AFPLATS (Pty) Ltd



Closure Costing Report for (Afplats)Leeuwkop Mine



April 2013



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ACTION	FUNCTION	NAME	DATE
Update of closure cos	st estimate for 2012FY (Sche	duled and 1-10 Ye	ear forecast)
Prepared Closure cost report	Estimator	L Koekemoer	April 2013
Prepared Closure costing	Estimator	L Koekemoer	7.0111 2010
Reviewed	Engineer	P Harris	April 2013





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LIST OF TERMS AND ABREVIATIONS USED

TERMS & ABBREVIATIONS	DESCRIPTION
Care and maintenance	This involves the maintaining and corrective action as requires as well as conducting the required inspection and monitoring to demonstrate achievement of success of the implemented measures
Closure	This involves the application for closure certificate and initiation of transfer of on-going care and maintenance to third parties
Contingencies	This allows for making reasonable allowance for possible oversights/omissions and possible work not foreseen at the time of compilation of the closure costs. Allowance of between 10 percent and 20 percent would usually be made based on the accuracy of the estimations. The South African Department of Minerals and Energy Guideline (January 2005) requires an allowance of 10 percent
Decommissioning	This relates to the situation after cessation of operations involving the deconstruction/removal and/or transfer of surface infrastructure and the initiation of general site reclamation
DMR	Department of Mineral Resources
E-TEK	E-TEK Consulting
SLR	SLR Consulting (Africa) (Pty) Ltd
Impala	Impala Platinum Limited (Rustenburg Operations)
Post-closure	The period after mine closure
Preliminary and Generals (P&Gs)	This is a key cost item which is directly related to whether third party contractors have applied for site reclamation. This cost item comprises both fixed and time-related charges. The former makes allowance for establishment (and de-establishment) of contractors on site, as well as covering their operational requirements for their offices (electricity/water/communications), latrines, etc. Time-related items make allowance for the running costs of the fixed charged items for the contract period
Reclamation	The re-instatement of a disturbed area into a usable state (not necessarily its pre-mining state) as defined by broad land use and related performance objectives
Rehabilitation	The return of a disturbed area to its original state, or as close as possible to this state
Remediation	To assist in the reclamation process by enhancing the quality of an area through specific actions to improve especially bio-physical site conditions
Scheduled closure	Closure that happens at the planned date and/or time horizon
Un-scheduled closure	Immediate closure of a site, representing decommissioning and reclamation of the site in its present state





1 INTRODUCTION

E-TEK Consulting (E-TEK) was requested by SLR Consulting (SLR) to assist with the determination of the preliminary closure costing of the updated mining infrastructure at the (Afplats) Leeuwkop Mine as part of the EMP amendment process. The Leeuwkop Mine is located 10km west of Brits on the western limb of the Bushveld Complex in the North West Province. These closure costs form part of an authorization process with the Department of Mineral Resources (DMR) and are aligned to the DMR guideline document for new EIA/EMP applications.

This report provides the closure cost estimates for the Scheduled (Life of Mine) as well as a forecast for the unscheduled closure for the first ten years of operation

Closure costing is categorised according to the DMR guideline:

- Infrastructural areas;
- · Mining areas;
- · General surface reclamation;
- · Water management;
- · Post closure aspects; and
- Additional allowances.

Quantities were obtained from drawings and operational personnel. Rates used were obtained from E-TEK Consulting's (E-TEK) existing data base and in consultation with demolition and earthworks contractors.

The closure cost estimate for Leeuwkop Mine for scheduled closure is R80.45 million as indicated in the table below:

	Closure Costing Summary		Scheduled
	Tasks		Closure
1	Closure Aspects		
1.1	Infrastructural aspects	R	45 225 596.43
1.2	Mining aspects	R	13 572 900.71
1.3	General surface reclamation	R	3 493 050.00
1.4	Water management	R	-
	SUB - TOTAL 1 (for infrastructural and related structures)	R	62 291 547.14
2	Post closure aspects	R	7 440 200.00
	SUB - TOTAL 2 (for post - closure aspects)	R	8 184 220.00
3	Additional allow ances		
3.1	Preliminary and General	R	3 737 492.83
3.2	Contingencies	R	6 229 154.71
	SUB - TOTAL 3 (for additional allow ances)	R	9 966 647.54
	Grand - Total (for sub - total 1+2+3)	R	80 442 414.68





2 APPROACH AND COST DETERMINATION

2.1 Approach

E-TEK recently updated the closure cost estimates for all of Implats South African mining operations (Implats). The closure criteria and unit rates used were assumed to be similar to that of the Implats group.

The Leeuwkop Mine consists of the following components:

- · Admin buildings and offices;
- Change rooms and lamp house;
- Stores and workshops;
- Ventilation shafts:
- Main shaft and winder houses;
- Stormwater dams and settling ponds;
- · Sewage and water treatment plant;
- Material handling plant;
- Topsoil stockpiles:
- Waste rock dump;
- Processing plant; and
- Tailings storage facility.

2.2 Cost determination

The costing exercise based of the following:

- Sourcing and review of project information from SLR to determine the nature and extent of the project;
- Agreement that no site visit was required. Furthermore, the project team has a good understanding of the general site conditions and nature of operations at Impala due to involvement in the closure costing for the whole of Impala's current Rustenburg Operations;
- Review of available information, identification of infrastructure and mining-related activities that would need to be decommissioned at closure;
- Determination of the various components of demolition or rehabilitation related to each structure and/or area;
- Compilation of a Bill of Quantities capturing the quantities and actions relating to closure of the complexes;
- Unit rates from E-TEK's data base were updated to be aligned with the current market related rates acquired from local civil- and demolition contractors;
- Application of the above unit rates and associated quantities in pre-determined spreadsheets to determine the latest closure cost estimates;
- Forecasting the first ten operational years of the increase in closure costs for the proposed shaft complexes; and
- Compilation of a closure cost report to reflect the assumptions made in the closure costing as well as the matters requiring attention to ensure that future closure costing is gradually improved





3 INFORMATION

Closure costing was based on the following information supplied by Impala and BGQS:

Description	Person	Date
GA Drawing	SLR (Natasha Daly)	20/06/2012
Extract from EIA	SLR (Natasha Daly)	16/04/2012
Detailed Execution Schedule	DRA (Bruno Vrugtman)	23/07/2012
2011 Closure Costing	Impala (Gerhard van Dyk)	11/06/2012
Project info	Impala (Karools van Wyk)	16/07/2012

4 CLOSURE CRITERIA

The following general and site specific assumptions and qualifications for each of the closure components listed in section 2.1 for Impala are described below:

4.1 General assumptions

- The closure cost estimate is aligned to the Guideline Document for the Evaluation of the Quantum of Closure Related Financial Provision Provided by a Mine, by the DMR (January, 2005);
- The closure costs for the site could comprise a number of cost components. This report only
 addresses the decommissioning and reclamation costs, equating to an outside (third party)
 contractor establishing on-site and conducting reclamation-related work. Other components such
 as staffing of the site after decommissioning, the infrastructure and support services (e.g. power
 supply, etc.) for this staff as well as workforce matters such as separation packages, re-training
 /re-skilling, etc. are outside the scope of this report;
- Based on the above, dedicated contractors would be commissioned to conduct the demolition and reclamation work on the site. This would inter alia require establishment costs for the contractors and hence, the allowance for preliminary and general (P&Gs) in the cost estimate;
- Allowance has also been made for third party contractors and consultants to conduct post-closure care and maintenance work as well as compliance monitoring;
- Closure costs have been determined for both the scheduled and un-scheduled closure situations.
 Specifically, scheduled closure takes place at a planned date and/or within a time horizon, in accordance with overall mine planning. Un-scheduled closure entails immediate closure of a site, representing decommissioning and reclamation of the site in its present state;
- In accordance with the DMR guideline, no cost off-sets due to possible salvage values were considered and gross reclamation costs are reported; and
- Fixed percentages for P&Gs and contingencies as per the DMR guideline have been applied.

4.2 Site specific assumptions

Site development and disturbance has already taken place;





- The 1-10 year forecast was based on the project schedule supplied by operational personnel;
- Steel and related material from the plant demolition which has salvage value will be removed to an authorized facility within a 30km radius from the demolition site to be sold or auctioned off. However as per the DMR guideline, the salvage value of the steel and salvageable equipment has not been considered as part of the closure costing;
- Although a temporary headgear will be erected for sinking purposes no allowance were made for removal of the headgear as this will remain the responsibility of the appointed contractor;
- Allowance was made for the disposal of general waste (including building rubble) at a permitted waste disposal site within a 50 km radius;
- It has been assumed that all tarred roads, outside of plant and shaft areas, will remain post closure to be incorporated into the regional road network. Hence, no allowance was made to rehabilitate tarred roads as it would remain to serve the larger community; and
- Concurrent rehabilitation will be conducted operationally on the waste rock dump and tailings facilities.

5 CLOSURE COSTING

Detailed spreadsheets for the closure cost estimates for this report are included in Appendix A. The following sub-headings describe all criteria and assumptions used for closure costing. The various subsections that follow must be read in conjunction with the detailed spreadsheet. Closure costs were calculated for unscheduled closure for the first ten years and scheduled closure as per the project schedule provided.

5.1 Infrastructural areas

- 5.1.1 Processing plants, steel structures, reinforced concrete structures, offices, workshops, residential buildings and related structures.
 - All infrastructures will be completely removed to 1m below natural ground level. No beneficial reuse has been allowed for any of the surface infrastructure;
 - Allowance was made for the demolition cost of all steel type structures. This includes a removal
 fee for a 30km load and hauls to an authorised facility to be sold or auctioned off. However as per
 DMR requirement, the salvage value of steel was not used to offset demolitions costs;
 - Provision was made to establish a crane to assist with the dismantling process;
 - A nominal allowance was made for the dismantling of salvageable equipment;
 - Allowance was made for the disposal of other non-demolition waste (general waste) at a permitted disposal site within a 50 km radius;
 - Eskom sub-stations were excluded from these calculations;
 - A 2.5 % allowance was made for the sorting and screening of waste; and
 - General surface rehabilitation will be implemented on footprint areas.

5.1.2 Roads

 No allowance was made to rehabilitate tarred roads outside of the plant or shaft areas. It has been assumed that these will be transferred to the regional authorities to be incorporated into the regional road network.

5.1.3 Power lines, railways and pipelines





- All tailings and service delivery pipelines will be removed;
- Main water supply pipeline will be removed; and
- All power lines not forming part of Eskom's supply network will be removed.

5.2 Mining areas

5.2.1 Shaft

- Provision was made for the complete dismantling of all shafts, vent shaft and related infrastructure;
- Allowance was made to seal all vertical and incline shafts with a concrete cap as per the DMR guideline; and
- No allowance was made to backfill underground workings of shafts with waste material.

5.2.2 Tailings disposal facility

- Rehabilitation of the tailings facilities will entail the in-situ establishment of on the facilities side slopes, concurrently with development. A similar rehabilitation method to that of sister company Impala Platinum will be followed;
- Allowance was made to establish vegetation on the top surface at closure;
- The side slopes will be rehabilitated concurrently during the operational phase and was assumed that a 2m high strip will still require rehabilitation at scheduled closure; and
- Additional allowance was made to plug the penstocks and remove the spigot and delivery pipelines.

5.2.3 Topsoil stockpiles

- Allowance were made to rip the footprint of the topsoil stockpiles to alleviate compaction; and
- Additional allowance was made to establish vegetation on the footprint areas.

5.2.4 Waste rock dump

Allowance was made to re-shape the waste rock dump slopes to 1:3 (v:h) and place a 800 mm capping layer over the entire facility, as prescribed in the recommendations for waste rock dumps, prior to vegetation; our guideline refer:

Capping of a waste rock dump should be carried out with materials that exist naturally in the vicinity of the dump. Modelling on various WRD's around the world has determined that typically a total of 0.5 m of capping materials is considered sufficient to prevent the infiltration of rainfall into the final landforms. The final objective of the capping design is to prevent the infiltration of rainfall into the waste rock dump.

- It is stated that concurrent rehabilitation will take place but it was assumed that at any given time a strip of 20 m will be exposed; and
- Deposition of waste rock on proposed footprint will start in year 1 of operation.

5.2.5 Settling ponds

- Allowance was made to remove 250mm layer of material from the dam basin and dispose of onto the tailings dams before rehabilitation commences;
- Allowance was made to breach the dam walls and doze the excess material inwards to fill the void of the dam;
- Allowance was made to remove and dispose of the HDPE liner at 'n disposal site; and
- Additional allowance was made to establish vegetation on the disturbed footprint.





5.2.6 Emergency and Pollution control dam

- Allowance was made to remove 100mm layer of material from the dam basin and dispose of onto the tailings dams before rehabilitation commences;
- Allowance was made to breach the dams walls and doze the excess material inwards to fill the void of the dam;
- Allowance was made to remove and dispose of the HDPE liners; and
- Additional allowance was made to establish vegetation on the disturbed area.

5.2.7 Waste rock noise berm

- Allowance were made to reshape the berm;
- Allowance were made to import a 200mm layer of topsoil from the local topsoil stockpiles; and
- Additional allowance was made to establish vegetation on the reshaped area.

5.3 General surface reclamation

5.3.1 Shaping and levelling of footprint areas

 Allowance was made to stockpile demolition waste, shape and level the area filling all voids and making area free draining.

5.3.2 Topsoil growth medium

- Allowance was made to import 150mm of topsoil on the disturbed footprint areas after shaping and levelling; and
- Where topsoil is not imported, it was assumed that the in-situ soil can effectively be ameliorated to sustain vegetation.

5.3.3 Ripping

Allowance was made to rip the disturbed footprint to a depth of 500mm to alleviate compaction.

5.3.4 Vegetation

 Allowance was made to establish vegetation on all rehabilitated areas, which includes soil amelioration, cultivation and seeding with an indigenous grass seed mixture.

5.4 Water management

 No allowance has been made as it was assumed correct mitigation measures will be implemented during the operational phase.

5.5 Post closure aspects

5.5.1 Surface water monitoring

 An overall allowance was made for the monitoring of 8 surface water monitoring positions, on a monthly basis, for a period of five years post closure.

5.5.2 Ground water monitoring

 An overall allowance was made for the monitoring of 15 groundwater monitoring positions on a quarterly basis, for a period of 5 years post closure.

5.5.3 Reclamation monitoring





 An allowance has been included for the reclamation monitoring of both reclaimed areas and dumps for a five year period.

5.5.4 Care and maintenance

 Care and maintenance of the reclaimed areas and dumps, over a five year period, has been assumed.

5.6 Additional allowances

5.6.1 Preliminary and general

Additional allowance of six percent of the total for infrastructural and related aspects (sub-total 1 on summary costing table) has been made, which is aligned to the DMR guideline.

5.6.2 Contingencies

Additional allowance of 10 percent of the total for infrastructure and related aspects (sub-total 1 on summary costing table), which is aligned to the DMR guidelines.

6 ASPECTS REQUIRING ATTENTION

- More detailed investigation or trials should be conducted to assess the cover/capping options for the WRDs in order to assess the suitability / sustainability of the on-site black clays as a capping material, especially at steep gradients;
- The current required capacity for the emergency control dams is 138500m³, the current assumption were that two dams will be constructed. The closure costing will need to be updated if the final decision regarding the dams differ from the current assumptions;
- Once the mine is operational a detailed concurrent rehabilitation plan is to be developed and implemented to eliminate certain assumptions made regarding concurrent rehabilitation; and
- Quantities were based on the general arrangement drawings and relevant experience with similar projects. Once detail drawings of all infrastructure is available the closure cost estimates should be revised to confirm key quantities.

7 CONCLUSION

The closure costs as reflected in this report have been based on information obtained from SLR and operational personnel. Where the required information was not available, estimates or assumptions were made based on experience and benchmarked against similar facilities.

Unit rates for the costing were obtained from E-TEK's existing data base and/or from rehabilitation and demolition practitioners. Where required, these were adapted to reflect site-specific conditions. Rates are comparable to those used for determination of the closure costing for Impala's entire Rustenburg Operations (Y2012).



E-TEK Consulting





AFPLATS LEEUWKOP MINE - CLOSURE COST REPORT (2013)





	Closure Costing Summary	Υe	ear 1 - 2012	Υ	ear 2 - 2013)	Year 3 - 2014	Y	ear 4 - 2015	Υ	ear 5 - 2016	Y	ear 6 - 2017
	Tasks												
1	Closure Aspects												
1.1	Infrastructural aspects	R	3 817 489.03	R	5 435 807.78	R	11 236 830.07	R	17 384 422.20	R	19 149 678.87	R	19 748 467.67
1.2	Mining aspects	R	3 762 277.46	R	3 762 277.46	R	6 871 137.17	R	9 521 800.56	R	9 717 042.96	R	9 717 042.96
1.3	General surface reclamation	R	2 409 000.00	R	2 409 000.00	R	2 409 000.00	R	2 409 000.00	R	2 409 000.00	R	2 409 000.00
1.4	Water management	R	-	R	-	R	-	R	-	R	-	R	-
	SUB - TOTAL 1 (for infrastructural and related structures)	R	9 988 766.49	R	11 607 085.24	R	20 516 967.23	R	29 315 222.75	R	31 275 721.83	R	31 874 510.63
2	Post closure aspects	R	1 640 000.00	R	1 640 000.00	R	1 640 000.00	R	1 728 200.00	R	1 764 200.00	R	1 800 200.00
	SUB - TOTAL 2 (for post - closure aspects)	R	1 804 000.00	R	1 804 000.00	R	1 804 000.00	R	1 901 020.00	R	1 940 620.00	R	1 980 220.00
3	Additional allowances												
3.1	Preliminary and General	R	599 325.99	R	696 425.11	R	1 231 018.03	R	1 758 913.37	R	1 876 543.31	R	1 912 470.64
3.2	Contingencies	R	998 876.65	R	1 160 708.52	R	2 051 696.72	R	2 931 522.28	R	3 127 572.18	R	3 187 451.06
	SUB - TOTAL 3 (for additional allowances)	R	1 598 202.64	R	1 857 133.64	R	3 282 714.76	R	4 690 435.64	R	5 004 115.49	R	5 099 921.70
	Grand - Total (for sub - total 1+2+3)	R	13 390 969.12	R	15 268 218.87	R	25 603 681.99	R	35 906 678.39	R	38 220 457.32	R	38 954 652.33





Closure Costing Summary Tasks	Ye	ear 7 - 2018	Υ	/ear 8 - 2019	}	/ear 9 - 2020	Y	'ear 10 - 2021		Scheduled Closure
1 Closure Aspects										
1.1 Infrastructural aspects	R	21 026 527.67	R	22 384 190.17	R	23 858 409.28	R	24 728 426.91	R	45 225 596.43
1.2 Mining aspects	R	9 717 042.96	R	9 717 042.96	R	9 717 042.96	R	9 717 042.96	R	13 572 900.71
1.3 General surface reclamation	R	2 409 000.00	R	2 409 000.00	R	2 409 000.00	R	2 409 000.00	R	3 493 050.00
1.4 Water management	R	-	R	-	R	-	R	-	R	-
SUB - TOTAL 1 (for infrastructural and related structures)	I D	33 152 570.63	R	34 510 233.13	R	35 984 452.24	R	36 854 469.86	R	62 291 547.14
2 Post closure aspects	R	1 836 200.00	R	1 872 200.00	R	1 908 200.00	R	1 944 200.00	R	7 440 200.00
SUB - TOTAL 2 (for post - closure aspects)	I R	2 019 820.00	R	2 059 420.00	R	2 099 020.00	R	2 138 620.00	R	8 184 220.00
3 Additional allowances										
3.1 Preliminary and General	R	1 989 154.24	R	2 070 613.99	R	2 159 067.13	R	2 211 268.19	R	3 737 492.83
3.2 Contingencies	R	3 315 257.06	R	3 451 023.31	R	3 598 445.22	R	3 685 446.99	R	6 229 154.71
SUB - TOTAL 3 (for additional allowances)	P	5 304 411.30	R	5 521 637.30	R	5 757 512.36	R	5 896 715.18	R	9 966 647.54
Grand - Total (for sub - total 1+2+3)	I D	40 476 801.93	R	42 091 290.43	R	43 840 984.60	R	44 889 805.04	R	80 442 414.68





		Closure Costing - Leeuwkop				Closure Co	sts - <u>Year 1 - (2012)</u>	s - <u>Year 1 - (2012)</u>		
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes		
2		Infrastructural Aspects Nominal cost and time related items								
3		Mine Removal of salvageable equipment	1.2	sum	1.00	R 1 000 000.00	R 1 000 000.00	Nominal allowance		
5		Crane	11.1	p/day	5.00		R 193 500.00	For assistance in the removal of equipment and demolition purposes		
6		Plant Removal of salvageable equipment	1.2	sum		R 6 500 000.00		Nominal allowance		
8		Crane	11.1	p/day	0.00		R -	For assistance in the removal of equipment and demolition purposes		
9		Sub-Total for cost and time related items Demolitioning of plant and related structures		p. ==,	5.50		R 1 193 500.00	, , , , , , , , , , , , , , , , , , ,		
11	21	Compressor house	3.7	m²	0.00	R 380.00	R -	To be constructed according to program		
12	22	Condenser cooling towers	4.2	m³	0.00		R -	To be constructed according to program		
13	23	Refrigeration plant	4.2	m³	0.00		R -	To be constructed according to program		
14	27	Grout Plant	3.7	m²	0.00		R -	To be constructed according to program		
15	28	Ventilation Shaft	2.2	t	0.00	R 1 280.00	R -	To be constructed according to program		
16	40	Water treatment plant	2.3.2	m²	0.00		R -	To be constructed according to program		
17	43	Sewage Plant	3.6	m²	0.00	R 320.00	R -	To be constructed according to program		
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program		
19 20	87	Plant - Cleaners Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program		
21		Structural concrete	4.3	m³	0.00	R 400.00	R -			
22 23	88	Plant - Cleaners Structural steel	2.3.2	m²	0.00		R -	To be constructed according to program		
24		Structural concrete	4.3	m³	0.00		R -			
25 26	89	Plant - Mill Structural steel	2.3.2	m²	0.00		R -	To be constructed according to program		
27		Structural concrete	4.3	m³	0.00	R 400.00	R -			
28 29	94 98	Plant - Storage area Plant	3.7 3.6	m² m²	0.00 0.00			To be constructed according to program To be constructed according to program		
30 31	99 100	Plant - Thickener	3.6	m²	0.00		R -	To be constructed according to program To be constructed according to program		
32		Structural steel	2.3.2	m²	0.00					
33 34	101	Structural concrete Plant - Thickener	4.3	m³	0.00		R -	To be constructed according to program		
35		Structural steel	2.3.2	m²	0.00					
36 37	102	Structural concrete Plant - Thickener	4.3	m³	0.00		R -	To be constructed according to program		
38		Structural steel	2.3.2	m²	0.00					
39 40		Structural concrete Sub - Total for demolitioning of plant and related structures	4.3	m³	0.00	R 400.00	R -			
41 42	16	Demolitioning of all structural structures Carports	2.6.1	m²	0.00			To be constructed according to program		
43 44	17 15	Contractors Carports Headgear	2.6.1	m² t	424.00 0.00	R 1 280.00	R -	IBR sheeting To be constructed according to program		
45		Structural concrete	4.1	m³	147.00					
46	38	Waste silo	4.3	m³	0.00		R -	To be constructed according to program		
47 48	38 41	Waste silo Water tank	4.3 2.4.2	m³ no	0.00 0.00		R -	To be constructed according to program To be constructed according to program		
49	42	M/W Dam	4.3	m³	0.00	R 400.00	R -	To be constructed according to program		
50	42	M/W Dam	4.3	m³	0.00	R 400.00	R -	To be constructed according to program		
51 52	60 61	Sump Water Canal	4.2 8.4	m³ m²	0.00	R 640.00 R 135.00	R -	To be constructed according to program To be constructed according to program		
53	78	Plant - covered parking	2.6.1	m²	0.00		R -	To be constructed according to program		
54 55	104	Plant - Waste silo Sub - Total for demolitioning of all structural structures	4.3	m³	0.00	R 400.00	R - 226 320.00	To be constructed according to program		
56 57	13	Demolitioning of workshops and stores Winder House	3.7	m²	0.00	R 380.00		To be constructed according to program		
58 59	14	Winder House Winder rope store	3.7 3.1.1	m² m²	0.00	R 380.00	R -	To be constructed according to program To be constructed according to program To be constructed according to program		
60	24	Winda rope store Fan and electrical motor store Workshop sink and perm	3.1.1	m² m²	0.00 0.00 819.90	R 295.00	R -	To be constructed according to program Single volume building		
62	31 32	Main Store Explosives Store	3.7 3.6	m² m²	0.00	R 380.00	R -	To be constructed according to program To be constructed according to program		
64 65	33 34	Gas bottle store Chemical Store	3.1.1 3.1.1	m² m²	36.00 201.00	R 295.00	R 10 620.00	Single storey brick building Single storey brick building		
66 67	35 36	Paint Store Oil store	3.1.1 3.1.1	m² m²	41.00 36.00	R 295.00	R 12 095.00	Single storey brick building		
68 69	44 82	Generator farm Plant - Building	3.2.1	m² m²	0.00	R 480.00	R -	To be constructed according to program To be constructed according to program		
70 71	83 86	Plant - Building Plant - Workshop	3.6 3.7	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program		
72 73	93 95	Plant - Building Plant - Building	3.6	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program		
74 75	96	Plant - Building Sub - Total for demolitioning of workshops and stores	3.6	m²	0.00			To be constructed according to program		
76		Demolitioning of permanent brick structures and temporary structures								
77 78	1 2	Offices Change House	3.1.1 3.1.1	m² m²	0.00 0.00	R 295.00	R -	To be constructed according to program To be constructed according to program		
79 80	3	Laundry Boiler House	3.1.1 3.1.1	m² m²	0.00 0.00	R 295.00	R -	To be constructed according to program To be constructed according to program		
81 82	5 6	Change House Lamp Room	3.1.1 3.1.1	m² m²	0.00 0.00	R 295.00	R -	To be constructed according to program To be constructed according to program		
83 84	7	Change House Induction Room	3.1.1 3.1.1	m² m²	0.00	R 295.00		To be constructed according to program To be constructed according to program		
85 86	9 10	Training Centre Gate House	3.1.1 3.1.1	m² m²	0.00 0.00	R 295.00 R 295.00	R -	To be constructed according to program To be constructed according to program		
87 88	11 12	Banksman Cabin & Proto Room Central Control room	3.1.1 3.1.1	m² m²	0.00 0.00	R 295.00 R 295.00	R -	To be constructed according to program To be constructed according to program		
89 90	19 19	Sub-station Sub-station	3.2.1 3.2.1	m² m²	0.00 0.00	R 480.00	R -	To be constructed according to program To be constructed according to program		
91	20	Transformer bays	3.2.1	m²	0.00			To be constructed according to program		





		Closure Costing - Leeuwkop				Closure Cos	sts - <u>Year 1 - (2012)</u>	
Item nr	ID	Task	Unit Rate	Unit	Quantity	Rate	Amount	Notes
92	29	Sub-station	3.2.1	m²	0.00			To be constructed according to program
93 94	30 45	MCC Sumer Sub-station	3.2.1 3.2.1	m² m²	0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
95 96	47 48	Geology building Offices	3.1.1 3.1.1	m² m²	183.00 149.60			Single storey brick building Single storey brick building
97 98	49 50	Offices Shaft Sinker Offices	3.1.1 3.3	m² m²	149.60 124.00			Single storey brick building Portable offices
99	51	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices
100	52 53	Change House Change House	3.3	m² m²	16.00 16.00	R 140.00	R 2 240.00	Portable offices Portable offices
102	54 55	Change House Lamp Room	3.3	m² m²	16.00 16.00			Portable offices Portable offices
104 105	56 57	Steffanuti Stocks Shaft Sinker Offices	3.3	m² m²	16.00 124.00	R 140.00	R 2 240.00	Portable offices Portable offices
106	58	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices
107 108	76 77	Explosives bunker Weighbridge	3.1.1 1.2	m² sum	150.00			Single storey brick building To be constructed according to program
109 110	79 80	Plant - Admin building Plant - Induction room	3.1.1 3.1.1	m² m²	0.00			To be constructed according to program To be constructed according to program
111 112	81 84	Plant - Office Plant - Sub-station	3.1.1 3.2.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
113	85 97	Plant - Sub-station Plant - building	3.2.1 3.1.1	m² m²	0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
	91	Sub - Total for demolitioning of permanent brick structures and	3.1.1	III	0.00	R 295.00		To be constructed according to program
115 116		temporary structures Removal of all surface related finishes					R 267 139.00	
117 118	26 46	Surface cable yard PFC yard	4.5 4.5	m² m²	0.00			To be constructed according to program To be constructed according to program
119 120	47 73	Geology yard General surface bed	4.5 4.4	m² m²	473.00 0.00			Assume 250mm thick concrete To be constructed according to program
121	90	Plant - Laydown areas	4.5	m²	0.00	R 590.00	R -	To be constructed according to program
122	91 92	Plant - Laydown areas Plant - Laydown areas	4.5 4.5	m² m²	0.00	R 590.00	R -	To be constructed according to program To be constructed according to program
124 125	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	0.00	R 590.00	R - 279 070.00	To be constructed according to program
126 127	32	Removal of all linear items Fencing to explosives store	5.5.3	m	85.00	R 27.00	R 2 295.00	
128 129	37 39	Reef and waste conveyor Reef conveyor	5.1.5 5.1.5	m m	0.00	R 640.00		To be constructed according to program To be constructed according to program
130	62	Waste conveyor	5.1.2	m	0.00	R 265.00	R -	To be constructed according to program
131 132	63 64	Return water pipeline Tailing delivery pipeline	5.2.2 5.2.2	m m	0.00	R 48.00	R -	To be constructed according to program To be constructed according to program
133 134	65 66	Pipeline from sump to PCD Emergency pipeline from concentrator to dam	5.2.2 5.2.2	m m	0.00		R -	To be constructed according to program To be constructed according to program
135 136	67 68	Distribution pipelines Water main pipeline	5.2.2 5.2.2	m m	0.00		R -	To be constructed according to program To be constructed according to program
137 138	69 74	Fire main pipeline Perimeter fencing	5.2.2 5.5.3	m m	0.00 3600.00	R 48.00	R -	To be constructed according to program
139	75	Perimeter fencing to tailings complex	5.5.3	m	0.00	R 27.00	R -	To be constructed according to program
140 141	76 105	Perimeter fence to explosives bunker Plant - Steel gantry's with delivery pipelines	5.5.3 2.3.1	m m²	201.00 0.00	R 107.00	R -	Assume 100kg of steel per m²
142 143	106	Plant - Security fencing Main water pipeline	5.5.3 5.2.3	m m	0.00 4669.00			To be constructed according to program
144 145		Sub - Total for removal of all linear items Rehabilitation of roads					R 403 738.00	
146 147		Entrance road Minor gravel road to explosives bunker	1.1 8.3	na m²	0.00 5864.00		R - R 23 456.00	Assume will remain
148		Sub - Total for rehabilitation of roads	0.5	- 111	3604.00	K 4.00	R 23 456.00	
149								
150		Disposal of demolition waste Sorting and screening of waste	6.1	%	1554721.00	2.50%	R 38 868.03	2.50%
150 151		Sorting and screening of waste Disposal of demolition waste	6.1 6.2.1	% m³/km	1554721.00 6440.00		R 1 030 400.00	2.50% Assume 50km distance
150 151 152 153		Sorting and screening of waste						
150 151 152 153 154 155		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects					R 1 030 400.00 R 1 069 268.03	
150 151 152 153 154 155 156		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps	6.2.1	m³/km	6440.00	R 160.00	R 1 030 400.00 R 1 069 268.03	
150 151 152 153 154 155 156 157		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable				R 160.00	R 1 030 400.00 R 1 069 268.03 R 3 817 489.03	
150 151 152 153 154 155 156 157 158		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines	1.1	m³/km na	6440.00	R 160.00	R 1 030 400.00 R 1 069 268.03 R 3 817 489.03	Assume 50km distance
150 151 152 153 154 155 156 157 158 159 160 161	15 23	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft	7.1.15 7.1.11	m³/km na sum	0.00 0.00 1.00 0.00	R 160.00 R R 2 573 324.00 R 1838 850.00	R 1030 400.00 R 1069 268.03 R 3817 489.03 R R R 2 573 324.00	Assume 50km distance 10m Diameter 8m Diameter
150 151 152 153 154 155 156 157 158 159 160		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft	1.1	m³/km na sum	0.00 0.00 1.00 0.00	R 160.00	R 1030 400.00 R 1069 268.03 R 3817 489.03 R R R 2 573 324.00	Assume 50km distance
150 151 152 153 154 155 156 157 158 159 160 161 162 163	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils	7.1.15 7.1.11	m³/km na sum	0.00 0.00 1.00 0.00	R 160.00 R R 2 573 324.00 R 1838 850.00	R 1030400.00 R 1069268.03 R 3817489.03 R R R 2573324.00 R R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166	23	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction	7.1.15 7.1.11 7.1.11 7.1.11	na sum sum ha	0.00 0.00 1.00 0.00 0.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 9 400.00	R 1030 400.00 R 1069 266.03 R 3817 489.03 R	Assume 50km distance 10m Diameter 8m Diameter
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 164	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils	7.1.15 7.1.11 7.1.11	na sum sum	0.00 0.00 1.00 0.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 9 400.00	R 1030 400.00 R 1069 268.03 R 3817 489.03 R - R - R - R - R - R - R - R - R - R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
150 151 152 153 154 156 156 157 158 160 161 162 163 164 165 166 166	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)	7.1.15 7.1.11 7.1.11 7.1.11	na sum sum ha	0.00 0.00 1.00 0.00 0.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 9 400.00	R 1030 400.00 R 1069 268.03 R 3817 489.03 R R R 2 573 324.00 R 2 573 324.00 R 11 099.52 R 16 295.04	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
150 151 152 153 154 156 156 157 158 159 160 161 162 163 164 165 166 167	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds	7.1.15 7.1.11 7.1.11 7.1.11	na sum sum ha	0.00 0.00 1.00 0.00 0.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 19400.00 R 13 800.00	R 1030 400.00 R 1069 268.03 R 3817 489.03 R R R 2 573 324.00 R 2 573 324.00 R 11 099.52 R 16 295.04	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
150 151 152 153 154 156 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 7.1.11	na na sum sum ha ha	0.00 1.00 0.00 0.00 0.00 1.18	R 160.00 R	R 1030 400.00 R 1069 268.03 R 3 817 489.03 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28 110	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 7.1.11	na na sum sum ha ha	0.00 1.00 0.00 0.00 0.00 1.18	R 160.00 R	R 1030 400.00 R 1 659 268.03 R 3 817 489.03 R - R - R - R 2 573 324.00 R - R 2 573 324.00 R 11 099.52 R 16 295.04 R 27 394.56	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
150 151 152 153 154 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11 10.4.1	m³/km na na sum sum ha ha ha	0.00 0.00 1.00 0.00 0.00 1.18 1.18	R 160.00 R R 2573 324 00 R 1838 850.00 R 1838 850.00 R 1940.00 R 13 800.00 R 2 20.00	R 1030 400.00 R 1 069 268.03 R 3 817 489.03 R - R - R - R 2 573 324.00 R - R 2 573 324.00 R 11 099.52 R 16 295.04 R 27 394.56 R - R - R - R - R - R - R - R - R - R -	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 7m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 170 171	23 28 110	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 10.4.1	m³/km na na sum sum ha ha ha	0.00 0.00 1.00 0.00 0.00 1.18 1.18 0.00	R 160.00 R	R 1030 400.00 R 1069 266.03 R 3817 489.03 R - R - R - R - R 2 573 324.00 R 11 099.52 R 11 099.52 R 12 73 94.56 R - R - R - R - R - R - R - R - R - R -	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 00nly footprints will remain
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 170 171 172 173 174 175 176 177	23 28 110	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish regetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting dams Rehabilitation of processing waste deposits and evaporation ponds (polluting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wail	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11 10.4.1 1.1 9.2 1.2 6.4 10.1.5	m³/km na na sum sum ha ha sum m³ m³ mm	0.00 1.00 0.00 1.118 1.18 0.00 0.00 0.00	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 3800.00 R - 1838 850.00 R 9040 R 9040 R 9040 R 9040 R 6.50 R 220.00	R 1030 400.00 R 1069 268.03 R 3 817 489.03 R R R - R - 11099.52 R 11099.52 R 12 573 324.00 R - 2 573 324.00 R - R R R R R R R R - 34 320.00 R 66 440.00 R 66 440.00	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 171 172 173 174 175 176 177	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove HOPE liner Breach dam wall Shape and level area	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1	m³/km na na sum sum ha ha sum sum sum	0.00 1.00 0.00 0.00 1.18 1.18 0.00 0.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 39 400.00 R - 13 800.00 R R 9 400.00 R R 9 400.00 R 55 250.00	R 1030 400.00 R 1 699 266.03 R 3 817 489.03 R - R - R - R 2 573 324.00 R 11 099.52 R 10 295.04 R 27 394.56 R - R - R - R - R - R - R - R - R - R -	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 00m Diameter 10m Diamete
150 151 152 153 154 156 157 158 159 160 161 162 163 164 166 167 168 169 170 171 172 173 174 175 176 177 178 179 179 180	23 28 110	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and leval area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile	9.2 1.1 9.2 1.2 6.4 10.4.1 9.2 9.2	m³/km na na sum sum ha ha na na na ha ha ha	0.00 1.00 0.00 0.00 1.18 1.18 1.18 0.00 0.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 3800.00 R 9 400.00 R R 90.40 R 6.50 R 90.40 R 6.50 R 13800.00 R 13 800.00	R 1030 400.00 R 1 669 266.03 R 3 817 489.03 R - 1 689 266.03 R R R 2 573 324.00 R 11 099.52 R 10 295.04 R 27 394.56 R - R R R R R R R R R R R - R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 170 171 172 173 174 175 176 177 178 179 180 181 180	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment and stockpile Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment and stockpile	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	m³/km na na sum sum ha ha ha na m³ sum sum	0.00 1.00 0.00 1.18 1.18 0.00 0.00 0.00	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 380.00 R 90.40 R 90.40 R 6.50 R 220.00 R 55 250.00 R 13 800.00 R 90.40 R 90.40 R 90.40	R 1030 400.00 R 1 669 266.03 R 3 817 489.03 R - 1 689 266.03 R R R 2 573 324.00 R 11 099.52 R 10 295.04 R 27 394.56 R - R R R R R R R R R R R - R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 00m Diameter 10m Diamete
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150 151 152 153 154 155 156 157 158 159 160 161 161 162 163 164 165 166 167 168 170 171 172 173 174 175 176 177 178 179 180 181 182 183 183 184 185 186 187 188 183 184 185	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Remove - Contaminated sediment and stockpile Load and haul contaminated sediment Remove - HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove - HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove - HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove - HDPE liner	9.5.1 10.4.1 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	m²/km na sum sum ha ha ha ha na m² m² m² mh ha ha sum m² m²	0.00 1.18 1.18 1.18 0.00 0.00 0.00 0.00	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 300.00 R 200.00 R 300.00 R 300.00 R 300.00 R 300.00 R 300.00 R 200.00 R 300.00 R 200.00 R 200.00 R 55 250.00 R 13 800.00 R 200.00 R 55 250.00 R 13 800.00 R 55 250.00	R 1030 400.00 R 1 669 266.03 R 3 817 489.03 R - 1 689 266.03 R R R 2 573 324.00 R 11 099.52 R 10 295.04 R 27 394.56 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining To be constructed according to program
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 166 167 168 169 170 171 171 172 173 174 175 176 177 178 180 181 182 183 184 185 185 186 187 188 188 189 189 180 180 180 180 180 180 180 180 180 180	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Remove Contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	9.2 1.1 9.5.1 10.4.1 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	m³/km na na sum sum ha	0.00 1.00 0.00 1.18 1.18 1.18 0.00 0.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1838 850.00 R 19400.00 R 13800.00 R 200.00 R 200.00 R 13800.00 R 200.00 R 300.00 R 200.00 R 200.00 R 200.00 R 200.00 R 200.00 R 200.00 R 300.00 R 200.00 R 300.00 R 200.00 R 55250.00 R 13800.00 R 200.00 R 55250.00 R 13800.00	R 1030 400.00 R 1 669 266.03 R 3 817 489.03 R - 1 689 266.03 R R R 2 573 324.00 R 11 099.52 R 10 295.04 R 27 394.56 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining To be constructed according to program
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 180 180 180 180 180 180 180 180 180 180	71A 71B	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area	9.2 1.1 9.5.1 10.4.1 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	m³/km na na sum sum ha	0.00 1.00 0.00 1.18 1.18 1.18 0.00 0.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 1380.00 R 20.00 R 20.00 R 220.00 R 30.00 R 30.00 R 30.00 R 30.00 R 220.00 R 55 250.00 R 13 800.00 R 20.00 R 20.00 R 20.00 R 30.40 R 6.50 R 220.00 R 55 250.00 R 13 800.00 R 20.00 R 20.00 R 20.00 R 20.00 R 30.40 R 20.00 R 20.00 R 20.00 R 30.40 R 30.40	R 1030 400.00 R 1069268.03 R 3817 489.03 R - 1069268.03 R R R R 11099.52 R 111099.52 R 162950.03 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter





