excav Model			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Macro Economic Indicators																				
US PPI escalation			0.98	0.99	1.00	1.01	1.03	1.04	1.05	1.06	1.07	1.09	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24
SA PPI escalation			1.09	1.17	1.24	1.31	1.39	1.47	1.56	1.65	1.75	1.86	1.97	2.09	2.21	2.35	2.49	2.64	2.80	2.96
R/$ exchange rates	100%		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
			9.54	9.05	9.22	9.42	9.60	9.59	9.59	9.59										
STATISTICS																				
Income per ton - Nominal terms	Ave. R/ton	137.73	214.59	217.29	220.12	223.12	225.57	228.04	230.73	233.44	236.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Income per ton - Real terms	Ave. R/ton	91.12	197.78	186.29	178.04	170.25	162.38	154.86	147.82	141.09	134.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Profit margin based on cash cost - Real	Ave. %	8%	29%	25%	22%	20%	17%	13%	10%	6%	-2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Profit margin based on total cost - Real	Ave. %	2%	21%	17%	14%	12%	9%	6%	3%	-1%	-20%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cash production cost - Total tons		8.46	8.73	8.71	8.60	8.49	8.39	8.32	8.26	8.20	8.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash production cost - Real terms	Ave. R/ton	136.59	140.85	140.60	138.80	137.04	135.40	134.31	133.26	132.28	136.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Production cost - Nominal terms	R/ton	210.81	169.54	180.71	188.32	196.32	204.81	214.48	224.72	235.57	282.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Production cost - Real Terms	Ave. R/ton	150.44	156.25	154.94	152.32	149.80	147.43	145.66	143.97	142.38	161.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total distribution cost - Nominal	Ave. R/ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total distribution cost - Real	Ave. R/ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Production Schedule	100%				100%	100%	100%	100%	100%											
Waste (Over-burden)	t	213,456,000	25,441,716	25,441,716	25,441,716	25,441,716	25,441,716	25,441,716	25,441,716	25,441,716	9,922,269	0	0	0	0	0	0	0	0	0
Stripping Ratio	Ave.	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	0.0	0.0	0.0	0.0	0.0
R.O.M Tonnage's	t	1,161,897	2,000,135	2,000,135	2,000,135	2,000,135	2,000,135	2,000,135	2,000,135	2,000,135	780,053	0	0	0	0	0	0	0	0	0
Final Yield	%		85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	0%	0%	0%	0%	0%
Final product produced	t	14,263,962	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**1,700,115**	**663,045**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Closing stock calculation																				
Opening stock	t	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Production	t	14,263,962	1,700,115	1,700,115	1,700,115	1,700,115	1,700,115	1,700,115	1,700,115	1,700,115	663,045	-	-	-	-	-	-	-	-	-
Total product sold	t	-14,263,962	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(1,700,115)**	**(663,045)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
- Market	t	-14,263,962	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(1,700,115)	(663,045)	-	-	-	-	-	-	-	-	-
	t	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing stock	t	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stock value per ton	R/ton	0	**169.54**	**180.71**	**188.32**	**196.32**	**204.81**	**214.48**	**224.72**	**235.57**	**282.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Sales Schedule	100%																			
Sales Price																				
- Market	$/t	$23.30	21.46	21.73	22.01	22.31	22.56	22.80	23.07	23.34	23.64	23.94	24.26	24.61	25.01	25.43	25.89	0.00	0.00	0.00
	$/t	$23.30	21.46	21.73	22.01	22.31	22.56	22.80	23.07	23.34	23.64	23.94	24.26	24.61	25.01	25.43	25.89	0.00	0.00	0.00
Revenue																				
- Market	R	3,204,846,045	364,826,600	369,415,999	374,228,225	379,322,158	383,494,811	387,692,897	392,270,238	396,876,705	156,718,412	0	0	0	0	0	0	0	0	0
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross Revenue	R	3,204,846,045	364,826,600	369,415,999	374,228,225	379,322,158	383,494,811	387,692,897	392,270,238	396,876,705	156,718,412	0	0	0	0	0	0	0	0	0
LESS : Distribution Cost	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Sales	R	3,204,846,045	**364,826,600**	**369,415,999**	**374,228,225**	**379,322,158**	**383,494,811**	**387,692,897**	**392,270,238**	**396,876,705**	**156,718,412**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Distribution cost schedule	100%																			
Export via RBCT	100%																			
- Road	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution cost RBCT																				
- Road	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rail	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Port	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Export via BMA (Durban)	100%																			
- Road	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution cost BMA (Durban)	R																			
- Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rail		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Port		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total distribution cost	R	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total :																				
- Road	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost of Sales Schedule	100%																			
80% Variable cost	100%	2,599,240,018	252,908,495	271,407,171	283,997,235	297,229,701	311,285,438	327,296,098	344,233,974	362,199,358	148,682,548	0	0	0	0	0	0	0	0	0
- Mine		2,274,410,176	221,302,247	237,489,122	248,505,793	260,084,583	272,383,759	286,393,550	301,214,681	316,934,912	130,101,529	0	0	0	0	0	0	0	0	0
- Plant handling cost - discard		5,066,670	492,992	529,051	553,593	579,387	606,785	637,995	671,011	706,031	289,825	0	0	0	0	0	0	0	0	0
- Plant opex		315,259,465	30,675,042	32,918,730	34,445,767	36,050,721	37,755,529	39,697,447	41,751,827	43,930,832	18,033,571	0	0	0	0	0	0	0	0	0
- Laboratory cost		4,503,707	438,215	470,268	492,082	515,010	539,365	567,106	596,455	627,583	257,622	0	0	0	0	0	0	0	0	0
- Royalties		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80% Fixed cost	100%	77,274,596	6,901,419	7,406,215	7,749,775	8,110,865	8,494,421	8,931,323	9,393,527	9,883,770	10,403,282	0	0	0	0	0	0	0	0	0
- Mine		77,274,596	6,901,419	7,406,215	7,749,775	8,110,865	8,494,421	8,931,323	9,393,527	9,883,770	10,403,282	0	0	0	0	0	0	0	0	0
- Plant		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Maintenance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rehabilitation		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Outside services		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Head Office costs (fixed)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other costs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production cost		2,676,514,614	**259,809,914**	**278,813,385**	**291,747,010**	**305,340,566**	**319,779,859**	**336,227,421**	**353,627,501**	**372,083,128**	**159,085,830**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Change in stock value		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Cost of Sales		2,676,514,614	**259,809,914**	**278,813,385**	**291,747,010**	**305,340,566**	**319,779,859**	**336,227,421**	**353,627,501**	**372,083,128**	**159,085,830**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
EBITDA		528,331,431	**105,016,686**	**90,602,614**	**82,481,215**	**73,981,591**	**63,714,952**	**51,465,475**	**38,642,737**	**24,793,577**	**-2,367,418**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CAPEX Schedule																				
80% SA R related Capex	100%	202,678,000	202,678,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100% SA R related Land & Buildings	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20% US$ related Capex	100%	53,112,683	53,112,683	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total capital		255,790,683	**255,790,683**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Working Capital																				
		Opening Bal																		
Trade Debtors	365	-	29,985,748	30,362,959	30,758,484	31,177,164	31,520,121	31,865,170	32,241,389	32,620,003	12,880,965	0	0	0	0	0	0	0	0	0
Stock - Coal		-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital Creditors		-	(21,023,892)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trade Creditors		-	(21,354,240)	(22,916,169)	(23,979,206)	(25,096,485)	(26,283,276)	(27,635,131)	(29,065,274)	(30,582,175)	(13,075,548)	-	-	-	-	-	-	-	-	-
Total Working Capital	**$6,543,835.43**	-	**(12,392,383)**	**7,446,790**	**6,779,278**	**6,080,679**	**5,236,845**	**4,230,039**	**3,176,115**	**2,037,828**	**(194,582)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Change in stock value		0	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Change in total working capital		0	**12,392,383**	**(19,839,174)**	**667,512**	**698,599**	**843,833**	**1,006,806**	**1,053,924**	**1,138,287**	**2,232,411**	**(194,582)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Taxation before financial items		100,876,710	-	-	-	6,692,950	28,887,427	34,616,013	12,359,651	11,592,821	7,438,073	(710,225)	-	-	-	-	-	-	-	-
Change to Cash ("Petty Cash")		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	$10,962,366.96		-246,575	-138,904,457	-41,737,114	36,248,235	43,807,019	58,470,951	79,596,245	56,344,652	58,302,157	56,844,013	56,223,025	50,604,335	84,278,224	2,690,518	-182,717	0	0	

University of Pretoria etd – Swanepoel, W (2003)

"Nominal terms"

Hydr Excav Model		Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59
Stand alone cash flow	$44,623,973.25		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
		171,664,038	-138,381,614	70,763,441	83,148,728	67,987,241	35,671,359	17,856,268	27,337,010	14,339,043	-7,573,080	515,643	0	0	0	0	0	0	0	0
Cummulative cash flow		0	-138,381,614	-67,618,174	15,530,554	83,517,795	119,189,154	137,045,421	164,382,432	178,721,475	171,148,395	171,664,038	171,664,038	171,664,038	171,664,038	171,664,038	171,664,038	171,664,038	171,664,038	
Interest (payable)/received		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment		-																		
Investment Income received		-																		
Change in taxation due to interest charge		19,114,486	0	0	0	0	0	0	0	3,674,843	3,846,821	4,154,748	8,148,298	-710,225	0	0	0	0	0	0
Dividends and STC paid		-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow after financing		190,778,523	-138,381,614	70,763,441	83,148,728	67,987,241	35,671,359	17,856,268	27,337,010	18,013,886	-3,726,259	4,670,391	8,148,298	-710,225	0	0	0	0	0	0
		0																		

0 0

Depreciation Schedule

ACCOUNTING DEPRECIATION

Period of depreciation of new assets	9.00
Historical per - P & M	9
Historical per - Buildings	9
Commence depreciation	2005
Life of mine (from commence date)	9