		Closure Costing - Leeuwkop				-	Closure Cos	sts - <u>Year 1 - (2012)</u>	
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate	Amount	Notes
198		Breach dam wall	10.1.5	m	0.00		220.00		
199		Shape and level area	10.1.1	ha	0.00		55 250.00		
200		Establish vegetation	10.4.1	ha	0.00	R	13 800.00	R -	Assumed 20m strip would not have been
201	107	Waste Rock Dump							rehabilitated
202		Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R 34 340.00	Assume 250mm thick
203		Reshape WRD	9.1.1	m³	29925.00	Ь	13.50	R 403 987.50	Cut to fill action assumed 20m high at 87.5m³/per meter
203			3.1.1	""	29925.00	IX.	15.50	403 907.30	
		Import capping layers							Assumed 1km haul distance, 300mm thick capillary layer and 300mm thick black turf
204			9.6.1	m³	8160.00	R	28.00	R 228 480.00	Assumed 1km haul distance, 200mm thick
205		Import topsoil layer	9.6.1	m³	2720.00	R	28.00	R 76 160.00	layer
206		Establish vegetation	10.4.1	ha	1.36		13 800.00	R 18 768.00	
207	108	Tailings Complex	7.0		0.00	_	040 000 00	_	To be constructed according to program
208		Seal Penstocks Breach wall & reshape	7.3 10.1.5	sum m	0.00		213 200.00 220.00		
210		Rip to alleviate compaction	9.5.1	ha	0.00		9 400.00		
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00		13 800.00	R -	
212		Establish vegetation on tailings dam slopes	10.4.2	ha	0.00	R	19 250.00	R -	
213		Establish vegetation on tailings dam top	10.4.2	ho	0.00	_	10.250.00	R -	
213	109	Waste Rock Noise Barrier	10.4.2	ha	0.00	ĸ	19 250.00	- 7	
215		Reshape berm	10.1.1	ha	2.10	R	55 250.00	R 116 025.00	
010		Import topsoil layer	0.0.1		1000	_		D 447.000	Assumed 1km haul distance, 200mm thick
216 217		Establish vegetation	9.6.1 10.4.1	m³ ha	4200.00 2.10		28.00 13 800.00	R 117 600.00 R 28 980.00	layer
211		Sub - Total for rehabilitation of processing waste deposits and	10.4.1	iia	2.10	1	10 000.00	20 300.00	
218		evaporation ponds (polluting potential)						R 1 161 558.90	
219		Reclamation of subsided areas				_		_	
220		Not applicable	1.1	na	0.00	R	-	R -	
221 222		Sub - Total for reclamation of subsided areas Sub - Total for Mining aspects						R 3 762 277.46	
223		ous rounter mining apposite							
224		General Surface Reclamation							
225		Mine							
									Includes stockpiling of material, backfilling
226		Shape and level disturbed area	10.1.1	ha	20.00	R	55 250.00	R 1 105 000.00	of excavations in cut to fill operation and final profiling @ave 500mm over footprint
227		Rip area to alleviate compaction	9.5.1	ha	20.00		9 400.00		500mm deep ripping
									150mm from local stockpile, assume 1km
228		Import topsoil	9.6.1	m³	30000.00		28.00	R 840 000.00	load and haul
229		Establish vegetation	10.4.1	ha	20.00	R	13 800.00	R 276 000.00	Footprint not disturbed
230		Plant							Footprint not disturbed
						_		_	
231		Shape and level disturbed area Rip area to alleviate compaction	10.1.1 9.5.1	ha ha	0.00		55 250.00 9 400.00		
202		rup area to aneviate compaction	3.0.1	na	0.00	11	3 400.00	-	
233		Import topsoil	9.6.1	m³	0.00		28.00	R -	
234		Establish vegetation	10.4.1	ha	0.00	R	13 800.00	R -	
235 236		Sub - Total for General Surface Reclamation						R 2 409 000.00	
237		Water Management							
									Assume none required, all mitigation
238		Not applicable	1.1	na	0.00	_		R -	measures will be implemented during the operational phase
238		Not applicable Sub - Total for Water Management	1.1	ııa	0.00	ĸ		R -	ороганона: рназе
240		Cab Total Io. Trato. management				L			
241		SUB - TOTAL 1						R 9 988 766.49	
		(for infrastructural and related structures)						3 300 700.49	
242 243		Post - closure aspects Surface water quality monitoring	10.1	1.00	E 00	D	106 000.00	D 520,000,00	9 manitoring points on a monthly basi-
243		Surface water quality monitoring Groundwater quality monitoring	12.1 12.2	yr yr	5.00 5.00		150 000.00		
245		Reclamation monitoring on reclaimed areas	12.3	ha	20.00		2 500.00		
246		Care and maintenance of reclaimed areas	12.4	ha	20.00		15 500.00	R 310 000.00	
247		Sub - Total for Post closure aspects				lacksquare		R 1 640 000.00	Assumed 10 persont for any discount
248		Contingencies for post closure aspects	1.2	sum	1.00	P	164 000.00	R 164 000.00	Assumed 10 percent for post closure aspects
249		Sub - Total for Contingencies for post closure aspects	1.4	Julii	1.00	1	10- 000.00	R 164 000.00	
250		SUB - TOTAL 2						R 1 804 000.00	
		(for post - closure aspects)						1 004 000.00	
251		Additional allowances	1.2	CI I'm	1.00	D	500 225 02	D E00 33E 00	Assume 6 percent of sub-total 1
252 253		Preliminary and General Contingencies	1.2 1.2	sum	1.00 1.00		599 325.99 998 876.65		Assume 6 percent of sub - total 1 Assume 10 percent of sub - total 1
		SUB - TOTAL 3			00	Ė	5, 5.55		,
254		(for additional allowances)						R 1 598 202.64	
255		Grand - Total						R 13 390 969.12	
		(for sub - total 1+2+3)							



		Closure Costing - Leeuwkop				Closure Co	sts - <u>Year 2 - (2013</u>	<u>2013)</u>		
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes		
2		Infrastructural Aspects Nominal cost and time related items								
3		Mine Removal of salvageable equipment	1.2	sum	1.00	R 1000000.00	R 1 000 000.00	Nominal allowance		
5		Crane	11.1	p/day			R 270 900.00	For assistance in the removal of equipment and demolition purposes		
6		Plant Removal of salvageable equipment	1.2	sum	0.00			Nominal allowance		
. 8		Crane	11.1	p/day	0.00		R -	For assistance in the removal of equipment and demolition purposes		
9		Sub-Total for cost and time related items Demolitioning of plant and related structures		prody	0.00		R 1 270 900.00			
11	21	Compressor house	3.7	m²	0.00	R 380.00	R -	To be constructed according to program		
12	22	Condenser cooling towers	4.2	m³		R 640.00	R -	To be constructed according to program		
13	23	Refrigeration plant	4.2	m³	0.00	R 640.00	R -	To be constructed according to program		
14	27	Grout Plant	3.7	m²	0.00		R -	To be constructed according to program		
15	28	Ventilation Shaft	2.2	+	0.00	R 1 280.00	R -	To be constructed according to program		
16	40	Water treatment plant	2.3.2	m²	1225.00			Assume 450kg of steel per m ²		
17	43	Sewage Plant	3.6	m²	1732.50	R 320.00	R 554 400.00	Single volume building		
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program		
19 20	87	Plant - Cleaners Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program		
21		Structural concrete	4.3	m³	0.00	R 400.00	R -			
22	88	Plant - Cleaners Structural steel	2.3.2	m²	0.00		R -	To be constructed according to program		
24		Structural concrete	4.3	m³	0.00	R 400.00	R -			
25 26	89	Plant - Mill Structural steel	2.3.2	m²	0.00			To be constructed according to program		
27		Structural concrete	4.3	m³	0.00	R 400.00	R -			
28	94 98	Plant - Storage area Plant	3.7	m² m²	0.00	R 380.00 R 320.00	R -	To be constructed according to program To be constructed according to program		
30 31	99 100	Plant Plant - Thickener	3.6	m²	0.00			To be constructed according to program To be constructed according to program		
32	100	Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be concluded according to program		
33 34	101	Structural concrete Plant - Thickener	4.3	m³	0.00	R 400.00	R -	To be constructed according to program		
35		Structural steel	2.3.2	m²	0.00	R 590.00	R -	3.17.3		
36 37	102	Structural concrete Plant - Thickener	4.3	m³	0.00	R 400.00	R -	To be constructed according to program		
38		Structural steel	2.3.2	m²	0.00	R 590.00	R -	3 1 3		
39 40		Structural concrete Sub - Total for demolitioning of plant and related structures	4.3	m³	0.00	R 400.00	R - 1 277 150.00			
41 42	16	Demolitioning of all structural structures Carports	2.6.1	m²	0.00	R 90.00		To be constructed according to program		
43 44	17 15	Contractors Carports Headgear	2.6.1	m² t	424.00 0.00	R 90.00	R 38 160.00	IBR sheeting To be constructed according to program		
45		Structural concrete	4.1	m³	147.00			3.17.3		
46	38	Waste silo	4.3	m³	0.00	R 400.00	R -	To be constructed according to program		
47 48	38 41	Waste silo Water tank	4.3 2.4.2	m³ no	0.00 0.00	R 400.00 R 26 650.00	R -	To be constructed according to program To be constructed according to program		
49	42	M/W Dam	4.3	m³	0.00		R -	To be constructed according to program		
50	42	M/W Dam	4.3	m³	0.00	R 400.00	R -	To be constructed according to program		
51	60	Sump	4.2	m³	0.00	R 640.00	R -	To be constructed according to program		
52 53	61 78	Water Canal Plant - covered parking	8.4 2.6.1	m² m²	0.00	R 135.00		To be constructed according to program To be constructed according to program		
54	104	Plant - Waste silo	4.3	m³	0.00	R 400.00	R -	To be constructed according to program		
55 56		Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores					R 226 320.00			
57 58	13 14	Winder House Winder House	3.7 3.7	m² m²	0.00 0.00			To be constructed according to program To be constructed according to program		
59 60	18	Winder rope store Fan and electrical motor store	3.1.1 3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program To be constructed according to program		
61 62	25 31	Workshop sink and perm Main Store	3.6	m² m²	819.90 0.00	R 320.00	R 262 368.00	Single volume building To be constructed according to program		
63 64	32 33	Explosives Store Gas bottle store	3.6 3.1.1	m² m²	0.00 36.00	R 320.00	R -	To be constructed according to program Single storey brick building		
65 66	34 35	Chemical Store Paint Store	3.1.1	m² m²	201.00 41.00	R 295.00	R 59 295.00	Single storey brick building Single storey brick building		
67 68	36 44	Coli store Generator farm	3.1.1 3.2.1	m² m²	36.00 0.00	R 295.00	R 10 620.00	Single storey brick building To be constructed according to program		
69 70	82 83	Plant - Building	3.6	m² m²	0.00	R 320.00 R 320.00	R -	To be constructed according to program To be constructed according to program To be constructed according to program		
71 72	86 93	Plant - Building Plant - Workshop Plant - Building	3.7 3.6	m² m²	0.00	R 380.00	R -	To be constructed according to program To be constructed according to program To be constructed according to program		
73 74	95 96	Plant - Building Plant - Building	3.6 3.6	m² m²		R 320.00	R -	To be constructed according to program To be constructed according to program To be constructed according to program		
75	- 50	Sub - Total for demolitioning of workshops and stores Demolitioning of permanent brick structures and temporary	0.0		0.00	320.00	R 354 998.00	. 2 20 contacted according to program		
76 77	1	Structures Offices	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program		
78 79	2	Change House Laundry	3.1.1 3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program To be constructed according to program		
80	4	Boiler House	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program		
81 82	5 6	Change House Lamp Room	3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program		
83 84	7 8	Change House Induction Room	3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program		
85 86	9 10	Training Centre Gate House	3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program		
87 88	11 12	Banksman Cabin & Proto Room Central Control room	3.1.1 3.1.1	m² m²		R 295.00	R -	To be constructed according to program To be constructed according to program		
90	19 19	Sub-station Sub-station	3.2.1 3.2.1	m² m²	0.00	R 480.00	R -	To be constructed according to program To be constructed according to program		
91	20	Transformer bays	3.2.1	m²	0.00	R 480.00	R -	To be constructed according to program		





		Closure Costing - Leeuwkop				Closure C	osts - <u>Year 2 - (201</u> 3	3)
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
92	29	Sub-station	3.2.1	m²	0.00			To be constructed according to program
93 94	30 45	MCC Sumer Sub-station	3.2.1 3.2.1	m² m²	0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
95 96	47 48	Geology building Offices	3.1.1 3.1.1	m² m²	183.00 149.60			Single storey brick building Single storey brick building
97 98	49 50	Offices Shaft Sinker Offices	3.1.1	m² m²	149.60 124.00	R 295.00	R 44 132.00	Single storey brick building Portable offices
99	51	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices
100	52 53	Change House Change House	3.3	m² m²	16.00 16.00			Portable offices Portable offices
102 103	54 55	Change House Lamp Room	3.3 3.3	m² m²	16.00 16.00	R 140.00	R 2 240.00	Portable offices Portable offices
104	56	Steffanuti Stocks	3.3	m²	16.00	R 140.00	R 2 240.00	Portable offices
105 106	57 58	Shaft Sinker Offices Shaft Sinker Offices	3.3	m² m²	124.00 124.00			Portable offices Portable offices
107 108	76 77	Explosives bunker Weighbridge	3.1.1 1.2	m² sum	150.00 0.00			Single storey brick building To be constructed according to program
109	79 80	Plant - Admin building Plant - Induction room	3.1.1 3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
111	81	Plant - Office	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
112 113	84 85	Plant - Sub-station Plant - Sub-station	3.2.1 3.2.1	m² m²	0.00 0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
114	97	Plant - building Sub - Total for demolitioning of permanent brick structures and	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
115 116		temporary structures Removal of all surface related finishes	-				R 267 139.00	
117	26	Surface cable yard	4.5	m²	0.00			To be constructed according to program
118 119	46 47	PFC yard Geology yard	4.5 4.5	m² m²	473.00	R 590.00	R 279 070.00	To be constructed according to program Assume 250mm thick concrete
120 121	73 90	General surface bed Plant - Laydown areas	4.4 4.5	m² m²	0.00			To be constructed according to program To be constructed according to program
122 123	91 92	Plant - Laydown areas Plant - Laydown areas	4.5 4.5	m² m²	0.00			To be constructed according to program To be constructed according to program
124 125	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	0.00		R -	To be constructed according to program
126		Removal of all linear items						
127 128	32 37	Fencing to explosives store Reef and waste conveyor	5.5.3 5.1.5	m m	85.00 0.00			To be constructed according to program
129 130	39 62	Reef conveyor Waste conveyor	5.1.5 5.1.2	m m	0.00	R 640.00 R 265.00		To be constructed according to program To be constructed according to program
131	63	Return water pipeline Tailing delivery pipeline	5.2.2	m	0.00	R 48.00	R -	To be constructed according to program To be constructed according to program
133	64 65	Pipeline from sump to PCD	5.2.2 5.2.2	m m	0.00	R 48.00	R -	To be constructed according to program
134 135	66 67	Emergency pipeline from concentrator to dam Distribution pipelines	5.2.2 5.2.2	m m	0.00			To be constructed according to program To be constructed according to program
136 137	68 69	Water main pipeline Fire main pipeline	5.2.2 5.2.2	m m	0.00			To be constructed according to program To be constructed according to program
138 139	74 75	Perimeter fencing Perimeter fencing to tailings complex	5.5.3 5.5.3	m m	3600.00 0.00			To be constructed according to program
140	76	Perimeter fence to explosives bunker	5.5.3	m	201.00	R 27.00	R 5 427.00	
141 142	105 106	Plant - Steel gantry's with delivery pipelines Plant - Security fencing	2.3.1 5.5.3	m² m	0.00 0.00	R 27.00	R -	Assume 100kg of steel per m² To be constructed according to program
143 144		Main water pipeline Sub - Total for removal of all linear items	5.2.3	m	4669.00	R 64.00	R 298 816.00 R 403 738.00	
145 146		Rehabilitation of roads Entrance road	1.1	na	0.00	Р -	R -	Assume will remain
147		Minor gravel road to explosives bunker						Assume will remain
			8.3	m²	5864.00	R 4.00		
148 149		Sub - Total for rehabilitation of roads Disposal of demolition waste	8.3	m²			R 23 456.00	
148 149 150		Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste	6.1	%	2831871.00	2.50%	R 23 456.00 R 70 796.78	2.50% Assume 50km distance
148 149 150 151 152		Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste				2.50%	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78	2.50% Assume 50km distance
148 149 150 151 152 153 154		Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects	6.1	%	2831871.00	2.50%	R 23 456.00 R 70 796.78 R 1 262 240.00	
148 149 150 151 152 153		Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste	6.1	%	2831871.00	2.50%	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78	
148 149 150 151 152 153 154		Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects	6.1	%	2831871.00	2.50% R 160.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78	
148 149 150 151 152 153 154 155 156 157		Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps	6.1	% m³/km	2831871.00 7889.00	2.50% R 160.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78	
148 149 150 151 152 153 154 155 156 157	15	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable	6.1	% m³/km	2831871.00 7889.00 0.00	2.50% R 160.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R - R	Assume 50km distance 10m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161	23	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft	6.1 6.2.1 1.1 7.1.15 7.1.11	% m³/km na sum sum	2831871.00 7889.00 0.00	2.50% R 160.00 R	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163		Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines	6.1 6.2.1 1.1	% m³/km na	2831871.00 7889.00 0.00	2.50% R 160.00 R	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165	23	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles	6.1 6.2.1 1.1 7.1.15 7.1.11 7.1.11	% m³/km na sum sum	2831871.00 7889.00 0.00 1.00 0.00	R 160.00 R R 2.573 324.00 R 1838 850.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164	23 28	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils	6.1 6.2.1 1.1 7.1.15 7.1.11	% m³/km na sum sum	2831871.00 7889.00 0.00	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 9 400.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
148 149 150 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166	23 28	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils	7.1.15 7.1.11 7.1.11 9.5.1	% m³/km na sum sum sum	2831871.00 7889.00 0.00 1.00 0.00 0.00	R 160.00 R 2573 324.00 R 1838 850.00 R 1 838 850.00 R 9 400.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
148 149 150 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polituting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	% m³/km na sum sum sum ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 1.18	R 160.00 R 2.573 324.00 R 1838 850.00 R 9 400.00 R 13 800.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 166 167 168 169 170	23 28	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish veleviate compaction Establish or of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and	7.1.15 7.1.11 7.1.11 9.5.1	% m³/km na sum sum sum	2831871.00 7889.00 0.00 1.00 0.00 0.00	R 160.00 R 2.573 324.00 R 1838 850.00 R 9 400.00 R 13 800.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R R 2 573 324.00 R 2 573 324.00 R 11 099.52 R 16 295.04 R 27 394.56	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
148 149 150 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	% m³/km na sum sum sum ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 1.18	R 160.00 R 2.573 324.00 R 1838 850.00 R 9 400.00 R 13 800.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
148 149 150 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170	23 28 110	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polituting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polituting potential) Rehabilitation of processing waste deposits and evaporation ponds (polituting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	% m³/km na sum sum sum ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 1.18	R 160.00 R 2.573 324.00 R 1838 850.00 R 9 400.00 R 13 800.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R R 2 573 324.00 R 2 573 324.00 R 11 099.52 R 16 295.04 R 27 394.56	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171	23 28	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11	% m³/km na sum sum ha ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 1.18 1.18	R 160.00 R 2573 324.00 R 1838 850.00 R 13800.00 R 9 400.00 R 13 800.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 7m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 169 170 171 172 173 174 175	23 28 110	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	% m³/km na na sum sum ha ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 1.18 1.18 0.00 0.00	R 2573 324.00 R 1838 850.00 R 1380.00 R - 1380.00 R - 1380.00 R - 1380.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 00 Diameter 10m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176	23 28 110	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Rehabilitation of processing waste deposits and evaporation ponds (polluting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wail	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1	% m³/km na na sum sum ha ha na na m³ sum	2831871.00 7889.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 133 800.00 R 90.40 R 90.40 R 90.40 R 90.40 R 90.40 R 90.40	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 169 170 171 172 173 174 175 176 177 178	23 28 110 70	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Sestablish vegetation	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	% m³/km na sum sum ha ha na na sum	2831871.00 7889.00 0.00 1.00 0.00 0.00 1.18 1.18 0.00 0.00	R 2573 324.00 R 1838 850.00 R 1380 850.00 R 9 400.00 R - 1380 850.00 R 200.00 R 220.00 R 6.55 R 220.00 R 55250.00	R 23 456.00 R 70 796.78 R 1 282 240.00 R 1333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 0m Diam
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 166 167 168 169 170 171 172 173 174 175 176 177 177 177 179 180	23 28 110	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach and well Breach and well Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile	6.1 6.2.1 1.1 7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 6.4 10.1.5 10.4.1	% m³/km na na sum sum sum ha ha ha na na m³	2831871.00 7889.00 0.00 1.00 0.00 0.00 1.18 1.18 1.18 0.00 0.00	R 2573 324.00 R 1838 850.00 R 1380.00 R 20.00 R 20.00 R 20.00 R 55250.00 R 13800.00 R 20.00 R 20.00 R 20.00 R 220.00 R 300.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179	23 28 110 70	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Setting dams Remabilitation of processing waste deposits and evaporation ponds (polluting potential) Setting dams Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Esterpercy storage dam	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	% m³/km na sum sum sum ha ha ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00	R 2573 324.00 R 1838 850.00 R 1338 00.00 R 90.40 R 90.40 R 90.40 R 133 800.00 R 220.00 R 7 85 250.00 R 90.40	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 0m Diam
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 166 167 166 167 177 177 177 177 177 177	23 28 110 70	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam well Evence HDPE liner Breach dam wall	9.2 1.1 9.2 1.1 9.2 1.2 6.4 10.1.5 10.4.1	% m³/km na na sum sum ha ha ha na m³ sum m² m² m ha ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 1.18 1.18 0.00 0.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1938 850.00 R 20.00 R 20.00 R 20.00 R 55 250.00 R 13 800.00 R 55 250.00 R 13 800.00 R 55 250.00 R 13 800.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R 2 573 324.00 R 1 1 099.52 R 10 295.04 R 2 7 394.56 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 0m Diam
148 149 150 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 177 178 179 170 177 177 177 177 178 179 180 181 182 183 184 185	23 28 110 70	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	% m³/km na sum sum sum ha ha ha na m³ sum m² sum	2831871.00 7889.00 0.00 1.00 0.00 0.00 0.00 5280.00 302.00 0.00 0.00 0.00 0.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 20.00 R 90.40 R 90.40 R 6.50 R 220.00 R 13 800.00 R 220.00 R 220.00 R 6.50 R 220.00 R 55250.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Conly footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining To be constructed according to program
148 149 150 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 176 177 178 179 179 179 179 179 179 180 181 182 183 184 185	23 28 110 70	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polituting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HOPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HOPE liner Breach dam vall Shape and level area	9.5.1 10.4.1 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	% m³/km na sum sum sum ha ha ha ha sum m³ sum m² m² m ha ha ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 0.00 5280.00 0.03 0.03 0.03 0.03 0.00 0.00 0.00	R 2573 324.00 R 1583 850.00 R 13800.00 R 20.00 R 90.40 R 13800.00 R 13800.00 R 13800.00 R 13800.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 0m Diam
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 166 167 168 169 170 171 172 173 174 175 176 177 177 180 181 182 183 184 185 188 189	23 28 110 70	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam well Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment and stockpile	9.2 1.1 9.5.1 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 10.4.1 9.2 1.2 1.3 10.4.1	% m³/km na sum sum sum ha ha ha ha m³ m³ m² m ha ha ha sum	2831871.00 7889.00 0.00 1.00 0.00 0.00 0.00 0.00 5280.00 302.00 0.00 0.00 0.00 0.00 0.00 0.0	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 20.00 R 220.00 R 13800.00 R 220.00 R 55 250.00 R 220.00 R 230.00 R 20.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Conly footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining To be constructed according to program
148 149 150 151 152 153 154 155 156 157 158 159 159 160 161 162 163 164 165 166 167 171 172 173 174 175 176 177 178 179 181 182 183 184 185 186 187 188 189 190 191	23 28 110 70	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and contaminated sediment Remove HDPE liner Breach dam wall	6.1 6.2.1 7.1.15 7.1.17 7.1.11 7.1.11 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.4.1 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	% m³/km na sum sum sum ha ha ha ha na m³ sum m² m² na m³ sum ha ha ha ha m³ m² m² m² m m ha ha ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 0.00 5280.00 302.03 0.00 0.00 0.00 0.00 0.00 0.0	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 1380.00 R 20.00 R 30.00 R 20.00 R 6.55 R 220.00 R 7 55 250.00 R 13 800.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Conly footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining To be constructed according to program
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 177 178 179 179 178 179 178 179 180 181 182 183 184 185 186 187 188 189 190 191	71A 71B	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area	9.2 1.2 6.4 10.4.1 9.5.1 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	% m³/km na sum sum sum ha ha ha ha ha ha ha ha na m³	2831871.00 7889.00 0.00 1.00 0.00 0.00 0.00 0.00 5280.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	R 2573 324.00 R 15838 850.00 R 13800.00 R 13800.00 R 200.00 R 90.40 R 200.00 R 13800.00 R 13800.00 R 13800.00 R 13800.00 R 200.00 R 13800.00 R 200.00 R 13800.00 R 552 500.00 R 13800.00 R 552 500.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining To be constructed according to program To be constructed according to program
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 171 172 173 174 175 176 177 177 178 180 181 182 183 184 185 186 187 188 189 190 191 192 193	23 28 110 70	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	9.2 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	% m³/km na sum sum sum ha ha ha na m³ sum m² m² m ha ha ha ha ha ha ha ha ha	2831871.00 7889.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380 850.00 R 1380 850.00 R 20.00 R 220.00 R 55 250.00 R 13 800.00 R 220.00 R 55 250.00 R 13 800.00 R 20.00 R 20.00 R 20.00 R 20.00 R 20.00 R 20.00 R 30.00 R 20.00 R 30.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R R R 2 573 324.00 R 11 099.52 R 10 295.04 R 27 394.56 R R R R R R R R -	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Conly footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining To be constructed according to program
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 177 178 179 179 178 179 178 179 180 181 182 183 184 185 186 187 188 189 190 191	71A 71B	Sub - Total for rehabilitation of roads Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area	9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1 10.4.1	% m³/km na sum sum sum ha	2831871.00 7889.00 0.00 1.00 0.00 0.00 0.00 5280.00 302.00 0.00 0.00 0.00 0.00 0.00 0.0	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 20.00 R 20.00 R 20.00 R 20.00 R 20.00 R 3380.00 R 20.00	R 23 456.00 R 70 796.78 R 1 262 240.00 R 1 333 036.78 R 5 435 807.78 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining To be constructed according to program To be constructed according to program





		Closure Costing - Leeuwkop					Closure Co	sts	- <u>Year 2 - (2013</u>	<u>s)</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate		Amount	Notes
198		Breach dam wall	10.1.5	m	0.00	R	220.00	R	-	
199		Shape and level area	10.1.1	ha	0.00	R	55 250.00	R	-	
200		Establish vegetation	10.4.1	ha	0.00	R	13 800.00	R	-	
										Assumed 20m strip would not have been
201	107	Waste Rock Dump			4747.00	<u> </u>	20.00	_	04.040.00	rehabilitated
202		Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R	34 340.00	Assume 250mm thick
203		Reshape WRD	9.1.1	m³	29925.00	P	13.50	R	403 987.50	Cut to fill action assumed 20m high at 87.5m³/per meter
200			5.1.1		23323.00		10.00	11	400 307.50	·
		Import capping layers								Assumed 1km haul distance, 300mm thick
204		,	9.6.1	m³	8160.00	R	28.00	R	228 480.00	capillary layer and 300mm thick black turf
		Import toposil lover								Assumed 1km haul distance, 200mm thick
205		Import topsoil layer	9.6.1	m³	2720.00	R	28.00	R	76 160.00	layer
206		Establish vegetation	10.4.1	ha	1.36	R	13 800.00	R	18 768.00	
207	108	Tailings Complex								To be constructed according to program
208		Seal Penstocks	7.3	sum	0.00		213 200.00		-	
209		Breach wall & reshape	10.1.5	m	0.00		220.00		-	
210		Rip to alleviate compaction	9.5.1	ha	0.00		9 400.00		-	
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00		13 800.00		-	
212		Establish vegetation on tailings dam slopes	10.4.2	ha	0.00	К	19 250.00	К	-	
213	l	Establish vegetation on tailings dam top	10.4.2	ha	0.00	R	19 250.00	R		
213	109	Waste Rock Noise Barrier	10.4.2	ha	0.00	ĸ	19 250.00	К	-	
214	108	Reshape berm	10.1.1	ha	2.10	R	55 250.00	R	116 025.00	
210			10.1.1	. iu	2.10	Ë	55 255.50			Assumed 1km haul distance, 200mm thick
216		Import topsoil layer	9.6.1	m³	4200.00	R	28.00	R	117 600.00	layer
217		Establish vegetation	10.4.1	ha	2.10		13 800.00	R	28 980.00	,
		Sub - Total for rehabilitation of processing waste deposits and								
218		evaporation ponds (polluting potential)						R	1 161 558.90	
219		Reclamation of subsided areas								
220		Not applicable	1.1	na	0.00	R	-	R	-	
221		Sub - Total for reclamation of subsided areas						R	-	
222		Sub - Total for Mining aspects						R	3 762 277.46	
223										
224		General Surface Reclamation								
225		Mine								
										Includes stockpiling of material, backfilling
										of excavations in cut to fill operation and
226		Shape and level disturbed area	10.1.1	ha	20.00		55 250.00	R	1 105 000.00	final profiling @ave 500mm over footprint
227		Rip area to alleviate compaction	9.5.1	ha	20.00	R	9 400.00	R	188 000.00	500mm deep ripping
000				١.		_		_		150mm from local stockpile, assume 1km
228		Import topsoil	9.6.1	m³	30000.00		28.00	R	840 000.00	load and haul
229		Establish vegetation	10.4.1	ha	20.00	ĸ	13 800.00	R	276 000.00	Footovist and district of
230		Plant				<u> </u>				Footprint not disturbed
231		Shape and level disturbed area	10.1.1	ha	0.00	R	55 250.00	R	_	
232		Rip area to alleviate compaction	9.5.1	ha	0.00	R	9 400.00	R	-	
233		Import topsoil	9.6.1	m³	0.00		28.00	R	-	
234		Establish vegetation	10.4.1	ha	0.00	R	13 800.00		-	
235		Sub - Total for General Surface Reclamation						R	2 409 000.00	
236		Water Management								
237		Water Management								A
	l			l		1				Assume none required, all mitigation
238		Not applicable	1.1	na	0.00	R	_	R	_	measures will be implemented during the operational phase
239	—	Sub - Total for Water Management	1.1	iia	0.00	<u>'`</u>	-	R	-	Sp. Salonai phaoc
240		Oub - Total for Water Management		-		H			-	
		SUB - TOTAL 1								
241		(for infrastructural and related structures)						R	11 607 085.24	
242		Post - closure aspects								
243		Surface water quality monitoring	12.1	yr	5.00	R	106 000.00	R	530 000.00	8 monitoring points on a monthly basis
244		Groundwater quality monitoring	12.2	yr	5.00		150 000.00		750 000.00	
245		Reclamation monitoring on reclaimed areas	12.3	ha	20.00	R	2 500.00	R	50 000.00	
246		Care and maintenance of reclaimed areas	12.4	ha	20.00		15 500.00		310 000.00	5 years
247		Sub - Total for Post closure aspects						R	1 640 000.00	
										Assumed 10 percent for post closure
248		Contingencies for post closure aspects	1.2	sum	1.00	R	164 000.00	R	164 000.00	aspects
249		Sub - Total for Contingencies for post closure aspects						R	164 000.00	
250		SUB - TOTAL 2						R	1 804 000.00	
		(for post - closure aspects)								
251		Additional allowances								
252		Preliminary and General	1.2	sum	1.00			R	696 425.11	Assume 6 percent of sub - total 1
253		Contingencies	1.2	sum	1.00	R	1 160 708.52	R	1 160 708.52	Assume 10 percent of sub - total 1
254		SUB - TOTAL 3						R	1 857 133.64	
		(for additional allowances)								
255		Grand - Total						R	15 268 218.87	
		(for sub - total 1+2+3)								





		Closure Costing - Leeuwkop				Closure Co	ests - <u>Year 3 - (2014</u>	<u>0</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
2		Infrastructural Aspects Nominal cost and time related items						
3		Mine Removal of salvageable equipment	1.2	sum	1.00	R 1500 000.00	R 1 500 000.00	Nominal allowance
5		Crane	11.1	p/day	10.00		R 387 000.00	For assistance in the removal of equipment and demolition purposes
6		Plant Removal of salvageable equipment	1.2	sum	0.00			Nominal allowance
8		Crane	11.1	p/day	0.00		R -	For assistance in the removal of equipment and demolition purposes
9		Sub-Total for cost and time related items	11.1	pruay	0.00	K 36 700.00	R 1 887 000.00	and demonator purposes
	04	Demolitioning of plant and related structures	0.7	2	0.00	D 200.00	D	To be constructed asserting to program
11	21	Compressor house Condenser cooling towers	4.2	m²	0.00		R -	To be constructed according to program To be constructed according to program
13	23	Refrigeration plant	4.2	m³ m³	0.00	R 640.00	R -	To be constructed according to program To be constructed according to program
14	27	Grout Plant	3.7	m²	0.00		R -	To be constructed according to program
15	28	Ventilation Shaft	2.2	+	480.00	R 1280.00	R 614 400.00	Info received from Impala
16	40	Water treatment plant	2.3.2	m²	1225.00		R 722 750.00	Assume 450kg of steel per m²
17	43	Sewage Plant	3.6	m²	1732.50	R 320.00	R 554 400.00	Single volume building
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program
19 20	87	Plant - Cleaners Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
21			4.3	m³	0.00		R -	
21 22 23	88	Structural concrete Plant - Cleaners Structural steel	2.3.2	m² m²	0.00		R -	To be constructed according to program
24			4.3	m³			R -	
25	89	Structural concrete Plant - Mill Structural steal			0.00			To be constructed according to program
26 27		Structural steel	2.3.2 4.3	m² m³	0.00	R 590.00	R -	
28	94	Structural concrete Plant - Storage area	3.7	m²	0.00	R 380.00		To be constructed according to program
29 30	98 99	Plant Plant Plant Thiskener	3.6 3.6	m² m²	0.00		R -	To be constructed according to program To be constructed according to program To be constructed according to program
31 32	100	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
33		Structural concrete	4.3	m³	0.00	R 400.00	R -	
34 35	101	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
36		Structural concrete	4.3	m³	0.00	R 400.00	R -	
37 38	102	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
39		Structural concrete	4.3	m³	0.00	R 400.00	R -	
40		Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures					R 1 891 550.00	100 1 1
42	16 17	Carports Contractors Carports	2.6.1 2.6.1	m² m²	5934.00 424.00	R 90.00	R 38 160.00	IBR sheeting IBR sheeting
44 45	15	Headgear Structural concrete	2.2 4.1	t m³	0.00 147.00		R - 188 160.00	To be constructed according to program
46	38	Waste silo	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
47	38	Waste silo	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
48	41	Water tank	2.4.2	no	1.00		R 26 650.00	Assume concrete dam, 250mm thick, 6m
49	42	M/W Dam	4.3	m³	56.25		R 22 500.00	Assume concrete dam, 250mm thick, 6m
50	42	M/W Dam	4.3	m³	56.25		R 22 500.00	high
51 52	60	Sump Water Canal	4.2 8.4	m³ m²	6.24 2692.00		R 3 993.60 R 363 420.00	Structural concrete, 300mm thick, 2m deep Thin reinforced concrete
53	78	Plant - covered parking	2.6.1	m²	0.00		R -	To be constructed according to program
54 55	104	Plant - Waste silo Sub - Total for demolitioning of all structural structures	4.3	m³	0.00	R 400.00	R 1 199 443.60	To be constructed according to program
56 57	13	Demolitioning of workshops and stores Winder House	3.7	m²	0.00			To be constructed according to program
58 59	14	Winder House Winder rope store	3.7	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program Circle described building
60	24 25	Fan and electrical motor store Workshop sink and perm	3.1.1	m² m²	198.00 819.90	R 320.00	R 262 368.00	Single storey brick building Single volume building
62	31 32	Main Store Explosives Store	3.7	m² m²	1380.80 285.00	R 320.00	R 91 200.00	Double volume building Single volume building
64 65	33 34	Gas bottle store Chemical Store	3.1.1	m² m²	201.00	R 295.00	R 59 295.00	Single storey brick building Single storey brick building
66 67	35 36	Paint Store Oil store	3.1.1 3.1.1	m² m²	41.00 36.00	R 295.00	R 10 620.00	Single storey brick building Single storey brick building
68 69	44 82	Generator farm Plant - Building	3.2.1 3.6	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program
70 71	83 86	Plant - Building Plant - Workshop	3.6	m² m²	0.00	R 380.00	R -	To be constructed according to program To be constructed according to program
72 73	93 95	Plant - Building Plant - Building	3.6	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program
74 75	96	Plant - Building Sub - Total for demolitioning of workshops and stores	3.6	m²	0.00	R 320.00	R 1 029 312.00	To be constructed according to program
76		Demolitioning of permanent brick structures and temporary structures						
77 78	2	Offices Change House	3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
79 80	3 4	Laundry Boiler House	3.1.1 3.1.1	m² m²	0.00 0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
81 82	5 6	Change House Lamp Room	3.1.1 3.1.1	m² m²	0.00 0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
83 84	7	Change House Induction Room	3.1.1	m² m²		R 295.00	R -	To be constructed according to program To be constructed according to program
85 86	9	Training Centre Gate House	3.1.1 3.1.1	m² m²		R 295.00	R 54 280.00	To be constructed according to program Single storey brick building
87 88	11	Banksman Cabin & Proto Room Central Control room	3.1.1 3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
90	19 19	Sub-station Sub-station	3.2.1 3.2.1	m² m²	0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
91	20	Transformer bays	3.2.1	m²	0.00	R 480.00	К -	To be constructed according to program





		Closure Costing - Leeuwkop				Closure Co	osts - <u>Year 3 - (2014</u>	9
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
92	29	Sub-station	3.2.1	m²	0.00			To be constructed according to program
93 94	30 45	MCC Sumer Sub-station	3.2.1 3.2.1	m² m²	0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
95 96	47 48	Geology building Offices	3.1.1 3.1.1	m² m²	183.00 149.60			Single storey brick building Single storey brick building
97 98	49 50	Offices Shaft Sinker Offices	3.1.1	m² m²	149.60 124.00	R 295.00	R 44 132.00	Single storey brick building Portable offices
99	51	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices
100	52 53	Change House Change House	3.3	m² m²	16.00 16.00			Portable offices Portable offices
102 103	54 55	Change House Lamp Room	3.3 3.3	m² m²	16.00 16.00	R 140.00	R 2 240.00	Portable offices Portable offices
104	56	Steffanuti Stocks	3.3	m²	16.00	R 140.00	R 2 240.00	Portable offices
105 106	57 58	Shaft Sinker Offices Shaft Sinker Offices	3.3	m² m²	124.00 124.00			Portable offices Portable offices
107 108	76 77	Explosives bunker Weighbridge	3.1.1 1.2	m² sum	150.00 0.00			Single storey brick building To be constructed according to program
109	79 80	Plant - Admin building Plant - Induction room	3.1.1 3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
111	81	Plant - Office	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
112 113	84 85	Plant - Sub-station Plant - Sub-station	3.2.1 3.2.1	m² m²	0.00 0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
114	97	Plant - building Sub - Total for demolitioning of permanent brick structures and	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
115 116		temporary structures Removal of all surface related finishes					R 321 419.00	
117	26	Surface cable yard	4.5	m²	30.00 1199.00			Assume 250mm thick concrete
118 119	46 47	PFC yard Geology yard	4.5 4.5	m² m²	473.00	R 590.00	R 279 070.00	Assume 250mm thick concrete Assume 250mm thick concrete
120 121	73 90	General surface bed Plant - Laydown areas	4.4 4.5	m² m²	0.00			To be constructed according to program To be constructed according to program
122 123	91 92	Plant - Laydown areas Plant - Laydown areas	4.5 4.5	m² m²	0.00	R 590.00		To be constructed according to program To be constructed according to program
124	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	0.00			To be constructed according to program
126		Removal of all linear items						
127 128	32 37	Fencing to explosives store Reef and waste conveyor	5.5.3 5.1.5	m m	85.00 0.00			To be constructed according to program
129 130	39 62	Reef conveyor Waste conveyor	5.1.5 5.1.2	m m	0.00	R 640.00 R 265.00		To be constructed according to program To be constructed according to program
131	63	Return water pipeline	5.2.2	m	0.00	R 48.00	R -	To be constructed according to program To be constructed according to program
133	64 65	Tailing delivery pipeline Pipeline from sump to PCD	5.2.2 5.2.2	m m	0.00	R 48.00	R -	To be constructed according to program
134 135	66 67	Emergency pipeline from concentrator to dam Distribution pipelines	5.2.2 5.2.2	m m	0.00 4780.00	R 48.00	R 229 440.00	To be constructed according to program 200-350mm steel pipelines
136 137	68 69	Water main pipeline Fire main pipeline	5.2.2 5.2.2	m m	1870.00 1870.00			200-350mm steel pipelines 200-350mm steel pipelines
138 139	74 75	Perimeter fencing Perimeter fencing to tailings complex	5.5.3 5.5.3	m m	3600.00 0.00	R 27.00	R 97 200.00	To be constructed according to program
140	76	Perimeter fence to explosives bunker	5.5.3	m	201.00	R 27.00	R 5 427.00	
141 142	105 106	Plant - Steel gantry's with delivery pipelines Plant - Security fencing	2.3.1 5.5.3	m² m	0.00 0.00	R 27.00	R -	To be constructed according to program To be constructed according to program
143 144		Main water pipeline Sub - Total for removal of all linear items	5.2.3	m	4669.00	R 64.00	R 298 816.00 R 812 698.00	
145 146		Rehabilitation of roads Entrance road	1.1	na	0.00	Р -	R -	Assume will remain
147		Minor gravel road to explosives bunker	8.3	m ²	5864.00			Assume will remain
			0.0		3004.00	1 4.00		
148 149		Sub - Total for rehabilitation of roads Disposal of demolition waste	0.0				R 23 456.00	
149 150		Disposal of demolition waste Sorting and screening of waste	6.1	%	6282058.60	2.50%	R 23 456.00	2.50% Assume 50km distance
149 150 151 152		Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste				2.50%	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47	2.50% Assume 50km distance
149 150 151 152 153 154		Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects	6.1	%	6282058.60	2.50%	R 23 456.00 R 157 051.47 R 2 910 720.00	
149 150 151 152 153		Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste	6.1	%	6282058.60	2.50%	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47	
149 150 151 152 153 154 155		Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects	6.1	%	6282058.60	2.50% R 160.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47	
149 150 151 152 153 154 155 156 157		Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps	6.1	% m³/km	6282058.60 18192.00	2.50% R 160.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07	
149 150 151 152 153 154 155 156 157	15	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable	6.1	% m³/km	6282058.60 18192.00 0.00	2.50% R 160.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07	Assume 50km distance 10m Diameter
149 150 151 152 153 154 155 156 157 158 159 160	23	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft	6.1 6.2.1 1.1 7.1.15 7.1.11	% m³/km na	6282058.60 18192.00 0.00	2.50% R 160.00 R	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R R R 2 573 324.00 R	Assume 50km distance 10m Diameter 8m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163		Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines	6.1 6.2.1 1.1	% m³/km na	6282058.60 18192.00 0.00	2.50% R 160.00 R	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R R R 2 573 324.00 R	Assume 50km distance 10m Diameter
149 150 151 151 152 153 154 155 156 157 158 159 160 161 162 163 164 164	23	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles	7.1.15 7.1.11 7.1.11	% m³/km na sum sum	6282058.60 18192.00 0.00 1.00 0.00 1.00	R 160.00 R R 2.573 324.00 R 1838 850.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter
149 150 151 152 153 154 155 156 157 158 160 161 162 163 164	23 28	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils	6.1 6.2.1 1.1 7.1.15 7.1.11	% m³/km na	6282058.60 18192.00 0.00	R 160.00 R 2573 324.00 R 1838 850.00 R 9 400.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
149 150 151 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166	23 28	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils	7.1.15 7.1.11 7.1.11 7.1.11	% m³/km na sum sum sum	6282058.60 18192.00 0.00 1.00 0.00 1.00	R 160.00 R 2573 324.00 R 1838 850.00 R 9 400.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	% m³/km na sum sum sum ha	6282058.60 18192.00 0.00 1.00 0.00 1.00	R 160.00 R 2.573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and	7.1.15 7.1.11 7.1.11 7.1.11	% m³/km na sum sum sum	6282058.60 18192.00 0.00 1.00 0.00 1.00	R 160.00 R 2.573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsol stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	% m³/km na sum sum sum ha	6282058.60 18192.00 0.00 1.00 0.00 1.00	R 160.00 R 2.573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170	23 28 110	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	% m³/km na sum sum sum ha	6282058.60 18192.00 0.00 1.00 0.00 1.00	R 160.00 R 2.573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
149 150 151 152 153 154 155 156 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170	23 28	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Seavice and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11 10.4.1	% m³/km na sum sum ha ha	6282058.80 18192.00 0.00 1.00 0.000 1.00	R 160.00 R 2573 324.00 R 1838 850.00 R 13800.00 R - 13800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 199 170 171 172 173 174 175	23 28 110	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	% m³/km na na sum sum ha ha	6282058.60 18192.00 0.00 1.00 0.00 1.00 1.18 1.18 0.00 1320.00 5280.00	R 2573 324.00 R 1838 850.00 R 13800.00 R - 13800.00 R - 13800.00 R - 13800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 667 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 00 Diameter 10m Diameter
149 150 151 152 153 154 155 156 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176	23 28 110	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Renabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wail	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1	% m³/km na sum sum sum ha ha a na m³ sum m²	6282058.60 18192.00 0.00 1.00 0.00 1.118 1.18 1.18 0.00 1320.00 1320.00 5280.00	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 133 800.00 R 9 400.00 R	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 199 170 171 172 173 174 175 176 177 178	23 28 110 70	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and exporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	% m³/km na sum sum sum ha ha na na	6282058.60 18192.00 0.00 1.00 0.00 1.00 1.18 1.18 0.00 1320.00 5280.00	R 2573 324.00 R 1838 850.00 R 1380.00 R 1380.00 R 20.00 R 20.00 R 20.00 R 20.00 R 20.00 R 55 250.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 00 Diameter 10m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 170 171 172 173 174 175 178 179 180 181	23 28 110	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile	6.1 6.2.1 1.1 7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.4.1	% m³/km na na sum sum sum ha ha ha na m³	0.00 1.00 0.00 1.1.18 1.18 1.18 1.18 0.00 1320.00 1320.00 0.5280.00 0.53 0.53	R 2573 324.00 R 1838 850.00 R 1380.00 R 20.00 R 20.00 R 20.00 R 20.00 R 3380.00 R 3380.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 00 Diameter 10m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178	23 28 110 70	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting patential) Setting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	% m³/km na sum sum sum ha ha ha	6282058.60 18192.00 0.00 1.00 0.00 1.00 1.18 1.18 1.18 0.00 1320.00 5280.00 302.00 302.00 305.05 0.53	R 2573 324.00 R 1838 850.00 R 1338 00.00 R 90.40 R 90.40 R 90.40 R 13380.00 R 220.00 R 90.40	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 530.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 199 170 171 172 173 174 175 176 177 178 180 181 182 183 184	23 28 110 70	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and exportance of the processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Remove HDPE liner Breach dam wall Remove HOPE liner Breach dam wall	9.2 1.1 9.2 1.1 9.2 1.2 6.4 10.1.5 10.4.1	% m³/km na sum sum sum ha ha ha na na m³ sum m² m ha ha ha	1.00 0.00 1.00 0.00 1.00 0.00 1.00 1.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 200.00 R 200.00 R 55250.00 R 13800.00 R 55250.00 R 13800.00 R 200.00 R 13800.00 R 55250.00 R 13800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 667 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185	23 28 110 70	Disposal of demolition waste Surbing and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	7.1.15 7.1.15 7.1.11 7.1.11 7.1.11 10.4.1 9.2 1.2 6.4 9.2	% m³/km na sum sum sum ha ha ha na m³ sum m² r²	6282058.60 18192.00 0.00 1.00 0.00 1.00 1.118 1.18 1.18	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 20.00 R 30.40 R 90.40 R 90.40 R 6.50 R 220.00 R 13 800.00 R 13 800.00 R 155 250.00 R 220.00 R 55 250.00 R 90.40 R 55 250.00 R 55 250.00 R 90.40 R 55 250.00 R 55 250.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 10m Diameter
149 150 151 152 153 154 155 156 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 181 182 183 184	23 28 110 70	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wail Shape and level area Establish vegetation Emergency storage dam Remove HDPE liner Breach dam wall Shape and level area	9.5.1 1.1.1 9.5.1 10.4.1 1.1.1 9.5.1 10.4.1 1.1.1 9.2.1.2 6.4 10.1.5 10.1.1 10.4.1	% m³/km na sum sum sum ha ha ha na m³ sum m² m² m ha ha ha	6282058.60 18192.00 0.00 1.00 0.00 1.00 1.118 1.18 0.00 1320.00 5280.00 302.00 0.53 0.53 0.53 0.00 0.00 31881.00 714.00 3.19	R 2573 324.00 R 1838 850.00 R 1380 850.00 R 20.00 R 90.40 R 13800.00 R 13800.00 R 13800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 330.07 R R R R 1 1 838 850.00 R 4412 174.00 R 11 9328.00 R 27 394.56 R 26 400.00 R 119 328.00 R 34 320.00 R 66 440.00 R 29 172.00 R 7 286.40 R 20 7 96.80 R 176 032.03 R 43 968.18	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 10m Doze material inward to fill void 10m Assume 100mm contaminated sediment 10m Diameter diameter 10m Diameter diameter 10m Diameter diameter 10m Diameter diamet
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 170 171 172 173 174 175 178 179 180 181 182 183 184 185	23 28 110 70	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment and stockpile	9.2 1.1 9.5.1 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 10.4.1 9.2 1.2 10.4.1	% m³/km na sum sum sum sum ha ha ha ha na m² m² m ha ha ha sum	1.00 0.00 1.00 0.00 1.00 1.00 1.00 1.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 20.00 R 13800.00 R 220.00 R 13800.00 R 220.00 R 220.00 R 230.00 R 20.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining Assume 100mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 199	23 28 110 70	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall	6.1 6.2.1 1.1 7.1.15 7.1.11 7.1.11 7.1.11 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.4.1 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	% m³/km na sum sum sum ha ha ha na m³ sum m² m² m ha ha ha m³ sum m² m² m ha ha ha	6282058.60 18192.00 18192.00 0.00 1.00 1.00 1.118 1.118 1.120.00 1320.	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 20.00 R 3800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Doze material inward to fill void 10m Diameter 1
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191	71A 71B	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	9.5.1 1.1 9.5.1 10.4.1 1.1 9.6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	% m³/km na sum sum sum ha ha ha ha na m³ sum m² m² m² m² m³	6282058.60 18192.00 0.00 1.00 0.00 1.	R 2573 324.00 R 15838 850.00 R 13800.00 R 13800.00 R 20.00 R 90.40 R 220.00 R 90.40 R 13800.00 R 13800.00 R 13800.00 R 220.00 R 90.40 R 6.55 R 220.00 R 90.40 R 6.55 R 220.00 R 90.40 R 6.55 R 220.00 R 55 250.00 R 13 800.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 330.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 7m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 8m Diameter 10m Di
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 199 170 171 172 173 174 175 178 179 180 181 182 183 184 185 186 187 188 199 190 191	23 28 110 70	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (spolluting potential) Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	9.2 1.1 9.5 1.1 1.1 7.1.15 7.1.11 7.1.11 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	% m³/km na sum sum ha ha ha na m³ sum m² m² m ha ha ha ha ha ha ha ha	6282058.80 18192.00 0.00 1.00 0.00 1.00 1.00 1.00 1.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 1380.00 R 20.00 R 220.00 R 1380.00 R 220.00 R 1380.00 R 220.00 R 3380.00 R 20.00 R 20.00 R 20.00 R 30.00 R 20.00 R 30.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Doze material inward to fill void 10m Diameter 1
149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 170 171 172 173 174 175 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194	71A 71B	Disposal of demolition waste Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1 10.4.1 10.4.1	% m³/km na sum sum sum sum ha ha ha na m² m² m ha ha ha ha ha ha ha	1320.00 1320.0	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 20.00	R 23 456.00 R 157 051.47 R 2 910 720.00 R 3 067 771.47 R 11 236 830.07 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 7m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 8m Diameter 10m Di





		Closure Costing - Leeuwkop					Closure Co	sts	- <u>Year 3 - (2014</u>	<u>1)</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate		Amount	Notes
198		Breach dam wall	10.1.5	m	0.00	R	220.00	R	-	
199		Shape and level area	10.1.1	ha	0.00		55 250.00		-	
200		Establish vegetation	10.4.1	ha	0.00	R	13 800.00	R	-	Assessed 00s string and set house have
201	107	Waste Rock Dump								Assumed 20m strip would not have been rehabilitated
202	101	Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R	34 340.00	Assume 250mm thick
		Reshape WRD								Cut to fill action assumed 20m high at
203			9.1.1	m³	29925.00	R	13.50	R	403 987.50	87.5m³/per meter
204		Import capping layers	9.6.1	m³	8160.00	R	28.00	R	228 480.00	Assumed 1km haul distance, 300mm thick capillary layer and 300mm thick black turf
205		Import topsoil layer	9.6.1	m³	2720.00	R	28.00	R	76 160.00	Assumed 1km haul distance, 200mm thick layer
206	400	Establish vegetation	10.4.1	ha	1.36	R	13 800.00	R	18 768.00	To be a section at all a sections at a section at
207 208	108	Tailings Complex Seal Penstocks	7.3	sum	0.00	P	213 200.00	P	-	To be constructed according to program
209		Breach wall & reshape	10.1.5	m	0.00		220.00		-	
210		Rip to alleviate compaction	9.5.1	ha	0.00	R	9 400.00	R	-	
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00	R	13 800.00	R	-	
212		Establish vegetation on tailings dam slopes	10.4.2	ha	0.00	R	19 250.00	R	-	
213		Establish vegetation on tailings dam top	10.4.2	ha	0.00	R	19 250.00	R	_	
214	109	Waste Rock Noise Barrier	10.4.2	Ha	0.00	11	10 200.00	11	_	
215		Reshape berm	10.1.1	ha	2.10	R	55 250.00	R	116 025.00	
240	1	Import topsoil layer	0.64	m-1	4000.00	٦	00.00	р.	117 000 00	Assumed 1km haul distance, 200mm thick
216 217		Establish vegetation	9.6.1 10.4.1	m³ ha	4200.00 2.10		28.00 13 800.00	R	117 600.00 28 980.00	layer
217		Sub - Total for rehabilitation of processing waste deposits and	10.4.1	IIa	2.10	IX	13 000.00	IX	20 900.00	
218		evaporation ponds (polluting potential)						R	2 431 568.61	
219		Reclamation of subsided areas								
220		Not applicable	1.1	na	0.00	R	-	R	-	
221 222		Sub - Total for reclamation of subsided areas Sub - Total for Mining aspects						R R	6 871 137.17	
223		Sub - Total for Milling aspects						ĸ	0 0/1 13/.1/	
224		General Surface Reclamation								
225		Mine								
										Includes stockpiling of material, backfilling of excavations in cut to fill operation and
226		Shape and level disturbed area	10.1.1	ha	20.00		55 250.00		1 105 000.00	final profiling @ave 500mm over footprint
227		Rip area to alleviate compaction	9.5.1	ha	20.00	R	9 400.00	R	188 000.00	500mm deep ripping
228		Import topsoil	9.6.1	m³	30000.00	R	28.00	R	840 000.00	150mm from local stockpile, assume 1km load and haul
229		Establish vegetation	10.4.1	ha	20.00		13 800.00	R	276 000.00	load and hadi
230		Plant								Footprint not disturbed
231		Shape and level disturbed area	10.1.1	ha	0.00	R	55 250.00	R	-	
232		Rip area to alleviate compaction	9.5.1	ha	0.00	R	9 400.00	R	-	
000		I	0.04	3	0.00	_	20.00	_		
233 234		Import topsoil Establish vegetation	9.6.1 10.4.1	m³ ha	0.00	R R	28.00 13 800.00	R	-	
235		Sub - Total for General Surface Reclamation						R	2 409 000.00	
236										
237		Water Management								
										Assume none required, all mitigation measures will be implemented during the
238		Not applicable	1.1	na	0.00	R	-	R	-	operational phase
239		Sub - Total for Water Management						R	-	
240										
241		SUB - TOTAL 1 (for infrastructural and related structures)						R	20 516 967.23	
242		Post - closure aspects								
243		Surface water quality monitoring	12.1	yr	5.00		106 000.00		530 000.00	
244		Groundwater quality monitoring	12.2	yr	5.00		150 000.00		750 000.00	
245 246		Reclamation monitoring on reclaimed areas	12.3 12.4	ha	20.00 20.00		2 500.00 15 500.00		50 000.00 310 000.00	
246	 	Care and maintenance of reclaimed areas Sub - Total for Post closure aspects	12.4	ha	20.00	15	10 300.00	R	1 640 000.00	5 years
		·	1.0	61.00	4.00	Б	164 000 00	R	164 000.00	Assumed 10 percent for post closure aspects
248 249	 	Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects	1.2	sum	1.00	R	164 000.00	R	164 000.00 164 000.00	aspects
		SUB - TOTAL 2								
250		(for post - closure aspects)						R	1 804 000.00	
251		Additional allowances	4 -			_	10015:		100:	Assume Consent of the state of
252 253	 	Preliminary and General Contingencies	1.2	sum			1 231 018.03 2 051 696.72	R	1 231 018.03 2 051 696.72	Assume 6 percent of sub - total 1 Assume 10 percent of sub - total 1
		SUB - TOTAL 3	1.2	sum	1.00	К	∠ ∪01 090./2			, assume to personal of sub - total 1
254		(for additional allowances)						R	3 282 714.76	
255		Grand - Total (for sub - total 1+2+3)						R	25 603 681.99	
		(10, 000 total 11210)								





		Closure Costing - Leeuwkop				Closure Co	osts - <u>Year 4 - (2015</u>	<u>;)</u>
Item nr	ID	Task	Unit Rate	Unit	Quantity	Rate	Amount	Notes
1		Infrastructural Aspects	Code					
3		Nominal cost and time related items Mine						
4		Removal of salvageable equipment	1.2	sum	1.00	R 1500 000.00	R 1 500 000.00	Nominal allowance For assistance in the removal of equipment
5		Crane	11.1	p/day	12.00	R 38 700.00	R 464 400.00	and demolition purposes
6 7		Plant Removal of salvageable equipment	1.2	sum	0.00	R 6 500 000.00	R -	Nominal allowance
8		Crane	11.1	p/day	0.00	R 38 700.00	R -	For assistance in the removal of equipment and demolition purposes
9 10		Sub-Total for cost and time related items Demolitioning of plant and related structures					R 1 964 400.00	
11	21	Compressor house	3.7	m²	1318.45	R 380.00	R 501 011.00	Double volume building
12	22	Condenser cooling towers	4.2	m³	0.00		R -	To be constructed according to program Structural Concrete, assume 5m high,
13	23	Refrigeration plant	4.2	m³	1128.75	R 640.00	R 722 400.00	250mm thick
14	27	Grout Plant	3.7	m²	0.00	R 380.00	R -	To be constructed according to program
15 16	28 40	Ventilation Shaft Water treatment plant	2.2	t m²	480.00 1225.00	R 1280.00 R 590.00	R 614 400.00 R 722 750.00	Info received from Impala Assume 450kg of steel per m ²
17	43	Sewage Plant	3.6	m²	1732.50		R 554 400.00	Single volume building
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program
19 20	87	Plant - Cleaners Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
21		Structural concrete	4.3	m³	0.00	R 400.00	R -	
22	88	Plant - Cleaners Structural steel	2.3.2	m²	0.00			To be constructed according to program
24		Structural screen	4.3	m³	0.00		R -	
25	89	Plant - Mill						To be constructed according to program
26		Structural steel	2.3.2	m²	0.00			
27 28	94	Structural concrete Plant - Storage area	4.3 3.7	m³ m²	0.00	R 380.00		To be constructed according to program
29 30	98 99	Plant Plant	3.6 3.6	m² m²	0.00		R -	To be constructed according to program To be constructed according to program
31 32	100	Plant - Thickener Structural steel	2.3.2	m²	0.00			To be constructed according to program
							R -	
33 34	101	Structural concrete Plant - Thickener	4.3	m³	0.00			To be constructed according to program
35		Structural steel	2.3.2	m²	0.00		R -	
36 37	102	Structural concrete Plant - Thickener	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
38		Structural steel	2.3.2	m²	0.00	R 590.00	R -	
39		Structural concrete		_				
			4.3	m³	0.00	R 400.00	R -	
40 41		Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures					R 3 114 961.00	
40	16 17	Sub - Total for demolitioning of plant and related structures	2.6.1 2.6.1	m³ m² m²	5934.00 424.00	R 90.00	R 3 114 961.00	IBR sheeting IBR sheeting
40 41 42 43 44		Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear	2.6.1	m² m² t	5934.00 424.00 0.00	R 90.00 R 90.00 R 1280.00	R 3114 961.00 R 534 060.00 R 38 160.00 R -	
40 41 42 43 44 45	17 15	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete	2.6.1 2.6.1 2.2 4.1	m² m² t	5934.00 424.00 0.00 147.00	R 90.00 R 90.00 R 1280.00 R 1280.00	R 3114 961.00 R 534 060.00 R 38 160.00 R 188 160.00	IBR sheeting To be constructed according to program
40 41 42 43 44 45	17 15 38	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo	2.6.1 2.6.1 2.2 4.1	m² m² t m³	5934.00 424.00 0.00 147.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 400.00	R 3114 961.00 R 534 060.00 R 38 160.00 R - R 188 160.00	IBR sheeting To be constructed according to program To be constructed according to program
40 41 42 43 44 45	17 15	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete	2.6.1 2.6.1 2.2 4.1	m² m² t	5934.00 424.00 0.00 147.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 400.00	R 3114 961.00 R 534 060.00 R 38 160.00 R - 188 160.00 R - R 188 160.00	IBR sheeting To be constructed according to program To be constructed according to program To be constructed according to program
40 41 42 43 44 45 46	17 15 38 38 41	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo	2.6.1 2.6.1 2.2 4.1 4.3	m² m² t m³ m³	5934.00 424.00 0.00 147.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00	R 3114961.00 R 534 060.00 R 38 160.00 R - 188 160.00 R - 188 160.00 R - 188 160.00	IBR sheeting To be constructed according to program To be constructed according to program To be constructed according to program Assume concrete dam, 250mm thick, 6m high
40 41 42 43 44 45 46 47 48	17 15 38 38 41	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank	2.6.1 2.6.1 2.2 4.1 4.3 4.3 2.4.2	m² m² t m³ m³ no	5934.00 424.00 0.00 147.00 0.00 0.00 1.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00	R 3114 961.00 R 534 060.00 R 38 160.00 R 188 160.00 R R R 26 650.00 R 22 500.00	IBR sheeting To be constructed according to program To be constructed according to program To be constructed according to program Assume concrete dam, 250mm thick, 6m
40 41 42 43 44 45 46 47 48	17 15 38 38 41 42	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam	2.6.1 2.6.1 2.2 4.1 4.3 4.3 2.4.2	m² m² t m³ m³ no m³	5934.00 424.00 0.00 147.00 0.00 1.00 56.25	R 90.00 R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00	R 3114 961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high
40 41 42 43 44 45 46 47 48 49 50 51 52	17 15 38 38 41 42 42 60 61	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 2.4.2 4.3	m² m² t m³ m³ m³ m³ m²	5934.00 424.00 0.00 147.00 0.00 0.00 1.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 135.00	R 3114 961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 3 993.60 R 3 993.60 R 363 420.00	IBR sheeting To be constructed according to program To be constructed according to program To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete
40 41 42 43 44 45 46 47 48 49 50 51 52 53	17 15 38 38 41 42 42 60 61 78	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3	m² m² t m³ m³ m³ no m³ m³ no	5934.00 424.00 0.00 147.00 147.00 0.00 56.25 56.25 6.24 2692.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 400.00 R 90.00 R 90.00	R 3114 961.00 R 534 060.00 R 38 160.00 R - R 188 160.00 R - R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.80 R 363 420.00 R -	IBR sheeting To be constructed according to program To be constructed according to program To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53	17 15 38 38 41 42 42 60 61	Sub - Total for demolitioning of plant and related structures Carports Carports Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - Covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 2.4.2 4.3	m² m² t m³ m³ m³ m³ m²	5934.00 424.00 0.00 147.00 147.00 0.00 56.25 56.25 6.24 2692.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 400.00 R 90.00 R 90.00	R 3114 961.00 R 534 060.00 R 38 160.00 R - R 188 160.00 R - R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.80 R 363 420.00 R -	IBR sheeting To be constructed according to program To be constructed according to program To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	17 15 38 38 41 42 42 60 61 78 104	Sub - Total for demolitioning of plant and related structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MWW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House	2.6.1 2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m² t m³ t m³ m³ no m³ m³ no m³ m³ m³	5934.00 424.00 0.00 147.00 0.00 1.00 1.00 56.25 6.25 6.24 2692.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 90.00 R 400.00 R 400.00 R 335.00 R 90.00 R 335.00	R 3114 961.00 R 534 060.00 R 38 160.00 R 188 160.00 R R 26 650.00 R 22 500.00 R 3 993.60 R 363 420.00 R R 1 199 443.60	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	17 15 38 38 41 42 42 60 61 78	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Demolitioning of workshops and stores	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m² m² t m³ m³ no m³ m³ m³ m²	5934.00 424.00 0.00 147.00 0.00 147.00 0.00 56.25 66.25 6.24 2692.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 380.00 R 380.00 R 380.00 R 380.00 R 380.00 R 295.00	R 3114 961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 3993.60 R 3993.60 R 3993.60 R 1199 443.60 R	IBR sheeting To be constructed according to program To be constructed according to program To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Thin reinforced concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	17 15 38 38 41 42 42 60 61 78 104	Sub - Total for demolitioning of plant and related structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - Covered parking Plant - Covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder rope store Fan and electrical motor store	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m2 m3	5934.00 424.00 0.00 147.00 0.00 0.00 1.00 56.25 56.25 6.24 2692.00 0.00 0.00 0.00 0.00 0.00 0.00 198.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 640.00 R 90.00 R 400.00 R 380.00 R 380.00 R 380.00 R 295.00	R 3114 961.00 R 534 060.00 R 38 160.00 R	IBR sheeting To be constructed according to program To be constructed according to program To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 60 60 61 62	17 15 38 38 41 42 42 60 61 78 104	Sub - Total for demolitioning of plant and related structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MWW Dam MIN Dam Sump Sump Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder Hope store Fan and electrical motor store Workshop sink and perm Main Store Workshop sink and perm Main Store	2.6.1 2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.1 3.1 3.1 3.6	m2 m3 m3 no m3 m2 m2 m2 m3	5934.00 424.00 0.00 147.00 0.00 147.00 1.00 56.25 6.25 6.24 2692.00 0.00 0.00 0.00 0.00 198.00 61930 61930 61390.80	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 380.00 R 380.00 R 295.00 R 295.00 R 380.00	R 3114 961.00 R 534 060.00 R 38 160.00 R	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building Single volume building Doubte volume building
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63 64	17 15 38 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33	Sub - Total for demolitioning of plant and related structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder Hope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store	2.6.1 2.6.1 2.2 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3	m2 m3	5934.00 5934.00 0.00 0.00 147.00 0.00 147.00 0.00 1.00 1.00 0.00 0.00 0.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00	R 3114 961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 3993.60 R 3993.60 R 3993.60 R 3993.60 R 3993.60 R 58 410.00 R 58 410.00 R 58 410.00 R 26 268 00 R 7 58 410.00 R 7 68 268 00 R 7 7 7 8 7 8 7 8 8 10.00 R 7 8 91 200.00 R 91 200.00 R 91 200.00 R 16 200.00	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building Single volume building Single volume building Single volume building Single volume building Single storey brick building
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 66	17 15 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35	Sub - Total for demolitioning of plant and related structures Carports Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Waste rank M/W Dam M/W Dam Sump Water Canal Plant - Covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Paint Store Gas bottle store Chemical Store Paint Store Paint Store Chemical Store Paint Store Paint Store Chemical Store Paint Store	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1.1 3.1.1 3.1.1 3.1.1	m2 m2 m3 t m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3	5934.00 5934.00 0.00 0.00 147.00 0.00 147.00 0.00 1.00 56.25 6.24 2692.00 0.00 0.00 0.00 0.00 0.00 198.00 1398.90 1398.80 285.00 36.00 201.00 41.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 3993.60 R R 1199 443.60 R R R 58 410.00 R R 59 250.00 R 59 295.00 R 91 200.00 R 10 620.00 R 59 295.00	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single store brick building Single volume building Single storey brick building Single storey brick building Single storey brick building
40 41 42 43 44 45 46 47 48 49 50 51 52 53 55 56 57 58 59 60 61 62 63 64 65	17 15 38 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34	Sub - Total for demolitioning of plant and related structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam Sump Plant - Covered parking Plant - covered parking Plant - tovered parking Plant - tovered parking Plant - tovered parking Plant - tovered parking Plant - go workshops and stores Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Explosives Store Explosives Store Chemical Store	2.6.1 2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.7 3.7 3.1 3.6 3.7 3.6 3.1 3.6 3.1 3.1 3.6	m2 m3	5934.00 424.00 0.00 147.00 147.00 0.00 147.00 0.00 1.00 56.25 56.25 6.24 2692.00 0.00 0.00 0.00 0.00 1380.80 285.00 36.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 300.00 R 300.00 R 380.00 R 380.00 R 295.00 R 320.00 R 320.00 R 320.00 R 320.00 R 295.00	R 3114 961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 3993.60 R 363 420.00 R R 1199 443.60 R R 58 410.00 R 524 704.00 R 91 200.00 R 10 620.00 R 12 095.00 R 12 095.00 R 12 095.00 R 12 095.00 R 16 20 090.00	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 67 60 61 62 63 64 65 66	17 15 38 38 41 42 42 42 60 61 78 104 113 14 18 24 25 31 32 33 33 34 35 36	Sub - Total for demolitioning of plant and related structures Carports Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam MH Dam Sump Sump Sump Sump Flant - covered parking Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Explosives Store Eas bottle store Chemical Store Paint Store Oil store	2.6.1 2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m2 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3	5934.00 5934.00 424.00 0.00 147.00 0.00 147.00 1.00 56.25 56.25 6.24 2692.00 0.00 0.00 0.00 198.00 1380.80 285.00 201.00 41.00 36.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 295.00 R 320.00 R 320.00 R 295.00	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 393.60 R 1199 443.60 R R R R R R R R R R 58 410.00 R 262 368.00 R 262 368.00 R 10 620.00	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building Single volume building Single storey brick building
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 67 68 69 70 71	17 15 38 38 41 42 42 42 60 61 78 104 113 124 125 31 14 18 24 25 31 32 33 34 34 35 36 36 36 36 36 36 36 36 36 36 36 36 36	Sub - Total for demolitioning of plant and related structures Camports Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder House Winder House Sump Winder House Winder House Winder House Winder House Winder House Owinder House Winder Hous	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m2 m3 m3 m3 m3 m0 m1 m1 m1 m1 m2 m1 m2 m1 m2 m1 m2 m1 m2 m2 m3 m1 m3 m1 m1 m1 m2 m1 m2 m1 m2 m3 m3 m1 m3 m1 m1 m2 m1 m3 m1 m3 m1 m1 m2 m1 m3	5934.00 5934.00 0.00 0.00 147.00 0.00 1.00 1.00 56.25 6.25 6.24 2692.00 0.00 0.00 0.00 1.80 0.00 1.80 0.80 0	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 380.00 R 390.00	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 3993.60 R 3993.60 R 3993.60 R 1199 443.60 R R R 1 199 443.60 R	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building To be constructed according to program To be constructed according to program To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 71 72 73	17 15 38 38 41 42 42 42 42 60 61 78 104 113 13 14 18 24 25 31 32 33 34 44 82 83 86 99 95	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Winder dana Maw Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Palint all Store Generator farm Plant - Building Plant - Building Plant - Workshop Plant - Building Plant - Building Plant - Building	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 2.4.2 4.3 4.3 4.3 2.4.2 8.4 2.6.1 4.3 3.7 3.7 3.11 3.11 3.11 3.11 3.11 3.11	m2 m3 m3 m3 m3 m0 m3 m0 m3 m0 m3	5934.00 5934.00 0.00 0.00 147.00 0.00 147.00 56.25 56.25 6.24 2692.00 0.00 0.00 0.00 1380.80 265.00 21.00 36.00 41.00 0.00 0.00 0.00 0.00 0.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 380.00 R 320.00	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 363 420.00 R 3993.60 R 363 420.00 R 1199 443.60 R R 199 443.60 R 524 704.00 R 10 620.00 R 10 620.00 R 197 760.00 R 1- R R R R R R 197 760.00 R	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 68 69 70 71 72	17 15 38 38 41 42 42 42 42 60 61 78 104 113 14 18 24 25 31 32 33 33 34 44 45 86 86 86 86 86 86 86 86 86 86 86 86 86	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Sump Water Canal Plant - covered parking Plant - Buste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Oil store Generator farm Plant - Building	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m2 m3	5934.00 5934.00 424.00 0.00 147.00 0.00 147.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 380.00 R 320.00	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 363 420.00 R 3993.60 R 363 420.00 R 1199 443.60 R R 199 443.60 R 524 704.00 R 10 620.00 R 10 620.00 R 197 760.00 R 1- R R R R R R 197 760.00 R	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76	17 15 38 38 41 42 42 42 42 60 61 78 104 113 13 14 18 24 25 31 32 33 34 44 82 83 86 99 95	Sub - Total for demolitioning of plant and related structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam MW Dam MW Dam MW Dam MID Total for demolitioning of all structural structures Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder House Winder House Minder house Minder house Winder House Wi	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.1 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6	m2 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3 m3	5934.00 5934.00 0.00 0.00 147.00 0.00 147.00 0.00 1.00 1.00 1.00 0.00 0.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 300.00 R 380.00 R 320.00	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 3993.60 R 3993.60 R 3993.60 R 3993.60 R 1199443.60 R R 1 199443.60 R R 1 199 443.60 R 10 620.00 R 10 620.0	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 56 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75	17 15 38 38 41 42 42 42 42 60 61 78 104 113 13 14 18 24 25 31 32 33 34 44 82 83 86 99 95	Sub - Total for demolitioning of plant and related structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Waste silo Waste silo Waste rank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Generator farm Plant - Building Sub - Total for demolitioning of workshops and stores Demolitioning of permanent brick structures and temporary	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.11 3.11 3.11 3.11 3.11 3.11 3.11 3.21 3.6 3.7 3.6 3.7 3.6 3.7 3.6 3.7 3.6 3.7 3.6 3.7 3.7 3.7 3.1 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7	m2 m3 m3 m3 m3 m0 m3 m0 m3 m0 m3	5934.00 5934.00 0.00 0.00 147.00 0.00 147.00 56.25 56.25 6.24 2692.00 0.00 0.00 0.00 1380.80 265.00 21.00 36.00 41.00 0.00 0.00 0.00 0.00 0.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 380.00 R 320.00	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 363 420.00 R 3993.60 R 1199 443.60 R R 1 199 443.60 R 524 704.00 R 10 620.00 R 10 620.00 R 10 760.00 R 12 760.00 R 199 7760.00	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building To be constructed according to program
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 70 71 72 73 74 75 76 77 78 79 79 79 79 79 79 79 79 79 79	17 15 38 38 41 42 42 42 42 42 40 60 61 78 104 118 22 31 32 33 34 44 82 83 86 93 95 96	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of permanent brick structures and temporary structures Waste silo Wast	2.6.1 2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m2 m3 m3 m0 m3 m0 m3 m0 m3 m0 m3 m3 m0 m3	5934.00 5934.00 0.00 0.00 147.00 0.00 147.00 0.00 1.00 56.25 56.25 6.24 2692.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	R 90.00 R 1280.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 380.00 R 395.00	R 3144961.00 R 534 060.00 R 38 160.00 R	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building To be constructed according to program
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40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 70 71 72 73 74 77 78 80 81 82 83 84 84 85 86 87 87 87 87 87 87 87 87 87 87	17 15 38 38 41 42 42 42 42 42 42 42 42 42 42 42 42 43 43 43 43 43 43 43 44 44 45 46 46 47 47 47 48 47 48 48 48 48 48 48 48 48 48 48 48 48 48	Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Oil store Generator farm Plant - Building Plan	2.6.1 2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m2 m3 m3 m3 m0 m3 m0 m3 m0 m3 m0 m3 m3 m0 m3	5934.00 5934.00 6.00 0.00 147.00 0.00 147.00 0.00 1.00 56.25 56.25 6.24 2692.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 300.00 R 380.00 R 380.00 R 295.00 R 390.00 R 320.00	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 393.60 R 393.60 R 363 420.00 R R 1199 443.60 R R 58 410.00 R 52 2500.00 R 10 620.00	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 78 78 78 78 78 78 78 78	17 15 38 38 41 42 42 42 60 61 78 104 13 14 18 24 25 31 32 25 33 34 44 42 82 83 95 96 96 96 97 97 97 97 97 97 97 97 97 97 97 97 97	Sub - Total for demolitioning of plant and related structures Carports Carports Centractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Waste silo Waste silo Waster tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder House Winder Inpe store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Oil store Generator farm Plant - Building Sub - Total for demolitioning of workshops and stores Demolitioning of permanent brick structures and temporary structures Offices Change House Lamp Room Change House Lamp Room Training Centre Gate House Banksman Cabin & Proto Room Central Control room	2.6.1 2.6.1 2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m2 m3	5934.00 5934.00 1424.00 0.00 147.00 0.00 147.00 0.00 1.00 1.00 1.00 0.00 0.00 0.00	R 90.00 R 90.00 R 1280.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 300.00 R 300.00 R 300.00 R 320.00 R	R 314961.00 R 534 060.00 R 38 160.00 R R 188 160.00 R R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 3993.60 R 3993.60 R 3993.60 R 1199 443.60 R R 191 200.00 R 10 620.00 R 10 6	IBR sheeting To be constructed according to program Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building Single storey brick building To be constructed according to program To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building To be constructed according to program Single storey brick building