10

		TOTAL DEPR	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	PERIODS	
Opening Bal - Buildings		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	
Opening Bal - Plant & machinery	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	
2004	255,790,683	255,790,683	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0.00
2005	0	0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0.00
2006	0	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0.00
2007	0	0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	0.00
2008	0	0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.00
2009	0	0						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0.00
2010	0	0							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.00
2011	0	0								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0.00
2012	0	0									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.00
2013	0	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.00
2014	0	0											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
2015	0	0												-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
2016	0	0													-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
2017	0	0														-	-	-	-	-	-	-	-	-	-	-	-	0.00
2018	0	0															-	-	-	-	-	-	-	-	-	-	-	0.00
2019	0	0																-	-	-	-	-	-	-	-	-	-	0.00
2020	0	0																	-	-	-	-	-	-	-	-	-	0.00
2021	0	0																		-	-	-	-	-	-	-	-	0.00
	255,790,683	255,790,683	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	28,421,187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Check	0.00																										

TAX DEPRECIATION

Period of depreciation of new assets	1
Historical per - P & M	-
Historical tax value	-

		TOTAL DEPR	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	-21	-22	PERIODS	
Opening Bal - Buildings		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Opening Bal - Plant & machinery		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	255,790,683	255,790,683	255,790,683	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	########
2005	0	0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2006	0	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2007	0	0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2008	0	0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2009	0	0						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2010	0	0							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2011	0	0								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2012	0	0									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2013	0	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2014	0	0											-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2015	0	0												-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2016	0	0													-	-	-	-	-	-	-	-	-	-	-	-	1	-
2017	0	0														-	-	-	-	-	-	-	-	-	-	-	1	-
2018	0	0															-	-	-	-	-	-	-	-	-	-	1	-
2019	0	0																-	-	-	-	-	-	-	-	-	1	-
2020	0	0																	-	-	-	-	-	-	-	-	1	-
2021	0	0																		-	-	-	-	-	-	-	1	-
2022	0	0																			-	-	-	-	-	-	1	-
2023	0	0																				-	-	-	-	-	1	-
2024	0	0																					-	-	-	-	1	-
2025	0	0																						-	-	-	1	-
2026	0	0																							-	-	1	-
2027	0	0																								-	1	
2028	0	0																										
	255,790,683	255,790,683	255,790,683	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Check	-																										

Taxation Schedule

RING FENCED MINE

Tax rate	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
STC Rate	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
TFreceived - (Tax Factor) to be applied	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
TFpaid - (Tax Factor) to be applied	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%

TAX CALCULATION - Income Statement

OPERATING PROFIT (excl depr)	105,016,686	90,602,614	82,481,215	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	-2,367,418	0	0	0	0	0	0	0	0	0	0	0	0	0
INTEREST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LESS DEPRECIATION	-28,421,187	-28,421,187	-28,421,187	-28,421,187	-28,421,187	-28,421,187	-28,421,187	-28,421,187	-28,421,187	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	76,595,499	62,181,427	54,060,028	45,560,404	35,293,765	23,044,288	10,221,550	-3,627,610	-30,788,605	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	76,595,499	62,181,427	54,060,028	45,560,404	35,293,765	23,044,288	10,221,550	-3,627,610	-30,788,605	0	0	0	0	0	0	0	0	0	0	0	0	0
TAX PAYABLE - FINANCIAL : (Dr) / Cr.	22,978,650	18,654,428	16,218,008	13,668,121	10,588,130	6,913,286	3,066,465	(1,088,283)	(9,236,581)	-	-	-	-	-	-	-	-	-	-	-	-	-

TAX CALCULATION - Actual tax paid

OPERATING PROFIT (excl depr)	105,016,686	90,602,614	82,481,215	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	-2,367,418	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit available for Unredeemed capital	105,016,686	90,602,614	82,481,215	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital brought forward	-	-150,773,998	-60,171,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit /loss before Wear and Tear	105,016,686	-60,171,383	22,309,832	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LESS Wear and Tear	-255,790,683	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital before Group application	-150,773,998	-60,171,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital utilized by Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital carried forward	-150,773,998	-60,171,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	0	0	22,309,832	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	-2,367,418	0	0	0	0	0	0	0	0	0	0	0	0	0
TAX PAYABLE - BEFORE INTEREST	-	-	6,692,950	22,194,477	19,114,486	15,439,643	11,592,821	7,438,073	(710,225)	-	-	-	-	-	-	-	-	-	-	-	-	-

TAX CALCULATION - Actual tax afterinter.

OPERATING PROFIT (excl depr)	105,016,686	90,602,614	82,481,215	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	(2,367,418)	-	-	-	-	-	-	-	-	-	-	-	-	-
INTEREST RECEIVED /(PAYABLE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit available for Unredeemed capital	105,016,686	90,602,614	82,481,215	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital brought forward	-	-150,773,998	-60,171,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit available for Wear and Tear	105,016,686	-60,171,383	22,309,832	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LESS Wear and Tear	-255,790,683	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital before Group application	-150,773,998	-60,171,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital utilized by Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital carried forward	-150,773,998	-60,171,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	0	0	22,309,832	73,981,591	63,714,952	51,465,475	38,642,737	24,793,577	-2,367,418	0	0	0	0	0	0	0	0	0	0	0	0	0
TAX PAYABLE - AFTER INTEREST	-	-	6,692,950	22,194,477	19,114,486	15,439,643	11,592,821	7,438,073	(710,225)	-	-	-	-	-	-	-	-	-	-	-	-	-

TAXATION CASHFLOW - before Interest

First and second payment		-	-	-	6,692,950	22,194,477	19,114,486	15,439,643	11,592,821	7,438,073	(710,225)	-	-	-	-	-	-	-	-	-	-	-
Third payment		-	-	6,692,950	22,194,477	12,421,536	(6,754,835)	(7,521,664)	(8,001,569)	(8,148,298)	710,225	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	6,692,950	28,887,427	34,616,013	12,359,651	11,592,821	7,438,073	(710,225)	-	-	-	-	-	-	-	-	-	-	-	-
Change in Taxation credit	-	-	(6,692,950)	(15,501,528)	9,772,941	19,176,371	766,830	4,154,748	8,148,298	(710,225)	-	-	-	-	-	-	-	-	-	-	-	-

TAXATION CASHFLOW - Afterinterest

First and second payment	-	-	-	-	6,692,950	22,194,477	19,114,486	15,439,643	11,592,821	7,438,073	(710,225)	-	-	-	-	-	-	-	-	-	-	-
Third payment		-	-	6,692,950	22,194,477	12,421,536	(6,754,835)	(7,521,664)	(8,001,569)	(12,303,047)	(7,438,073)	710,225	-	-	-	-	-	-	-	-	-	-
	-	-	-	6,692,950	28,887,427	34,616,013	12,359,651	7,917,978	3,591,252	(4,864,973)	(8,148,298)	710,225	-	-	-	-	-	-	-	-	-	-

University of Pretoria etd – Swanepoel, W (2003)

"Nominal terms"

Hydr Excav Model	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59		
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Change in Taxation credit		-	-	(6,692,950)	(15,501,528)	9,772,941	19,176,371	766,830	479,905	4,301,477	(4,864,973)	(8,148,298)	710,225	-	-	-	-	-	-	-	-
Change to Deferred Taxation		22,978,650	18,654,428	9,525,059	-8,526,356	-8,526,356	-8,526,356	-8,526,356	-8,526,356	-8,526,356	-	-	-	-	-	-	-	-	-	-	-
STC TAXATION	**Capitalise=0 Cash=1**																				
Opening balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STC Taxation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STC Taxation Paid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Creditor STC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change to STC Balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIVIDEND / SHAREHOLDERS ACCOUNT	**Capitalise=0 Cash=1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividend Rate		33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Opening balance Shareholders Account		-	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Dividends capitilized for the period		#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Share Holder's Loan Balance		#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Dividends opening balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends to be paid out		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends paid in cash		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing balance cash dividends		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REPAYMENT OF INTERGROUP LOAN																					
Interest payable on Loan		15.0%	12.6%	11.1%	10.5%	9.6%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	0.0%	0.0%
Interest receivable on Loan		12.0%	9.6%	8.1%	7.5%	6.6%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	0.0%	0.0%
Balance brought forward	-	-	**(138,381,614)**	**(67,618,174)**	**15,530,554**	**83,517,795**	**119,189,154**	**137,045,421**	**164,382,432**	**182,396,318**	**178,670,059**	**183,340,450**	**191,488,749**	**190,778,523**	**190,778,523**	**190,778,523**	**190,778,523**	**190,778,523**	**190,778,523**	**190,778,523**	**190,778,523**
Amount drawn	-	-138,381,614	70,763,441	83,148,728	67,987,241	35,671,359	17,856,268	27,337,010	14,339,043	-7,573,080	515,643	-	-	-	-	-	-	-	-	-	-
Balance before interest	-	(138,381,614)	(67,618,174)	15,530,554	83,517,795	119,189,154	137,045,421	164,382,432	178,721,475	174,823,238	179,185,702	183,340,450	191,488,749	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523
Amount (paid)/received - Interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	(138,381,614)	(67,618,174)	15,530,554	83,517,795	119,189,154	137,045,421	164,382,432	178,721,475	174,823,238	179,185,702	183,340,450	191,488,749	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523
Taxation movement - Interest	19,114,486	-	-	-	-	-	-	-	3,674,843	3,846,821	4,154,748	8,148,298	(710,225)	-	-	-	-	-	-	-	-
Balance at end of period	19,114,486	(138,381,614)	(67,618,174)	15,530,554	83,517,795	119,189,154	137,045,421	164,382,432	182,396,318	178,670,059	183,340,450	191,488,749	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523
Average Cashflow	(171,664,038)	-69,190,807	-102,999,894	-26,043,810	49,524,174	101,353,474	128,117,288	150,713,927	171,551,953	178,609,778	178,927,881	183,340,450	191,488,749	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523	190,778,523
Net cashflow (Interest-taxation)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest portion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxation Portion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DCF VALUATION

VALUATION BEFORE FINANCING

Discount Rate	NPV - R 'M	IRR
10.0%	91.5	
12.0%	228.1	38.3%
14.0%	69.9	

81.39959387
88.6733183

VALUATION AFTER FINANCING AND DIVIDENDS

Discount Rate	NPV - R 'M	IRR
#REF!	#REF!	
#REF!	#REF!	