		Closure Costing - Leeuwkop				Closure Co	osts - <u>Year 4 - (2015</u>	<u>)</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
92 93	29 30	Sub-station MCC	3.2.1 3.2.1	m² m²	120.00 0.00			Single storey brick building To be constructed according to program
94	45	Sumer Sub-station	3.2.1	m²	0.00	R 480.00	R -	To be constructed according to program Single storey brick building
95 96	47 48	Geology building Offices	3.1.1 3.1.1	m² m²	183.00 149.60	R 295.00	R 44 132.00	Single storey brick building
97 98	49 50	Offices Shaft Sinker Offices	3.1.1	m² m²	149.60 124.00			Single storey brick building Portable offices
99 100	51 52	Shaft Sinker Offices Change House	3.3 3.3	m² m²	124.00 16.00			Portable offices Portable offices
101	53	Change House	3.3	m²	16.00	R 140.00	R 2 240.00	Portable offices
102 103	54 55	Change House Lamp Room	3.3	m² m²	16.00 16.00			Portable offices Portable offices
104 105	56 57	Steffanuti Stocks Shaft Sinker Offices	3.3	m² m²	16.00 124.00			Portable offices Portable offices
106	58	Shaft Sinker Offices	3.3	m²	124.00 150.00	R 140.00	R 17 360.00	Portable offices
107 108	76 77	Explosives bunker Weighbridge	3.1.1 1.2	m² sum	0.00	R 50 000.00	R -	Single storey brick building To be constructed according to program
109 110	79 80	Plant - Admin building Plant - Induction room	3.1.1 3.1.1	m² m²	0.00	R 295.00 R 295.00	R -	To be constructed according to program To be constructed according to program
111 112	81 84	Plant - Office Plant - Sub-station	3.1.1 3.2.1	m² m²	0.00	R 295.00 R 480.00		To be constructed according to program To be constructed according to program
113 114	85 97	Plant - Sub-station Plant - building	3.2.1 3.1.1	m² m²	0.00			To be constructed according to program To be constructed according to program
		Sub - Total for demolitioning of permanent brick structures and	0.111		0.00	100.00		
115 116		Removal of all surface related finishes					R 1 214 796.50	
117 118	26 46	Surface cable yard PFC yard	4.5 4.5	m² m²	30.00 1199.00			Assume 250mm thick concrete Assume 250mm thick concrete
119 120	47 73	Geology yard General surface bed	4.5 4.4	m² m²	473.00 10610.85			Assume 250mm thick concrete Assume 150mm thick concrete
121 122	90 91	Plant - Laydown areas Plant - Laydown areas	4.5 4.5	m² m²	0.00	R 590.00	R -	To be constructed according to program To be constructed according to program
123	92	Plant - Laydown areas	4.5 4.5 4.5	m²	0.00	R 590.00	R -	To be constructed according to program
124 125	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	0.00	R 590.00	R 3 285 512.75	To be constructed according to program
126 127	32	Removal of all linear items Fencing to explosives store	5.5.3	m	85.00	R 27.00	R 2 295.00	
128 129	37 39	Reef and waste conveyor Reef conveyor	5.1.5 5.1.5	m m	0.00	R 640.00	R -	To be constructed according to program To be constructed according to program
130	62	Waste conveyor	5.1.2	m	1226.00	R 265.00	R 324 890.00	Overland conveyor
131 132	63 64	Return water pipeline Tailing delivery pipeline	5.2.2 5.2.2	m m	0.00	R 48.00	R -	To be constructed according to program To be constructed according to program
133 134	65 66	Pipeline from sump to PCD Emergency pipeline from concentrator to dam	5.2.2 5.2.2	m m	348.00 0.00			200-350mm steel pipelines To be constructed according to program
135 136	67 68	Distribution pipelines Water main pipeline	5.2.2 5.2.2	m m	4780.00 1870.00			200-350mm steel pipelines 200-350mm steel pipelines
137	69 74	Fire main pipeline Perimeter fencing	5.2.2 5.5.3	m	1870.00 3600.00	R 48.00	R 89 760.00	200-350mm steel pipelines
139	75	Perimeter fencing to tailings complex	5.5.3	m m	0.00	R 27.00	R -	To be constructed according to program
140 141	76 105	Perimeter fence to explosives bunker Plant - Steel gantry's with delivery pipelines	5.5.3 2.3.1	m m²	201.00 0.00	R 107.00	R -	To be constructed according to program
142 143	106	Plant - Security fencing Main water pipeline	5.5.3 5.2.3	m m	0.00 4669.00			To be constructed according to program
144 145		Sub - Total for removal of all linear items Rehabilitation of roads					R 1 154 292.00	
146		Entrance road	1.1	na	0.00		R -	Assume will remain
147 148		Minor gravel road to explosives bunker Sub - Total for rehabilitation of roads	8.3	m²	5864.00	R 4.00	R 23 456.00 R 23 456.00	
149 150		Disposal of demolition waste Sorting and screening of waste	6.1	%	11219533.85	2.50%	R 280 488.35	2.50%
151		Disposal of demolition waste	6.2.1	m³/km	24500.00		R 3 920 000.00	Assume 50km distance
152 153		Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects					R 4 200 488.35 R 17 384 422.20	
154 155		Mining Aspects						
156 157		Open pit reclamation including final voids and ramps	11	na	0.00	Р -	P -	
157		Not applicable	1.1	na	0.00	iv -	_	
158 159		Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines					R -	
160 161	15 23	Service and Production Shaft Refrigeration shaft	7.1.15 7.1.11	sum sum		R 2 573 324.00 R 1 838 850.00	R 2 573 324.00 R 1 838 850.00	10m Diameter 8m Diameter
162 163	28	Vent Shaft Sub - Total for sealing of shafts and inclines	7.1.11	sum		R 1838850.00		8m Diameter
164		Rehabilitation of overburden and spoils					K 0 231 024.00	
165 166	110	Topsoil stockpiles Rip area to alleviate compaction	9.5.1	ha	1.18	R 9 400.00	R 11 099.52	Only footprints will remain
167 168		Establish vegetation Sub - Total for rehabilitation of overburden and spoils	10.4.1	ha	1.18			·
		Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)					2. 004.00	
169 170		Not applicable	1.1	na	0.00	R -	R -	
171		Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)		L		<u> </u>	R -	
172		Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)			-	-		
173 174	70	Settling dams Remove contaminated sediment and stockpile	9.2	m ³	1320.00	R 20.00	R 26 400.00	Assume 250mm contaminated sediment
175		Load and haul contaminated sediment	1.2	m³ sum	1320.00	R 90.40	R 119 328.00	Haul sediment to tailings facility 8km
176 177		Remove HDPE liner Breach dam wall	6.4 10.1.5	m² m	5280.00 302.00	R 220.00	R 66 440.00	Doze material inward to fill void
178 179	_	Shape and level area Establish vegetation	10.1.1 10.4.1	ha ha	0.53 0.53	R 55 250.00	R 29 172.00	Make area free draining
180	71A	Emergency storage dam						Assume 100mm contaminated sediment
181 182		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	2986.50 2986.50	R 90.40	R 269 979.60	Haul sediment to tailings facility 8km
183 184		Remove HDPE liner Breach dam wall	6.4 10.1.5	m² m	31861.00 714.00			Doze material inward to fill void
185		Shape and level area Establish vegetation	10.1.1	ha ha		R 55 250.00	R 176 032.03	Make area free draining
187	71B	Emergency storage dam						A
188 189		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	2160.80 2160.80			Assume 100mm contaminated sediment Haul sediment to tailings facility 8km
190 191		Remove HDPE liner Breach dam wall	6.4 10.1.5	m² m	29000.00 688.00	R 6.50	R 188 500.00	Doze material inward to fill void
192		Shape and level area	10.1.1	ha	2.90	R 55 250.00	R 160 225.00	Make area free draining
193 194	72	Establish vegetation Pollution control dam	10.4.1	ha				
195 196		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	0.00			Assume 100mm contaminated sediment Haul sediment to tailings facility 8km
197		Remove HDPE liner	6.4	m²	17685.00			V V .





		Closure Costing - Leeuwkop					Closure Co	sts -	Year 4 - (2015	<u>)</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate		Amount	Notes
198		Breach dam wall	10.1.5	m	532.00	R	220.00	R	117 040.00	Doze material inward to fill void
199		Shape and level area	10.1.1	ha	0.17		55 250.00		9 248.85	Make area free draining
200		Establish vegetation	10.4.1	ha	0.17	R	13 800.00	R	2 310.12	
	407									Assumed 20m strip would not have been
201	107	Waste Rock Dump Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R	34 340.00	rehabilitated Assume 250mm thick
202			5.2		1717.00		20.00	10	04 040.00	Cut to fill action assumed 20m high at
203		Reshape WRD	9.1.1	m³	29925.00	R	13.50	R	403 987.50	87.5m³/per meter
204		Import capping layers	9.6.1	m³	8160.00	R	28.00	R	228 480.00	Assumed 1km haul distance, 300mm thick capillary layer and 300mm thick black turf
205		Import topsoil layer	9.6.1	m³	2720.00	R	28.00	R	76 160.00	Assumed 1km haul distance, 200mm thick layer
206		Establish vegetation	10.4.1	ha	1.36		13 800.00	R	18 768.00	iayoi
207	108	Tailings Complex								To be constructed according to program
208		Seal Penstocks	7.3	sum	0.00		213 200.00		-	
209 210		Breach wall & reshape Rip to alleviate compaction	10.1.5 9.5.1	m ha	0.00	R R	220.00 9 400.00	R R	-	
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00	R	13 800.00	R	-	
212		Establish vegetation on tailings dam slopes	10.4.2	ha	0.00	R	19 250.00	R	-	
		Establish vegetation on tailings dam top								
213	100		10.4.2	ha	0.00	R	19 250.00	R	-	
214 215	109	Waste Rock Noise Barrier Reshape berm	10.1.1	ha	2.10	R	55 250.00	R	116 025.00	
-10			10.1.1	···u	2.10	Ė	55 250.00			Assumed 1km haul distance, 200mm thick
216		Import topsoil layer	9.6.1	m³	4200.00		28.00	R	117 600.00	layer
217		Establish vegetation	10.4.1	ha	2.10	R	13 800.00	R	28 980.00	
218		Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential)				1		R	3 243 382.00	
218		Reclamation of subsided areas				H		ĸ	3 243 382.00	
220		Not applicable	1.1	na	0.00	R	-	R	-	
221		Sub - Total for reclamation of subsided areas						R		
222		Sub - Total for Mining aspects						R	9 521 800.56	
223		Consent Confess Destauration				_				
224 225		General Surface Reclamation Mine								
223		wille				┢				
										Includes stockpiling of material, backfilling of excavations in cut to fill operation and
226		Shape and level disturbed area	10.1.1	ha	20.00	R	55 250.00	R	1 105 000.00	final profiling @ave 500mm over footprint
227		Rip area to alleviate compaction	9.5.1	ha	20.00	R	9 400.00	R	188 000.00	500mm deep ripping
										150mm from local stockpile, assume 1km
228 229		Import topsoil	9.6.1 10.4.1	m³ ha	30000.00	R R	28.00 13 800.00	R R	840 000.00	load and haul
230		Establish vegetation Plant	10.4.1	Ha	20.00	К	13 800.00	К	276 000.00	Footprint not disturbed
		T turk								
204										
		Chang and level disturbed area	10.1.1	ho	0.00	В	EE 250.00	В		
231		Shape and level disturbed area Rip area to alleviate compaction	10.1.1	ha ha	0.00	R R		R R	-	
231		Shape and level disturbed area Rip area to alleviate compaction	10.1.1 9.5.1	ha ha	0.00				-	
232		Rip area to alleviate compaction Import topsoil	9.5.1 9.6.1	ha m³	0.00	R R	9 400.00	R R	-	
232 233 234		Rip area to alleviate compaction Import topsoil Establish vegetation	9.5.1	ha	0.00	R R	9 400.00	R R R	-	
232 233 234 235		Rip area to alleviate compaction Import topsoil	9.5.1 9.6.1	ha m³	0.00	R R	9 400.00	R R	2 409 000.00	
232 233 234 235 236		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation	9.5.1 9.6.1	ha m³	0.00	R R	9 400.00	R R R	-	
232 233 234 235		Rip area to alleviate compaction Import topsoil Establish vegetation	9.5.1 9.6.1	ha m³	0.00	R R	9 400.00	R R R	-	Assume none required, all mitigation
232 233 234 235 236 237		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management	9.5.1 9.6.1 10.4.1	ha m³ ha	0.00 0.00 0.00	R R R	9 400.00	R R R	-	measures will be implemented during the
232 233 234 235 236 237		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable	9.5.1 9.6.1	ha m³	0.00	R R R	9 400.00	R R R	2 409 000.00 -	
232 233 234 235 236 237 238 238		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management	9.5.1 9.6.1 10.4.1	ha m³ ha	0.00 0.00 0.00	R R R	9 400.00	R R R	-	measures will be implemented during the
232 233 234 235 236 237 238 239 240		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable	9.5.1 9.6.1 10.4.1	ha m³ ha	0.00 0.00 0.00	R R R	9 400.00	R R R R	- 2 409 000.00 - -	measures will be implemented during the
232 233 234 235 236 237 238 239 240		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management	9.5.1 9.6.1 10.4.1	ha m³ ha	0.00 0.00 0.00	R R R	9 400.00	R R R	2 409 000.00 -	measures will be implemented during the
232 233 234 235 236 237 238 239 240 241		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management SUB - TOTAL 1 (for infrastructural and related structures)	9.5.1 9.6.1 10.4.1	ha m³ ha na	0.00	R R R	9 400.00 28.00 13 800.00	R R R R R	2 409 000.00 	measures will be implemented during the operational phase
232 233 234 235 236 237 238 239 240 241 242 243		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management SUB - TOTAL 1 (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring	9.5.1 9.6.1 10.4.1 1.1	ha m³ ha na	0.00 0.00 0.00	R R R	9 400.00 28.00 13 800.00	R R R R	2 409 000.00 - 2 409 100.00 	measures will be implemented during the operational phase 8 monitoring points on a monthly basis
232 233 234 235 236 237 238 239 240 241 242 243 244		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management SUB - TOTAL 1 (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2	na na	0.00 0.00 0.00 0.00	R R R R	9 400.00 28.00 13 800.00	R R R R R R R R R R R R R R R R R R R	2 409 000.00 - - 29 315 222.75 530 000.00 750 000.00	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis
232 233 234 235 236 237 238 239 240 241 242 243 244 245		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management Sub - Total for Water Management (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring Reclamation monitoring on reclaimed areas	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3	na yr yr ha	0.00 0.00 0.00 0.00 0.00 5.00 24.90	R R R R	9 400.00 28.00 13 800.00 - - - 106 000.00 150 000.00 2 500.00	R R R R R R R R R R R R R R R R R R R	2 409 000.00 2 409 000.00 29 315 222.75 530 000.00 750 000.00 62 250.00	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years
232 233 234 235 236 237 238 239 240 241 242 243 244		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management SUB - TOTAL 1 (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2	na na	0.00 0.00 0.00 0.00	R R R R	9 400.00 28.00 13 800.00	R R R R R R R R R R R R R R R R R R R	2 409 000.00 - - 29 315 222.75 530 000.00 750 000.00	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247		Rip area to alleviate compaction Import topsoil Estabish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management (for infrastructural and related structures) Surface water quality monitoring Groundwater quality monitoring Groundwater quality monitoring Groundwater quality monitoring Reclamation monitoring on reclaimed areas Care and maintenance of reclaimed areas Sub - Total for Post closure aspects	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3 12.4	na na yr yr ha ha	0.00 0.00 0.00 0.00 5.00 5.49 24.90	R R R R R R R R	9 400.00 28.00 13 800.00 106 000.00 150 000.00 2 500.00 15 500.00	R R R R R R R R R R R R R R R R R R R	29 315 222.75 530 000.00 750 000.00 62 250.00 385 950.00 1728 200.00	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years Assumed 10 percent for post closure
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management SUB - TOTAL 1 (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring Groundwater quality monitoring on reclaimed areas Care and maintenance of reclaimed areas Sub - Total for Post closure aspects Contingencies for post closure aspects	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3	na yr yr ha	0.00 0.00 0.00 0.00 0.00 5.00 24.90	R R R R R R R R	9 400.00 28.00 13 800.00 - - - 106 000.00 150 000.00 2 500.00	R R R R R R R R R R R R R R R R R R R	2 409 000.00 	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management SUB - TOTAL 1 (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring Reclamation monitoring on reclaimed areas Care and maintenance of reclaimed areas Sub - Total for Post closure aspects Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3 12.4	na na yr yr ha ha	0.00 0.00 0.00 0.00 5.00 5.49 24.90	R R R R R R R R	9 400.00 28.00 13 800.00 106 000.00 150 000.00 2 500.00 15 500.00	R R R R R R R R R R R R R R R R R R R	2 409 000.00 29 315 222.75 530 000.00 750 000.00 32 590.00 317 28 200.00 172 820.00	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years Assumed 10 percent for post closure
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring Reclamation monitoring on reclaimed areas Care and maintenance of reclaimed areas Care and maintenance of reclaimed areas Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3 12.4	na na yr yr ha ha	0.00 0.00 0.00 0.00 5.00 5.49 24.90	R R R R R R R R	9 400.00 28.00 13 800.00 106 000.00 150 000.00 2 500.00 15 500.00	R R R R R R R R R R R R R R R R R R R	2 409 000.00 	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years Assumed 10 percent for post closure
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management SUB - TOTAL 1 (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring Reclamation monitoring on reclaimed areas Care and maintenance of reclaimed areas Sub - Total for Post closure aspects Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3 12.4	na na yr yr ha ha	0.00 0.00 0.00 0.00 5.00 5.49 24.90	R R R R R R R R	9 400.00 28.00 13 800.00 106 000.00 150 000.00 2 500.00 15 500.00	R R R R R R R R R R R R R R R R R R R	2 409 000.00 29 315 222.75 530 000.00 750 000.00 325 950.00 317 28 200.00 172 820.00	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years Assumed 10 percent for post closure
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management SUB - TOTAL 1 (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring Reclamation monitoring on reclaimed areas Care and maintenance of reclaimed areas Care and maintenance of reclaimed areas Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects Preliminary and General	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3 12.4 1.2	na na sum sum sum	0.00 0.00 0.00 0.00 0.00 5.00 5.00 24.90 1.00	R R R R R R R R	9 400.00 28.00 13 800.00 106 000.00 150 000.00 2 500.00 172 820.00 1758 913.37	R R R R R R R R R R R R R R R R R R R	29 315 222.75 530 000.00 750 000.00 38 59 50.00 1728 200.00 1728 200.00 178 8913.37	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years Assumed 10 percent for post closure aspects Assume 6 percent of sub - total 1
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring on reclaimed areas Care and maintenance of reclaimed areas Care and maintenance of reclaimed areas Contingencies for post closure aspects Sub - Total for Post closure aspects Sub - Total for Contingencies for post closure aspects Additional allowances Preliminary and General Contingencies	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3 12.4	na na yr yr yr ha ha ha	0.00 0.00 0.00 0.00 0.00 5.00 5.00 24.90 1.00	R R R R R R R R	9 400.00 28.00 13 800.00 106 000.00 150 000.00 2 500.00 15 500.00 172 820.00	R R R R R R R R R R R R R R R R R R R	29 315 222.75 530 000.00 750 000.00 385 950.00 1728 200.00 1728 200.00 179 820.00	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years Assumed 10 percent for post closure aspects
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management (for infrastructural and related structures) Surface water quality monitoring Groundwater quality monitoring Groundwater quality monitoring Groundwater quality monitoring Care and maintenance of reclaimed areas Sub - Total for Post closure aspects Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects Preliminary and General Contingencies Sub - Total General Contingencies Sub - Total General Contingencies	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3 12.4 1.2	na na sum sum sum	0.00 0.00 0.00 0.00 0.00 5.00 5.00 24.90 1.00	R R R R R R R R	9 400.00 28.00 13 800.00 106 000.00 150 000.00 2 500.00 172 820.00 1758 913.37	R R R R R R R R R R R R R R R R R R R	29 315 222.75 530 000.00 750 000.00 38 59 50.00 1728 200.00 1728 200.00 178 8913.37	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years Assumed 10 percent for post closure aspects Assume 6 percent of sub - total 1
232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 250 252 253		Rip area to alleviate compaction Import topsoil Establish vegetation Sub - Total for General Surface Reclamation Water Management Not applicable Sub - Total for Water Management (for infrastructural and related structures) Post - closure aspects Surface water quality monitoring Groundwater quality monitoring on reclaimed areas Care and maintenance of reclaimed areas Care and maintenance of reclaimed areas Contingencies for post closure aspects Sub - Total for Post closure aspects Sub - Total for Contingencies for post closure aspects Additional allowances Preliminary and General Contingencies	9.5.1 9.6.1 10.4.1 1.1 12.1 12.2 12.3 12.4 1.2	na na sum sum sum	0.00 0.00 0.00 0.00 0.00 5.00 5.00 24.90 1.00	R R R R R R R R	9 400.00 28.00 13 800.00 106 000.00 150 000.00 2 500.00 172 820.00 1758 913.37	R R R R R R R R R R R R R R R R R R R	29 315 222.75 530 000.00 750 000.00 38 59 50.00 1728 200.00 1728 200.00 1758 913.37 2 931 522.28	measures will be implemented during the operational phase 8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis 5 years 5 years Assumed 10 percent for post closure aspects Assume 6 percent of sub - total 1





		Closure Costing - Leeuwkop				osts - <u>Year 5 - (2016</u>	<u>2016)</u>		
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes	
2		Infrastructural Aspects Nominal cost and time related items							
3		Mine							
4		Removal of salvageable equipment	1.2	sum	1.00	R 2 000 000.00	R 2 000 000.00	Nominal allowance For assistance in the removal of equipment	
5 6		Crane Plant	11.1	p/day	15.00	R 38 700.00	R 580 500.00	and demolition purposes	
7		Removal of salvageable equipment	1.2	sum	0.00	R 6 500 000.00	R -	Nominal allowance For assistance in the removal of equipment	
8		Crane	11.1	p/day	0.00	R 38 700.00	R - 2 580 500.00	and demolition purposes	
10		Sub-Total for cost and time related items Demolitioning of plant and related structures					R 2 580 500.00		
11	21	Compressor house	3.7	m²	1318.45	R 380.00	R 501 011.00		
12	22	Condenser cooling towers	4.2	m³	527.80	R 640.00	R 337 792.00	Structural Concrete, assume 5m high, 250mm thick	
13	23	Refrigeration plant	4.2	m³	1128.75	R 640.00	R 722 400.00	Structural Concrete, assume 5m high, 250mm thick	
14	27	Grout Plant	3.7	m²	1734.00	R 380.00	R 658 920.00	Double volume building	
15	28	Ventilation Shaft	2.2	1	480.00		R 614 400.00	Info received from Impala	
16	40	Water treatment plant	2.3.2	m²	1225.00			Assume 450kg of steel per m²	
17	43	Sewage Plant	3.6	m²	1732.50	R 320.00	R 554 400.00	Single volume building	
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program	
19	87	Plant - Cleaners						To be constructed according to program	
20		Structural steel	2.3.2	m²	0.00	R 590.00	R -		
21 22	88	Structural concrete Plant - Cleaners	4.3	m³	0.00	R 400.00	R -	To be constructed according to program	
23		Structural steel	2.3.2	m²	0.00	R 590.00	R -		
24	00	Structural concrete	4.3	m³	0.00	R 400.00	R -	To be according to a constitution to according	
25 26	89	Plant - Mill Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program	
27		Structural concrete	4.3	m³	0.00				
28 29	94 98	Plant - Storage area Plant	3.7 3.6	m² m²				To be constructed according to program To be constructed according to program	
30 31	99 100	Plant Plant - Thickener	3.6	m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program	
32		Structural steel	2.3.2	m²	0.00	R 590.00	R -	3.17.3	
33 34	101	Structural concrete	4.3	m³	0.00	R 400.00	R -	To be constructed according to program	
35	101	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program	
36		Structural concrete	4.3	m³	0.00	R 400.00	R -		
37 38	102	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program	
39		Structural concrete	4.3	m³	0.00	R 400.00	R -		
40 41		Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures					R 4 111 673.00		
42	16 17	Carports Contractors Carports	2.6.1 2.6.1	m² m²	5934.00 424.00			IBR sheeting IBR sheeting	
44	15	Headgear	2.2	t	0.00	R 1 280.00	R -	To be constructed according to program	
45		Structural concrete	4.1	m³					
46	38	Waste silo	4.3	m³	0.00		R -	To be constructed according to program	
47 48	38 41	Waste silo Water tank	4.3 2.4.2	m³ no	0.00 1.00	R 400.00 R 26 650.00	R - 26 650.00	To be constructed according to program	
49	42	M/W Dam	4.3	m³	56.25	R 400.00	R 22 500.00	Assume concrete dam, 250mm thick, 6m high	
50	42	M/W Dam	4.3	m³	56.25			Assume concrete dam, 250mm thick, 6m high	
51	60	Sump	4.2	m³	6.24			Structural concrete, 300mm thick, 2m deep	
52 53	61 78	Water Canal Plant - covered parking	8.4 2.6.1	m² m²	2692.00 0.00	R 135.00	R 363 420.00		
54 55	104	Plant - Waste silo Sub - Total for demolitioning of all structural structures	4.3	m³	0.00	R 400.00	R - 1 199 443.60	To be constructed according to program	
56 57	13	Demolitioning of workshops and stores Winder House	3.7	m²	0.00	R 380.00	R -	To be constructed according to program	
58 59	14 18	Winder House Winder rope store	3.7 3.1.1	m² m²	0.00 45.00			To be constructed according to program Single storey brick building	
60 61	24 25	Fan and electrical motor store Workshop sink and perm	3.1.1 3.6	m² m²	198.00 819.90	R 295.00	R 58 410.00	Single storey brick building Single volume building	
62 63	31 32	Main Store Explosives Store	3.7	m² m²	1380.80 285.00	R 380.00	R 524 704.00	Double volume building Single volume building	
64 65	33 34	Gas bottle store Chemical Store	3.1.1 3.1.1	m² m²	36.00 201.00	R 295.00	R 10 620.00	Single storey brick building	
66	35	Paint Store	3.1.1	m²	41.00 36.00	R 295.00	R 12 095.00	Single storey brick building	
67 68	36 44	Oil store Generator farm	3.1.1	m² m²	412.00	R 480.00	R 197 760.00	Single storey brick building	
69 70	82 83	Plant - Building Plant - Building	3.6	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program	
71 72	86 93	Plant - Workshop Plant - Building	3.7 3.6	m² m²	0.00 0.00	R 320.00	R -	To be constructed according to program To be constructed according to program	
73 74	95 96	Plant - Building Plant - Building	3.6 3.6	m² m²	0.00 0.00		R -	To be constructed according to program To be constructed according to program	
75		Sub - Total for demolitioning of workshops and stores Demolitioning of permanent brick structures and temporary					R 1 240 347.00		
76 77	1	structures Offices	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program	
78	2	Change House	3.1.1	m²	1066.00	R 295.00	R 314 470.00	Single storey brick building Single storey brick building	
79 80	4	Laundry Boiler House	3.1.1	m² m²	179.00 232.00	R 295.00	R 68 440.00	Single storey brick building	
81 82	5 6	Change House Lamp Room	3.1.1 3.1.1	m² m²	0.00 909.50	R 295.00	R 268 302.50	To be constructed according to program Single storey brick building	
83 84	7 8	Change House Induction Room	3.1.1 3.1.1	m² m²	0.00 144.00	R 295.00	R 42 480.00	To be constructed according to program Single storey brick building	
85 86	9 10	Training Centre Gate House	3.1.1 3.1.1	m² m²	0.00 184.00			To be constructed according to program Single storey brick building	
87	11	Banksman Cabin & Proto Room Central Control room	3.1.1 3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program	
88	12								
	12 19 19	Sub-station Sub-station	3.2.1 3.2.1	m² m²	15.00 15.00			Single storey brick building Single storey brick building	





		Closure Costing - Leeuwkop				Closure Co	osts - <u>Year 5 - (2016</u>	<u></u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
92 93	29 30	Sub-station MCC	3.2.1 3.2.1	m² m²	120.00 0.00			Single storey brick building
94	45	MCC Sumer Sub-station	3.2.1	m²	0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
95 96	47 48	Geology building Offices	3.1.1 3.1.1	m² m²	183.00 149.60			Single storey brick building Single storey brick building
97	49	Offices	3.1.1	m²	149.60	R 295.00	R 44 132.00	Single storey brick building
98 99	50 51	Shaft Sinker Offices Shaft Sinker Offices	3.3	m² m²	124.00 124.00			Portable offices Portable offices
100 101	52 53	Change House Change House	3.3	m² m²	16.00 16.00			Portable offices Portable offices
102	54	Change House	3.3	m²	16.00	R 140.00		Portable offices
103 104	55 56	Lamp Room Steffanuti Stocks	3.3	m² m²	16.00 16.00			Portable offices Portable offices
105	57	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices
106 107	58 76	Shaft Sinker Offices Explosives bunker	3.3 3.1.1	m² m²	124.00 150.00			Portable offices Single storey brick building
108 109	77 79	Weighbridge Plant - Admin building	1.2 3.1.1	sum m²	0.00 0.00	R 50 000.00 R 295.00	R -	To be constructed according to program To be constructed according to program
110	80	Plant - Induction room	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
111 112	81 84	Plant - Office Plant - Sub-station	3.1.1 3.2.1	m² m²	0.00	R 295.00 R 480.00		To be constructed according to program To be constructed according to program
113 114	85 97	Plant - Sub-station Plant - building	3.2.1 3.1.1	m² m²	0.00			To be constructed according to program To be constructed according to program
	- 51	Sub - Total for demolitioning of permanent brick structures and	3.1.1		0.00	10 255.50		To be concurated according to program
115 116		Removal of all surface related finishes					R 1 214 796.50	
117 118	26 46	Surface cable yard PFC yard	4.5 4.5	m² m²	30.00 1199.00			Assume 250mm thick concrete Assume 250mm thick concrete
119	47	Geology yard	4.5	m²	473.00	R 590.00	R 279 070.00	Assume 250mm thick concrete
120 121	73 90	General surface bed Plant - Laydown areas	4.4 4.5	m² m²	10610.85 0.00			Assume 150mm thick concrete To be constructed according to program
122 123	91 92	Plant - Laydown areas Plant - Laydown areas	4.5 4.5	m² m²	0.00	R 590.00	R -	To be constructed according to program To be constructed according to program
124	103	Plant - Laydown areas	4.5	m² m²			R -	To be constructed according to program To be constructed according to program
125 126		Sub - Total for removal of all surface related finishes Removal of all linear items		-			R 3 285 512.75	
127	32	Fencing to explosives store Reef and waste conveyor	5.5.3	m	85.00 0.00			To be constructed according to program
128 129	37 39	Reef conveyor	5.1.5 5.1.5	m m	0.00			To be constructed according to program
130 131	62 63	Waste conveyor Return water pipeline	5.1.2 5.2.2	m m	1226.00 0.00	R 265.00	R 324 890.00	Overland conveyor To be constructed according to program
132	64	Tailing delivery pipeline	5.2.2	m	0.00	R 48.00	R -	To be constructed according to program
133 134	65 66	Pipeline from sump to PCD Emergency pipeline from concentrator to dam	5.2.2 5.2.2	m m	348.00 0.00			200-350mm steel pipelines To be constructed according to program
135 136	67 68	Distribution pipelines Water main pipeline	5.2.2 5.2.2	m m	4780.00 1870.00			200-350mm steel pipelines 200-350mm steel pipelines
137	69	Fire main pipeline	5.2.2	m	1870.00	R 48.00	R 89 760.00	200-350mm steel pipelines
138 139	74 75	Perimeter fencing Perimeter fencing to tailings complex	5.5.3 5.5.3	m m	3600.00 0.00			To be constructed according to program
140 141	76 105	Perimeter fence to explosives bunker Plant - Steel gantry's with delivery pipelines	5.5.3 2.3.1	m m²	201.00 0.00			To be constructed according to program
142	106	Plant - Security fencing	5.5.3	m	0.00	R 27.00	R -	To be constructed according to program
143 144		Main water pipeline Sub - Total for removal of all linear items	5.2.3	m	4669.00	R 64.00	R 298 816.00 R 1 154 292.00	
145 146		Rehabilitation of roads	4.4		0.00	R -	D	A
146		Entrance road Minor gravel road to explosives bunker	1.1 8.3	na m²	0.00 5864.00		R - R 23 456.00	Assume will remain
148 149		Sub - Total for rehabilitation of roads Disposal of demolition waste					R 23 456.00	
150		Sorting and screening of waste	6.1	%	12229520.85	2.50%		2.50%
151 152		Disposal of demolition waste Sub - Total for disposal of demolition waste	6.2.1	m³/km	25212.00	R 160.00	R 4 033 920.00 R 4 339 658.02	Assume 50km distance
153 154		Sub - Total for infrastructural aspects					R 19 149 678.87	
155		Mining Aspects						
156		Open pit reclamation including final voids and ramps	11	na	0.00	В	В	
15/		Not applicable	1.1	na	0.00	К -	K -	
158 159		Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines					R -	
160	15	Service and Production Shaft	7.1.15	sum		R 2 573 324.00		10m Diameter
161 162	23 28	Refrigeration shaft Vent Shaft	7.1.11 7.1.11	sum		R 1 838 850.00 R 1 838 850.00		8m Diameter 8m Diameter
163 164		Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils					R 6 251 024.00	
165	110	Topsoil stockpiles						Only footprints will remain
166 167		Rip area to alleviate compaction Establish vegetation	9.5.1 10.4.1	ha ha	1.18 1.18			
168		Sub - Total for rehabilitation of overburden and spoils	10.4.1	iia.	1.10	13 000.00	R 27 394.56	
169		Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)						
170		Not applicable	1.1	na	0.00	R -	R -	
171		Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)					R -	
172		Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)						
173	70	Settling dams				D	D 25 122	Aggume 250mmtin-
174 175		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	1320.00 1320.00			Assume 250mm contaminated sediment Haul sediment to tailings facility 8km
176 177		Remove HDPE liner Breach dam wall	6.4	m² m	5280.00 302.00			Doze material inward to fill void
178		Shape and level area	10.1.5 10.1.1	m ha	0.53	R 55 250.00	R 29 172.00	Make area free draining
179 180	71A	Establish vegetation Emergency storage dam	10.4.1	ha	0.53	R 13 800.00	R 7 286.40	
181		Remove contaminated sediment and stockpile	9.2	m³	2986.50			Assume 100mm contaminated sediment
182 183		Load and haul contaminated sediment Remove HDPE liner	1.2 6.4	sum m²	2986.50 31861.00			Haul sediment to tailings facility 8km
184	_	Breach dam wall	10.1.5	m	714.00	R 220.00	R 157 080.00	Doze material inward to fill void
185 186		Shape and level area Establish vegetation	10.1.1 10.4.1	ha ha	3.19 3.19			Make area free draining
187 188	71B	Emergency storage dam Remove contaminated sediment and stockpile	9.2	m³	2160.80			Assume 100mm contaminated sediment
189		Load and haul contaminated sediment	1.2	sum	2160.80	R 90.40	R 195 336.32	Haul sediment to tailings facility 8km
190 191		Remove HDPE liner Breach dam wall	6.4 10.1.5	m² m	29000.00 688.00			Doze material inward to fill void
192		Shape and level area	10.1.1	ha	2.90	R 55 250.00	R 160 225.00	Make area free draining
100		Establish vegetation	10.4.1	ha	2.90	R 13 800.00	R 40 020.00	<u> </u>
193 194	72	Pollution control dam					<u> </u>	<u> </u>
	72		9.2	m³ sum	1768.50 1768.50			Assume 100mm contaminated sediment Haul sediment to tailings facility 8km





		Closure Costing - Leeuwkop					Closure Co	sts	- <u>Year 5 - (2016</u>	2
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate		Amount	Notes
198		Breach dam wall	10.1.5	m	532.00	R	220.00	R	117 040.00	Doze material inward to fill void
199		Shape and level area	10.1.1	ha	0.17	R	55 250.00	R	9 248.85	Make area free draining
200		Establish vegetation	10.4.1	ha	0.17	R	13 800.00	R	2 310.12	
										Assumed 20m strip would not have been
201	107	Waste Rock Dump								rehabilitated
202		Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R	34 340.00	Assume 250mm thick
		Reshape WRD								Cut to fill action assumed 20m high at
203		*******	9.1.1	m³	29925.00	R	13.50	R	403 987.50	87.5m³/per meter
										Assumed 1km haul distance, 300mm thick
204		Import capping layers	0.04	3	0400.00	_	00.00	ь.	000 400 00	capillary layer and 300mm thick black turf
204			9.6.1	m³	8160.00	ĸ	28.00	R	228 480.00	A d 41 b d distance - 000 third
205		Import topsoil layer	9.6.1	m³	2720.00	R	28.00	R	76 160.00	Assumed 1km haul distance, 200mm thick layer
206		Establish vegetation	10.4.1	ha	1.36			R	18 768.00	layei
207	108	Tailings Complex	10.1.1	- nu	1.00		10 000.00	•	10 1 00.00	To be constructed according to program
208		Seal Penstocks	7.3	sum	0.00	R	213 200.00	R		то по
209		Breach wall & reshape	10.1.5	m	0.00		220.00		_	
210		Rip to alleviate compaction	9.5.1	ha	0.00		9 400.00			
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00		13 800.00		-	
212		Establish vegetation on tailings dam slopes	10.4.1	ha	0.00		19 250.00		-	
212			10.4.2	IIa	0.00	IX.	19 230.00	IX	-	
213		Establish vegetation on tailings dam top	10.4.2	ha	0.00	R	19 250.00	R	_	
214	109	Waste Rock Noise Barrier	10.7.2	· iu	0.00	··	.0 200.00		-	
215	.00	Reshape berm	10.1.1	ha	2.10	R	55 250.00	R	116 025.00	
	1				2.10	Ė		-	5 020.00	Assumed 1km haul distance, 200mm thick
216	l	Import topsoil layer	9.6.1	m³	4200.00	R	28.00	R	117 600.00	layer
217		Establish vegetation	10.4.1	ha	2.10		13 800.00	R	28 980.00	,
		Sub - Total for rehabilitation of processing waste deposits and								
218	l	evaporation ponds (polluting potential)		l		l		R	3 438 624.40	
219		Reclamation of subsided areas								
220		Not applicable	1.1	na	0.00	R	-	R	-	
221		Sub - Total for reclamation of subsided areas						R		
222		Sub - Total for Mining aspects						R	9 717 042.96	
223										
224		General Surface Reclamation								
225		Mine								
										land, des et electrica ef es et ed la bendation
										Includes stockpiling of material, backfilling
226		Shape and level disturbed area	10.1.1	ha	20.00	R	55 250.00	R	1 105 000.00	of excavations in cut to fill operation and final profiling @ave 500mm over footprint
227		Rip area to alleviate compaction	9.5.1	ha	20.00		9 400.00	R	188 000.00	500mm deep ripping
221		Rip area to alleviate compaction	9.5.1	IId	20.00	К	9 400.00	К	100 000.00	150mm from local stockpile, assume 1km
228		Import topsoil	9.6.1	m³	30000.00	R	28.00	R	840 000.00	load and haul
229		Establish vegetation	10.4.1	ha	20.00		13 800.00	R	276 000.00	ioda dila lidai
230		Plant	10.4.1	IIa	20.00	IX.	13 000.00	IX	270 000.00	Footprint not disturbed
230		Fidit								1 ootprint not distarbed
231		Shape and level disturbed area	10.1.1	ha	0.00	R	55 250.00	R	-	
232		Rip area to alleviate compaction	9.5.1	ha	0.00	R	9 400.00	R	-	
		,								
233		Import topsoil	9.6.1	m³	0.00	R	28.00	R	-	
234		Establish vegetation	10.4.1	ha	0.00		13 800.00		-	
235		Sub - Total for General Surface Reclamation						R	2 409 000.00	
236										
237		Water Management								
										Assume none required, all mitigation
	l			l		l				measures will be implemented during the
238	<u> </u>	Not applicable	1.1	na	0.00	R	-	R		operational phase
239		Sub - Total for Water Management						R	-	
240										
244		SUB - TOTAL 1						ь	24 275 704 52	
241		(for infrastructural and related structures)						R	31 275 721.83	
242		Post - closure aspects								
243		Surface water quality monitoring	12.1	yr	5.00	R	106 000.00	R	530 000.00	8 monitoring points on a monthly basis
244		Groundwater quality monitoring	12.2	yr	5.00		150 000.00		750 000.00	15 monitoring points on a quarterly basis
245		Reclamation monitoring on reclaimed areas	12.3	ha	26.90		2 500.00		67 250.00	
246		Care and maintenance of reclaimed areas	12.4	ha	26.90		15 500.00		416 950.00	5 years
247		Sub - Total for Post closure aspects						R	1 764 200.00	•
										Assumed 10 percent for post closure
248	l	Contingencies for post closure aspects	1.2	sum	1.00	R	176 420.00	R	176 420.00	aspects
249		Sub - Total for Contingencies for post closure aspects						R	176 420.00	
		SUB - TOTAL 2								
250		(for post - closure aspects)						R	1 940 620.00	
251		Additional allowances								
252		Preliminary and General	1.2	sum	1 00	R	1 876 543.31	R	1 876 543.31	Assume 6 percent of sub - total 1
253		Contingencies	1.2	sum			3 127 572.18		3 127 572.18	Assume 10 percent of sub - total 1
		SUB - TOTAL 3			1.00	Ė				
254		(for additional allowances)						R	5 004 115.49	
		Grand - Total								
255		(for sub - total 1+2+3)						R	38 220 457.32	





		Closure Costing - Leeuwkop				sts - <u>Year 6 - (2017</u>	<u>2017)</u>		
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes	
1 2		Infrastructural Aspects Nominal cost and time related items							
3		Mine							
4		Removal of salvageable equipment	1.2	sum	1.00	R 2 250 000.00	R 2 250 000.00	Nominal allowance For assistance in the removal of equipment	
5 6		Crane Plant	11.1	p/day	20.00	R 38 700.00	R 774 000.00	and demolition purposes	
7		Removal of salvageable equipment	1.2	sum	0.00	R 6 500 000.00	R -	Nominal allowance For assistance in the removal of equipment	
8 9		Crane	11.1	p/day	0.00	R 38 700.00	R -	and demolition purposes	
10		Sub-Total for cost and time related items Demolitioning of plant and related structures					R 3 024 000.00		
11	21	Compressor house	3.7	m²	1318.45	R 380.00	R 501 011.00	Double volume building	
12	22	Condenser cooling towers	4.2	m³	527.80	R 640.00	R 337 792.00	Structural Concrete, assume 5m high, 250mm thick	
13	23	Refrigeration plant	4.2	m³	1128.75	R 640.00	R 722 400.00	Structural Concrete, assume 5m high, 250mm thick	
14	27	Grout Plant	3.7	m²	1734.00		R 658 920.00	Double volume building	
15	28	Ventilation Shaft	2.2		480.00		R 614 400.00	Info received from Impala	
16	40	Water treatment plant	2.3.2	m²	1225.00			Assume 450kg of steel per m²	
17	43	Sewage Plant	3.6	m²	1732.50	R 320.00	R 554 400.00	Single volume building	
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program	
19	87	Plant - Cleaners						To be constructed according to program	
20		Structural steel	2.3.2	m²	0.00	R 590.00	R -		
21 22	88	Structural concrete Plant - Cleaners	4.3	m³	0.00	R 400.00	R -	To be constructed according to program	
23	00	Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program	
24		Structural concrete	4.3	m³	0.00	R 400.00	R -		
25 26	89	Plant - Mill Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program	
27		Structural concrete	4.3	m³	0.00	R 400.00	R -		
28 29	94 98	Plant - Storage area Plant	3.7 3.6	m² m²		R 380.00 R 320.00		To be constructed according to program To be constructed according to program	
30 31	99 100	Plant - Thickener	3.6	m²	0.00	R 320.00		To be constructed according to program To be constructed according to program	
32	100	Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program	
33		Structural concrete	4.3	m³	0.00	R 400.00	R -		
34 35	101	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program	
36		Structural concrete	4.3	m³	0.00	R 400.00	R -		
37 38	102	Plant - Thickener Structural steel	2.3.2	m²	0.00		R -	To be constructed according to program	
39		Structural concrete	4.3	m³	0.00		R -		
40		Sub - Total for demolitioning of plant and related structures	4.0		0.00	100.00	R 4 111 673.00		
41 42	16	Demolitioning of all structural structures Carports	2.6.1	m²	5934.00			IBR sheeting	
43 44	17 15	Contractors Carports Headgear	2.6.1	m² t	424.00 0.00			IBR sheeting To be constructed according to program	
45		Structural concrete	4.1	m³	147.00	R 1 280.00	R 188 160.00		
46	38	Waste silo	4.3	m³	0.00	R 400.00	R -	To be constructed according to program	
47 48	38 41	Waste silo Water tank	4.3 2.4.2	m³ no	0.00	R 400.00 R 26 650.00	R - R 26 650.00	To be constructed according to program	
								Assume concrete dam, 250mm thick, 6m	
49	42	M/W Dam	4.3	m³	56.25			high Assume concrete dam, 250mm thick, 6m	
50	42	M/W Dam	4.3	m³	56.25		R 22 500.00	high	
51 52	60 61	Sump Water Canal	4.2 8.4	m³ m²	6.24 2692.00		R 3 993.60 R 363 420.00	Structural concrete, 300mm thick, 2m deep Thin reinforced concrete	
53	78	Plant - covered parking	2.6.1	m²	0.00			To be constructed according to program	
54 55	104	Plant - Waste silo Sub - Total for demolitioning of all structural structures	4.3	m³	0.00	R 400.00	R - 1 199 443.60	To be constructed according to program	
56		Demolitioning of workshops and stores							
57 58	13 14	Winder House Winder House	3.7 3.7	m² m²	0.00	R 380.00	R -	To be constructed according to program To be constructed according to program	
59 60	18 24	Winder rope store Fan and electrical motor store	3.1.1 3.1.1	m² m²	45.00 198.00	R 295.00	R 58 410.00	Single storey brick building Single storey brick building	
61 62	25 31	Workshop sink and perm Main Store	3.6 3.7	m² m²	819.90 1380.80	R 320.00	R 262 368.00	Single volume building Double volume building	
63 64	32 33	Explosives Store Gas bottle store	3.6 3.1.1	m² m²	285.00 36.00			Single volume building Single storey brick building	
65 66	34 35	Chemical Store Paint Store	3.1.1	m² m²	201.00 41.00	R 295.00	R 59 295.00	Single storey brick building Single storey brick building	
67	36 44	Oil store	3.1.1	m²	36.00	R 295.00	R 10 620.00	Single storey brick building	
68 69	82	Generator farm Plant - Building	3.2.1	m² m²	412.00 0.00	R 320.00	R -	Single storey brick building To be constructed according to program	
70 71	83 86	Plant - Building Plant - Workshop	3.6	m² m²	0.00	R 380.00	R -	To be constructed according to program To be constructed according to program	
72 73	93 95	Plant - Building Plant - Building	3.6 3.6	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program	
74 75	96	Plant - Building Sub - Total for demolitioning of workshops and stores	3.6	m²	0.00	R 320.00	R - 1 240 347.00	To be constructed according to program	
76		Demolitioning of permanent brick structures and temporary structures							
77	1	Offices	3.1.1	m²	0.00			To be constructed according to program	
78 79	3	Change House Laundry	3.1.1	m² m²	1066.00 179.00	R 295.00	R 52 805.00	Single storey brick building Single storey brick building	
80 81	5	Boiler House Change House	3.1.1 3.1.1	m² m²	232.00 0.00	R 295.00	R -	Single storey brick building To be constructed according to program	
82 83	6 7	Lamp Room Change House	3.1.1 3.1.1	m² m²	909.50 0.00	R 295.00	R -	Single storey brick building To be constructed according to program	
84 85	8	Induction Room Training Centre	3.1.1 3.1.1	m² m²	144.00 0.00	R 295.00	R 42 480.00	Single storey brick building To be constructed according to program	
86 87	10	Gate House Banksman Cabin & Proto Room	3.1.1	m² m²	184.00 0.00	R 295.00	R 54 280.00	Single storey brick building To be constructed according to program	
88	12	Central Control room	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program	
89 90	19 19	Sub-station Sub-station	3.2.1 3.2.1	m² m²	15.00 15.00	R 480.00	R 7 200.00	Single storey brick building Single storey brick building	
91	20	Transformer bays	3.2.1	m²	156.00	R 480.00	R 74 880.00	Single storey brick building	





		Closure Costing - Leeuwkop				Closure Co	osts - <u>Year 6 - (2017</u>	2
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
92 93	29 30	Sub-station MCC	3.2.1	m²	120.00 65.00			Single storey brick building
94	45	Sumer Sub-station	3.2.1 3.2.1	m² m²	206.40	R 480.00	R 99 072.00	Single storey brick building Single storey brick building
95 96	47 48	Geology building Offices	3.1.1 3.1.1	m² m²	183.00 149.60			Single storey brick building Single storey brick building
97 98	49 50	Offices Shaft Sinker Offices	3.1.1	m² m²	149.60 124.00			Single storey brick building Portable offices
99	51	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices
100	52 53	Change House Change House	3.3	m² m²	16.00 16.00	R 140.00	R 2 240.00	Portable offices Portable offices
102 103	54 55	Change House Lamp Room	3.3	m² m²	16.00 16.00	R 140.00 R 140.00		Portable offices Portable offices
104	56	Steffanuti Stocks	3.3	m²	16.00	R 140.00	R 2 240.00	Portable offices Portable offices
105 106	57 58	Shaft Sinker Offices Shaft Sinker Offices	3.3	m² m²	124.00 124.00	R 140.00	R 17 360.00	Portable offices
107 108	76 77	Explosives bunker Weighbridge	3.1.1 1.2	m² sum	150.00			Single storey brick building To be constructed according to program
109 110	79 80	Plant - Admin building Plant - Induction room	3.1.1 3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
111	81	Plant - Office	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
112 113	84 85	Plant - Sub-station Plant - Sub-station	3.2.1 3.2.1	m² m²	0.00 0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
114	97	Plant - building Sub - Total for demolitioning of permanent brick structures and	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
115 116		temporary structures Removal of all surface related finishes					R 1 345 068.50	
117	26 46	Surface cable yard PFC yard	4.5 4.5	m² m²	30.00 1199.00			Assume 250mm thick concrete Assume 250mm thick concrete
119	47	Geology yard	4.5	m²	473.00	R 590.00	R 279 070.00	Assume 250mm thick concrete
120 121	73 90	General surface bed Plant - Laydown areas	4.4 4.5	m² m²	10610.85 0.00			Assume 150mm thick concrete To be constructed according to program
122 123	91 92	Plant - Laydown areas Plant - Laydown areas	4.5 4.5	m² m²	0.00			To be constructed according to program To be constructed according to program
124 125	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	0.00			To be constructed according to program
126		Removal of all linear items				D		
127 128	32 37	Fencing to explosives store Reef and waste conveyor	5.5.3 5.1.5	m m	85.00 0.00			To be constructed according to program
129 130	39 62	Reef conveyor Waste conveyor	5.1.5 5.1.2	m m	0.00 1226.00	R 640.00 R 265.00		To be constructed according to program Overland conveyor
131 132	63 64	Return water pipeline Tailing delivery pipeline	5.2.2 5.2.2	m m	0.00	R 48.00	R -	To be constructed according to program To be constructed according to program
133	65	Pipeline from sump to PCD	5.2.2	m	348.00	R 48.00	R 16 704.00	200-350mm steel pipelines
134 135	66 67	Emergency pipeline from concentrator to dam Distribution pipelines	5.2.2 5.2.2	m m	0.00 4780.00	R 48.00	R 229 440.00	To be constructed according to program 200-350mm steel pipelines
136 137	68 69	Water main pipeline Fire main pipeline	5.2.2 5.2.2	m m	1870.00 1870.00			200-350mm steel pipelines 200-350mm steel pipelines
138 139	74 75	Perimeter fencing Perimeter fencing to tailings complex	5.5.3 5.5.3	m m	3600.00 0.00			To be constructed according to program
140	76	Perimeter fence to explosives bunker	5.5.3	m	201.00	R 27.00	R 5 427.00	To be constructed according to program
142	105 106	Plant - Steel gantry's with delivery pipelines Plant - Security fencing	2.3.1 5.5.3	m² m	0.00 0.00	R 27.00	R -	To be constructed according to program To be constructed according to program
143 144		Main water pipeline Sub - Total for removal of all linear items	5.2.3	m	4669.00	R 64.00	R 298 816.00 R 1 154 292.00	
145 146		Rehabilitation of roads Entrance road	1.1	na	0.00	R -	R -	Assume will remain
147		Minor gravel road to explosives bunker	8.3	m²	5864.00		R 23 456.00	Assume will remain
148 149		Sub - Total for rehabilitation of roads Disposal of demolition waste					R 23 456.00	
150 151		Sorting and screening of waste Disposal of demolition waste	6.1 6.2.1	% m³/km	12359792.85	2.50% R 160.00		2.50%
152 153					25348.00			Assume 50km distance
153		Sub - Total for disposal of demolition waste			25348.00	100.00	R 4 364 674.82	Assume 50km distance
		Sub - Total for infrastructural aspects			25348.00	100.00		Assume 50km distance
155 156		Sub - Total for infrastructural aspects Mining Aspects			25348.00	100.00	R 4 364 674.82	Assume 50km distance
155		Sub - Total for infrastructural aspects	1.1	na	25348.00		R 4 364 674.82	Assume 50km distance
155 156 157 158		Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps	1.1				R 4 364 674.82 R 19 748 467.67	Assume 50km distance
155 156 157	15	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable	1.1 7.1.15		0.00	R -	R 4 364 674.82 R 19 748 467.67	10m Diameter
155 156 157 158 159 160 161	23	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft	7.1.15 7.1.11	na sum sum	0.00 1.00 1.00	R R 2573 324.00 R 1838 850.00	R 4 364 674.82 R 19 748 467.67 R - R - R 2 573 324.00 R 1 838 850.00	10m Diameter 8m Diameter
155 156 157 158 159 160 161 162 163		Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines	7.1.15	na sum	0.00	R R 2573 324.00 R 1838 850.00	R 4 364 674.82 R 19 748 467.67 R - R - R 2 573 324.00 R 1 838 850.00	10m Diameter
155 156 157 158 159 160 161 162 163 164 165	23	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles	7.1.15 7.1.11 7.1.11	na sum sum sum	1.00 1.00 1.00	R - R 2 573 32400 R 1838 850.00 R 1838 850.00	R 4 364 674.82 R 19 748 467.67 R - R 2 573 324.00 R 1 838 850.00 R 6 251 024.00	10m Diameter 8m Diameter
155 156 157 158 159 160 161 162 163 164 165	23 28	Sub - Total for infrastructural aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction	7.1.15 7.1.11 7.1.11 9.5.1	na sum sum sum	1.000 1.000 1.000	R - 257332400 R 1838850.00 R 1838850.00	R 4 364 674.82 R 19 748 467.67 R R R 2 573 324.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52	10m Diameter 8m Diameter 8m Diameter
155 156 157 158 159 160 161 162 163 164 165	23 28	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils	7.1.15 7.1.11 7.1.11	na sum sum sum	1.00 1.00 1.00	R 257332400 R 1838850.00 R 1838850.00	R 4 364 674.82 R 19 748 467.67 R R R 2 573 324.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52	10m Diameter 8m Diameter 8m Diameter
155 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)	7.1.15 7.1.11 7.1.11 9.5.1 10.4.1	na sum sum sum ha ha	0.00 1.00 1.00 1.118	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1838 850.00	R 4 364 674.82 R 19 748 467.67 R R 2 573 324.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52 R 11 099.52 R 12 7 394.56	10m Diameter 8m Diameter 8m Diameter
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169	23 28	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and	7.1.15 7.1.11 7.1.11 9.5.1	na sum sum sum	1.000 1.000 1.000	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1838 850.00	R 4 364 674.82 R 19 748 467.67 R R R 2 573 324.00 R 1 838 850.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52 R 16 295.04 R 27 394.56	10m Diameter 8m Diameter 8m Diameter
155 156 157 158 159 160 161 162 163 164 165 166 167 168	23 28	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)	7.1.15 7.1.11 7.1.11 9.5.1 10.4.1	na sum sum sum ha ha	0.00 1.00 1.00 1.118	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1838 850.00	R 4 364 674.82 R 19 748 467.67 R R 2 573 324.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52 R 11 099.52 R 12 7 394.56	10m Diameter 8m Diameter 8m Diameter
155 156 157 158 159 160 161 162 163 164 165 166 167 168 170	23 28 110	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)	7.1.15 7.1.11 7.1.11 9.5.1 10.4.1	na sum sum sum ha ha	0.00 1.00 1.00 1.118	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1838 850.00	R 4 364 674.82 R 19 748 467.67 R R R 2 573 324.00 R 1 838 850.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52 R 16 295.04 R 27 394.56	10m Diameter 8m Diameter 8m Diameter
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170	23 28	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile	7.1.15 7.1.11 7.1.11 9.5.1 10.4.1	na sum sum sum ha ha na	1.00 1.00 1.00 1.00 1.18 1.18	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13 800.00 R	R 4 364 674.82 R 19 748 467.67 R R R 1838 850.00 R 1838 850.00 R 6 251 024.00 R 16 295.04 R 27 394.56 R R R R R R R R -	10m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170	23 28 110	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	sum sum sum	1.00 1.00 1.00 1.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 20.00 R 20.00 R 90.40	R 4 364 674.82 R 19 748 467.67 R R 2 573 324.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52 R 16 295.04 R 27 394.56 R R R R R R 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10m Diameter 8m Diameter 8m Diameter Only footprints will remain
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176	23 28 110	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wail	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5	na sum sum sum ha ha ha ma m² sum m² sum	1.00 1.00 1.00 1.00 1.18 1.18 1.18 2.00 1320.00 5280.00 302.00	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 33 800.00 R	R 4 364 674.82 R 19 748 467.67 R R R 2 573 324.00 R 1838 850.00 R 6 251 024.00 R 16 295.04 R 27 394.56 R R R R 34 300.00 R 34 320.00 R 34 320.00 R 66 440.00 R 66 440.00	10m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177	23 28 110	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4	na sum sum sum ha ha ha sum	0.00 1.00 1.00 1.00 1.01 1.18 1.18 1.18	R 2573 324 00 R 1838 850.00 R 1838 850.00 R 1838 850.00 R 13 800.00 R 2 90.00 R 2 90.00 R 6.50 R 220.00 R 55 250.00	R 4 364 674.82 R 19 748 467.67 R	10m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km
155 156 157 158 159 160 161 162 163 164 165 166 167 168 199 170 171 172 173 174 175 176 177 178 179 180	23 28 110	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile	7.1.15 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 6.4 10.1.5 10.4.1 9.2	na sum sum ha ha ha na m³ m³ m ha ha	1.18 1.18 1.18 0.00 1320.00 5280.00 302.00 0.53 0.53	R 2573 324 00 R 1838 850.00 R 1838 850.00 R 13 800.00 R 13 800.00 R 20.00 R 20.00 R 220.00 R 55250.00 R 13 800.00 R 13 800.00	R 4 364 674.82 R 19 748 467.67 R R R 1838 550.00 R 1838 550.00 R 1838 550.00 R 16 295.04 R 27 394.56 R R R 26 400.00 R 34 320.00 R 34 320.00 R 34 320.00 R 7 286.40 R 59 730.00	10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining Assume 100mm contaminated sediment
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180	23 28 110	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2	na sum sum ha ha ha na m² sum m³ sum	1.00 1.00 1.00 1.00 1.18 1.18 1.18 1.20.00 1320.00 5280.00 302.00 0.53 0.53 0.53	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 20.00 R 30.00	R 4 364 674.82 R 19 748 467.67 R R R 1838 850.00 R 1838 850.00 R 6 251 024.00 R 1938 850.00 R 16 295.04 R 27 394.56 R R R R R 26 400.00 R 119 328.00 R 66 440.00 R 7 286 400.00 R 7 286 70.00 R 59 730.00 R 69 730.00 R 69 269 979.60	10m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 180 180 180 180 180 180 180 180 180 18	23 28 110	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment Remove HDPE liner Breach dam wall	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	na sum sum ha ha na m³ sum m² sum m² m² m² m ha ha	1.18 1.18 1.20,00 1.320,00 1.320,00 1.320,00 1.053 1.0	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 20.00 R 20.00 R 20.00 R 20.00 R 55 250.00 R 55 250.00 R 13 800.00 R 6.50 R 220.00 R 6.50 R 120.00 R 7 90.40 R 6.50 R 120.00 R 90.40 R 6.50 R 220.00	R 4 364 674.82 R 19 748 467.67 R R R 19 388 50.00 R 1 838 850.00 R 1 838 850.00 R 16 295.04 R 27 394.56 R R R 26 400.00 R 119 328.00 R 34 320.00 R 66 440.00 R 7 286.00 R 7 286.00 R 7 280.00 R 7 280.00 R 9 397.00 R 159 970.00 R 159 970.00 R 207 970.60 R 207 970.60 R 157 080.00	10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining Assume 100mm contaminated sediment Haul sediment to tailings facility 8km
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185	23 28 110 70	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment and stockpile	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4	na sum sum ha ha na m² sum m² m² sum m² sum m² m²	1.00 1.00 1.00 1.00 1.18 1.18 1.18 1.20.00 1320.00 5280.00 0.53 0.53 2986.50 2986.50 2386.50	R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380 850.00 R 13 800.00 R 20.00 R 55 250.00 R 55.250.00	R 4 364 674.82 R 19 748 467.67 R R R 1838 850.00 R 1838 850.00 R 6 251 024.00 R 16 295.04 R 27 394.56 R R R 26 400.00 R 119 328.00 R 66 440.00 R 34 320.00 R 66 440.00 R 7 286.40 R 7 7 286.40 R 7 7 286.00 R 159 790.60 R 207 796.50 R 207 796.50 R 176 032.03	10m Diameter 8m Diameter 8m Diameter 7m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining Assume 100mm contaminated sediment Haul sediment to tailings facility 8km
155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184	23 28 110	Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Emergency storage dam Shape and level area Establish vegetation Emergency storage dam	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1	na sum sum sum ha ha ha na m² sum m² m² m ha ha ha ha	1.18 1.18 1.18 1.20.00 1.20.00 1.20.00 0.5280.00 0.5280.00 0.53 0.53 0.53 0.53 0.53 0.53 0.53	R 2573 32400 R 1838 850.00 R 1838 850.00 R 1380 850.00 R 13 800.00 R 20.00 R 20.00 R 20.00 R 13 800.00 R 20.00 R 13 800.00 R 255 250.00 R 6.50 R 20.00 R 7 380.00 R 7 380.00 R 7 380.00 R 8 6.50 R 13 800.00 R 13 800.00 R 13 800.00	R 4 364 674.82 R 19 748 467.67 R R R 19 328 50.00 R 1 838 550.00 R 1 838 550.00 R 16 295.04 R 27 394.56 R R R R R 26 400.00 R 119 328.00 R 66 440.00 R 34 320.00 R 66 440.00 R 7 286.40 R 29 772.00 R 7 728.64 R 26 979.60 R 26 979.60 R 26 979.60 R 27 995.50 R 176 032.03 R 176 032.03 R 176 032.03 R 43 968.18	10m Diameter 8m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km Doze material inward to fill void Make area free draining Assume 100mm contaminated sediment Haul sediment to tailings facility 8km
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Closure Costing - Leeuwkop				Closure Costs - <u>Year 6 - (2017)</u>									
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Γ	Rate		Amount	Notes			
198		Breach dam wall	10.1.5	m	532.00	R	220.00	R	117 040.00	Doze material inward to fill void			
199		Shape and level area	10.1.1	ha	0.17		55 250.00		9 248.85	Make area free draining			
200		Establish vegetation	10.4.1	ha	0.17	R	13 800.00	R	2 310.12	Assumed 20m strip would not have been			
201	107	Waste Rock Dump								Assumed 20m strip would not have been rehabilitated			
202		Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R	34 340.00	Assume 250mm thick			
		Reshape WRD				Ι_		_		Cut to fill action assumed 20m high at			
203			9.1.1	m³	29925.00	R	13.50	R	403 987.50	87.5m³/per meter			
		Import capping layers								Assumed 1km haul distance, 300mm thick			
204			9.6.1	m³	8160.00	R	28.00	R	228 480.00	capillary layer and 300mm thick black turf			
205		Import topsoil layer	9.6.1	m³	2720.00	L	28.00	ь	76 160.00	Assumed 1km haul distance, 200mm thick layer			
206		Establish vegetation	10.4.1	ha	1.36		13 800.00	R R	18 768.00	layei			
207	108	Tailings Complex								To be constructed according to program			
208		Seal Penstocks	7.3	sum	0.00		213 200.00		-				
209 210		Breach wall & reshape Rip to alleviate compaction	10.1.5	m ha	0.00		220.00 9 400.00		-				
210		Establish vegetation disturbed footprint	9.5.1 10.4.1	ha	0.00	_	13 800.00		-				
212		Establish vegetation on tailings dam slopes	10.4.1	ha	0.00		19 250.00		-				
		Establish vegetation on tailings dam top											
213 214	109		10.4.2	ha	0.00	R	19 250.00	R	-				
214	109	Waste Rock Noise Barrier Reshape berm	10.1.1	ha	2.10	R	55 250.00	R	116 025.00				
		Import topsoil layer								Assumed 1km haul distance, 200mm thick			
216			9.6.1	m³	4200.00		28.00	R	117 600.00	layer			
217		Establish vegetation Sub - Total for rehabilitation of processing waste deposits and	10.4.1	ha	2.10	R	13 800.00	R	28 980.00				
218		evaporation ponds (polluting potential)						R	3 438 624.40				
219		Reclamation of subsided areas											
220		Not applicable	1.1	na	0.00	R	-	R	-				
221 222		Sub - Total for reclamation of subsided areas Sub - Total for Mining aspects				1		R R	9 717 042.96				
223		· ·				t		_	0 / 11 0 12.00				
224		General Surface Reclamation											
225		Mine				<u> </u>							
										Includes stockpiling of material, backfilling			
226		Shape and level disturbed area	10.1.1	ha	20.00	R	55 250.00	ь	1 105 000.00	of excavations in cut to fill operation and final profiling @ave 500mm over footprint			
227		Rip area to alleviate compaction	9.5.1	ha	20.00		9 400.00		188 000.00	500mm deep ripping			
		,								150mm from local stockpile, assume 1km			
228		Import topsoil	9.6.1	m³	30000.00		28.00	R	840 000.00	load and haul			
229 230		Establish vegetation Plant	10.4.1	ha	20.00	R	13 800.00	К	276 000.00	Footprint not disturbed			
200		i ant				t				1 COLDINA HOL GIOLOGO			
231		Shape and level disturbed area	10.1.1	ha	0.00	R	55 250.00	P	_				
232		Rip area to alleviate compaction	9.5.1	ha	0.00		9 400.00		-				
233 234		Import topsoil Establish vegetation	9.6.1 10.4.1	m³ ha	0.00		28.00 13 800.00	R R	-				
235		Sub - Total for General Surface Reclamation	10.4.1	IIa	0.00	1	13 800.00	R	2 409 000.00				
236													
237		Water Management											
										Assume none required, all mitigation measures will be implemented during the			
238		Not applicable	1.1	na	0.00	R	-	R	-	operational phase			
239		Sub - Total for Water Management						R	-				
240		AUD TOTAL				<u> </u>							
241		SUB - TOTAL 1 (for infrastructural and related structures)						R	31 874 510.63				
242		Post - closure aspects											
243		Surface water quality monitoring	12.1	yr	5.00		106 000.00		530 000.00	8 monitoring points on a monthly basis			
244		Groundwater quality monitoring	12.2	yr	5.00		150 000.00		750 000.00	15 monitoring points on a quarterly basis			
245 246		Reclamation monitoring on reclaimed areas	12.3 12.4	ha ha	28.90 28.90		2 500.00 15 500.00	R	72 250.00 447 950.00	5 years			
246		Care and maintenance of reclaimed areas Sub - Total for Post closure aspects	12.4	III	∠8.90	" "	10 500.00	R	1 800 200.00	5 years			
		Jan Total Io. 1 Doc Globale depende				t				Assumed 10 percent for post closure			
248		Contingencies for post closure aspects	1.2	sum	1.00	R	180 020.00	R	180 020.00	aspects			
249		Sub - Total for Contingencies for post closure aspects SUB - TOTAL 2				L		R	180 020.00				
250		(for post - closure aspects)						R	1 980 220.00				
251		Additional allowances											
252		Preliminary and General	1.2	sum	1.00	R	1 912 470.64	R	1 912 470.64	Assume 6 percent of sub - total 1			
253		Contingencies	1.2	sum	1.00	R	3 187 451.06	R	3 187 451.06	Assume 10 percent of sub - total 1			
254		SUB - TOTAL 3 (for additional allowances)						R	5 099 921.70				
255		Grand - Total (for sub - total 1+2+3)						R	38 954 652.33				





		Closure Costing - Leeuwkop				Closure Co	sts - <u>Year 7 - (2018</u>	<u>)</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
2		Infrastructural Aspects Nominal cost and time related items						
3		Mine Removal of salvageable equipment	1.2	sum	1.00	R 2 500 000.00	R 2 500 000.00	Nominal allowance
5		Crane	11.1	p/day	25.00		R 967 500.00	For assistance in the removal of equipment and demolition purposes
6		Plant Removal of salvageable equipment	1.2	sum	0.00			Nominal allowance
8		Crane	11.1	p/day	0.00		R -	For assistance in the removal of equipment and demolition purposes
9		Sub-Total for cost and time related items	11.1	p/day	0.00	K 38 700.00	R 3 467 500.00	and demonition purposes
10	04	Demolitioning of plant and related structures	0.7	2	4040.45	D 200.00	D 504 044 00	Double valume building
11	21	Compressor house Condenser cooling towers	3.7	m²		R 380.00	R 501 011.00	Double volume building Structural Concrete, assume 5m high,
12	22	v	4.2	m³	527.80		R 337 792.00	250mm thick Structural Concrete, assume 5m high,
13	23	Refrigeration plant	4.2	m³	1128.75		R 722 400.00	250mm thick
14	27	Grout Plant	3.7	m²	1734.00 480.00		R 658 920.00 R 614 400.00	Double volume building
15 16	40	Ventilation Shaft Water treatment plant	2.2	m²	1225.00			Info received from Impala Assume 450kg of steel per m ²
17	43	Sewage Plant	3.6	m²	1732.50	R 320.00	R 554 400.00	Single volume building
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program
19 20	87	Plant - Cleaners	2.3.2	m²	0.00	D 500.00	D	To be constructed according to program
21		Structural steel		m² m³	0.00			
21 22 23	88	Structural concrete Plant - Cleaners Structural steel	2.3.2	m³ m²	0.00		R -	To be constructed according to program
23							R -	
25	89	Structural concrete Plant - Mill Structural steel	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
26		Structural steel	2.3.2	m²	0.00			
27 28	94	Structural concrete Plant - Storage area	4.3 3.7	m³ m²	0.00	R 400.00 R 380.00		To be constructed according to program To be constructed according to program
29 30	99	Plant Plant	3.6 3.6	m² m²	0.00	R 320.00 R 320.00		To be constructed according to program
31 32	100	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
33	404	Structural concrete	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
34 35	101	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
36 37	102	Structural concrete Plant - Thickener	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
38	102	Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
39 40		Structural concrete Sub - Total for demolitioning of plant and related structures	4.3	m³	0.00	R 400.00	R - 4 111 673.00	
41	16	Demolitioning of all structural structures Carports	2.6.1	m²	5934.00	R 90.00		IBR sheeting
43	17	Contractors Carports	2.6.1	m²	424.00 600.00	R 90.00	R 38 160.00	IBR sheeting Info received from Impala
45	15	Headgear Structural concrete	2.2 4.1	t m³	147.00			illio received iroin illipala
46	38	Waste silo	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
47 48	38 41	Waste silo Water tank	4.3 2.4.2	m³ no	0.00 1.00		R - 26 650.00	To be constructed according to program
40	42	M/W Dam	4.3	m³	56 25			Assume concrete dam, 250mm thick, 6m
50	42	M/W Dam	4.3	m³	56.25		R 22 500.00	Assume concrete dam, 250mm thick, 6m high
51	60	Sump	4.2	m³	6.24	R 640.00	R 3 993.60	Structural concrete, 300mm thick, 2m deep
52 53	61 78	Water Canal Plant - covered parking	8.4 2.6.1	m² m²	2692.00 0.00	R 135.00	R 363 420.00	Thin reinforced concrete To be constructed according to program
54	104	Plant - Waste silo	4.3	m³	0.00		R -	To be constructed according to program
55 56		Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores					R 1 967 443.60	3 . 3
57 58	13 14	Winder House Winder House	3.7 3.7	m² m²	0.00			To be constructed according to program To be constructed according to program
59 60	18	Winder rope store Fan and electrical motor store	3.1.1 3.1.1	m² m²	45.00 198.00	R 295.00	R 13 275.00	Single storey brick building Single storey brick building
61 62	25 31	Workshop sink and perm Main Store	3.6	m² m²	819.90 1380.80	R 320.00	R 262 368.00	Single volume building Double volume building
63 64	32 33	Explosives Store Gas bottle store	3.6 3.1.1	m² m²	285.00 36.00	R 320.00	R 91 200.00	Single volume building Single storey brick building
65 66	34 35	Chemical Store Paint Store	3.1.1	m² m²	201.00 41.00	R 295.00	R 59 295.00	Single storey brick building Single storey brick building
67 68	36 44	Oil store Generator farm	3.1.1	m² m²	36.00 412.00	R 295.00	R 10 620.00	Single storey brick building Single storey brick building
69 70	82 83	Plant - Building Plant - Building	3.6	m² m²	0.00		R -	To be constructed according to program To be constructed according to program
71 72	86 93	Plant - Workshop Plant - Building	3.7 3.6	m² m²	0.00	R 380.00	R -	To be constructed according to program To be constructed according to program
73 74	95 96	Plant - Building Plant - Building	3.6 3.6	m² m²		R 320.00	R -	To be constructed according to program To be constructed according to program
75		Sub - Total for demolitioning of workshops and stores Demolitioning of permanent brick structures and temporary					R 1 240 347.00	y p y
76 77	1	structures Offices	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
78 79	2	Change House Laundry	3.1.1 3.1.1	m² m²	1066.00 179.00	R 295.00	R 314 470.00	Single storey brick building Single storey brick building
80	4 5	Boiler House Change House	3.1.1	m² m²	232.00	R 295.00	R 68 440.00	Single storey brick building To be constructed according to program
82	6 7	Change House Change House	3.1.1	m² m²	909.50	R 295.00	R 268 302.50	Single storey brick building To be constructed according to program
84 85	8	Induction Room Training Centre	3.1.1	m² m²	144.00	R 295.00	R 42 480.00	Single storey brick building To be constructed according to program
86 87	10	Gate House Banksman Cabin & Proto Room	3.1.1	m² m²	184.00 0.00	R 295.00	R 54 280.00	Single storey brick building To be constructed according to program
88 89	12 19	Central Control room Sub-station	3.1.1	m² m²	0.00 15.00	R 295.00	R -	To be constructed according to program Single storey brick building
90 91	19 20	Sub-station Transformer bays	3.2.1 3.2.1	m² m²		R 480.00	R 7 200.00	Single storey brick building Single storey brick building
		•						-