CASH FLOW IN US$-TERMS US$ #REF!

VALUATION BEFORE FINANCING

Discount Rate	NPV - US$ 'M	IRR
4.0%	#REF!	
6.0%	#REF!	

University of Pretoria etd – Swanepoel, W (2003)

	"Nominal terms"	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59
Wheel loader Model			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Macro Economic Indicators																				
US PPI escalation			0.98	0.99	1.00	1.01	1.03	1.04	1.05	1.06	1.07	1.09	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24
SA PPI escalation			1.09	1.17	1.24	1.31	1.39	1.47	1.56	1.65	1.75	1.86	1.97	2.09	2.21	2.35	2.49	2.64	2.80	2.96
R/$ exchange rates	100%		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
			9.54	9.05	9.22	9.42	9.60	9.59	9.59	9.59										
STATISTICS																				
Income per ton - Nominal terms	Ave. R/ton	235.54	214.59	217.29	220.12	223.12	225.57	228.04	230.73	233.44	236.36	239.43	242.56	246.10	250.07	0.00	0.00	0.00	0.00	0.00
Income per ton - Real terms	Ave. R/ton	139.38	197.78	186.29	178.04	170.25	162.38	154.86	147.82	141.09	134.77	128.80	123.09	117.82	112.94	0.00	0.00	0.00	0.00	0.00
Profit margin based on cash cost - Real	Ave. %	20%	40%	36%	34%	32%	29%	27%	24%	21%	18%	14%	11%	7%	8%	0%	0%	0%	0%	0%
Profit margin based on total cost - Real	Ave. %	14%	35%	32%	30%	28%	25%	21%	18%	15%	12%	9%	6%	2%	-18%	0%	0%	0%	0%	0%
Cash production cost - Total tons		10.16	10.72	10.70	10.56	10.43	10.31	10.22	10.14	10.07	10.00	9.93	9.87	9.81	9.38	0.00	0.00	0.00	0.00	0.00
Cash production cost - Real terms	Ave. R/ton	113.00	119.18	118.97	117.44	115.96	114.57	113.64	112.76	111.93	111.14	110.39	109.70	109.06	104.27	0.00	0.00	0.00	0.00	0.00
Total Production cost - Nominal terms	R/ton	194.24	138.61	148.06	154.50	161.27	168.45	179.56	188.22	197.40	207.14	217.44	228.39	240.02	296.03	0.00	0.00	0.00	0.00	0.00
Total Production cost - Real Terms	Ave. R/ton	121.95	127.75	126.94	124.96	123.05	121.26	121.94	120.59	119.31	118.11	116.97	115.90	114.91	133.70	0.00	0.00	0.00	0.00	0.00
Total distribution cost - Nominal	Ave. R/ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total distribution cost - Real	Ave. R/ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Production Schedule	100%				100%	100%	100%	100%	100%											
Waste (Over-burden)	t	205,861,000	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	16,891,159	3,167,092	0	0	0	0	0
Stripping Ratio	Ave.	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	0.0	0.0	0.0	0.0	0.0
R.O.M Tonnage's	t	1,851,304	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	1,998,954	374,804	0	0	0	0	0
Final Yield	%		85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	0%	0%	0%	0%	0%
Final product produced	t	20,707,911	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**1,699,111**	**318,583**	**0**	**0**	**0**	**0**	**0**
Closing stock calculation																				
Opening stock	t	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Production	t	20,707,911	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	1,699,111	318,583	-	-	-	-	-
Total product sold	t	-20,707,911	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(1,699,111)**	**(318,583)**	-	-	-	-	-
- Market	t	-20,707,911	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(1,699,111)	(318,583)	-	-	-	-	-
	t	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing stock	t	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stock value per ton	R/ton	0	**138.61**	**148.06**	**154.50**	**161.27**	**168.45**	**179.56**	**188.22**	**197.40**	**207.14**	**217.44**	**228.39**	**240.02**	**296.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Sales Schedule	100%																			
Sales Price																				
- Market	$/t	$23.30	21.46	21.73	22.01	22.31	22.56	22.80	23.07	23.34	23.64	23.94	24.26	24.61	25.01	25.43	25.89	0.00	0.00	0.00
	$/t	$23.30	21.46	21.73	22.01	22.31	22.56	22.80	23.07	23.34	23.64	23.94	24.26	24.61	25.01	25.43	25.89	0.00	0.00	0.00
Revenue																				
- Market	R	4,764,722,969	364,611,147	369,197,836	374,007,219	379,098,144	383,268,333	387,463,939	392,038,578	396,642,324	401,604,769	406,825,631	412,140,457	418,157,708	79,666,884	0	0	0	0	0
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross Revenue	R	4,764,722,969	364,611,147	369,197,836	374,007,219	379,098,144	383,268,333	387,463,939	392,038,578	396,642,324	401,604,769	406,825,631	412,140,457	418,157,708	79,666,884	0	0	0	0	0
LESS : Distribution Cost	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Sales	R	4,764,722,969	**364,611,147**	**369,197,836**	**374,007,219**	**379,098,144**	**383,268,333**	**387,463,939**	**392,038,578**	**396,642,324**	**401,604,769**	**406,825,631**	**412,140,457**	**418,157,708**	**79,666,884**	**0**	**0**	**0**	**0**	**0**
Distribution cost schedule	100%																			
Export via RBCT	100%																			
- Road	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution cost RBCT																				
- Road	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rail	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Port	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Export via BMA (Durban)	100%																			
- Road	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution cost BMA (Durban)	R																			
- Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rail		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Port		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total distribution cost	R	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total :																				
- Road	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Rail	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Port	R/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost of Sales Schedule	100%																			
80% Variable cost	100%	3,499,131,591	211,228,481	226,678,524	237,193,711	248,245,431	259,984,743	273,356,803	287,503,270	302,507,910	318,408,349	335,237,847	353,120,826	372,117,228	73,548,467	0	0	0	0	0
- Mine		2,975,863,565	179,640,898	192,780,507	201,723,229	211,122,250	221,106,039	232,478,411	244,509,383	257,270,195	270,792,847	285,105,624	300,314,342	316,469,979	62,549,863	0	0	0	0	0
- Plant handling cost - discard		8,161,893	492,701	528,739	553,266	579,044	606,427	637,618	670,615	705,614	742,703	781,958	823,671	867,981	171,555	0	0	0	0	0
- Plant opex		507,851,117	30,656,927	32,899,289	34,425,425	36,029,431	37,733,232	39,674,003	41,727,169	43,904,888	46,212,619	48,655,191	51,250,661	54,007,729	10,674,555	0	0	0	0	0
- Laboratory cost		7,255,016	437,956	469,990	491,792	514,706	539,046	566,771	596,102	627,213	660,180	695,074	732,152	771,539	152,494	0	0	0	0	0
- Royalties		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80% Fixed cost	100%	137,505,741	8,478,886	9,099,064	9,521,152	9,964,777	10,436,003	10,972,768	11,540,619	12,142,918	12,781,175	13,456,725	14,174,562	14,937,093	0	0	0	0	0	0
- Mine		137,505,741	8,478,886	9,099,064	9,521,152	9,964,777	10,436,003	10,972,768	11,540,619	12,142,918	12,781,175	13,456,725	14,174,562	14,937,093	0	0	0	0	0	0
- Plant		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Maintenance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rehabilitation		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Outside services		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Head Office costs (fixed)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other costs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production cost		3,636,637,333	**219,707,367**	**235,777,588**	**246,714,863**	**258,210,208**	**270,420,746**	**284,329,571**	**299,043,889**	**314,650,827**	**331,189,524**	**348,694,572**	**367,295,388**	**387,054,322**	**73,548,467**	**0**	**0**	**0**	**0**	**0**
Change in stock value		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Cost of Sales		3,636,637,333	**219,707,367**	**235,777,588**	**246,714,863**	**258,210,208**	**270,420,746**	**284,329,571**	**299,043,889**	**314,650,827**	**331,189,524**	**348,694,572**	**367,295,388**	**387,054,322**	**73,548,467**	**0**	**0**	**0**	**0**	**0**
EBITDA		1,128,085,636	**144,903,779**	**133,420,248**	**127,292,356**	**120,887,936**	**112,847,587**	**103,134,368**	**92,994,688**	**81,991,497**	**70,415,245**	**58,131,060**	**44,845,069**	**31,103,386**	**6,118,417**	**0**	**0**	**0**	**0**	**0**
CAPEX Schedule																				
80% SA R related Capex	100%	199,857,543	162,750,000	0	0	0	0	37,107,543	0	0	0	0	0	0	0	0	0	0	0	0
100% SA R related Land & Buildings	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20% US$ related Capex	100%	50,198,443	42,649,371	0	0	0	0	7,549,072	0	0	0	0	0	0	0	0	0	0	0	0
Total capital		250,055,986	**205,399,371**	**0**	**0**	**0**	**0**	**44,656,615**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Working Capital																				
		Opening Bal																		
Trade Debtors	365	-	29,968,039	30,345,028	30,740,319	31,158,752	31,501,507	31,846,351	32,222,349	32,600,739	33,008,611	33,437,723	33,874,558	34,369,127	6,547,963	0	0	0	0	0
Stock - Coal		-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital Creditors		-	(16,882,140)	-	-	-	-	(3,670,407)	-	-	-	-	-	-	-	-	-	-	-	-
Trade Creditors		-	(18,058,140)	(19,378,980)	(20,277,934)	(21,222,757)	(22,226,363)	(23,369,554)	(24,578,950)	(25,861,712)	(27,221,057)	(28,659,828)	(30,188,662)	(31,812,684)	(6,045,079)	-	-	-	-	-
Total Working Capital	$26,078,724.68	-	**(4,972,240)**	**10,966,048**	**10,462,385**	**9,935,995**	**9,275,144**	**4,806,391**	**7,643,399**	**6,739,027**	**5,787,554**	**4,777,895**	**3,685,896**	**2,556,443**	**502,884**	**-**	**-**	**-**	**-**	**-**
Change in stock value		0	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Change in total working capital		0	**4,972,240**	**(15,938,288)**	**503,662**	**526,391**	**660,851**	**4,468,753**	**(2,837,008)**	**904,372**	**951,473**	**1,009,659**	**1,091,999**	**1,129,453**	**2,053,559**	**502,884**	**-**	**-**	**-**	**-**
Taxation before financial items		297,263,171	-	-	21,877,397	60,065,104	52,576,691	31,932,950	15,131,221	27,898,407	24,597,449	21,124,574	17,439,318	13,453,521	9,331,016	1,835,525	-	-	-	-
Change to Cash ("Petty Cash")		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	$10,962,366.96		-246,575	-138,904,457	-41,737,114	36,248,235	43,807,019	58,470,951	79,596,245	56,344,652	58,302,157	56,844,013	56,223,025	50,604,335	84,278,224	2,690,518	-182,717	0	0	