		Closure Costing - Leeuwkop				Closure Co	osts - <u>Year 7 - (2018</u>	3)
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
92 93	29 30	Sub-station MCC	3.2.1	m²	120.00 65.00			
94	45	Sumer Sub-station	3.2.1 3.2.1	m² m²	206.40	R 480.00	R 99 072.00	Single storey brick building Single storey brick building
95 96	47 48	Geology building Offices	3.1.1 3.1.1	m² m²	183.00 149.60			Single storey brick building Single storey brick building
97 98	49 50	Offices Shaft Sinker Offices	3.1.1	m² m²	149.60 124.00			Single storey brick building Portable offices
99	51	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices
100	52 53	Change House Change House	3.3	m² m²	16.00 16.00	R 140.00	R 2 240.00	Portable offices Portable offices
102 103	54 55	Change House Lamp Room	3.3	m² m²	16.00 16.00			Portable offices Portable offices
104	56	Steffanuti Stocks	3.3	m²	16.00	R 140.00	R 2 240.00	Portable offices Portable offices
105 106	57 58	Shaft Sinker Offices Shaft Sinker Offices	3.3	m² m²	124.00 124.00	R 140.00	R 17 360.00	Portable offices
107 108	76 77	Explosives bunker Weighbridge	3.1.1 1.2	m² sum	150.00			Single storey brick building To be constructed according to program
109 110	79 80	Plant - Admin building Plant - Induction room	3.1.1 3.1.1	m² m²	0.00	R 295.00	R -	To be constructed according to program To be constructed according to program
111	81	Plant - Office	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
112 113	84 85	Plant - Sub-station Plant - Sub-station	3.2.1 3.2.1	m² m²	0.00 0.00	R 480.00	R -	To be constructed according to program To be constructed according to program
114	97	Plant - building Sub - Total for demolitioning of permanent brick structures and	3.1.1	m²	0.00	R 295.00	R -	To be constructed according to program
115 116		temporary structures Removal of all surface related finishes					R 1 345 068.50	
117	26 46	Surface cable yard PFC yard	4.5 4.5	m² m²	30.00 1199.00			Assume 250mm thick concrete Assume 250mm thick concrete
119	47	Geology yard	4.5	m²	473.00	R 590.00	R 279 070.00	Assume 250mm thick concrete
120 121	73 90	General surface bed Plant - Laydown areas	4.4 4.5	m² m²	10610.85 0.00	R 590.00	R -	Assume 150mm thick concrete To be constructed according to program
122 123	91 92	Plant - Laydown areas Plant - Laydown areas	4.5 4.5	m² m²	0.00			To be constructed according to program To be constructed according to program
124 125	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	0.00			To be constructed according to program
126		Removal of all linear items				D		
127 128	32 37	Fencing to explosives store Reef and waste conveyor	5.5.3 5.1.5	m m	85.00 0.00			To be constructed according to program
129 130	39 62	Reef conveyor Waste conveyor	5.1.5 5.1.2	m m	0.00 1226.00	R 640.00 R 265.00		To be constructed according to program Overland conveyor
131 132	63 64	Return water pipeline Tailing delivery pipeline	5.2.2 5.2.2	m m	0.00	R 48.00	R -	To be constructed according to program To be constructed according to program
133	65	Pipeline from sump to PCD	5.2.2	m	348.00	R 48.00	R 16 704.00	200-350mm steel pipelines
134 135	66 67	Emergency pipeline from concentrator to dam Distribution pipelines	5.2.2 5.2.2	m m	0.00 4780.00	R 48.00	R 229 440.00	To be constructed according to program 200-350mm steel pipelines
136 137	68 69	Water main pipeline Fire main pipeline	5.2.2 5.2.2	m m	1870.00 1870.00			200-350mm steel pipelines 200-350mm steel pipelines
138 139	74 75	Perimeter fencing Perimeter fencing to tailings complex	5.5.3 5.5.3	m m	3600.00 0.00			To be constructed according to program
140	76	Perimeter fence to explosives bunker	5.5.3	m	201.00	R 27.00	R 5 427.00	To be constructed according to program
142	105 106	Plant - Steel gantry's with delivery pipelines Plant - Security fencing	2.3.1 5.5.3	m² m	0.00 0.00	R 27.00	R -	To be constructed according to program
143 144		Main water pipeline Sub - Total for removal of all linear items	5.2.3	m	4669.00	R 64.00	R 298 816.00 R 1 154 292.00	
145 146		Rehabilitation of roads Entrance road	1.1	na	0.00	R -	R -	Assume will remain
147		Minor gravel road to explosives bunker	8.3	m²	5864.00		R 23 456.00	Assume will remain
148 149		Sub - Total for rehabilitation of roads					R 23 456.00	
		Disposal of demolition waste						
150 151		Sorting and screening of waste	6.1	% m³/km	13127792.85 25644.00	2.50% R 160.00	R 328 194.82	2.50% Assume 50km distance
151 152		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste	6.1 6.2.1	% m³/km	13127792.85 25644.00		R 328 194.82 R 4 103 040.00 R 4 431 234.82	2.50% Assume 50km distance
151 152 153 154		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects					R 328 194.82 R 4 103 040.00	
151 152 153		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects					R 328 194.82 R 4 103 040.00 R 4 431 234.82	
151 152 153 154 155		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects				R 160.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82	
151 152 153 154 155 156 157		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps	6.2.1	m³/km	25644.00	R 160.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67	
151 152 153 154 155 156 157	15	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable	6.2.1	m³/km	25644.00	R 160.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67	Assume 50km distance 10m Diameter
151 152 153 154 155 156 157 158 159 160 161	23	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft	7.1.15 7.1.11	na sum sum	25644.00 0.00 1.00	R 160.00 R R 2573 324.00 R 1838 850.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 2 573 324.00 R 1 838 850.00	Assume 50km distance 10m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163		Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines	1.1	m³/km	25644.00 0.00	R 160.00 R R 2573 324.00 R 1838 850.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 2 573 324.00 R 1 838 850.00	Assume 50km distance 10m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 164	23	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles	7.1.15 7.1.11 7.1.11	na sum sum	25644.00 0.00 1.00 1.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 2 573 324.00 R 1 838 850.00 R 1 838 850.00 R 6 251 024.00	Assume 50km distance 10m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 165	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction	7.1.15 7.1.11 7.1.11 9.5.1	na sum sum sum	25644.00 0.00 1.00 1.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 9 400.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1838 850.00 R 1838 850.00 R 6 251 024.00 R 11 099.52	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 164	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils	7.1.15 7.1.11 7.1.11	na sum sum	25644.00 0.00 1.00 1.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 9 400.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1838 850.00 R 1838 850.00 R 6 251 024.00 R 11 099.52	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polituting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	na sum sum sum ha ha	25644.00 0.00 1.00 1.00 1.18	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.000	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 2 573 324.00 R 1 838 850.00 R 1 838 850.00 R 1 6 251 024.00 R 1 1 099.52 R 1 6 295.04 R 27 394.56	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 166 167 168	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and	7.1.15 7.1.11 7.1.11 9.5.1	na sum sum sum	25644.00 0.00 1.00 1.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.000	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1 838 850.00 R 1 838 850.00 R 6 251 024.00 R 1 1 099.52 R 16 295.04 R 27 394.56	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	na sum sum sum ha ha	25644.00 0.00 1.00 1.00 1.18	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.000	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 2 573 324.00 R 1 838 850.00 R 1 838 850.00 R 1 6 251 024.00 R 1 1 099.52 R 1 6 295.04 R 27 394.56	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 170	23 28 110	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Vent Shaft Vent Shaft In Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11	na sum sum sum ha ha	25644.00 0.00 1.00 1.00 1.18	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.000	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1 838 850.00 R 1 838 850.00 R 6 251 024.00 R 1 1 099.52 R 16 295.04 R 27 394.56	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171	23 28	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	na sum sum ha ha na ma	25644.00 0.00 1.00 1.00 1.01 1.18 1.18	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13 800.00 R R 9400.00 R 13 800.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 2 573 324.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52 R 16 295.04 R 27 394.56 R R R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 7m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 166 167 168 169 170	23 28 110	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	na na sum sum sum ha ha	25644.00 0.00 1.00 1.00 1.00 1.18 1.18	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13 800.00 R R 9 400.00 R R 9 400.00 R 9 90.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1838 850.00 R 1838 850.00 R 6 251 024.00 R 10 295.04 R R 11 099.52 R R 17 394.56 R R R R 11 099.52 R 16 295.04 R 27 394.56	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 00 Diameter 8m Diameter 01 Diameter 02 Diameter 03 Diameter
151 152 153 154 155 156 156 157 158 159 160 161 162 163 164 165 166 167 170 171 172 173 174 175 175	23 28 110	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Reting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wail	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 10.4.1 1.1 9.2 1.2 6.4 10.1.5	na sum sum ha ha na m³ sum m² m² sum	25644.00 0.00 1.00 1.00 1.118 1.18 1.320.00 1320.00 5280.00 302.00	R 160.00 R	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1838 850.00 R 1838 850.00 R 16 295.04 R 27 394.56 R R R R 3432.00 R 34 320.00 R 34 320.00 R 34 320.00 R 66 440.00 R 66 440.00	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 169 170 171 172 173 174 175 176 177	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area	7.1.15 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1	m³/km na na sum sum sum ha ha na na	25644.00 0.00 1.00 1.00 1.01 1.18 1.18 0.00 1320.00 5280.00	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 20.00 R 20.00 R 90.40 R 90.40 R 90.40 R 90.40 R 90.40 R 55560.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R 2 573 324.00 R 1 838 850.00 R 1 838 850.00 R 16 295 04 R 27 394.56 R R 2 6 400.00 R 119 328.00 R 119 328.00 R 34 320.00 R 34 320.00 R 66 440.00 R 29 172.00	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 00 Diameter 10m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 166 167 168 169 170 171 172 173 174 175 176	23 28 110	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft When Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.1	na sum sum ha ha na ma sum m² sum ha ha ha ha na ma m² sum m² sum m² sum m² sum m² ha ha ha ha sum m² sum m² sum ma ha ha ha ha sum m² sum ma sum m² sum ma sum m² sum m² sum ma ha ha sum ma sum m² sum ma sum m² sum ma sum m² sum m² sum m² sum m² sum ma sum m² s	25644.00 0.00 1.00 1.00 1.18 1.18 0.00 1320.00 1320.00 5280.00 0.05	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 39 400.00 R 39 400.00 R R 20.00 R 90.40 R 90.40 R 90.40 R 90.40 R 90.40 R 13800.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R 2 573 324.00 R 1 838 850.00 R 6 251 024.00 R 11 099.52 R 10 295.04 R 27 394.56 R R R R R R R 17 099.52 R 195.04 R 295.04 R 34 320.00 R 66 440.00 R 29 172.00 R 7 286.40	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter Only footprints will remain Assume 250mm contaminated sediment Haul sediment to tailings facility 8km
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 170 171 172 173 174 175 176 177 177 178 179 180 181 182	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment and stockpile Load and haul contaminated sediment and stockpile Load and haul contaminated sediment and stockpile Load and haul contaminated sediment and stockpile	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 10.4.1 1.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.1.1 10.1.1	na sum sum ha ha ha m² sum m ma sum sum sum sum sum sum m² sum	25644.00 0.00 1.00 1.00 1.00 1.18 1.18 1.18 0.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00 1320.00	R 160.00 R R 2573 324.00 R 1838 850.00 R 1838 850.00 R 380.00 R 90.40 R 90.40 R 90.40 R 90.40 R 1380.00 R 90.40	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1838 850.00 R 1838 850.00 R 16 291 024.00 R 11 099.52 R 16 295.04 R 27 394.56 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 170 171 172 173 174 175 177 177 178 179 180 180 181 182 183	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall	9.2 1.1 9.5.1 10.4.1 9.1 1.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	na sum sum ha ha na m³ sum sum sum sum ha ha m³ sum sum m² m² m² m ha ha m³ sum m²	25644.00 0.00 1.00 1.00 1.00 1.00 1.00 1.	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 200.00 R 200.00 R 55 250.00 R 13 800.00 R 55 250.00 R 13 800.00 R 50.00 R 10.00 R 10.0	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R R 1838 850.00 R 1838 850.00 R 16 295.04 R 27 394.56 R R R 26 400.00 R 149.82 R 27 394.56 R 7 286.40 R 9 979.60 R 207 996.50 R 157 080.00	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 184 185	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment and stockpile	7.1.15 7.1.11 7.1.11 7.1.11 7.1.11 7.1.11 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.4.1	na sum sum sum ha ha ha na m² sum m² sum m² sum na m² sum	25644.00 0.00 1.00 1.00 1.00 1.18 1.18 1.18	R 160.00 R	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1838 850.00 R 1838 850.00 R 6 251 024.00 R 199.52 R 16 295.04 R 27 394.56 R R R R R R 17 328.00 R 18 320.00 R 19 328.00 R 19 328.00 R 29 172.00 R 29 978.60 R 29 778.64 R 29 778.64 R 29 979.60 R 207 998.50 R 207 998.50 R 157 080.00 R 157 080.00 R 157 080.00 R 176 032.03	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 10m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 170 171 172 173 174 175 176 177 178 180 181 182 183 184 185 186 187	23 28 110 70	Sorting and screening of waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove HDPE liner Breach dam wall	9.2 1.1 9.5.1 10.4.1 9.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 10.4.1	na sum sum ha ha ha m² sum m² m² m ha	25644.00 0.00 1.00 1.00 1.00 1.00 1.18 1.18 1.18 0.00 322.00 322.00 322.00 322.00 322.00 323.00 323.00 323.00 324.00 325.00 325.00 326.50 31861.00 3.19 3.19	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 99.40 R 20.00 R 13 800.00 R 13 800.00 R 55 250.00 R 13 800.00 R 20.00 R 13 800.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R 2 1 026 527.67 R R R 1838 850.00 R 1838 850.00 R 16 295.04 R 27 394.56 R R R R R R 11 099.52 R 16 295.04 R 27 394.56 R R R R R R R R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 167 168 170 171 172 173 174 175 177 177 177 178 179 180 181 182 183 184 185 185	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner	9.2 1.1 9.5.1 10.4.1 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	na sum sum ha ha ha m² sum m² m² m² ma ha ha ha sum m² sum ma ha ha sum m² ma m² m² ma ha ha sum² m² ma ha ha ha sum² m² ma ha	25644.00 0.00 1.00 1.00 1.00 1.00 1.18 1.18	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1938 850.00 R 13 800.00 R 20.00 R 20.00 R 13 800.00 R 30.00 R 13 800.00 R 20.00 R 13 800.00 R 20.00 R 38 800.00 R 20.00 R 90.40	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R R R 1838 850.00 R 1838 850.00 R 16 295.04 R 27 394.56 R R 26 400.00 R 34 320.00 R 34 320.00 R 37 286.40 R 59 730.00 R 29 172.00 R 7 286.40 R 59 730.00 R 167 032.03 R 43 216.00 R 147 032.03 R 43 216.00 R 43 216.00 R 43 216.00 R 443 216.00 R 195 336.32	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 183 184 185 186 187 188 189 189 190 191	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polituting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polituting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove contaminated sediment Remove HDPE liner Breach dam wall	9.2 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.4.1 9.2 1.2 6.4 10.1.5 10.4.1	na sum sum ha	25644.00 0.00 1.00 1.00 1.00 1.18 1.18 1.18	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 20.00 R 90.40 R 6.50 R 220.00 R 13 800.00 R 13 800.00 R 20.00 R 13 800.00 R 20.00 R 90.40 R 6.50 R 13 800.00 R 90.40 R 6.50 R 220.00 R 13 800.00 R 90.40 R 6.50 R 220.00 R 13 800.00 R 12 800.00 R	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R 2 573 324.00 R 1 838 850.00 R 1 838 850.00 R 16 295 04 R 27 394.56 R R R 11 099.52 R 16 295.04 R 27 394.56 R 34 320.00 R 149 328.00 R 34 320.00 R 29 172.00 R 29 978.00 R 26 979.00 R 176 082.03 R 43 965.18 R 43 16.00 R 195 336.32 R 43 188 500.00 R 187 5368.23 R 43 216.00 R 188 500.00 R 187 5368.23 R 43 188 500.00 R 187 5368.20 R 188 500.00 R 157 5368.00	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Doze material inward to fill void 10m Diameter 1
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 170 171 172 173 174 175 178 179 180 181 182 183 184 185 186 187 187 188 189 180	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area	9.5.1 11 9.5.1 10.4.1 11 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	na sum sum sum ha	25644.00 0.00 1.00 1.00 1.00 1.18 1.18 1.18	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 13800.00 R 20.00 R 55 250.00 R 13 800.00 R 20.00 R 20.00 R 13 800.00 R 20.00 R 55 250.00 R 13 800.00 R 20.00 R 55 250.00 R 13 800.00 R 55 250.00 R 10 80.00 R 55 250.00 R 10 80.00 R 55 250.00 R 55 250.00 R 55 250.00 R 10 80.00 R 55 250.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R 2 1 026 527.67 R R R 1838 850.00 R 1838 850.00 R 16 295.04 R 27 394.56 R R 26 400.00 R 193 28.00 R 34 320.00 R 34 320.00 R 66 440.00 R 7 286.40 R 59 730.00 R 7 286.40 R 176 032.03 R 176 032.03 R 43 968.00 R 176 032.03 R 43 26.00 R 195 336.32 R 188 500.00 R 195 336.32 R 188 500.00 R 195 336.32 R 188 500.00 R 195 336.20 R 160 225.00 R 160 225.00	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Contaminated sediment 10m Diameter
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 190 190 190 190 190 190 190 190 19	23 28 110 70	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to alleviate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Settling dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Pollution control dam	9.2 1.1 9.5.1 10.4.1 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	na sum sum ha ha ha m² sum m² m² m ha ha ha ha ha ha ha ha ha m² sum m² m ha	25644.00 0.00 1.00 1.00 1.00 1.00 1.00 1.	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 13800.00 R 20.00 R 20.00 R 13 800.00 R 20.00 R 13 800.00 R 20.00 R 30.00 R 20.00 R 30.00	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R 2 1 026 527.67 R R R 1838 850.00 R 1838 850.00 R 16 295.04 R 27 394.56 R R 26 400.00 R 119 328.00 R 34 320.00 R 34 320.00 R 66 440.00 R 7 286.40 R 7 286.40 R 7 286.40 R 157 080.00 R 176 032.03 R 43 968.18 R 43 216.00 R 195 336.32 R 188 850.00 R 195 336.32 R 188 500.00 R 195 336.32 R 195 326.32 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 8m Diameter 6m Diam
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191	71A 71B	Sorting and screening of waste Disposal of demolition waste Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects Mining Aspects Open pit reclamation including final voids and ramps Not applicable Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines Service and Production Shaft Refrigeration shaft Vent Shaft Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Topsoil stockpiles Rip area to allevate compaction Establish vegetation Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting dams Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wail Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wail Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area Establish vegetation Emergency storage dam Remove contaminated sediment and stockpile Load and haul contaminated sediment Remove HDPE liner Breach dam wall Shape and level area	9.2 1.1 9.5.1 10.4.1 1.1 9.5.1 10.4.1 1.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1 9.2 1.2 6.4 10.1.5 10.1.1 10.4.1	na sum sum ha	25644.00 0.00 1.00 1.00 1.00 1.00 1.00 1.	R 160.00 R 2573 324.00 R 1838 850.00 R 1838 850.00 R 1380.00 R 1380.00 R 20.00 R 20.00 R 20.00 R 20.00 R 30.00 R 30.00 R 20.00 R 30.00 R 30.0	R 328 194.82 R 4 103 040.00 R 4 431 234.82 R 21 026 527.67 R 2 1026 527.67 R	Assume 50km distance 10m Diameter 8m Diameter 8m Diameter 8m Diameter 9m Diameter 10m Doze material inward to fill void 10m Diameter 1





		Closure Costing - Leeuwkop					Closure Co	sts - <u>Year 7 - (201</u>	<u>8)</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate	Amount	Notes
198		Breach dam wall	10.1.5	m	532.00	R	220.00	R 117 040.00	Doze material inward to fill void
199		Shape and level area	10.1.1	ha	0.17		55 250.00		
200		Establish vegetation	10.4.1	ha	0.17	R	13 800.00		
						T			Assumed 20m strip would not have been
201	107	Waste Rock Dump							rehabilitated
202		Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R 34 340.00	
		Reshape WRD			00005.00		40.50		Cut to fill action assumed 20m high at
203		· ·	9.1.1	m³	29925.00	R	13.50	R 403 987.50	87.5m³/per meter
		Import capping layers							Assumed 1km haul distance, 300mm thick
204		import capping layers	9.6.1	m³	8160.00	R	28.00	R 228 480.00	capillary layer and 300mm thick black turf
									Assumed 1km haul distance, 200mm thick
205		Import topsoil layer	9.6.1	m³	2720.00		28.00	R 76 160.00	layer
206		Establish vegetation	10.4.1	ha	1.36	R	13 800.00	R 18 768.00	
207	108	Tailings Complex				<u> </u>			To be constructed according to program
208		Seal Penstocks	7.3	sum	0.00		213 200.00		
209		Breach wall & reshape	10.1.5	m	0.00		220.00		
210		Rip to alleviate compaction	9.5.1	ha	0.00		9 400.00		
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00		13 800.00		
212		Establish vegetation on tailings dam slopes	10.4.2	ha	0.00	R	19 250.00	R -	
213		Establish vegetation on tailings dam top	10.4.2	ha	0.00	Ь	19 250.00	R -	
214	109	Waste Rock Noise Barrier	10.4.2	ha	0.00	1	13 230.00		
215		Reshape berm	10.1.1	ha	2.10	R	55 250.00	R 116 025.00)
									Assumed 1km haul distance, 200mm thick
216		Import topsoil layer	9.6.1	m³	4200.00	R	28.00	R 117 600.00	
217		Establish vegetation	10.4.1	ha	2.10	R	13 800.00	R 28 980.00	
		Sub - Total for rehabilitation of processing waste deposits and							
218		evaporation ponds (polluting potential)				_		R 3 438 624.40	1
219 220		Reclamation of subsided areas Not applicable	1.1	na	0.00			R -	
221		Sub - Total for reclamation of subsided areas	1.1	IId	0.00	, K	-	R -	
222		Sub - Total for rectamation of subsided areas Sub - Total for Mining aspects				1		R 9 717 042.96	
223		Oub - Total for mining aspects						7717 042.50	
224		General Surface Reclamation							
225		Mine							
									Includes stockpiling of material, backfilling of excavations in cut to fill operation and
226		Shape and level disturbed area	10.1.1	ha	20.00	R	55 250.00	R 1 105 000.00	
227		Rip area to alleviate compaction	9.5.1	ha	20.00		9 400.00		
						Ħ			150mm from local stockpile, assume 1km
228		Import topsoil	9.6.1	m³	30000.00	R	28.00	R 840 000.00	
229		Establish vegetation	10.4.1	ha	20.00	R	13 800.00	R 276 000.00	
230		Plant							Footprint not disturbed
004		Change and level disturbed and	40.4.4		0.00		55.050.00	R -	
231 232		Shape and level disturbed area Rip area to alleviate compaction	10.1.1 9.5.1	ha ha	0.00		55 250.00 9 400.00		
202		Trip area to alleviate compaction	3.3.1	IIa	0.00	1 1	3 400.00	-	
233		Import topsoil	9.6.1	m³	0.00	R	28.00	R -	
234		Establish vegetation	10.4.1	ha	0.00		13 800.00		
235		Sub - Total for General Surface Reclamation						R 2 409 000.00	
236									
237		Water Management							
									Assume none required, all mitigation
05-		L			_	۱_		_	measures will be implemented during the
238		Not applicable	1.1	na	0.00	R	-	R -	operational phase
239		Sub - Total for Water Management				_		R -	
240		SUB - TOTAL 1				H			
241		(for infrastructural and related structures)						R 33 152 570.63	
242		Post - closure aspects				H			
243		Surface water quality monitoring	12.1	vr	5.00	P	106 000.00	R 530 000.00	8 monitoring points on a monthly basis
244		Groundwater quality monitoring	12.1	yr yr	5.00		150 000.00		
245		Reclamation monitoring on reclaimed areas	12.3	ha	30.90		2 500.00		
246		Care and maintenance of reclaimed areas	12.4	ha	30.90		15 500.00		
247		Sub - Total for Post closure aspects			55.50	Ť	. 2 000.00	R 1 836 200.00	
		222 222 224 200000 40 0000			İ	T			Assumed 10 percent for post closure
248		Contingencies for post closure aspects	1.2	sum	1.00	R	183 620.00	R 183 620.00	aspects
249		Sub - Total for Contingencies for post closure aspects						R 183 620.00	
250		SUB - TOTAL 2						R 2 019 820.00	
		(for post - closure aspects)						2 019 020.00	
251		Additional allowances							
252		Preliminary and General	1.2	sum					
253		Contingencies	1.2	sum	1.00	R	3 315 257.06	R 3 315 257.06	Assume 10 percent of sub - total 1
254		SUB - TOTAL 3						R 5 304 411.30	
		(for additional allowances)				L		222.71100	
255		Grand - Total						R 40 476 801.93	1
		(for sub - total 1+2+3)							