University of Pretoria etd – Swanepoel, W (2003)

"Nominal terms"

Wheel loader Model		Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59
Stand alone cash flow			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$215,732,799.66	580,766,479	-55,523,351	117,481,960	105,918,622	61,349,223	60,931,747	31,013,556	75,026,459	54,997,462	46,769,269	38,016,145	28,497,750	18,779,318	-1,159,040	-1,332,641	0	0	0	0
Cummulative cash flow		0	-55,523,351	61,958,609	167,877,230	229,226,453	290,158,200	321,171,756	396,198,215	451,195,678	497,964,947	535,981,092	564,478,842	583,258,160	582,099,121	580,766,479	580,766,479	580,766,479	580,766,479	
Interest (payable)/received		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment		-																		
Investment Income received		-																		
Change in taxation due to interest charge		33,854,276	0	0	0	0	0	0	0	16,310,950	-10,355,081	3,300,957	3,472,875	3,685,256	3,985,797	4,122,505	7,495,491	1,835,525	0	0
Dividends and STC paid		-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow after financing		614,620,755	-55,523,351	117,481,960	105,918,622	61,349,223	60,931,747	31,013,556	75,026,459	71,308,413	36,414,188	41,317,103	31,970,626	22,464,574	2,826,757	2,789,864	7,495,491	1,835,525	0	0
		0																		

0 0

Depreciation Schedule

ACCOUNTING DEPRECIATION

Period of depreciation of new assets	13.00
Historical per - P & M	13
Historical per - Buildings	13
Commence depreciation	2005
Life of mine (from commence date)	13

14

		TOTAL DEPR	13	12	11	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	PERIODS	
Opening Bal - Buildings		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	
Opening Bal - Plant & machinery	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	
2004	205,399,371	205,399,371	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	-	-	-	-	-	-	-	-	-	-	-	13	0.00
2005	0	0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	0.00
2006	0	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0.00
2007	0	0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	0.00
2008	0	0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	0.00
2009	44,656,615	44,656,615						4,961,846	4,961,846	4,961,846	4,961,846	4,961,846	4,961,846	4,961,846	4,961,846	4,961,846	-	-	-	-	-	-	-	-	-	-	9	0.00
2010	0	0							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0.00
2011	0	0								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	0.00
2012	0	0									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.00
2013	0	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0.00
2014	0	0											-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.00
2015	0	0												-	-	-	-	-	-	-	-	-	-	-	-	-	3	0.00
2016	0	0													-	-	-	-	-	-	-	-	-	-	-	-	2	0.00
2017	0	0														-	-	-	-	-	-	-	-	-	-	-	1	0.00
2018	0	0															-	-	-	-	-	-	-	-	-	-	-	0.00
2019	0	0																-	-	-	-	-	-	-	-	-	-	0.00
2020	0	0																	-	-	-	-	-	-	-	-	-	0.00
2021	0	0																		-	-	-	-	-	-	-	-	0.00
	250,055,986	250,055,986	15,799,952	15,799,952	15,799,952	15,799,952	15,799,952	20,761,798	20,761,798	20,761,798	20,761,798	20,761,798	20,761,798	20,761,798	20,761,798	4,961,846	0	0	0	0	0	0	0	0	0	0		
	Check	0.00																										

TAX DEPRECIATION

Period of depreciation of new assets	1
Historical per - P & M	-
Historical tax value	-

		TOTAL DEPR	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	-21	-22	PERIODS	
Opening Bal - Buildings		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Opening Bal - Plant & machinery		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	205,399,371	205,399,371	205,399,371	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	#######
2005	0	0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2006	0	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2007	0	0				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2008	0	0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2009	44,656,615	44,656,615						44,656,615	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	#######
2010	0	0							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2011	0	0								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2012	0	0									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2013	0	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2014	0	0											-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2015	0	0												-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2016	0	0													-	-	-	-	-	-	-	-	-	-	-	-	1	-
2017	0	0														-	-	-	-	-	-	-	-	-	-	-	1	-
2018	0	0															-	-	-	-	-	-	-	-	-	-	1	-
2019	0	0																-	-	-	-	-	-	-	-	-	1	-
2020	0	0																	-	-	-	-	-	-	-	-	1	-
2021	0	0																		-	-	-	-	-	-	-	1	-
2022	0	0																			-	-	-	-	-	-	1	-
2023	0	0																				-	-	-	-	-	1	-
2024	0	0																					-	-	-	-	1	-
2025	0	0																						-	-	-	1	-
2026	0	0																							-	-	1	-
2027	0	0																								-	1	
2028	0	0																										
	250,055,986	250,055,986	205,399,371	-	-	-	-	44,656,615	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Check	-																										

Taxation Schedule

RING FENCED MINE

Tax rate	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
STC Rate	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
TFreceived - (Tax Factor) to be applied	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
TFpaid - (Tax Factor) to be applied	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%

TAX CALCULATION - Income Statement

OPERATING PROFIT (excl depr)	144,903,779	133,420,248	127,292,356	120,887,936	112,847,587	103,134,368	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	0	0	0	0	0	0	0	0	0	0
INTEREST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LESS DEPRECIATION	-15,799,952	-15,799,952	-15,799,952	-15,799,952	-15,799,952	-20,761,798	-20,761,798	-20,761,798	-20,761,798	-20,761,798	-20,761,798	-20,761,798	-20,761,798	-20,761,798	-4,961,846	0	0	0	0	0	0	0	0
TOTAL	129,103,828	117,620,297	111,492,405	105,087,984	97,047,635	82,372,570	72,232,891	61,229,699	49,653,448	37,369,262	24,083,271	10,341,588	-14,643,381	-4,961,846	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	129,103,828	117,620,297	111,492,405	105,087,984	97,047,635	82,372,570	72,232,891	61,229,699	49,653,448	37,369,262	24,083,271	10,341,588	-14,643,381	-4,961,846	0	0	0	0	0	0	0	0	0
TAX PAYABLE - FINANCIAL : (Dr) / Cr.	38,731,148	35,286,089	33,447,721	31,526,395	29,114,291	24,711,771	21,669,867	18,368,910	14,896,034	11,210,779	7,224,981	3,102,476	(4,393,014)	(1,488,554)	-	-	-	-	-	-	-	-	-

TAX CALCULATION - Actual tax paid

OPERATING PROFIT (excl depr)	144,903,779	133,420,248	127,292,356	120,887,936	112,847,587	103,134,368	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	0	0	0	0	0	0	0	0	0	0
Profit available for Unredeemed capital	144,903,779	133,420,248	127,292,356	120,887,936	112,847,587	103,134,368	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital brought forward	-	-60,495,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit /loss before Wear and Tear	144,903,779	72,924,657	127,292,356	120,887,936	112,847,587	103,134,368	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	-	-	-	-	-	-	-	-	-	-
LESS Wear and Tear	-205,399,371	0	0	0	0	-44,656,615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital before Group application	-60,495,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital utilized by Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital carried forward	-60,495,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	0	72,924,657	127,292,356	120,887,936	112,847,587	58,477,753	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	0	0	0	0	0	0	0	0	0	0
TAX PAYABLE - BEFORE INTEREST	-	21,877,397	38,187,707	36,266,381	33,854,276	17,543,326	27,898,407	24,597,449	21,124,574	17,439,318	13,453,521	9,331,016	1,835,525	-	-	-	-	-	-	-	-	-	-

TAX CALCULATION - Actual tax afteInter.

OPERATING PROFIT (excl depr)	144,903,779	133,420,248	127,292,356	120,887,936	112,847,587	103,134,368	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	-	-	-	-	-	-	-	-	-	-
INTEREST RECEIVED /(PAYABLE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Profit available for Unredeemed capital	144,903,779	133,420,248	127,292,356	120,887,936	112,847,587	103,134,368	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital brought forward	-	-60,495,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit available for Wear and Tear	144,903,779	72,924,657	127,292,356	120,887,936	112,847,587	103,134,368	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	-	-	-	-	-	-	-	-	-	-
LESS Wear and Tear	-205,399,371	0	0	0	0	-44,656,615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed Capital before Group application	-60,495,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital utilized by Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unredeemed capital carried forward	-60,495,592	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL USED FOR CALCULATION	0	72,924,657	127,292,356	120,887,936	112,847,587	58,477,753	92,994,688	81,991,497	70,415,245	58,131,060	44,845,069	31,103,386	6,118,417	0	0	0	0	0	0	0	0	0	0
TAX PAYABLE - AFTER INTEREST	-	21,877,397	38,187,707	36,266,381	33,854,276	17,543,326	27,898,407	24,597,449	21,124,574	17,439,318	13,453,521	9,331,016	1,835,525	-	-	-	-	-	-	-	-	-	-

TAXATION CASHFLOW - before Interest

First and second payment		-	-	21,877,397	38,187,707	36,266,381	33,854,276	17,543,326	27,898,407	24,597,449	21,124,574	17,439,318	13,453,521	9,331,016	1,835,525	-	-	-	-	-	-	-	-
Third payment		-	21,877,397	38,187,707	14,388,984	(4,333,431)	(18,723,055)	(5,955,869)	7,054,123	(3,472,875)	(3,685,256)	(3,985,797)	(4,122,505)	(7,495,491)	(1,835,525)	-	-	-	-	-	-	-	-
	-	-	21,877,397	60,065,104	52,576,691	31,932,950	15,131,221	27,898,407	24,597,449	21,124,574	17,439,318	13,453,521	9,331,016	1,835,525	-	-	-	-	-	-	-	-	-
Change in Taxation credit	-	(21,877,397)	(16,310,310)	23,798,723	18,722,415	14,389,624	(12,767,185)	3,300,957	3,472,875	3,685,256	3,985,797	4,122,505	7,495,491	1,835,525	-	-	-	-	-	-	-	-	-

TAXATION CASHFLOW - AfteInterest

First and second payment	-	-	-	21,877,397	38,187,707	36,266,381	33,854,276	17,543,326	27,898,407	24,597,449	21,124,574	17,439,318	13,453,521	9,331,016	1,835,525	-	-	-	-	-	-	-	-
Third payment		-	21,877,397	38,187,707	14,388,984	(4,333,431)	(18,723,055)	(5,955,869)	7,054,123	(6,773,833)	(7,158,131)	(7,671,053)	(8,108,302)	(11,617,996)	(9,331,016)	(1,835,525)	-	-	-	-	-	-	-
	-	-	21,877,397	60,065,104	52,576,691	31,932,950	15,131,221	11,587,456	34,952,530	17,823,616	13,966,442	9,768,265	5,345,218	(2,286,980)	(7,495,491)	(1,835,525)	-	-	-	-	-	-	-	-

University of Pretoria etd – Swanepoel, W (2003)

"Nominal terms"

Wheel loader Model	Original R:$	9.54	9.62	10.26	10.97	11.72	12.29	12.88	13.49	14.13	14.79	15.46	16.14	16.84	17.54	18.27	19.01	19.80	20.59		
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Change in Taxation credit		-	(21,877,397)	(16,310,310)	23,798,723	18,722,415	14,389,624	(12,767,185)	(13,009,993)	13,827,956	384,298	512,922	437,249	3,509,693	(2,286,980)	(7,495,491)	(1,835,525)	-	-	-	-
Change to Deferred Taxation		38,731,148	13,408,692	-4,739,985	-4,739,985	-4,739,985	7,168,445	-6,228,539	-6,228,539	-6,228,539	-6,228,539	-6,228,539	-6,228,539	-6,228,539	-1,488,554	-	-	-	-	-	-
STC TAXATION	**Capitalise=0 Cash=1**																				
Opening balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STC Taxation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STC Taxation Paid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Creditor STC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change to STC Balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIVIDEND / SHAREHOLDERS ACCOUNT	**Capitalise=0 Cash=1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividend Rate		33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Opening balance Shareholders Account		-	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Dividends capitilized for the period		#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Share Holder's Loan Balance		#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Dividends opening balance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends to be paid out		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends paid in cash		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing balance cash dividends		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REPAYMENT OF INTERGROUP LOAN																					
Interest payable on Loan		15.0%	12.6%	11.1%	10.5%	9.6%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	0.0%	0.0%
Interest receivable on Loan		12.0%	9.6%	8.1%	7.5%	6.6%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	0.0%	0.0%
Balance brought forward	-	**-**	**(55,523,351)**	**61,958,609**	**167,877,230**	**229,226,453**	**290,158,200**	**321,171,756**	**396,198,215**	**467,506,628**	**503,920,816**	**545,237,919**	**577,208,544**	**599,673,119**	**602,499,876**	**605,289,739**	**612,785,230**	**614,620,755**	**614,620,755**	**614,620,755**	**614,620,755**
Amount drawn	-	-55,523,351	117,481,960	105,918,622	61,349,223	60,931,747	31,013,556	75,026,459	54,997,462	46,769,269	38,016,145	28,497,750	18,779,318	-1,159,040	-1,332,641	-	-	-	-	-	-
Balance before interest	-	(55,523,351)	61,958,609	167,877,230	229,226,453	290,158,200	321,171,756	396,198,215	451,195,678	514,275,897	541,936,961	573,735,669	595,987,863	598,514,079	601,167,234	605,289,739	612,785,230	614,620,755	614,620,755	614,620,755	614,620,755
Amount (paid)/received - Interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	(55,523,351)	61,958,609	167,877,230	229,226,453	290,158,200	321,171,756	396,198,215	451,195,678	514,275,897	541,936,961	573,735,669	595,987,863	598,514,079	601,167,234	605,289,739	612,785,230	614,620,755	614,620,755	614,620,755	614,620,755
Taxation movement - Interest	33,854,276	-	-	-	-	-	-	-	16,310,950	(10,355,081)	3,300,957	3,472,875	3,685,256	3,985,797	4,122,505	7,495,491	1,835,525	-	-	-	-
Balance at end of period	33,854,276	(55,523,351)	61,958,609	167,877,230	229,226,453	290,158,200	321,171,756	396,198,215	467,506,628	503,920,816	545,237,919	577,208,544	599,673,119	602,499,876	605,289,739	612,785,230	614,620,755	614,620,755	614,620,755	614,620,755	614,620,755
	(580,766,479)																				
Average Cashflow		-27,761,676	3,217,629	114,917,920	198,551,842	259,692,327	305,664,978	358,684,986	423,696,946	490,891,262	522,928,889	559,486,794	586,598,204	599,093,599	601,833,555	605,289,739	612,785,230	614,620,755	614,620,755	614,620,755	614,620,755
Net cashflow (Interest-taxation)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest portion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxation Portion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DCF VALUATION

VALUATION BEFORE FINANCING

Discount Rate	NPV - R 'M	IRR
10.0%	337.4	
12.0%	398.8	194.8%
14.0%	279.4	

81.39959387
88.6733183

VALUATION AFTER FINANCING AND DIVIDENDS

Discount Rate	NPV - R 'M	IRR
#REF!	#REF!	
#REF!	#REF!	

CASH FLOW IN US$-TERMS US$ #REF!

VALUATION BEFORE FINANCING

Discount Rate	NPV - US$ 'M	IRR
4.0%	#REF!	
6.0%	#REF!	

APPENDIX F – PRODUCTION SCHEDULE

Bench height (m)		Buffelshoek-west	Donkerpoort-west	Donkerpoort-nek	Kwaggashoek-east	Total	Stripping ratio
3	Waste	43,257,000	89,758,000	28,972,000	43,874,000	**205,861,000**	**8.45**
	Ore	7,100,000	9,700,000	2,425,000	5,150,000	**24,375,000**	
6	Waste	43,897,000	90,448,000	29,172,000	44,274,000	**207,791,000**	**9.26**
	Ore	6,460,000	9,010,000	2,225,000	4,750,000	**22,445,000**	
9	Waste	44,537,000	91,238,000	29,407,000	44,524,000	**209,706,000**	**10.21**
	Ore	5,820,000	8,220,000	1,990,000	4,500,000	**20,530,000**	
12	Waste	45,117,000	91,948,000	29,637,000	45,104,000	**211,806,000**	**11.49**
	Ore	5,240,000	7,510,000	1,760,000	3,920,000	**18,430,000**	
15	Waste	45,677,000	92,728,000	29,817,000	45,234,000	**213,456,000**	**12.72**
	Ore	4,680,000	6,730,000	1,580,000	3,790,000	**16,780,000**	

	Target	2,000,000	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	Total
3 meter	waste	**205,861,000**	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	16,891,158.97	3,167,092.31	**205,861,000**
	ROM ore	**24,375,000**	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	375,000	**24,375,000**
																-
6 meter	waste	**207,791,000**	18,515,571.40	18,515,571.40	18,515,571.40	18,515,571.40	18,515,571.40	18,515,571.40	18,515,571.40	18,515,571.40	18,515,571.40	18,515,571.40	18,515,571.40	4,119,714.64	-	**207,791,000**
	ROM ore	**22,445,000**	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	445,000		**22,445,000**
																-
9 meter	waste	**209,706,000**	20,429,225.52	20,429,225.52	20,429,225.52	20,429,225.52	20,429,225.52	20,429,225.52	20,429,225.52	20,429,225.52	20,429,225.52	20,429,225.52	5,413,744.76	-		**209,706,000**
	ROM ore	**20,530,000**	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	530,000			**20,530,000**
																-
12 meter	waste	**211,806,000**	22,984,915.90	22,984,915.90	22,984,915.90	22,984,915.90	22,984,915.90	22,984,915.90	22,984,915.90	22,984,915.90	22,984,915.90	4,941,756.92	-			**211,806,000**
	ROM ore	**18,430,000**	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	430,000				**18,430,000**
																-
15 meter	waste	**213,456,000**	25,441,716.33	25,441,716.33	25,441,716.33	25,441,716.33	25,441,716.33	25,441,716.33	25,441,716.33	25,441,716.33	9,922,269.37	-	-			**213,456,000**
	ROM ore	**16,780,000**	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	780,000					**16,780,000**