		Closure Costing - Leeuwkop				Closure Co	osts - <u>Year 8 - (2019</u>	2
Item nr	ID	Task	Unit Rate	Unit	Quantity	Rate	Amount	Notes
1		Infrastructural Aspects	Code					
3		Nominal cost and time related items Mine						
4		Removal of salvageable equipment	1.2	sum	1.00	R 2750 000.00	R 2 750 000.00	Nominal allowance For assistance in the removal of equipment
5		Crane	11.1	p/day	30.00	R 38 700.00	R 1 161 000.00	and demolition purposes
6 7		Plant Removal of salvageable equipment	1.2	sum	0.00	R 6 500 000.00	R -	Nominal allowance
8		Crane	11.1	p/day	0.00	R 38 700.00	R -	For assistance in the removal of equipment and demolition purposes
9 10		Sub-Total for cost and time related items Demolitioning of plant and related structures					R 3 911 000.00	
11	21	Compressor house	3.7	m²	1318.45	R 380.00	R 501 011.00	Double volume building
								Structural Concrete, assume 5m high,
12	22	Condenser cooling towers	4.2	m³	527.80		R 337 792.00	250mm thick Structural Concrete, assume 5m high,
13	23	Refrigeration plant	4.2	m³	1128.75	R 640.00	R 722 400.00	250mm thick
14	27	Grout Plant	3.7	m²	1734.00	R 380.00	R 658 920.00	Double volume building
15 16	28 40	Ventilation Shaft Water treatment plant	2.2	t m²	480.00 1225.00		R 614 400.00 R 722 750.00	Info received from Impala Assume 450kg of steel per m ²
17	43	Sewage Plant	3.6	m²	1732.50		R 554 400.00	Single volume building
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program
19 20	87	Plant - Cleaners Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
21		Structural concrete	4.3	m³	0.00	R 400.00	R -	
22	88	Plant - Cleaners Structural steel	2.3.2	m²	0.00			To be constructed according to program
24		Structural screen	4.3	m³	0.00		R -	
25	89	Plant - Mill						To be constructed according to program
26		Structural steel	2.3.2	m²	0.00			
27 28	94	Structural concrete Plant - Storage area	4.3 3.7	m³ m²	0.00	R 380.00		To be constructed according to program
29 30	98 99	Plant Plant	3.6 3.6	m² m²	0.00		R -	To be constructed according to program To be constructed according to program
31 32	100	Plant - Thickener Structural steel	2.3.2	m²	0.00			To be constructed according to program
33 34	101	Structural concrete Plant - Thickener	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
35		Structural steel	2.3.2	m²	0.00		R -	
36 37	102	Structural concrete Plant - Thickener	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
38		Structural steel	2.3.2	m²	0.00	R 590.00	R -	
39		Structural concrete Sub - Total for demolitioning of plant and related structures	4.3	m³	0.00	R 400.00	R -	
40		Demolitioning of all structural structures					R 4 111 673.00	100
	16 17		2.6.1 2.6.1	m² m²	5934.00 424.00	R 90.00		IBR sheeting IBR sheeting
41 42 43 44		Demolitioning of all structural structures Carports Contractors Carports Headgear		m² t	424.00 600.00	R 90.00 R 1280.00	R 534 060.00 R 38 160.00 R 768 000.00	
41 42 43 44 45	17 15	Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete	2.6.1 2.2 4.1	m² t m³	424.00 600.00 147.00	R 90.00 R 1280.00 R 1280.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume
41 42 43 44 45	17 15 38	Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo	2.6.1 2.2 4.1 4.3	m² t m³	424.00 600.00 147.00 210.00	R 90.00 R 1280.00 R 1280.00 R 400.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume
41 42 43 44 45	17 15	Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete	2.6.1 2.2 4.1	m² t m³	424.00 600.00 147.00	R 90.00 R 1280.00 R 1280.00 R 400.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high
41 42 43 44 45 46	17 15 38 38 41	Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo	2.6.1 2.2 4.1 4.3	m² t m³ m³	424.00 600.00 147.00 210.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high
41 42 43 44 45 46 47 48	17 15 38 38 41	Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Waster silo	2.6.1 2.2 4.1 4.3 4.3 2.4.2	m² t m³ m³ no	424.00 600.00 147.00 210.00 210.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m
41 42 43 44 45 46 47 48 49	17 15 38 38 41 42	Demolitioning of all structural structures Carports Carports Headgear Structural concrete Waste silo Waste silo MWADAM MW Dam	2.6.1 2.2 4.1 4.3 4.3 2.4.2	m² t m³ m³ no	424.00 600.00 147.00 210.00 210.00 56.25	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 22 500.00 R 22 500.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high
41 42 43 44 45 46 47 48 49 50 51 52	17 15 38 38 41 42 42 60 61	Demolitioning of all structural structures Carports Contractors Carports Headgear Structural concrete Waste silo Water tank MW Dam MrW Dam Sump Water Canal	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3	m² t m³ m³ m³ no m³ m³ m³ m³	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 435.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 3 993.60 R 363 420.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete
41 42 43 44 45 46 47 48 49 50 51 52 53	17 15 38 38 41 42 42 60 61 78	Demolitioning of all structural structures Carports Carports Centractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam MwW Dam Sump Water Canal Plant - covered parking	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.2 8.4 2.6.1	m² t m³ m³ m³ no m³ m³ m³ m² m³	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 0.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 400.00 R 90.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R -	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program
41 42 43 44 45 46 47 48 49 50 51 52 53 54	17 15 38 38 41 42 42 60 61	Demolitioning of all structural structures Carports Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3	m² t m³ m³ m³ no m³ m³ m³ m³	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 400.00 R 90.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R -	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57	17 15 38 38 41 42 42 60 61 78 104	Demolitioning of all structural structures Carports Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Flant - Covered parking Plant - Covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1	m² t m³ m³ m³ no m³ m³ m³ m³ m³ m² m²	424.00 600.00 147.00 210.00 210.00 1.00 56.25 56.25 6.24 2692.00 0.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 640.00 R 90.00 R 90.00 R 335.00 R 335.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3993.80 R 363 420.00 R R R 2135 443.60 R 425 220.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Thin reinforced concrete Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	17 15 38 38 41 42 42 60 61 78	Demolitioning of all structural structures Carports Carports Centractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.2 4.3 4.3 4.2 8.4 2.6.1	m² t m³ m³ m³ no m³ no m³ m² m³ m³	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 0.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 350.00 R 400.00 R 380.00 R 380.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R R 2 135 443.60 R 425 220.00 R 4 25 220.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	17 15 38 38 41 42 42 60 61 78 104	Demolitioning of all structural structures Carports Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - Covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder Flouse Winder fope store Fan and electrical motor store	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.7 3.1.1	m² t m³ m³ no m³ no m³ m² m² m³ m² m² m² m² m² m²	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 0.00 1119.00 45.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26650.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 380.00 R 380.00 R 295.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R R 2 135 443.60 R 425 220.00 R 13 275.00 R 13 275.00 R 13 275.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 6m high To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building Single storey brick building
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62	17 15 38 38 41 42 42 60 61 78 104	Demolitioning of all structural structures Carports Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Plant - Covered parking Plant - covered parking Plant - House Winder House Workshop sink and perm Main Store Workshop sink and perm Main Store Workshop sink and perm	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.1.1 3.6 3.7	m² t m³ m³ m³ no m³ m³ m³ m° m³ m² m² m² m² m² m² m²	424.00 600.00 147.00 210.00 1.00 1.00 56.25 56.25 6.24 2692.00 0.00 1119.00 45.00 198.00 819.90 1398.80	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 400.00 R 640.00 R 90.00 R 380.00 R 380.00 R 295.00 R 295.00 R 380.00 R 380.00 R 380.00 R 380.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3993.80 R 363 420.00 R R 13 275.00 R 425 220.00 R 2 2 368.00 R 58 410.00 R 58 410.00 R 58 470.00 R 58 470.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building Single storey brick building Single volume building Double volume building Double volume building
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64	17 15 38 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33	Demolitioning of all structural structures Carports Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Plant - covered parking Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder hose Winder hose store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Explosives Store Esplosives Store	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 2.6.1 4.3 3.7 3.7 3.1 3.1 3.6 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7	m2 t m3 m3 m0 m3 m0 m3 m3 m0 m3	424.00 600.00 147.00 210.00 210.00 1.00 56.25 6.25 6.24 2692.00 0.00 1119.00 0.00 159.00 198.00 198.00 1380.80 285.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 380.00 R 380.00 R 295.00 R 380.00 R 380.00 R 295.00 R 320.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R R 13 275.00 R 425 220.00 R 22 500.00 R 9 13 275.00 R 9 18 410.00 R 68 24704.00 R 91 200.00 R 91 200.00 R 16 620.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building Single volume building Double volume building Double volume building Single volume building
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	17 15 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35	Demolitioning of all structural structures Carports Carports Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam MSW Dam MSW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder upostore Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Paint Store Chemical Store Paint Store Chemical Store Paint Store Chemical Store Paint Store Paint Store Chemical Store Paint Store	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1	m2 t m3 m3 m0 m3 m3 m2 m2 m2 m2 m2 m2 m3	424.00 600.00 147.00 210.00 210.00 1.00 56.25 56.25 6.24 2692.00 0.00 1119.00 45.00 198.00 819.90 1380.80 285.00 36.00 201.00 41.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 295.00 R 380.00 R 320.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 22 500.00 R 3993.60 R 3993.60 R 393.60 R 393.60 R 363 420.00 R 425 220.00 R 7 13 275.00 R 13 275.00 R 624 704.00 R 10 620.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building Single storey brick building Double volume building Double volume building Single volume building Single storey brick building Single storey brick building Single storey brick building Single storey brick building
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	17 15 38 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34	Demolitioning of all structural structures Carports Carports Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1 3.6 3.7 3.6 3.7 3.6 3.1 3.6 3.1 3.1 3.1	m2 t m3 m3 no m3 m2 m2 m2 m2 m2 m3	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 0.00 0.00 45.00 198.00 819.90 1380.80 285.00 36.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 300.00 R 90.00 R 400.00 R 380.00 R 380.00 R 295.00 R 320.00 R 380.00 R 295.00 R 320.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R 3 425 220.00 R 4 25 220.00 R 58 410.00 R 59 295.00 R 10 620.00 R 10 620.00 R 12 095.00 R 12 095.00 R 12 095.00 R 16 620.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building Single volume building Single volume building Single storey brick building
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 67 62 63 64 65 66 67	17 15 38 38 41 42 42 42 60 61 78 104 113 14 18 24 25 31 32 33 33 34 35 36	Demolitioning of all structural structures Carports Carports Carports Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - covered parking Plant - bear of the silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Eas bottle store Chemical Store Paint Store Oil store	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m2 t m3 m3 m0 m3 m2	424.00 600.00 147.00 210.00 210.00 1.00 1.00 1.00 1.00 1.	R 90.00 R 1280.00 R 1280.00 R 400.00 R 300.00 R 380.00 R 380.00 R 380.00 R 380.00 R 380.00 R 295.00 R 320.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R R 13 275.00 R 425 220.00 R 52 470.00 R 524 704.00 R 10 620.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building Single storey brick building Single volume building Single storey brick building
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41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 70 71 72 73	17 15 38 38 41 42 42 42 42 60 61 78 104 113 13 14 18 24 25 31 32 33 34 44 82 83 86 99 95	Demolitioning of all structural structures Carports Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - Covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Daint Store Paint Store Paint Store Paint Building Plant - Building Plant - Building Plant - Workshop Plant - Building Plant - Workshop Plant - Building	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1.1 3.1.	m2 t m3 m3 m3 m3 m3 m0 m3	424.00 600.00 147.00 210.00 147.00 210.00 1.00 56.25 6.25 6.24 2692.00 0.00 1119.00 45.00 198.00 201.00 41.00 36.00 36.00 201.00 0.00 0.00 0.00 0.00 0.00 0.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 300.00 R 135.00 R 90.00 R 380.00 R 380.00 R 320.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 393.60 R 363 420.00 R R 2135 443.60 R 425 220.00 R 524 760.00 R 524 760.00 R 91 200.00 R 10 620.00 R 10 620.00 R 10 620.00 R 10 760.00 R 197 760.00 R R 1 760.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building To be constructed according to program
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 67 68 69 69 70 71 72	17 15 38 38 41 42 42 42 42 60 61 78 104 113 14 18 24 25 31 32 33 33 34 44 45 86 86 86 86 86 86 86 86 86 86 86 86 86	Demolitioning of all structural structures Carports Carports Carports Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Oil store Generator farm Plant - Building	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m2 t m3 m3 m3 m3 m0 m3 m3 m0 m3 m3 m2 m3 m3 m2 m3	424.00 600.00 147.00 210.00 210.00 1.00 1.00 1.00 1.00 1.	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 300.00 R 135.00 R 90.00 R 380.00 R 380.00 R 320.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 393.60 R 363 420.00 R R 2135 443.60 R 425 220.00 R 524 760.00 R 524 760.00 R 91 200.00 R 10 620.00 R 10 620.00 R 10 620.00 R 10 760.00 R 197 760.00 R R 1 760.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building To be constructed according to program To be constructed according to program To be constructed according to program
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 67 68 69 69 70 71 72 73 74 75	17 15 38 38 41 42 42 42 42 60 61 78 104 113 13 14 18 24 25 31 32 33 34 44 82 83 86 99 95	Demolitioning of all structural structures Carports Carports Carports Carports Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam Sump Flant - Covered parking Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Explosives Store Cas abottle store Chemical Store Plant Store Oil store Generator farm Plant - Building	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m2 t m3 m3 m3 m0 m3 m0 m3 m3 m3 m6 m3 m7 m3 m7 m8 m9	424.00 600.00 147.00 210.00 210.00 1.00 1.00 1.00 1.00 1.	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 90.00 R 400.00 R 90.00 R 330.00 R 320.00 R 380.00	R 534 060.00 R 38 160.00 R 38 160.00 R 768 000.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3993.60 R 363 420.00 R 363 420.00 R 425 220.00 R 2 132 443.60 R 425 220.00 R 19 1200.00 R 58 410.00 R 58 410.00 R 59 295.00 R 10 620.00 R 10 620.00 R 10 620.00 R 10 7 00.00 R 10 7	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Single storey brick building Single storey brick building Single volume building Double volume building Single storey brick building To be constructed according to program
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75	17 15 38 38 41 42 42 42 42 60 61 78 104 113 31 14 18 24 25 31 32 33 34 44 82 83 86 99 95	Demolitioning of all structural structures Carports Carports Headgear Structural concrete Waste silo Waste silo Waste silo Waste silo MW Dam MW Dam MW Dam MW Dam Sump Sump Plant - covered parking Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Office of the workshop of the	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1.1 3.1.	m2 t m3 m3 m3 m3 m3 m0 m3	424.00 600.00 147.00 210.00 147.00 210.00 1.00 56.25 6.25 6.24 2692.00 0.00 1119.00 45.00 198.00 201.00 41.00 36.00 36.00 201.00 0.00 0.00 0.00 0.00 0.00 0.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 400.00 R 380.00 R 380.00 R 380.00 R 320.00	R 534 060.00 R 38 160.00 R 38 160.00 R 768 000.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 22 500.00 R 393.60 R 393.60 R 393.60 R 363 420.00 R 4 425 220.00 R 13 275.00 R 10 620.00 R 10 620.	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building To be constructed according to program
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 77 78 79 79 79 79 79 79 79 79 79 79	17 15 38 38 41 42 42 42 42 42 40 60 61 78 104 118 22 31 32 33 34 44 82 83 86 93 95 96	Demolitioning of all structural structures Carports Carports Carports Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - Covered parking Plant - Covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Casa bottle store Chemical Store Paint Store Oil store Generator farm Plant - Building	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m2	424.00 600.00 147.00 210.00 210.00 1.00 1.00 56.25 56.25 6.24 2692.00 0.00 0.00 1119.00 45.00 198.00 201.00 41.00 0.00 0.00 0.00 0.00 0.00 0.0	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 400.00 R 300.00 R 135.00 R 90.00 R 380.00 R 380.00 R 320.00	R 534 060.00 R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R 393.60 R 13 275.00 R 13 275.00 R 12 280.00 R 197 760.00 R 197 760.00 R 197 760.00 R 197 760.00 R 1 7 R 1 180 197 760.00 R 1 18 197 760.00 R 1 18 197 760.00 R 1 18 197 760.00 R 197 770.00 R 197	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building To be constructed according to program
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 67 68 69 69 70 71 72 73 74 75 76 77 77 87 98 88 81	17 15 38 38 41 42 42 42 42 42 42 42 42 42 42 42 42 43 43 43 43 43 43 44 44 45 46 46 47 47 48 47 48 48 48 48 48 48 48 48 48 48 48 48 48	Demolitioning of all structural structures Carports Carports Carports Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Plant Store Oil store Generator farm Plant - Building	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.6 3.7 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6	m² t m² m² m² m² m² m²	424.00 600.00 147.00 210.00 210.00 1.00 1.00 1.00 1.00 1.	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 90.00 R 400.00 R 400.00 R 300.00 R 3	R 534 060.00 R 38 160.00 R 38 160.00 R 768 000.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R 3 400.00 R 10 600.00 R 10 600.00 R 10 600.00 R 10 600.00 R 10 700.00 R 10 700.	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 7m deep Thin reinforced concrete To be constructed according to program To be constructed according to program Double volume building To be constructed according to program Single storey brick building To be constructed according to program
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Section	
20 W.C.	Notes
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50 Sun Statut Prince of the community of the communit	
29 St. Start State Offices	ck building
191 D. Congret Research	
100 60 Lang Roam	
100 100 Confused Books	
100 98 South Researce Officials 1.1 mm 1.00 18 1.00 1.0	
100 77 Wingstrongs	al. b. data a
100 Park - Induction room	ed according to program
12 12 2 2 2 7 2 2 2 7 7	ed according to program ed according to program
110 Figure - Sociation	ed according to program ed according to program
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173 Comman and Com	thick concrete
1922 19 Part - Lyptown areas	
123 32 Part Lygbown areas 4.5 m² 0.00 R 590.00 R 7 To be constructed as 124 103 Part Lygbown areas 7 To be constructed as 125 Part Lygbown areas 7 To be constructed as 126 Part Lygbown areas 7 Part Lygbown areas Part L	ed according to program
126	ed according to program
	a according to program
128 37 Reef and waste conveyor	
131 63 Waste conveyor	ed according to program veyor
132 64 Tailing delivery pipeline	/or
136 67 Distripution prepries from concentrator to dam	ed according to program
137 68 Water man pipeline	ed according to program
139 74 Permeter Fencing to Julings complex 5.5.3 m 3800.00 R 27.00 R 97.200.00	el pipelines
139 75 Permiter fencing to fullings complex 5.5.3 m	l pipelines
141 105 Plant - Steel gantry's with delivery pipelines	ed according to program
143 Main water pipeline Sub - Total for removal of all linear tems Sub - Total for removal of all linear tems Rehabilitation of roads	ed according to program
146 Rehabilitation of roads	a according to program
147	
149	ain
Sorting and screening of waste 6.1 % 13882292 85 2.59% R 347 057 32 2.59%	
152 Sub - Total for infrastructural aspects R 2 2 364 190.17	
156	stance
156 Open pit reclamation including final voids and ramps	
157	
Sealing of Shafts and Inclines	
15	
161 23 Refrigeration shaft 7.1.11 sum 1.00 R 1838 850.00 R 1838 850.00 8m Diameter	
163 Rehabilitation of overburden and spoils Rehabilitation of overburden and spoils Sub-Total for sealing of shafts and inclines Rehabilitation of overburden and spoils Only footprints will re	
110 Topsoil stockpiles	
Rip area to alleviate compaction 9.5.1 ha 1.18 R 9 400.00 R 11 09.52	vill remain
Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Not applicable Not applicab	
169	
Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) Page 2	
Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	
172 (polluting potential)	
174 Remove contaminated sediment and stockpile 9.2 m³ 1320.00 R 20.00 R 26.400.00 Assume 250mm cont 175 Load and haul contaminated sediment 1.2 sum 1320.00 R 90.40 R 119 328.00 Haul sediment to taili 176 Remove HDPE liner 6.4 m² 5280.00 R 6.50 R 34 320.00 177 Breach dam wall 10.1.5 m 302.00 R 220.00 R 66.40.00 Doze material inward 178 Shape and level area 10.1.1 ha 0.53 R 55250.00 R 29.172.00 Make area free drain 179 Establish vegetation 10.4.1 ha 0.53 R 13 800.00 R 7 286.40 180 71A Emergency storage dam 10.4.1 ha 0.53 R 13 800.00 R 7 286.40 181 Remove contaminated sediment and stockpile 9.2 m² 2986.50 R 20.00 R 59 730.00 Assume 100mm cont 182 Load and haul contaminated sediment 1.2 sum 2986.50 R 90.40 R 269 979.60 Haul sediment to taili 183 Remove HDPE liner 6.4 m² 31861.00 R 6.50 R 207 096.50 184 Breach dam wall 10.1.5 m 714.00 R 220.00 R 157 080.00 Doze material inward 185 186	
176 Remove HDPE liner 6.4 m² 5280.00 R 6.50 R 34 320.00 177 Breach dam wall 10.1.5 m 302.00 R 220.00 R 6440.00 Doze material inward 178 Shape and level area 10.1.1 ha 0.53 R 55 250.00 R 29 172.00 Make area free drain 179 Establish vegetation 10.4.1 ha 0.53 R 13 800.00 R 7 286.40 180 71A Emergency storage dam 10.4.1 ha 1.50 R 13 800.00 R 7 286.40 181 Remove contaminated sediment and stockpile 9.2 m² 2986.50 R 20.00 R 59 730.00 Assume 100mm contaminated sediment 1.2 sum 2986.50 R 90.40 R 269 979.60 Haul sediment to talli 182 Load and haul contaminated sediment 1.2 sum 2986.50 R 90.40 R 269 979.60 Haul sediment to talli 183 Remove HDPE liner 6.4 m² 31861.00 R 6.50 R 207 096.50 184 Breach dam wall 10.1.5 m 714.00 R 220.00 R 157 080.00 Doze material inward	contaminated sediment
178	
179	
181 Remove contaminated sediment and stockpile 9.2 m² 2986.50 R 20.00 R 59.730.00 Assume 100mm contaminated sediment 1.2 sum 2986.50 R 90.40 R 269.979.60 Hauf sediment to talli 183 Remove HDPE liner 6.4 m² 31861.00 R 6.50 R 207.096.50 R 157.080.00 Doze material inward 184 Breach dam wall 10.1.5 m 714.00 R 220.00 R 157.080.00 Doze material inward 157.080.00 157.	
183 Remove HDPE liner 6.4 m² 31861.00 R 6.50 R 207 096.50 184 Breach dam wall 10.1.5 m 714.00 R 220.00 R 157 080.00 Doze material inward	contaminated sediment
186	-
188 Remove contaminated sediment and stockpile 9.2 m³ 2160.80 R 20.00 R 43 216.00 Assume 100mm cont	contaminated sediment
189 Load and haul contaminated sediment 1.2 sum 2160.80 R 90.40 R 195 336.32 Haul sediment to taili 190 Remove HDPE liner 6.4 m² 29000.00 R 6.50 R 188 500.00	
191 Breach dam wall 10.1.5 m 688.00 R 220.00 R 151 360.00 Doze material inward 192 Shape and level area 10.1.1 ha 2.90 R 55 250.00 R 160 225.00 Make area free drain	
193 Establish vegetation 10.4.1 ha 2.90 R 13 800.00 R 40 020.00 194 72 Pollution control dam	-
195 Remove contaminated sediment and stockpile 9.2 m³ 1768.50 R 20.00 R 35 370.00 Assume 100mm cont	contaminated sediment
196 Load and haul contaminated sediment 1.2 sum 1768.50 R 90.40 R 159 872.40 Haul sediment to taili 197 Remove HDPE liner 6.4 m² 17685.00 R 6.50 R 114 952.50	tailings facility 8km





		Closure Costing - Leeuwkop					Closure Co	sts	- <u>Year 8 - (2019</u>	2
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate		Amount	Notes
198		Breach dam wall	10.1.5	m	532.00	R	220.00	R	117 040.00	Doze material inward to fill void
199		Shape and level area	10.1.1	ha	0.17		55 250.00		9 248.85	Make area free draining
200		Establish vegetation	10.4.1	ha	0.17	R	13 800.00	R	2 310.12	
201	107	Waste Rock Dump								Assumed 20m strip would not have been rehabilitated
202	107	Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R	34 340.00	Assume 250mm thick
		Reshape WRD								Cut to fill action assumed 20m high at
203		resnape With	9.1.1	m³	29925.00	R	13.50	R	403 987.50	87.5m³/per meter
204		Import capping layers	9.6.1	m³	8160.00	R	28.00	R	228 480.00	Assumed 1km haul distance, 300mm thick capillary layer and 300mm thick black turf
205		Import topsoil layer	0.04	m³	0700.00	R	20.00	R	76 160.00	Assumed 1km haul distance, 200mm thick
206		Establish vegetation	9.6.1 10.4.1	ha	2720.00 1.36		28.00 13 800.00	R	18 768.00	layer
207	108	Tailings Complex								To be constructed according to program
208		Seal Penstocks	7.3	sum	0.00		213 200.00		-	
209		Breach wall & reshape	10.1.5	m	0.00		220.00		-	
210 211		Rip to alleviate compaction Establish vegetation disturbed footprint	9.5.1 10.4.1	ha ha	0.00	R R	9 400.00 13 800.00	R	-	
212		Establish vegetation on tailings dam slopes	10.4.1	ha	0.00	R	19 250.00	R	-	
213		Establish vegetation on tailings dam top	10.4.2	ha	0.00	R	19 250.00	R	-	
214	109	Waste Rock Noise Barrier	10.1.1	ho	2.10	D	EE 2E0 00	D	116 025 00	
215	 	Reshape berm	10.1.1	ha	2.10	R	55 250.00	R	116 025.00	Assumed 1km haul distance, 200mm thick
216		Import topsoil layer	9.6.1	m³	4200.00	R	28.00	R	117 600.00	layer
217		Establish vegetation	10.4.1	ha	2.10		13 800.00	R	28 980.00	,
		Sub - Total for rehabilitation of processing waste deposits and						_		
218 219		evaporation ponds (polluting potential) Reclamation of subsided areas						R	3 438 624.40	
219		Not applicable	1.1	na	0.00	R	_	R	_	
221		Sub - Total for reclamation of subsided areas		· iiu	0.00	· ·		R		
222		Sub - Total for Mining aspects						R	9 717 042.96	
223										
224		General Surface Reclamation								
225		Mine				_				
										Includes stockpiling of material, backfilling of excavations in cut to fill operation and
226		Shape and level disturbed area	10.1.1	ha	20.00	R	55 250.00	R	1 105 000.00	final profiling @ave 500mm over footprint
227		Rip area to alleviate compaction	9.5.1	ha	20.00			R	188 000.00	500mm deep ripping
										150mm from local stockpile, assume 1km
228		Import topsoil	9.6.1	m³	30000.00			R	840 000.00	load and haul
229 230		Establish vegetation Plant	10.4.1	ha	20.00	к	13 800.00	R	276 000.00	Footprint not disturbed
230		Fidit								1 ootprint not distarbed
004						_	== 0=0 00	_		
231 232		Shape and level disturbed area Rip area to alleviate compaction	10.1.1 9.5.1	ha ha	0.00		55 250.00 9 400.00	R	-	
202		Trip area to alleviate compaction	3.5.1	Ha	0.00	11	3 400.00			
233		Import topsoil	9.6.1	m³	0.00	R	28.00	R	-	
234		Establish vegetation	10.4.1	ha	0.00	R	13 800.00		-	
235 236		Sub - Total for General Surface Reclamation						R	2 409 000.00	
237		Water Management								
										Assume none required, all mitigation
										measures will be implemented during the
238	 	Not applicable	1.1	na	0.00	R	-	R	-	operational phase
239 240		Sub - Total for Water Management						R	-	
		SUB - TOTAL 1								
241		(for infrastructural and related structures)						R	34 510 233.13	
242		Post - closure aspects								
243		Surface water quality monitoring	12.1	yr	5.00		106 000.00		530 000.00	8 monitoring points on a monthly basis
244	 	Groundwater quality monitoring	12.2	yr	5.00		150 000.00		750 000.00	
245 246	-	Reclamation monitoring on reclaimed areas Care and maintenance of reclaimed areas	12.3 12.4	ha ha	32.90 32.90		2 500.00 15 500.00		82 250.00 509 950.00	5 years 5 years
247	1	Sub - Total for Post closure aspects	14.4	ıια	32.90	<u>'``</u>	10 000.00	R	1 872 200.00	o youre
		·								Assumed 10 percent for post closure
248		Contingencies for post closure aspects	1.2	sum	1.00	R	187 220.00	R	187 220.00	aspects
249		Sub - Total for Contingencies for post closure aspects SUB - TOTAL 2						R	187 220.00	
250		(for post - closure aspects)						R	2 059 420.00	
251		Additional allowances								
252		Preliminary and General	1.2	sum			2 070 613.99	R	2 070 613.99	Assume 6 percent of sub - total 1
253		Contingencies	1.2	sum	1.00	R	3 451 023.31	R	3 451 023.31	Assume 10 percent of sub - total 1
254		SUB - TOTAL 3						R	5 521 637.30	
		(for additional allowances) Grand - Total						_		
255		(for sub - total 1+2+3)						R	42 091 290.43	
		,				_				





		Closure Costing - Leeuwkop		Closure Costs - <u>Year 9 - (2020)</u>					
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes	
2		Infrastructural Aspects Nominal cost and time related items							
3		Mine Removal of salvageable equipment	1.2	sum	1.00	R 3 000 000.00	R 3 000 000.00	Nominal allowance	
5		Crane	11.1	p/day			R 1 354 500.00	For assistance in the removal of equipment and demolition purposes	
6		Plant Removal of salvageable equipment	1.2	sum	0.00			Nominal allowance	
8		Crane	11.1	p/day	0.00		R -	For assistance in the removal of equipment and demolition purposes	
9		Sub-Total for cost and time related items	11.1	p/day	0.00	R 38 700.00	R 4 354 500.00	and demonsion purposes	
10		Demolitioning of plant and related structures							
11	21	Compressor house	3.7	m²		R 380.00	R 501 011.00	Double volume building Structural Concrete, assume 5m high,	
12	22	Condenser cooling towers	4.2	m³	527.80		R 337 792.00	250mm thick Structural Concrete, assume 5m high,	
13	23	Refrigeration plant	4.2	m³	1128.75		R 722 400.00	250mm thick	
14	27	Grout Plant	3.7	m²	1734.00		R 658 920.00	Double volume building	
15 16	28 40	Ventilation Shaft Water treatment plant	2.2	t m²	480.00 1225.00	R 1 280.00 R 590.00	R 614 400.00 R 722 750.00	Info received from Impala Assume 450kg of steel per m ²	
17	43	Sewage Plant	3.6	m²	1732.50	R 320.00	R 554 400.00	Single volume building	
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program	
19	87	Plant - Cleaners						To be constructed according to program	
20		Structural steel	2.3.2	m²	0.00	R 590.00	R -		
21 22	88	Structural concrete Plant - Cleaners	4.3	m³	0.00	R 400.00	R -	To be constructed according to program	
23		Structural steel	2.3.2	m²	0.00	R 590.00	R -	o mercor fi	
24 25	89	Structural concrete Plant - Mill	4.3	m³	0.00	R 400.00	R -	To be constructed according to program	
26		Structural steel	2.3.2	m²	0.00	R 590.00	R -	and the second s	
27 28	94	Structural concrete Plant - Storage area	4.3 3.7	m³ m²	0.00	R 400.00 R 380.00	R -	To be constructed according to program	
29	98	Plant Plant	3.6	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program	
31 32	100	Plant - Thickener Structural steel	2.3.2	m²	0.00		R -	To be constructed according to program	
33		Structural scient	4.3	m³	0.00		R -		
34 35	101	Plant - Thickener Structural steel	2.3.2		0.00			To be constructed according to program	
				m²					
36 37	102	Structural concrete Plant - Thickener Characteristics	4.3	m³	0.00		R -	To be constructed according to program	
38		Structural steel	2.3.2	m²	0.00				
39 40		Structural concrete Sub - Total for demolitioning of plant and related structures	4.3	m³	0.00	R 400.00	R 4 111 673.00		
41 42	16	Demolitioning of all structural structures Carports	2.6.1	m²	5934.00			IBR sheeting	
43 44	17 15	Contractors Carports Headgear	2.6.1	m² t	424.00 600.00		R 768 000.00	IBR sheeting Info received from Impala	
45		Structural concrete	4.1	m³	147.00	R 1 280.00	R 188 160.00	Structural concrete, 250mm thick, assume	
46	38	Waste silo	4.3	m³	210.00	R 400.00	R 84 000.00	15m high Structural concrete, 250mm thick, assume	
47 48	38 41	Waste silo Water tank	4.3 2.4.2	m³ no	210.00 1.00		R 84 000.00 R 26 650.00	15m high	
49	42	M/W Dam	4.3	m³	56.25		R 22 500.00	Assume concrete dam, 250mm thick, 6m high	
50	42	M/W Dam	4.3	m³	56.25	R 400.00	R 22 500.00	Assume concrete dam, 250mm thick, 6m high	
51	60	Sump	4.2	m³	6.24	R 640.00	R 3 993.60	Structural concrete, 300mm thick, 2m deep	
52 53	61 78	Water Canal Plant - covered parking	8.4 2.6.1	m² m²		R 135.00	R 363 420.00	Thin reinforced concrete To be constructed according to program	
54	104	Plant - Waste silo	4.3	m³	0.00		R -	To be constructed according to program	
55 56		Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores	1.0		0.00	100.00	R 2 135 443.60		
57	13 14	Winder House	3.7 3.7	m² m²	1119.00			Double volume building Double volume building	
58 59 60	18 24	Winder House Winder rope store Ean and electrical motor store	3.1.1 3.1.1	m² m²	956.70 45.00 198.00	R 295.00	R 13 275.00	Single storey brick building Single storey brick building	
61 62	25 31	Fan and electrical motor store Workshop sink and perm Main Store	3.1.1 3.6 3.7	m² m² m²	819.90 1380.80	R 320.00	R 262 368.00	Single volume building Double volume building	
63	32	Explosives Store	3.6	m²	285.00	R 320.00	R 91 200.00	Single volume building	
64 65	33 34	Gas bottle store Chemical Store	3.1.1	m² m²	36.00 201.00	R 295.00	R 59 295.00	Single storey brick building Single storey brick building	
66 67	35 36	Paint Store Oil store Consents form	3.1.1 3.1.1	m² m²	41.00 36.00	R 295.00	R 10 620.00	Single storey brick building Single storey brick building	
68 69	82 82	Generator farm Plant - Building	3.2.1	m² m²	412.00 0.00	R 320.00	R -	Single storey brick building To be constructed according to program To be constructed according to program	
70 71	83 86	Plant - Building Plant - Workshop Rote - Wilding	3.6 3.7	m² m²	0.00	R 380.00	R -	To be constructed according to program To be constructed according to program To be constructed according to program	
72 73	93 95	Plant - Building Plant - Building Read - Building	3.6 3.6	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program	
74 75	96	Plant - Building Sub - Total for demolitioning of workshops and stores	3.6	m²	0.00	R 320.00	R 2 029 113.00	To be constructed according to program	
76		Demolitioning of permanent brick structures and temporary structures							
77 78	1 2	Offices Change House	3.1.1 3.1.1	m² m²	1023.00 1066.00	R 295.00	R 314 470.00	Single storey brick building Single storey brick building	
79 80	3 4	Laundry Boiler House	3.1.1 3.1.1	m² m²	179.00 232.00	R 295.00	R 68 440.00	Single storey brick building Single storey brick building	
81 82	5 6	Change House Lamp Room	3.1.1 3.1.1	m² m²	0.00 909.50	R 295.00	R 268 302.50	Single storey brick building	
83 84	7 8	Change House Induction Room	3.1.1 3.1.1	m² m²	0.00 144.00	R 295.00	R 42 480.00	Single storey brick building	
85 86	9 10	Training Centre Gate House	3.1.1 3.1.1	m² m²	116.70 184.00	R 295.00 R 295.00	R 34 426.50 R 54 280.00	Single storey brick building Single storey brick building	
87 88	11 12	Banksman Cabin & Proto Room Central Control room	3.1.1 3.1.1	m² m²	88.60 302.00	R 295.00	R 26 137.00	Single storey brick building Single storey brick building	
89 90	19 19	Sub-station Sub-station	3.2.1 3.2.1	m² m²	15.00 15.00	R 480.00	R 7 200.00	Single storey brick building Single storey brick building	
91	20	Transformer bays	3.2.1	m²	156.00			Single storey brick building	





		Closure Costing - Leeuwkop				Closure Co	osts - <u>Year 9 - (2020</u>	<u>u</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
92 93	29 30	Sub-station MCC	3.2.1 3.2.1	m² m²	120.00 65.00			Single storey brick building Single storey brick building
94 95	45 47	Sumer Sub-station Geology building	3.2.1	m² m²	206.40 183.00	R 480.00		Single storey brick building Single storey brick building
96	48	Offices	3.1.1	m²	149.60	R 295.00	R 44 132.00	Single storey brick building
97 98	49 50	Offices Shaft Sinker Offices	3.1.1 3.3	m² m²	149.60 124.00	R 140.00	R 17 360.00	Single storey brick building Portable offices
99 100	51 52	Shaft Sinker Offices Change House	3.3	m² m²	124.00 16.00			Portable offices Portable offices
101 102	53 54	Change House Change House	3.3	m² m²	16.00 16.00	R 140.00 R 140.00	R 2 240.00 R 2 240.00	Portable offices Portable offices
103 104	55 56	Lamp Room Steffanuti Stocks	3.3	m² m²	16.00 16.00	R 140.00 R 140.00	R 2 240.00	Portable offices Portable offices
105	57	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices
106	58 76	Shaft Sinker Offices Explosives bunker	3.3	m² m²	124.00 150.00	R 295.00	R 44 250.00	Portable offices Single storey brick building
108 109	77 79	Weighbridge Plant - Admin building	1.2 3.1.1	sum m²		R 50 000.00 R 295.00	R -	To be constructed according to program To be constructed according to program
110 111	80 81	Plant - Induction room Plant - Office	3.1.1 3.1.1	m² m²		R 295.00 R 295.00	R -	To be constructed according to program To be constructed according to program
112 113	84 85	Plant - Sub-station Plant - Sub-station	3.2.1 3.2.1	m² m²		R 480.00 R 480.00	R -	To be constructed according to program To be constructed according to program
114	97	Plant - building Sub - Total for demolitioning of permanent brick structures and	3.1.1	m²		R 295.00	R -	To be constructed according to program
115 116		temporary structures Removal of all surface related finishes					R 1 796 507.00	
117 118	26 46	Surface cable yard PFC yard	4.5 4.5	m² m²	30.00 1199.00			Assume 250mm thick concrete Assume 250mm thick concrete
119 120	47 73	Geology yard General surface bed	4.5 4.4	m² m²	473.00 10610.85	R 590.00	R 279 070.00	Assume 250mm thick concrete Assume 150mm thick concrete
121	90	Plant - Laydown areas Plant - Laydown areas	4.5	m²	0.00	R 590.00	R -	To be constructed according to program
122 123	92	Plant - Laydown areas	4.5 4.5	m² m²	0.00	R 590.00	R -	To be constructed according to program To be constructed according to program To be constructed according to program
124 125	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	0.00	R 590.00	R 3 285 512.75	To be constructed according to program
126 127	32	Removal of all linear items Fencing to explosives store	5.5.3	m	85.00			
128 129	37 39	Reef and waste conveyor Reef conveyor	5.1.5 5.1.5	m m	0.00 252.00	R 640.00 R 640.00		To be constructed according to program Suspended conveyor
130 131	62 63	Waste conveyor Return water pipeline	5.1.2 5.2.2	m m	1226.00 0.00	R 265.00 R 48.00		Overland conveyor To be constructed according to program
132 133	64 65	Tailing delivery pipeline Pipeline from sump to PCD	5.2.2 5.2.2	m m	0.00 348.00	R 48.00 R 48.00		To be constructed according to program 200-350mm steel pipelines
134 135	66 67	Emergency pipeline from concentrator to dam Distribution pipelines	5.2.2	m m	0.00 4780.00	R 48.00	R - 229 440.00	To be constructed according to program 200-350mm steel pipelines
136 137	68 69	Distribution pipeline Water main pipeline Fire main pipeline	5.2.2 5.2.2	m m	1870.00 1870.00	R 48.00		200-350mm steel pipelines 200-350mm steel pipelines
138	74	Perimeter fencing	5.5.3	m	3600.00	R 27.00	R 97 200.00	
139 140	75 76	Perimeter fencing to tailings complex Perimeter fence to explosives bunker	5.5.3	m m	0.00 201.00	R 27.00	R 5 427.00	To be constructed according to program
141 142	105 106	Plant - Steel gantry's with delivery pipelines Plant - Security fencing	2.3.1 5.5.3	m² m	0.00	R 27.00	R -	To be constructed according to program To be constructed according to program
143 144		Main water pipeline Sub - Total for removal of all linear items	5.2.3	m	4669.00	R 64.00	R 298 816.00 R 1 315 572.00	
145 146		Rehabilitation of roads Entrance road	1.1	na	0.00	R -	R -	Assume will remain
147 148		Minor gravel road to explosives bunker Sub - Total for rehabilitation of roads	8.3	m²	5864.00	R 4.00	R 23 456.00 R 23 456.00	
149 150		Disposal of demolition waste Sorting and screening of waste	6.1	%	14697277.35	2.50%	R 367 431.93	2.50%
151		Disposal of demolition waste	6.2.1	m³/km	27745.00		R 4 439 200.00	Assume 50km distance
152 153		Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects					R 4 806 631.93 R 23 858 409.28	
154 155		Mining Aspects						
156 157		Open pit reclamation including final voids and ramps Not applicable	1.1	na	0.00	R -	R -	
158		Sub - Total open pit reclamation including final voids and ramps					R -	
159 160	15	Sealing of shafts and inclines Service and Production Shaft	7.1.15	sum	1.00	R 2 573 324.00	R 2 573 324.00	10m Diameter
161	23	Refrigeration shaft	7.1.11	sum	1.00	R 1838850.00	R 1 838 850.00	8m Diameter
162 163	28	Vent Shaft Sub - Total for sealing of shafts and inclines	7.1.11	sum	1.00	R 1838850.00	R 1 838 850.00 R 6 251 024.00	8m Diameter
164 165	110	Rehabilitation of overburden and spoils Topsoil stockpiles						Only footprints will remain
166 167		Rip area to alleviate compaction Establish vegetation	9.5.1 10.4.1	ha ha	1.18 1.18	R 9 400.00 R 13 800.00	R 11 099.52 R 16 295.04	
168		Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds			-		R 27 394.56	-
169 170		(non polluting potential) Not applicable	1.1	na	0.00	R -	R -	
171		Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)			0.00		R -	
172		Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)						
173	70	Settling dams				D	D 05 :	Accumo 250mm
174 175		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	1320.00 1320.00	R 90.40	R 119 328.00	Assume 250mm contaminated sediment Haul sediment to tailings facility 8km
176 177		Remove HDPE liner Breach dam wall	6.4 10.1.5	m² m	5280.00 302.00			Doze material inward to fill void
178 179		Shape and level area Establish vegetation	10.1.1 10.4.1	ha ha	0.53 0.53	R 55 250.00	R 29 172.00	Make area free draining
180	71A	Emergency storage dam Remove contaminated sediment and stockpile	9.2	m³	2986.50			Assume 100mm contaminated sediment
182		Load and haul contaminated sediment Remove HDPE liner	1.2	sum m²	2986.50 31861.00	R 90.40	R 269 979.60 R 207 096.50	Haul sediment to tailings facility 8km
184		Breach dam wall	10.1.5	m	714.00	R 220.00	R 157 080.00	Doze material inward to fill void
185 186		Shape and level area Establish vegetation	10.1.1 10.4.1	ha ha	3.19 3.19		R 176 032.03 R 43 968.18	Make area free draining
187 188	71B	Emergency storage dam Remove contaminated sediment and stockpile	9.2	m³	2160.80			Assume 100mm contaminated sediment
189 190		Load and haul contaminated sediment Remove HDPE liner	1.2 6.4	sum m²	2160.80 29000.00	R 90.40	R 195 336.32	Haul sediment to tailings facility 8km
191 192		Breach dam wall Shape and level area	10.1.5	m ha	688.00 2.90	R 220.00	R 151 360.00	Doze material inward to fill void Make area free draining
193	70	Establish vegetation	10.1.1	ha	2.90			
194 195	72	Pollution control dam Remove contaminated sediment and stockpile	9.2	m³	1768.50			Assume 100mm contaminated sediment
196 197		Load and haul contaminated sediment Remove HDPE liner	1.2 6.4	sum m²	1768.50 17685.00			Haul sediment to tailings facility 8km





		Closure Costing - Leeuwkop					Closure Co	sts	- <u>Year 9 - (2020</u>	2
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate		Amount	Notes
198		Breach dam wall	10.1.5	m	532.00	R	220.00	R	117 040.00	Doze material inward to fill void
199		Shape and level area	10.1.1	ha	0.17		55 250.00		9 248.85	Make area free draining
200		Establish vegetation	10.4.1	ha	0.17	R	13 800.00		2 310.12	*
										Assumed 20m strip would not have been
201	107	Waste Rock Dump				<u> </u>				rehabilitated
202		Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R	34 340.00	Assume 250mm thick
203		Reshape WRD	9.1.1	m³	29925.00	R	13.50	R	403 987.50	Cut to fill action assumed 20m high at 87.5m³/per meter
203			5.1.1	- 111	29923.00	IX.	13.30	IX	403 907.30	
		Import capping layers								Assumed 1km haul distance, 300mm thick
204		,	9.6.1	m³	8160.00	R	28.00	R	228 480.00	capillary layer and 300mm thick black turf
		Import topsoil layer								Assumed 1km haul distance, 200mm thick
205			9.6.1	m³	2720.00	R	28.00	R	76 160.00	layer
206	400	Establish vegetation	10.4.1	ha	1.36	R	13 800.00	R	18 768.00	To be a sentented assertion to assert
207 208	108	Tailings Complex Seal Penstocks	7.0	01100	0.00	R	213 200.00	В	_	To be constructed according to program
208		Breach wall & reshape	7.3 10.1.5	sum m	0.00	R	220.00			
210		Rip to alleviate compaction	9.5.1	ha	0.00	R	9 400.00			
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00	R	13 800.00			
212		Establish vegetation on tailings dam slopes	10.4.2	ha	0.00		19 250.00		-	
213		Establish vegetation on tailings dam top	10.4.2	ha	0.00	R	19 250.00	R	-	
214	109	Waste Rock Noise Barrier								
215		Reshape berm	10.1.1	ha	2.10	R	55 250.00	R	116 025.00	
040		Import topsoil layer	0.04	3	4000.00	١,	20.00	R	447.000.00	Assumed 1km haul distance, 200mm thick
216 217		Establish vegetation	9.6.1 10.4.1	m³ ha	4200.00 2.10		28.00 13 800.00		117 600.00 28 980.00	layer
217		Sub - Total for rehabilitation of processing waste deposits and	10.4.1	TIG.	2.10	-	10 000.00	, i	20 300.00	
218		evaporation ponds (polluting potential)						R	3 438 624.40	
219		Reclamation of subsided areas								
220		Not applicable	1.1	na	0.00	R	-	R	-	
221		Sub - Total for reclamation of subsided areas						R		
222		Sub - Total for Mining aspects						R	9 717 042.96	
223										
224		General Surface Reclamation								
225		Mine				-		_		
										Includes stockpiling of material, backfilling
										of excavations in cut to fill operation and
226		Shape and level disturbed area	10.1.1	ha	20.00		55 250.00		1 105 000.00	final profiling @ave 500mm over footprint
227		Rip area to alleviate compaction	9.5.1	ha	20.00	R	9 400.00	К	188 000.00	500mm deep ripping
228		Import topsoil	9.6.1	m³	30000.00	R	28.00	R	840 000.00	150mm from local stockpile, assume 1km load and haul
229		Establish vegetation	10.4.1	ha	20.00		13 800.00		276 000.00	load and had
230		Plant				Ħ		i i		Footprint not disturbed
										,
231		Shape and level disturbed area	10.1.1	ha	0.00	R	55 250.00			
232		Rip area to alleviate compaction	9.5.1	ha	0.00	R	9 400.00	К	-	
233		Import topsoil	9.6.1	m³	0.00	R	28.00	R	_	
234		Establish vegetation	10.4.1	ha	0.00		13 800.00		-	
235		Sub - Total for General Surface Reclamation						R	2 409 000.00	
236										
237		Water Management								
										Assume none required, all mitigation
000	1	Mad and Backla				_				measures will be implemented during the
238	 	Not applicable	1.1	na	0.00	R		R R	-	operational phase
240	-	Sub - Total for Water Management				┢		K	•	
		SUB - TOTAL 1								
241		(for infrastructural and related structures)						R	35 984 452.24	
242		Post - closure aspects								
243		Surface water quality monitoring	12.1	yr	5.00	R	106 000.00	R	530 000.00	8 monitoring points on a monthly basis
244	1	Groundwater quality monitoring	12.2	yr	5.00		150 000.00		750 000.00	
245		Reclamation monitoring on reclaimed areas	12.3	ha	34.90		2 500.00		87 250.00	
246		Care and maintenance of reclaimed areas	12.4	ha	34.90		15 500.00		540 950.00	5 years
247		Sub - Total for Post closure aspects						R	1 908 200.00	
										Assumed 10 percent for post closure
248	ļ	Contingencies for post closure aspects	1.2	sum	1.00	R	190 820.00		190 820.00	aspects
249		Sub - Total for Contingencies for post closure aspects				L		R	190 820.00	
250		SUB - TOTAL 2 (for post - closure aspects)						R	2 099 020.00	
		(for post - closure aspects) Additional allowances								
251			1.0	01/77	4.00	_	2.450.007.40	В	0.450.007.10	Assume 6 percent of sub-total 1
252	i	Preliminary and General	1.2	sum	1.00		2 159 067.13 3 598 445.22	R R	2 159 067.13 3 598 445.22	Assume 6 percent of sub - total 1 Assume 10 percent of sub - total 1
252						111	J JJJ 44J.22	1.5	0 000 440.22	
253		Contingencies SUB - TOTAL 3								
		SUB - TOTAL 3						R	5 757 512.36	
253								R R	5 757 512.36 43 840 984.60	