APPENDIX G – CAPITAL SCHEDULE

University of Pretoria etd – Swanepoel, W (2003)

rope	Haultruck	Drill	shovel
3	R13,500,000	R800,000	R68,000,000
6	R13,500,000	R1,500,000	R68,000,000
9	R13,500,000	R1,500,000	R68,000,000
12	R13,500,000	R8,000,000	R68,000,000
15	R13,500,000	R8,000,000	R68,000,000

rope	Haultruck	Drill	shovel	total	life
3	-	-	272,000,000	272,000,000	volle leeftyd
6	-	-	272,000,000	272,000,000	
9	-	-	204,000,000	204,000,000	
12	-	-	204,000,000	204,000,000	
15	-	-	204,000,000	204,000,000	

wheel	Haultruck	Drill	shovel
3	R13,500,000	R800,000	R10,500,000
6	R13,500,000	R1,500,000	R10,500,000
9	R13,500,000	R1,500,000	R10,500,000
12	R13,500,000	R8,000,000	R10,500,000
15	R13,500,000	R8,000,000	R10,500,000

wheel	Haultruck	Drill	shovel		
3	-	-	31,500,000	31,500,000	5jaar
6	-	-	31,500,000	31,500,000	
9	-	-	31,500,000	31,500,000	
12	-	-	42,000,000	42,000,000	
15	-	-	52,500,000	52,500,000	

exc	Haultruck	Drill	shovel
3	R13,500,000	R800,000	R20,000,000
6	R13,500,000	R1,500,000	R20,000,000
9	R13,500,000	R1,500,000	R20,000,000
12	R13,500,000	R8,000,000	R20,000,000
15	R13,500,000	R8,000,000	R20,000,000

exc	Haultruck	Drill	shovel		
3	-	-	40,000,000	40,000,000	volle leeftyd
6	-	-	40,000,000	40,000,000	
9	-	-	60,000,000	60,000,000	
12	-	-	60,000,000	60,000,000	
15	-	-	80,000,000	80,000,000	

face	Haultruck	Drill	shovel
3	R13,500,000	R800,000	R20,000,000
6	R13,500,000	R1,500,000	R20,000,000
9	R13,500,000	R1,500,000	R20,000,000
12	R13,500,000	R8,000,000	R20,000,000
15	R13,500,000	R8,000,000	R20,000,000

face	Haultruck	Drill	shovel		
3	-	-	60,000,000	60,000,000	volle leeftyd
6	-	-	60,000,000	60,000,000	
9	-	-	40,000,000	40,000,000	
12	-	-	40,000,000	40,000,000	
15	-	-	60,000,000	60,000,000	

	Price
Haultrcuk budget price	**R13,500,000**
Rope shovel budget price	**R68,000,000**
Hydraulic excavator budget price	**R20,000,000**
Hydraulic face shovel buget price	**R20,000,000**
Wheel loader budget price	**R10,500,000**
251mm Drill rig budget price	**R8,000,000**
165mm Drill rig budget price	**R1,500,000**
114mm Drill rig budget price	**R1,500,000**
65mm Drill rig budget price	**R800,000**

Rope Shovel

Bench height		3 meter	6 meter	9 meter	12 meter	15 meter
Haultruck		R 121,500,000	R 121,500,000	R 135,000,000	R 135,000,000	R 135,000,000
Drill rigs		R 32,800,000	R 21,000,000	R 12,000,000	R 32,000,000	R 32,000,000
Shovel		R 272,000,000	R 272,000,000	R 204,000,000	R 204,000,000	R 204,000,000
Total Capital cost		**R 426,300,000**	**R 414,500,000**	**R 351,000,000**	**R 371,000,000**	**R 371,000,000**

Hydraulic excavator

Bench height		3 meter	6 meter	9 meter	12 meter	15 meter
Haultruck		R 121,500,000	R 94,500,000	R 135,000,000	R 135,000,000	R 121,500,000
Drill rigs		R 32,800,000	R 21,000,000	R 12,000,000	R 32,000,000	R 32,000,000
Shovel		R 40,000,000	R 40,000,000	R 60,000,000	R 60,000,000	R 80,000,000
Total Capital cost		**R 194,300,000**	**R 155,500,000**	**R 207,000,000**	**R 227,000,000**	**R 233,500,000**

Hydraulic face shovel

Bench height		3 meter	6 meter	9 meter	12 meter	15 meter
Haultruck		R 94,500,000	R 135,000,000	R 121,500,000	R 121,500,000	R 135,000,000
Drill rigs		R 32,800,000	R 21,000,000	R 12,000,000	R 32,000,000	R 32,000,000
Shovel		R 60,000,000	R 60,000,000	R 40,000,000	R 40,000,000	R 60,000,000
Total Capital cost		**R 187,300,000**	**R 216,000,000**	**R 173,500,000**	**R 193,500,000**	**R 227,000,000**

Wheel loader

Bench height		3 meter	6 meter	9 meter	12 meter	15 meter
Haultruck		R 94,500,000	R 135,000,000	R 135,000,000	R 121,500,000	R 148,500,000
Drill rigs		R 32,800,000	R 21,000,000	R 12,000,000	R 32,000,000	R 32,000,000
Shovel		R 31,500,000	R 31,500,000	R 31,500,000	R 42,000,000	R 52,500,000
Total Capital cost		**R 158,800,000**	**R 187,500,000**	**R 178,500,000**	**R 195,500,000**	**R 233,000,000**

ADDENDUM H – DETAIL COST CALCULATIONS

DRILLING COSTS
BLASTING COSTS
LOADING COSTS
HAULING COSTS
SECONDARY COSTS
TOTAL OTHER COSTS
MANPOWER

DRILLING COSTS

Bench height		3 meter	6 meter	9 meter	12 meter	15 meter
Hole diameter		65mm	114mm	165mm	251mm	251mm
t/m drilled *		7.3	23	49	107	123
R/meter						
Consumables**		15	15.03	17.88	43.7	43.7
Power**		9.56	9.56	9.56	1.00	1.00
Salaries**		6	6	6	6	6
Finance**		7.8	7.8	7.8	7.8	7.8
Maintenance**		5	5	5	5	5
R/meter		43.36	43.39	46.24	63.5	63.5
R/ton drilled		**R 5.940**	**R 1.887**	**R 0.944**	**R 0.593**	**R 0.516**

* Figures obtained from the blast design, see addendum I
** Prices were obtained from either contractor quotes or from actual costs.

Bench height		3 meter	6 meter	9 meter	12 meter	15 meter
Hole diameter		65mm	114mm	165mm	251mm	251mm
t/m		7.3	23	49	107	123
waste tons		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
meters/month req.		192821	67085	34744	17901	17237
m/hour		16	16	16	17	17
hours		12051	4193	2171	1053	1014
hour per drill		300	300	300	300	300
number of drills		**41**	**14**	**8**	**4**	**4**

2 R/kg
16 R/gat

BLASTING COSTS

Bench height		3 meter	6 meter	9 meter	12 meter	15 meter
Hole diameter		65mm	114mm	165mm	251mm	251mm
t/m drilled *		7.3	23	49	107	123
Mass of blasted material (t/hole)		25	158	498	1450	2050
Technical explosives factor ton/kg		3.72	3.82	3.72	3.5	3.64
Explosives cost @ R2/kg **		0.38	0.32	0.33	0.35	0.32
Accessories @ R16/hole **		0.64	0.10	0.03	0.01	0.01
R/ton blasted		**R 1.178**	**R 0.625**	**R 0.570**	**R 0.582**	**R 0.557**

* Figures obtained from the balst design, see addendum I
** Prices were obtained from actual costs.

Bench height				**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
	Hours/month	R/hour	R/m2*					
Water truck maintenance	200	250	R 2.56	0.267	0.133	0.089	0.067	0.053
Water truck operations	200	100	R 0.32	0.033	0.017	0.011	0.008	0.007
Budozer miantenance	380	800	R 4.86	0.507	0.253	0.169	0.127	0.101
Budozer operation	380	200	R 1.22	0.127	0.063	0.042	0.032	0.025
Wheel dozer maintenance	400	250	R 1.60	0.167	0.083	0.056	0.042	0.033
Wheel dozer operations	400	100	R 0.64	0.067	0.033	0.022	0.017	0.013
totaal R/ton				**R 1.167**	**R 0.583**	**R 0.389**	**R 0.292**	**R 0.233**

* Based on a secondary unit supporting 750,000 tons per month at a desity of 3.2 t/bcm.

Euclid 147

HAULING COSTS

Owning cost	Budget Price	R 13,500,000
	Life of equipment	60000
Total owning	**R/hour**	**671.02**
Maintenance	Servicing cost	54.5
	Repair cost	270.13
Consumables	Fuel/Electricity	319.2
	Wearparts	30
	Lubes	
	Tyres	159.4
Total operating	**R/hour**	**833.23**
Total Cost / hour		**1504.25**
Production rate *		500
Total Cost R/t		**3.01**

* Based on a Talpac simulation over a return distance of 2000m.

Rope Shovel

Bench height		**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
Waste tonnage/ annum		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
Ore tonnage/ annum		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Production rate t/hour		500	500	500	500	500
operating hours / month		370	370	370	370	370
Number of shovels		4.0	4.0	3.0	3.0	3.0
Number of trucks/shovel		2.0	2.0	3.0	3.0	3.0
Number of trucks		**9**	**9**	**10**	**10**	**10**

Hydraulic excavator

Bench height		**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
Waste tonnage/ annum		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
Ore tonnage/ annum		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Production rate t/hour		500	500	500	500	500
operating hours / month		370	370	370	370	370
Number of shovels		2.0	2.0	3.0	3.0	4.0
Number of trucks/shovel		4.0	3.0	3.0	3.0	2.0
Number of trucks		**9**	**7**	**10**	**10**	**9**

Hydraulic face shovel

Bench height		**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
Waste tonnage/ annum		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
Ore tonnage/ annum		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Production rate t/hour		500	500	500	500	500
operating hours / month		370	370	370	370	370
Number of shovels		3.0	3.0	2.0	2.0	3.0
Number of trucks/shovel		2.0	3.0	4.0	4.0	3.0
Number of trucks		**7**	**10**	**9**	**9**	**10**

Wheel loader

Bench height		**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
Waste tonnage/ annum		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
Ore tonnage/ annum		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Production rate t/hour		500	500	500	500	500
operating hours / month		370	370	370	370	370
Number of shovels		3.0	3.0	3.0	4.0	5.0
Number of trucks/shovel		2.0	3.0	3.0	2.0	2.0
Number of trucks		**7**	**10**	**10**	**9**	**11**

Other Costs

Bench height			3 meter	6 meter	9 meter	12 meter	15 meter
Labour	R/t		1.5	1.5	1.5	1.5	1.5
Fixed costs			2	2	2	2	2
Total Cost R/t			**3.5**	**3.5**	**3.5**	**3.5**	**3.5**

Summary of total mining cost exl. Loading

Bench height			3 meter	6 meter	9 meter	12 meter	15 meter
R/ton drilled			R 5.94	R 1.89	R 0.94	R 0.59	R 0.52
R/ton blasted			R 1.18	R 0.62	R 0.57	R 0.58	R 0.56
R/ton seconadry			R 1.17	R 0.58	R 0.39	R 0.29	R 0.23
R/ton hauling			R 3.00	R 3.00	R 3.00	R 3.00	R 3.00
R/ton other			R 3.50	R 3.50	R 3.50	R 3.50	R 3.50
Total			R 14.78	R 9.59	R 8.40	R 7.97	R 7.81

TOTAL OTHER COSTS

LOADING COSTS

			Hydraulic shovel	Wheel loader	Rope shovel
			Hitachi EX2500	CAT 994	P&H 2300
Owning cost	Budget Price		20,000,000	10500000	68000000
	Life of equipment		40000	30000	100000
Total owning	**R/hour**		**R994.10**	**R457.22**	**R1,580.00**
Maintenance	Servicing cost		84.8	54.72	826
	Repair cost		758.32	373.6	
Consumables	Fuel/Electricity		472.65	350.35	17.8
	GET and other		339.92	300	300
	Lubes			52.55	13.17
	Tyres		0	56.75	0
Total operating	**R/hour**		**R1,655.69**	**R1,187.97**	**R1,156.97**
Total Cost / hour			**R2,649.79**	**R1,645.19**	**R2,736.97**

Rope Shovel

Bench height		**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
Waste tonnage/ annum		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
Ore tonnage/ annum		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Production rate t/hour		994	1,245	2,018	2,267	2,267
operating hours / month		370	370	370	370	370
Number of shovels		4.0	4.0	3.0	3.0	3.0
Number of trucks/shovel		2.0	2.0	3.0	3.0	3.0
Loading Cost / ton handled		**R 2.75**	**R 2.20**	**R 1.36**	**R 1.21**	**R 1.21**

Hydraulic excavator

Bench height		**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
Waste tonnage/ annum		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
Ore tonnage/ annum		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Production rate t/hour		2,600	2,122	2,122	1,948	1,560
operating hours / month		370	370	370	370	370
Number of shovels		2.0	2.0	3.0	3.0	4.0
Number of trucks/shovel		4.0	3.0	3.0	3.0	2.0
Loading Cost / ton handled		**R 1.02**	**R 1.25**	**R 1.25**	**R 1.36**	**R 1.70**

Hydraulic face shovel

Bench height		**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
Waste tonnage/ annum		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
Ore tonnage/ annum		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Production rate t/hour		1,318	2,055	2,635	2,635	2,108
operating hours / month		370	370	370	370	370
Number of shovels		3.0	3.0	2.0	2.0	3.0
Number of trucks/shovel		2.0	3.0	4.0	4.0	3.0
Loading Cost / ton handled		**R 2.01**	**R 1.29**	**R 1.01**	**R 1.01**	**R 1.26**

Wheel loader

Bench height		**3 meter**	**6 meter**	**9 meter**	**12 meter**	**15 meter**
Waste tonnage/ annum		16,891,159	18,515,571	20,429,226	22,984,916	25,441,716
Ore tonnage/ annum		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Production rate t/hour		1,284	1,712	1,712	1,284	1,284
operating hours / month		370	370	370	370	370
Number of shovels		3.0	3.0	3.0	4.0	5.0
Number of trucks/shovel		2.0	3.0	3.0	2.0	2.0
Loading Cost / ton handled		**R 1.28**	**R 0.96**	**R 0.96**	**R 1.28**	**R 1.28**

The production rates were sumilated on Talpac, adjusting cycletimes for the different bench heights.

MANPOWER

Rope Shovel

Bench height	3 meter	6 meter	9 meter	12 meter	15 meter
Haultruck operators	9	9	10	10	10
Drill rig operators	41	14	8	4	4
Seconadry equipment	8	8	6	6	6
General workers	10	10	10	10	10
Shovel operators	4	4	3	3	3
Manpower/shift	72	45	37	33	33
Total manpower	**216**	**135**	**111**	**99**	**99**

Wheel loader

Bench height	3 meter	6 meter	9 meter	12 meter	15 meter
Haultruck operators	7	10	10	9	11
Drill rig operators	41	14	8	4	4
Seconadry equipment	6	6	6	8	10
General workers	10	10	10	10	10
Shovel operators	3	3	3	4	5
Manpower/shift	67	43	37	35	40
Total manpower	**201**	**129**	**111**	**105**	**120**

Hydraulic excavator

Bench height	3 meter	6 meter	9 meter	12 meter	15 meter
Haultruck operators	9	7	10	10	9
Drill rig operators	41	14	8	4	4
Seconadry equipment	4	4	6	6	8
General workers	10	10	10	10	10
Shovel operators	2	2	3	3	4
Manpower/shift	66	37	37	33	35
Total manpower	**198**	**111**	**111**	**99**	**105**

Hydraulic face shovel

Bench height	3 meter	6 meter	9 meter	12 meter	15 meter
Haultruck operators	7	10	9	9	10
Drill rig operators	41	14	8	4	4
Seconadry equipment	6	6	4	4	6
General workers	10	10	10	10	10
Shovel operators	3	3	2	2	3
Manpower/shift	67	43	33	29	33
Total manpower	**201**	**129**	**99**	**87**	**99**

ADDENDUM I – BLAST LAYOUT DESIGN

University of Pretoria etd – Swanepoel, W (2003)

	Design Parameters	3 meter	Parameters	6 meter	Parameters	9 meter	Parameters	12 meter	Parameters	15 meter	Parameters
Hole diameter (mm)		65		114		165		251		251	
Burden (m)	25 - 30 D	1.625	25.00	2.622	23.00	3.795	23.00	5.02	20.00	5.522	22.00
Spacing (m)	1 - 1.5 B	1.625	1.00	3.1464	1.20	4.554	1.20	7.53	1.50	7.7308	1.40
Bench height (m)	3 B	3	1.85	6	2.29	9	2.37	12	2.39	15	2.72
Sub drill (m)	0.3 - 0.35 B	0.4875	0.30	0.7866	0.30	1.1385	0.30	1.506	0.30	1.6566	0.30
Length of hole (m)		3.4875		6.7866		10.1385		13.506		16.6566	
Stemming (m)	1 B	1.4625	0.90	2.622	1.00	3.795	1.00	5.02	1.00	5.522	1.00
Charge length above floor level (m)	2 B	1.5375	0.95	3.378	1.29	5.205	1.37	6.98	1.39	9.478	1.72
Total charge length (m)		2.025		4.1646		6.3435		8.486		11.1346	
Charging density t/m3	1.2	1.20		1.20		1.20		1.20		1.20	
Exploives / meter (Kg/m)		3.98		12.25		25.66		59.38		59.38	
Explosive mass above floor level (kg)		6		41		134		414		563	
Total explosives mass (kg)		8		51		163		504		661	
Mass of blasted material (t/hole)		25		158		498		1452		2049	
Technical explosives consumption kg/ton		0.24		0.26		0.27		0.29		0.27	
Technical explosives factor ton/kg		4.14		3.83		3.73		3.50		3.64	
Technical explosives factor g/m3 (k)	600 - 900	773		836		859		914		879	
Explosives consumption kg/ton		0.32		0.32		0.33		0.35		0.32	
ton / meter		7.3		23		49		107		123	
Comparitive drilling efficiency		7%		22%		46%		100%		114%	

ADDENDUM J – ECONOMIC EALUATION RESULTS

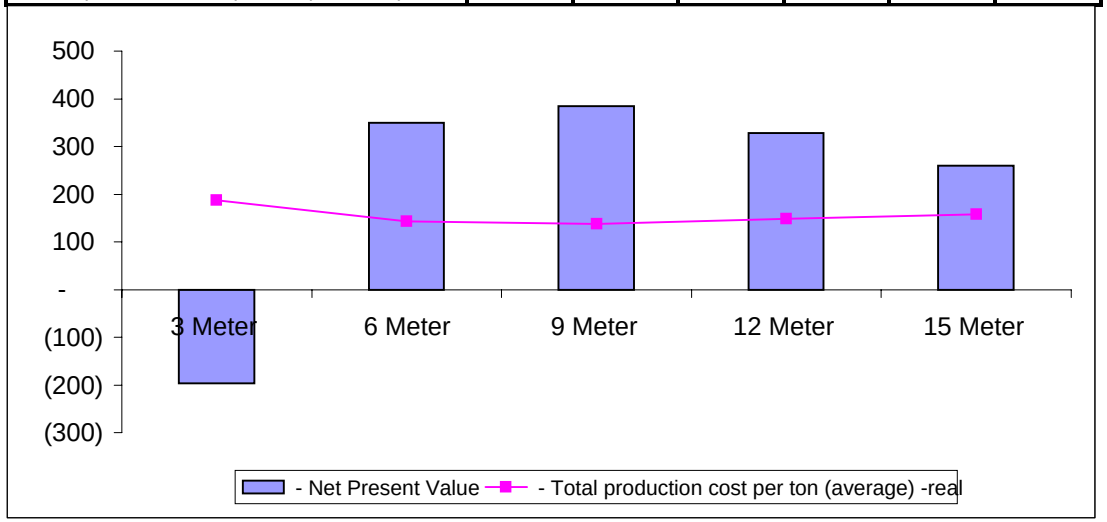
ROPE SHOVEL

HYDRAULIC FACE SHOVEL

HYDRAULIC EXCAVATOR

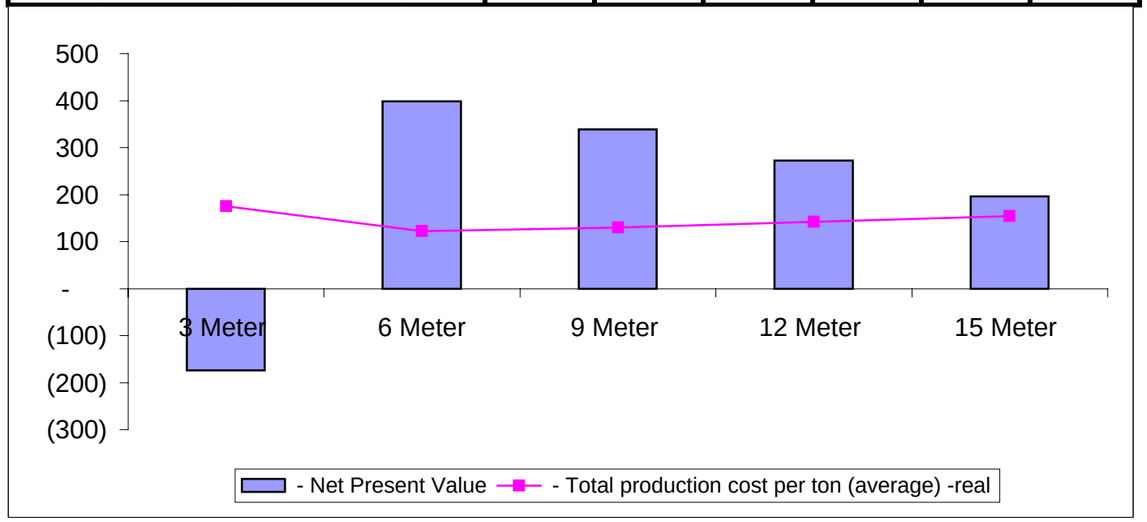
WHEEL LOADER

ROPE SHOVEL		3 Meter	6 Meter	9 Meter	12 Meter	15 Meter
- Net Present Value	R' m	(197)	350	385	329	260
- IRR	%	#DIV/0!	17%	34%	22%	10%
- Gross cash profit margin	%	-21%	12%	15%	12%	8%
-Gross profit margin	%	-33%	0%	6%	1%	-1%
- Cash production cost per ton (average) - Real	R/t	170	125	120	127	136
- Total production cost per ton (average) -real	R/t	187	144	137	149	158
- Cash production cost per ton (total tons) - Real	R/t	15.31	10.39	9.12	8.64	8.41



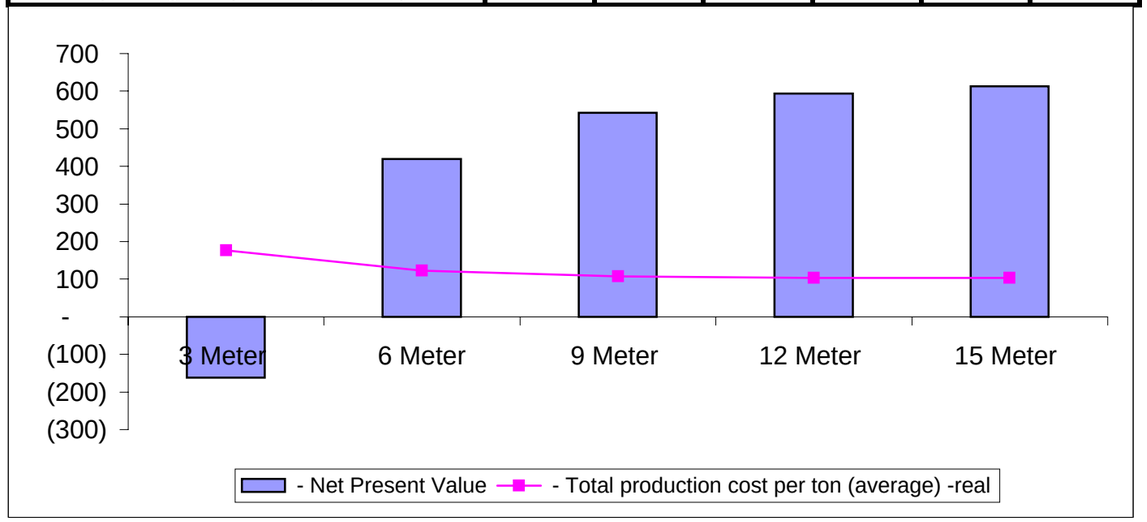
3	6	9	12	15
(197)	350	385	329	260
#DIV/0!	17%	34%	22%	10%
-21%	12%	15%	12%	8%
-33%	0%	6%	1%	-1%
170	125	120	127	136
187	144	137	149	158
15.31	10.39	9.12	8.64	8.41

WHEEL LOADER		3 Meter	6 Meter	9 Meter	12 Meter	15 Meter
- Net Present Value	R' m	(174)	399	339	272	197
- IRR	%	#DIV/0!	195%	181%	97%	32%
- Gross cash profit margin	%	-19%	20%	16%	12%	8%
-Gross profit margin	%	-25%	14%	10%	4%	0%
- Cash production cost per ton (average) - Real	R/t	168	113	120	127	137
- Total production cost per ton (average) -real	R/t	176	122	130	142	154
- Cash operating cost per ton (total tons) - Real	R/t	15.10	10.16	9.08	8.67	8.47



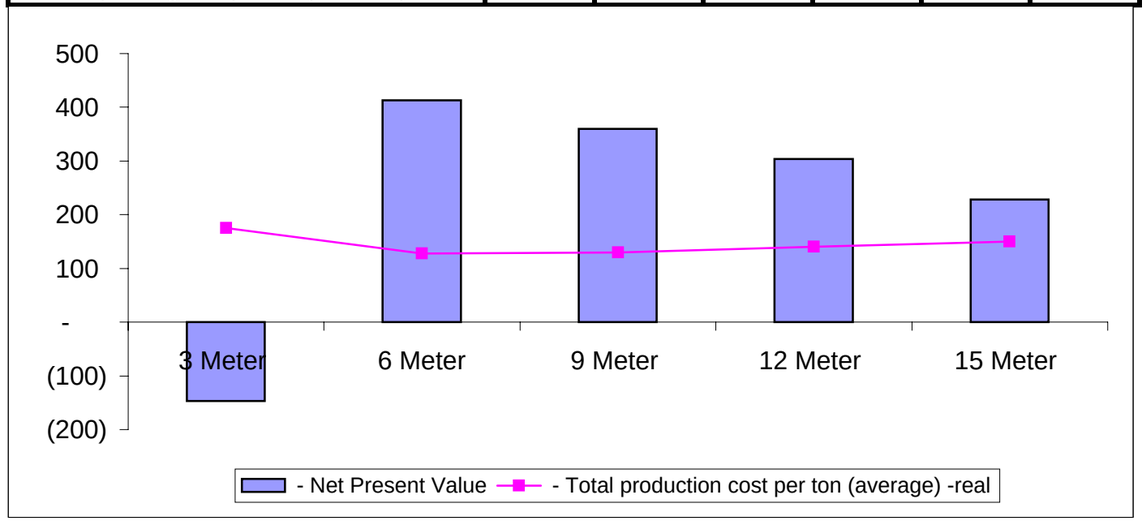
3	6	9	12	15
(174)	399	339	272	197
#DIV/0!	195%	181%	97%	32%
-19%	20%	16%	12%	8%
-25%	14%	10%	4%	0%
168	113	120	127	137
176	122	130	142	154
15.10	10.16	9.08	8.67	8.47

HYDRAULIC FACE SHOVEL		3 Meter	6 Meter	9 Meter	12 Meter	15 Meter
- Net Present Value	R' m	(161)	419	542	594	613
- IRR	%	#DIV/0!	123%	718%	462%	222%
- Gross cash profit margin	%	-20%	20%	29%	33%	34%
-Gross profit margin	%	-25%	14%	24%	27%	27%
- Cash production cost per ton (average) - Real	R/t	169	113	100	96	95
- Total production cost per ton (average) -real	R/t	176	122	107	104	104
- Cash operating cost per ton (total tons) - Real	R/t	15.17	10.20	9.04	8.61	8.51



3	6	9	12	15
(161)	419	542	594	613
#DIV/0!	123%	718%	462%	222%
-20%	20%	29%	33%	34%
-25%	14%	24%	27%	27%
169	113	100	96	95
176	122	107	104	104
15.17	10.20	9.04	8.61	8.51

HYDRAULIC EXCAVATOR		3 Meter	6 Meter	9 Meter	12 Meter	15 Meter
- Net Present Value	R' m	(147)	413	360	304	228
- IRR	%	#DIV/0!	506%	114%	69%	38%
- Gross cash profit margin	%	-19%	21%	15%	12%	8%
-Gross profit margin	%	-24%	17%	10%	5%	2%
- Cash production cost per ton (average) - Real	R/t	167	122	120	127	137
- Total production cost per ton (average) -real	R/t	175	128	130	140	150
- Cash operating cost per ton (total tons) - Real	R/t	15.06	10.99	9.11	8.65	8.46



3	6	9	12	15
(147)	413	360	304	228
#DIV/0!	506%	114%	69%	38%
-19%	21%	15%	12%	8%
-24%	17%	10%	5%	2%
167	122	120	127	137
175	128	130	140	150
15.06	10.99	9.11	8.65	8.46