		Closure Costing - Leeuwkop				Closure Cos	sts - <u>Year 10 - (202</u>	<u>1)</u>
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
2		Infrastructural Aspects Nominal cost and time related items						
3		Mine Removal of salvageable equipment	1.2	sum	1.00	R 3 250 000.00	R 3 250 000.00	Nominal allowance
5		Crane	11.1	p/day			R 1 548 000.00	For assistance in the removal of equipment and demolition purposes
6		Plant Removal of salvageable equipment	1.2	sum	0.00			Nominal allowance
8		Crane	11.1	p/day	0.00		R -	For assistance in the removal of equipment and demolition purposes
9		Sub-Total for cost and time related items	11.1	p/day	0.00	K 38 700.00	R 4 798 000.00	and demonition purposes
10	04	Demolitioning of plant and related structures	0.7	2	4040.45	D 200.00	D 504 044 00	Double valume building
11	21	Compressor house	3.7	m²			R 501 011.00 R 337 792.00	Double volume building Structural Concrete, assume 5m high,
12	22	Condenser cooling towers	4.2	m³	527.80			250mm thick Structural Concrete, assume 5m high,
13	23	Refrigeration plant	4.2	m³	1128.75		R 722 400.00	250mm thick
14	27	Grout Plant	3.7	m²	1734.00		R 658 920.00	Double volume building
15 16	28 40	Ventilation Shaft Water treatment plant	2.2	t m²	480.00 1225.00	R 1280.00 R 590.00	R 614 400.00 R 722 750.00	Info received from Impala Assume 450kg of steel per m ²
17	43	Sewage Plant	3.6	m²	1732.50	R 320.00	R 554 400.00	Single volume building
18	59	Booster pump station	3.6	m²	0.00	R 320.00	R -	To be constructed according to program
19	87	Plant - Cleaners	00-	_			D	To be constructed according to program
20		Structural steel	2.3.2	m²	0.00			
21	88	Structural concrete Plant - Cleaners	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
23		Structural steel	2.3.2	m²	0.00			
24 25	89	Structural concrete Plant - Mill	4.3	m³	0.00	R 400.00	R -	To be constructed according to program
26		Structural steel	2.3.2	m²	0.00			
27 28	94	Structural concrete Plant - Storage area	4.3 3.7	m³ m²	0.00	R 400.00 R 380.00		To be constructed according to program
29 30	98 99	Plant Plant	3.6 3.6	m² m²	0.00	R 320.00 R 320.00		To be constructed according to program To be constructed according to program
31 32	100	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
33		Structural concrete	4.3	m³	0.00	R 400.00	R -	
34 35	101	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
36		Structural concrete	4.3	m³	0.00	R 400.00	R -	
37 38	102	Plant - Thickener Structural steel	2.3.2	m²	0.00	R 590.00	R -	To be constructed according to program
39		Structural concrete	4.3	m³	0.00	R 400.00	R -	
40 41		Sub - Total for demolitioning of plant and related structures Demolitioning of all structural structures					R 4 111 673.00	
42	16 17	Carports Contractors Carports	2.6.1 2.6.1	m² m²	5934.00 424.00			IBR sheeting IBR sheeting
44 45	15	Headgear Structural concrete	2.2 4.1	t m³	600.00 147.00			Info received from Impala
46	38	Waste silo	4.3	m³	210.00		R 84 000.00	Structural concrete, 250mm thick, assume 15m high
47	38	Waste silo	4.3	m³	210.00		R 84 000.00	Structural concrete, 250mm thick, assume 15m high
48	41	Water tank	2.4.2	no	1.00	R 26 650.00	R 26 650.00	Assume concrete dam, 250mm thick, 6m
49	42	M/W Dam	4.3	m³	56.25	R 400.00	R 22 500.00	
50	42	M/W Dam	4.3	m³	56.25	R 400.00	R 22 500.00	high
51 52	60 61	Sump Water Canal	4.2 8.4	m³ m²	6.24 2692.00	R 640.00 R 135.00	R 3 993.60 R 363 420.00	Structural concrete, 300mm thick, 2m deep Thin reinforced concrete
53	78	Plant - covered parking	2.6.1	m²	0.00			To be constructed according to program
54 55	104	Plant - Waste silo Sub - Total for demolitioning of all structural structures	4.3	m³	0.00	R 400.00	R - 2 135 443.60	To be constructed according to program
56 57	13	Demolitioning of workshops and stores Winder House	3.7	m²	1119.00	R 380.00		Double volume building
58 59	14	Winder House Winder rope store	3.7	m² m²	956.70 45.00	R 380.00	R 363 546.00	Double volume building Single storey brick building
60 61	24 25	Fan and electrical motor store Workshop sink and perm	3.1.1	m² m²	198.00 819.90	R 295.00	R 58 410.00	Single storey brick building Single volume building
62	31 32	Main Store Explosives Store	3.7	m² m²	1380.80 285.00	R 380.00	R 524 704.00	Double volume building Single volume building
64 65	33 34	Gas bottle store Chemical Store	3.1.1 3.1.1	m² m²	36.00 201.00	R 295.00	R 10 620.00	Single storey brick building Single storey brick building
66 67	35 36	Paint Store Oil store	3.1.1	m² m²	41.00 36.00	R 295.00	R 12 095.00	Single storey brick building Single storey brick building
68 69	44 82	Generator farm Plant - Building	3.2.1	m² m²	412.00 0.00	R 480.00	R 197 760.00	Single storey brick building To be constructed according to program
70 71	83 86	Plant - Building Plant - Workshop	3.6 3.7	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program
72 73	93 95	Plant - Building Plant - Building	3.6	m² m²	0.00	R 320.00	R -	To be constructed according to program To be constructed according to program
74 75	96	Plant - Building Sub - Total for demolitioning of workshops and stores	3.6	m²	0.00			To be constructed according to program
76		Demolitioning of permanent brick structures and temporary structures						
77 78	1 2	Offices Change House	3.1.1 3.1.1	m² m²	1023.00 1066.00			Single storey brick building Single storey brick building
79 80	3	Grange Flouse Laundry Boiler House	3.1.1	m² m²	179.00 232.00	R 295.00	R 52 805.00	Single storey brick building Single storey brick building
81 82	5	Change House Lamp Room	3.1.1	m² m²	1119.00 909.50	R 295.00	R 330 105.00	Single storey brick building Single storey brick building Single storey brick building
83 84	7 8	Change House Induction Room	3.1.1	m² m²	0.00 144.00	R 295.00	R -	Single storey brick building
85 86	9	Training Centre Gate House	3.1.1	m² m²	116.70 184.00	R 295.00	R 34 426.50	Single storey brick building Single storey brick building
87 88	11	Banksman Cabin & Proto Room Central Control room	3.1.1	m² m²	88.60 302.00	R 295.00	R 26 137.00	Single storey brick building Single storey brick building
89 90	19 19	Sub-station Sub-station	3.2.1 3.2.1	m² m²	15.00 15.00	R 480.00	R 7 200.00	Single storey brick building Single storey brick building
91	20	Transformer bays	3.2.1	m²	156.00			Single storey brick building





		Closure Costing - Leeuwkop				Closure Co	sts - <u>Year 10 - (202</u>	1)
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes
92 93	29 30	Sub-station MCC	3.2.1 3.2.1	m² m²	120.00 65.00			Single storey brick building Single storey brick building
94 95	45 47	Sumer Sub-station Geology building	3.2.1 3.1.1	m² m²	206.40 183.00	R 480.00		Single storey brick building Single storey brick building
96	48	Offices	3.1.1	m²	149.60	R 295.00	R 44 132.00	Single storey brick building
97 98	49 50	Offices Shaft Sinker Offices	3.1.1 3.3	m² m²	149.60 124.00	R 140.00	R 17 360.00	Single storey brick building Portable offices
99 100	51 52	Shaft Sinker Offices Change House	3.3	m² m²	124.00 16.00			Portable offices Portable offices
101 102	53 54	Change House Change House	3.3 3.3	m² m²	16.00 16.00	R 140.00 R 140.00	R 2 240.00 R 2 240.00	Portable offices Portable offices
103	55 56	Lamp Room	3.3	m² m²	16.00	R 140.00	R 2 240.00	Portable offices Portable offices
105	57	Steffanuti Stocks Shaft Sinker Offices	3.3	m²	16.00 124.00	R 140.00	R 17 360.00	Portable offices
106 107	58 76	Shaft Sinker Offices Explosives bunker	3.3 3.1.1	m² m²	124.00 150.00	R 295.00	R 44 250.00	Portable offices Single storey brick building
108 109	77 79	Weighbridge Plant - Admin building	1.2 3.1.1	sum m²	0.00			To be constructed according to program To be constructed according to program
110 111	80 81	Plant - Induction room Plant - Office	3.1.1 3.1.1	m² m²	0.00			To be constructed according to program To be constructed according to program
112 113	84 85	Plant - Sub-station Plant - Sub-station	3.2.1 3.2.1	m² m²	0.00		R -	To be constructed according to program To be constructed according to program
114	97	Plant - building Sub - Total for demolitioning of permanent brick structures and	3.1.1	m²	0.00	R 295.00		To be constructed according to program
115		temporary structures					R 2 126 612.00	
116 117	26	Removal of all surface related finishes Surface cable yard	4.5	m²	30.00			Assume 250mm thick concrete
118 119	46 47	PFC yard Geology yard	4.5 4.5	m² m²	1199.00 473.00	R 590.00	R 279 070.00	Assume 250mm thick concrete Assume 250mm thick concrete
120 121	73 90	General surface bed Plant - Laydown areas	4.4 4.5	m² m²	10610.85 0.00	R 590.00	R -	Assume 150mm thick concrete To be constructed according to program
122 123	91 92	Plant - Laydown areas Plant - Laydown areas	4.5 4.5	m² m²	0.00 0.00	R 590.00	R -	To be constructed according to program To be constructed according to program
124 125	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	0.00	R 590.00	R 3 285 512.75	To be constructed according to program
126 127	32	Removal of all linear items Fencing to explosives store	5.5.3	m	85.00	R 27.00		
128 129	37 39	Reef and waste conveyor Reef conveyor	5.1.5 5.1.5	m m	0.00 252.00	R 640.00	R -	To be constructed according to program Suspended conveyor
130	62	Waste conveyor	5.1.2	m	1226.00	R 265.00	R 324 890.00	Overland conveyor
131 132	63 64	Return water pipeline Tailing delivery pipeline	5.2.2 5.2.2	m m	0.00	R 48.00 R 48.00	R -	To be constructed according to program To be constructed according to program
133 134	65 66	Pipeline from sump to PCD Emergency pipeline from concentrator to dam	5.2.2 5.2.2	m m	348.00 0.00	R 48.00 R 48.00	R 16 704.00	200-350mm steel pipelines To be constructed according to program
135 136	67 68	Distribution pipelines Water main pipeline	5.2.2 5.2.2	m m	4780.00 1870.00	R 48.00		200-350mm steel pipelines 200-350mm steel pipelines
137 138	69 74	Fire main pipeline Perimeter fencing	5.2.2 5.5.3	m m	1870.00 3600.00		R 89 760.00 R 97 200.00	200-350mm steel pipelines
139 140	75 76	Perimeter fencing to tailings complex Perimeter fence to explosives bunker	5.5.3 5.5.3	m m	0.00 201.00	R 27.00	R -	To be constructed according to program
141 142	105	Plant - Steel gantry's with delivery pipelines Plant - Security fencing	2.3.1 5.5.3	m² m	0.00	R 107.00	R -	To be constructed according to program To be constructed according to program
143 144		Main water pipeline Sub - Total for removal of all linear items	5.2.3	m	4669.00			3.1.3.
145		Rehabilitation of roads	4.4		0.00			A
146 147		Entrance road Minor gravel road to explosives bunker	1.1 8.3	na m²	0.00 5864.00			Assume will remain
148 149		Sub - Total for rehabilitation of roads Disposal of demolition waste					R 23 456.00	
150 151		Sorting and screening of waste Disposal of demolition waste	6.1 6.2.1	% m³/km	15027382.35 28296.00	2.50% R 160.00	R 375 684.56 R 4 527 360.00	2.50% Assume 50km distance
152 153		Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects					R 4 903 044.56 R 24 728 426.91	
154 155		Mining Aspects					2472042001	
156		Open pit reclamation including final voids and ramps				_	_	
157		Not applicable	1.1	na	0.00	R -	R -	
158 159		Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines					R -	
160 161	15 23	Service and Production Shaft Refrigeration shaft	7.1.15 7.1.11	sum	1.00 1.00	R 2 573 324.00 R 1 838 850.00	R 2 573 324.00 R 1 838 850.00	10m Diameter 8m Diameter
162 163	28	Vent Shaft Sub - Total for sealing of shafts and inclines	7.1.11	sum	1.00			8m Diameter
164		Rehabilitation of overburden and spoils					R 0251 024.50	0.1.(.)
165 166	110	Topsoil stockpiles Rip area to alleviate compaction	9.5.1	ha	1.18	R 9 400.00	R 11 099.52	Only footprints will remain
167 168	<u> </u>	Establish vegetation Sub - Total for rehabilitation of overburden and spoils	10.4.1	ha	1.18	R 13 800.00	R 16 295.04 R 27 394.56	
169		Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)						
170		Not applicable Sub - Total for rehabilitation of processing waste deposits and	1.1	na	0.00	R -	R -	
171		evaporation ponds (non polluting potential) Rehabilitation of processing waste deposits and evaporation ponds					R -	
172	70	(polluting potential)						
173 174	70	Settling dams Remove contaminated sediment and stockpile	9.2	m³	1320.00			Assume 250mm contaminated sediment
175 176		Load and haul contaminated sediment Remove HDPE liner	1.2 6.4	sum m²	1320.00 5280.00	R 6.50	R 34 320.00	Haul sediment to tailings facility 8km
177 178		Breach dam wall Shape and level area	10.1.5 10.1.1	m ha	302.00 0.53		R 66 440.00 R 29 172.00	Doze material inward to fill void Make area free draining
179 180	71A	Establish vegetation Emergency storage dam	10.4.1	ha	0.53			~
181		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2	m³	2986.50 2986.50			Assume 100mm contaminated sediment Haul sediment to tailings facility 8km
183		Remove HDPE liner	6.4	sum m²	31861.00	R 6.50	R 207 096.50	
184 185		Breach dam wall Shape and level area	10.1.5 10.1.1	m ha	714.00 3.19	R 55 250.00	R 176 032.03	Doze material inward to fill void Make area free draining
186 187	71B	Establish vegetation Emergency storage dam	10.4.1	ha	3.19	R 13 800.00	R 43 968.18	
188 189		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	2160.80 2160.80			Assume 100mm contaminated sediment Haul sediment to tailings facility 8km
190 191		Remove HDPE liner Breach dam wall	6.4	m²	29000.00 688.00	R 6.50	R 188 500.00	Doze material inward to fill void
192		Shape and level area	10.1.1	m ha	2.90	R 55 250.00	R 160 225.00	Make area free draining
193 194	72	Establish vegetation Pollution control dam	10.4.1	ha	2.90			
195	i	Remove contaminated sediment and stockpile	9.2 1.2	m³ sum	1768.50 1768.50			Assume 100mm contaminated sediment Haul sediment to tailings facility 8km
196 197		Load and haul contaminated sediment Remove HDPE liner	6.4	Juili	17685.00		R 114 952.50	





		Closure Costing - Leeuwkop					Closure Cos	sts -	Year 10 - (202	1)
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate		Amount	Notes
198		Breach dam wall	10.1.5	m	532.00	R	220.00	R	117 040.00	Doze material inward to fill void
199		Shape and level area	10.1.1	ha	0.17		55 250.00		9 248.85	Make area free draining
200		Establish vegetation	10.4.1	ha	0.17	R	13 800.00		2 310.12	•
										Assumed 20m strip would not have been
201	107	Waste Rock Dump				<u> </u>		_		rehabilitated
202		Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	К	34 340.00	Assume 250mm thick Cut to fill action assumed 20m high at
203		Reshape WRD	9.1.1	m³	29925.00	R	13.50	R	403 987.50	87.5m³/per meter
200			0.1.1		20020.00	Τ̈́	10.00	·`	100 001.00	
		Import capping layers								Assumed 1km haul distance, 300mm thick
204			9.6.1	m³	8160.00	R	28.00	R	228 480.00	capillary layer and 300mm thick black turf
		Import topsoil layer								Assumed 1km haul distance, 200mm thick
205			9.6.1	m³	2720.00		28.00	R	76 160.00	layer
206 207	108	Establish vegetation Tailings Complex	10.4.1	ha	1.36) K	13 800.00	ĸ	18 768.00	To be constructed according to program
208	100	Seal Penstocks	7.3	sum	0.00	R	213 200.00	R	-	To be constructed according to program
209		Breach wall & reshape	10.1.5	m	0.00		220.00			
210		Rip to alleviate compaction	9.5.1	ha	0.00		9 400.00		-	
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00		13 800.00		-	
212		Establish vegetation on tailings dam slopes	10.4.2	ha	0.00		19 250.00		-	
		Establish vegetation on tailings dam top								
213			10.4.2	ha	0.00	R	19 250.00	R	-	
214	109	Waste Rock Noise Barrier	40.4.4		0.40	_	FF 0F0 00		110 005 00	
215		Reshape berm	10.1.1	ha	2.10	ı ĸ	55 250.00	ĸ	116 025.00	Assumed 1km haul distance, 200mm thick
216		Import topsoil layer	9.6.1	m³	4200.00	R	28.00	R	117 600.00	layer
217		Establish vegetation	10.4.1	ha	2.10		13 800.00		28 980.00	layor
		Sub - Total for rehabilitation of processing waste deposits and								
218		evaporation ponds (polluting potential)						R	3 438 624.40	
219		Reclamation of subsided areas								
220		Not applicable	1.1	na	0.00	R	-	R	-	
221		Sub - Total for reclamation of subsided areas						R		
222 223		Sub - Total for Mining aspects				-		R	9 717 042.96	
223		General Surface Reclamation								
225		Mine								
223		Mille				+				
										Includes stockpiling of material, backfilling
226		Shape and level disturbed area	10.1.1	ha	20.00	l P	55 250.00	R	1 105 000.00	of excavations in cut to fill operation and final profiling @ave 500mm over footprint
227		Rip area to alleviate compaction	9.5.1	ha	20.00		9 400.00		188 000.00	500mm deep ripping
LL.		Tup area to anomate compassion	0.0.1	· · · ·	20.00	+:-	0 100.00	·`	100 000.00	150mm from local stockpile, assume 1km
228		Import topsoil	9.6.1	m³	30000.00	R	28.00	R	840 000.00	load and haul
229		Establish vegetation	10.4.1	ha	20.00	R	13 800.00	R	276 000.00	
230		Plant								Footprint not disturbed
231		Chang and lavel disturbed area	10.1.1	ho	0.00	R	55 250.00	R		
232		Shape and level disturbed area Rip area to alleviate compaction	9.5.1	ha ha	0.00		9 400.00			
202		Tup area to anomate companion	0.0.1	- na	0.00	۲÷	0 100.00	Ë		
233		Import topsoil	9.6.1	m³	0.00	R	28.00	R	-	
234		Establish vegetation	10.4.1	ha	0.00	R	13 800.00	R	-	
235		Sub - Total for General Surface Reclamation						R	2 409 000.00	
236										
237		Water Management								
			Ī	l		1				Assume none required, all mitigation
238		Not applicable	1.1	na	0.00	P	_	R	_	measures will be implemented during the operational phase
239		Sub - Total for Water Management		IIa	0.00	, IX		R	-	operational phase
240		- Oub - Total for Mater Management				t				
		SUB - TOTAL 1				t			00.054.400.55	
241		(for infrastructural and related structures)						R	36 854 469.86	
242		Post - closure aspects								
243		Surface water quality monitoring	12.1	yr	5.00		106 000.00		530 000.00	8 monitoring points on a monthly basis
244		Groundwater quality monitoring	12.2	yr	5.00		150 000.00		750 000.00	15 monitoring points on a quarterly basis
245		Reclamation monitoring on reclaimed areas	12.3	ha	36.90		2 500.00		92 250.00	,
246		Care and maintenance of reclaimed areas	12.4	ha	36.90	R	15 500.00		571 950.00	5 years
247		Sub - Total for Post closure aspects				╄		R	1 944 200.00	A
240		Contingonaica for post alequire general	4.0		4.00	L	104 400 00	Ь	104 400 00	Assumed 10 percent for post closure
248		Contingencies for post closure aspects Sub - Total for Contingencies for post closure aspects	1.2	sum	1.00	K	194 420.00	R R	194 420.00 194 420.00	aspects
240		Sub - Total for Contingencies for post closure aspects SUB - TOTAL 2				t				
249		(for post - closure aspects)						R	2 138 620.00	
249 250										
250										
		Additional allowances	1.2	sum	1.00	R	2 211 268.19	R	2 211 268.19	Assume 6 percent of sub - total 1
250 251			1.2	sum			2 211 268.19 3 685 446.99		2 211 268.19 3 685 446.99	Assume 6 percent of sub - total 1 Assume 10 percent of sub - total 1
250 251 252 253		Additional allowances Preliminary and General						R	3 685 446.99	
250 251 252		Additional allowances Preliminary and General Contingencies SUB - TOTAL 3 (for additional allowances)								
250 251 252 253		Additional allowances Preliminary and General Contingencies SUB - TOTAL 3						R	3 685 446.99	





		Closure Costing - Leeuwkop				Closure (Costs - Scheduled	
Item nr	ID	Task	Unit Rate	Unit	Quantity	Rate	Amount	Notes
1		Infrastructural Aspects	Code					
3		Nominal cost and time related items Mine						
4		Removal of salvageable equipment	1.2	sum	1.00	R 3 750 000.00	R 3 750 000.00	Nominal allowance For assistance in the removal of equipment
5 6		Crane Plant	11.1	p/day	45.00	R 38 700.00	R 1 741 500.00	and demolition purposes
7		Removal of salvageable equipment	1.2	sum	1.00	R 6 500 000.00	R 6 500 000.00	Nominal allowance For assistance in the removal of equipment
8 9		Crane Sub-Total for cost and time related items	11.1	p/day	30.00	R 38 700.00	R 1 161 000.00 R 13 152 500.00	and demolition purposes
10		Demolitioning of plant and related structures						
11	21	Compressor house	3.7	m²	1318.45	R 380.00	R 501 011.00	Double volume building Structural Concrete, assume 5m high,
12	22	Condenser cooling towers	4.2	m³	527.80	R 640.00	R 337 792.00	250mm thick Structural Concrete, assume 5m high,
13	23	Refrigeration plant	4.2	m³	1128.75	R 640.00	R 722 400.00	250mm thick
14	27	Grout Plant	3.7	m²	1734.00	R 380.00	R 658 920.00	Double volume building
15 16	28 40	Ventilation Shaft Water treatment plant	2.2	t m²	480.00 1225.00	R 1 280.00 R 590.00	R 614 400.00 R 722 750.00	Info received from Impala Assume 450kg of steel per m ²
17	43	Sewage Plant	3.6	m²	1732.50	R 320.00	R 554 400.00	Single volume building
18	59	Booster pump station	3.6	m²	850.00		R 272 000.00	Single volume building
19		Plant - Cleaners	0.0		000.00	N 320.00	272 000.00	origin volume banding
20	87	Structural steel	2.3.2	m²	765.00	R 590.00	R 451 350.00	Assume 450kg of steel per m²
21	00	Structural concrete	4.3	m³	191.25	R 400.00	R 76 500.00	Assume 250mm thick reinforced concrete
22	88	Plant - Cleaners Structural steel	2.3.2	m²	1297.00	R 590.00	R 765 230.00	Assume 450kg of steel per m²
24	90	Structural concrete	4.3	m³	324.25	R 400.00	R 129 700.00	Assume 250mm thick reinforced concrete
25 26	89	Plant - Mill Structural steel	2.3.2	m²	1240.00	R 590.00	R 731 600.00	Assume 450kg of steel per m²
27		Structural concrete	4.3	m³	310.00		R 124 000.00	Assume 250mm thick reinforced concrete
28 29	94 98	Plant - Storage area Plant	3.7 3.6	m² m²	1363.00 333.00	R 320.00	R 517 940.00 R 106 560.00	Double volume building Single volume building
30 31	99 100	Plant Plant - Thickener	3.6	m²	382.00	R 320.00	R 122 240.00	Single volume building
32		Structural steel	2.3.2	m²	146.00			Assume 450kg of steel per m ²
33 34	101	Structural concrete Plant - Thickener	4.3	m³	565.00	R 400.00	R 226 000.00	Assume 250mm thick reinforced concrete
35		Structural steel	2.3.2	m²	115.00	R 590.00	R 67 850.00	Assume 450kg of steel per m ²
36 37	102	Structural concrete Plant - Thickener	4.3	m³	299.00	R 400.00	R 119 600.00	Assume 250mm thick reinforced concrete
38		Structural steel	2.3.2	m²	115.00	R 590.00	R 67 850.00	Assume 450kg of steel per m ²
39 40		Structural concrete Sub - Total for demolitioning of plant and related structures	4.3	m³	299.00	R 400.00	R 119 600.00 R 8 095 833.00	Assume 250mm thick reinforced concrete
41 42	40	Demolitioning of all structural structures						
43	16	Carports	2.6.1	m²	5934.00	R 90.00	R 534 060.00	IBR sheeting
	16 17	Carports Contractors Carports Headnear	2.6.1 2.6.1	m² m² t	424.00	R 90.00	R 38 160.00	IBR sheeting IBR sheeting Info received from Impala
44 45								IBR sheeting Info received from Impala
44	17	Contractors Carports Headgear	2.6.1 2.2	m² t	424.00 600.00	R 90.00 R 1280.00	R 38 160.00 R 768 000.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high
44 45 46 47	17 15 38 38	Contractors Carports Headgear Structural concrete Waste silo Waste silo	2.6.1 2.2 4.1 4.3	m² t m³ m³	424.00 600.00 147.00 210.00	R 90.00 R 1280.00 R 1280.00 R 400.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume
44 45 46 47 48	17 15 38 38 41	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank	2.6.1 2.2 4.1 4.3 4.3 2.4.2	m² t m³ m³ no	424.00 600.00 147.00 210.00 210.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m
44 45 46 47 48 49	17 15 38 38 41 42	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam	2.6.1 2.2 4.1 4.3 4.3 2.4.2	m³ m³ m³ no	424.00 600.00 147.00 210.00 210.00 1.00 56.25	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m
44 45 46 47 48 49 50	17 15 38 38 41 42 42	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3	m² t m³ m³ no m³	424.00 600.00 147.00 210.00 210.00 1.00 56.25	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high
44 45 46 47 48 49 50 51 52	17 15 38 38 41 42 42 60 61	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3	m² t m³ m³ no m³ m³ no m³	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 440.00 R 640.00 R 135.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 3 993.60 R 363 420.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete
44 45 46 47 48 49 50 51 52 53	17 15 38 38 41 42 42 60 61 78	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.2 8.4 2.6.1	m² t m³ m³ no m³ m³ m² m² m² m²	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 1580.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 90.00 R 90.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R 142 200.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume
44 45 46 47 48 49 50 51 52 53 54 55	17 15 38 38 41 42 42 60 61 78	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - Covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3	m² t m³ m³ no m³ m³ no m³	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 90.00 R 90.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 363 420.00 R 142 200.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Structural concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting
44 45 46 47 48 49 50 51 52 53 54 55 56 56	17 15 38 38 41 42 42 60 61 78 104	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1	m² t m³ m³ no m³ no m³ m² m² m² m² m²	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 210.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26650.00 R 400.00 R 400.00 R 400.00 R 90.00 R 400.00 R 400.00 R 335.00 R 90.00 R 335.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 3 993.60 R 3 142 200.00 R 142 200.00 R 84 000.00 R 442 520.00 R 425 220.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	17 15 38 38 41 42 42 60 61 78 104	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.2 8.4 2.6.1 4.3	m² t m³ m³ no m³ m² m² m² m² m² m² m² m²	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 1119.00 966.70	R 90.00 R 1280.00 R 1280.00 R 400.00 R 350.00 R 350.00 R 380.00 R 380.00 R 380.00 R 380.00 R 2855.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 393.60 R 393.60 R 342 20.00 R 342 20.00 R 442 200.00 R 442 200.00 R 363 420.00 R 7 363 420.00 R 363 420.00 R 363 363 00.00 R 363 363 00.00 R 363 364 50.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Double volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61	17 15 38 38 41 42 42 42 60 61 78 104	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1.1 3.1.1 3.6	m² t m³ m³ no m³ m³ m³ m° m³ m² m² m² m² m² m²	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 1119.00 91119.00 915.70 915.70 915.70	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26650.00 R 400.00 R 400.00 R 400.00 R 400.00 R 350.00 R 380.00 R 380.00 R 380.00 R 295.00 R 295.00 R 295.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 393.60 R 393.60 R 363 420.00 R 363 450.00 R 363 566.00 R 13 275.00 R 13 275.00 R 16 410.00 R 56 410.00 R 26 586.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single storey brick building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 69 60 61 62 63	17 15 38 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder rope store Fan and electrical motor store	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1.1 3.6 3.7 3.6	m² t m³ m³ no m³ m³ m² m² m² m² m² m² m² m² m²	424.00 600.00 147.00 210.00 1.00 56.25 6.24 2692.00 1580.00 1119.00 956.70 45.00 188.00 189.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 380.00 R 380.00 R 380.00 R 295.00 R 320.00 R 380.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 3993.60 R 3993.60 R 363 420.00 R 142 200.00 R 2361 643.60 R 363 640.00 R 363 640.00 R 363 640.00 R 365 640.00 R 365 640.00 R 365 640.00 R 58 410.00 R 58 410.00 R 58 410.00 R 58 410.00 R 58 750.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Jouble volume building Single storey brick building Single volume building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62	17 15 38 38 41 42 42 60 61 78 104	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MWV Dam MWW Dam Mover tank M	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.7 3.1 1.3.6 3.7	m² t m³ m³ m³ no m³ m³ m²	424.00 600.00 147.00 210.00 1.00 1.00 56.25 56.25 6.24 2692.00 11890.00 1119.00 956.70 45.00 198.00 1380.80	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 640.00 R 90.00 R 90.00 R 380.00 R 380.00 R 295.00 R 320.00 R 380.00 R 320.00 R 320.00 R 320.00 R 320.00 R 320.00 R 2955.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 393.60 R 393.60 R 363 420.00 R 342 000 R 342 000 R 343 354 000 R 363 540.00 R 13 275.00 R 58 410.00 R 58 410.00 R 91 200.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63 64	17 15 38 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder pop store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 2.6.1 4.3 3.7 3.7 3.1 3.1 3.6 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7	m² t m³ m³ m³ no m³ m³ m³ m³ m² m² m² m² m² m² m² m² m²	424.00 600.00 147.00 210.00 1.00 1.00 56.25 6.25 6.24 2692.00 1580.00 1119.00 956.70 45.00 198.00 1380.80 285.00 36.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 380.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 24 650.00 R 22 500.00 R 22 500.00 R 32 500.00 R 393.60 R 363 420.00 R 363 420.00 R 363 450.00 R 363 450.00 R 363 450.00 R 363 450.00 R 10 20 360 60 60 60 60 60 60 60 60 60 60 60 60 6	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single storey brick building Single volume building Double volume building Single volume building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63 64 65 66	17 15 38 38 41 42 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Paint Store Paint Store Chemical Store Paint Store Paint Store Paint Store Paint Store	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1	m² t m³ m³ m³ no m³ m³ m³ m³ m²	424.00 600.00 147.00 210.00 210.00 1.00 1.00 56.25 6.25 6.24 2692.00 1580.00 210.00 1119.00 956.70 45.00 198.00 285.00 285.00 201.00 41.00 36.00 41.00 36.00 702.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 300.00 R 300.00 R 300.00 R 300.00 R 300.00 R 295.00 R 320.00 R 320.00 R 3295.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 363 420.00 R 142 200.00 R 442 520.00 R 445 220.00 R 58 440.00 R 197 200.00 R 59 295.00 R 59 295.00 R 10 620.00 R 224 640.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63 64 65 66 67 68 69 70 71	17 15 38 38 38 41 42 42 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35 36 44	Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Qenerator farm	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1 3.1 3.6 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m² t m³ m²	424.00 600.00 147.00 147.00 210.00 1.00 1.00 56.25 6.24 2692.00 1580.00 210.00 1119.00 188.00 285.00 285.00 285.00 285.00 285.00 285.00 285.00 385.00 383.00 383.00 383.00 383.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 300.00 R 380.00 R 380.00 R 380.00 R 380.00 R 380.00 R 390.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 32 500.00 R 363 420.00 R 363 420.00 R 363 420.00 R 363 420.00 R 363 640.00 R 363 640.00 R 363 640.00 R 363 640.00 R 10 20 20 20 20 20 20 20 20 20 20 20 20 20	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Single storey brick building Single volume building Single volume building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 66 67 70	17 15 38 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35 44 44 82 83	Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Cas bottle store Chemical Store Paint Store Oil store Generator farm Plant - Building Plant - Building Plant - Building Plant - Building	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.2 8.4 2.6.1 3.7 3.7 3.7 3.1 3.6 3.7 3.6 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m² t m³ m³ m³ m³ m³ m³ m³ m³ m³ m²	424.00 600.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 210.00 1199.00 198.00 198.00 36.00 201.00 41.00 412.00 702.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26650.00 R 400.00 R 400.00 R 400.00 R 90.00 R	R 38 160.00 R 768 000.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 393.60 R 393.60 R 142 200.00 R 142 200.00 R 363 420.00 R 142 200.00 R 25 650.00 R 12 500.00 R 12 500.00 R 12 70.00 R 12 70	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 69 60 61 62 63 64 65 66 67 68 69 70 70 71 71 72 73 74	17 15 38 38 41 42 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35 44 48 83 86 93	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Office of the workshop is and stores Ean and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Oil store Generator farm Plant - Building	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m² t m³ m³ m³ m³ m³ m³ m³ m³ m²	424.00 600.00 147.00 210.00 1.00 1.00 56.25 56.25 6.24 2692.00 1580.00 210.00 1119.00 956.70 45.00 198.00 285.00 201.00 41.00 36.00 201.00 41.00 36.00 36.00 36.00 41.00 36.00 41.00 36.00 41.00 36.00 41.00 36.00 41.00	R 90.00 R 1280.00 R 400.00 R 300.00 R 135.00 R 90.00 R 380.00 R 380.00 R 320.00 R 295.00 R 295.00 R 320.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 33 93.60 R 393.42.00 R 142 200.00 R 442 520.00 R 455 245 245 245 245 245 245 245 245 245	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single volume building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75	17 15 38 38 41 42 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 44 82 83 86 93 95	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Office of the workshop of the workshop sink and perm Main Store Eaplosives Store Gas bottle store Chemical Store Paint Store Generator farm Plant - Building	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1.1 3.1.1 3.1.1 3.1.1 3.1.1 3.2.1 3.6 3.6 3.6 3.6 3.7 3.6	m² t m³ m³ no m³ no m³ m²	424.00 600.00 147.00 210.00 1.00 1.00 1.00 1.00 1.00 1.00	R 90.00 R 1280.00 R 400.00 R 300.00 R 135.00 R 90.00 R 380.00 R 380.00 R 380.00 R 395.00 R 39	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 393.60 R 363 420.00 R 363 420.00 R 363 420.00 R 363 420.00 R 142 200.00 R 10 20 36 650.00 R 10 620.00 R 10 620.00 R 10 620.00 R 10 620.00 R 11 20 95.00 R 11 20 95.00 R 12 24 640.00 R 124 580.00 R 125 650.00 R 125 650.00 R 126 560.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single volume building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 77 76 77	17 15 38 38 41 42 42 42 60 61 78 104 13 14 18 24 25 31 33 34 44 82 83 86 93 95 96	Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Chemical Store Oil store Generator farm Plant - Building Plant - Workshop Plant - Building	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m² t m³ m³ no m³ no m³ no m³ m²	424.00 600.00 147.00 210.00 147.00 210.00 1.00 56.25 56.25 6.24 2692.00 1580.00 210.00 360.00 360.00 36.00 36.00 36.00 36.00 36.00 36.00 36.00 36.00 36.00 36.00 372.00 383.00 36.00 36.00 372.	R 90.00 R 1280.00 R 400.00 R 300.00 R 380.00 R 395.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 22 500.00 R 393.60 R 363 420.00 R 363 420.00 R 363 420.00 R 363 420.00 R 142 200.00 R 142 200.00 R 10 20 361 643.60 R 13 275.00 R 10 620.00 R 11 20 95.00 R 12 296.00 R 245 680.00 R 27 765 933.00 R 30 1785.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single volume building
44 45 46 47 48 49 50 51 52 53 54 55 56 67 58 59 60 61 62 63 64 65 66 67 70 71 72 73 74 75 76 77 78	17 15 38 38 38 41 42 42 42 60 61 78 104 13 14 14 25 31 32 33 34 44 82 83 86 93 95 96	Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank M/W Dam M/W Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Sub - Total for demolitioning of workshops and stores Winder House Store Paint Store Paint Store Paint Store Sub - Total for demolitioning of workshops and stores Demolitioning of permanent brick structures and temporary structures Offices Change House Laundry	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m²	424.00 600.00 147.00 210.00 210.00 1.00 1.00 56.25 56.25 6.24 2692.00 1580.00 210.00 1119.00 956.70 45.00 198.00 285.00 201.00 41.00 702.00 363.00 647.00 132.00 132.00 132.00 1086.00 1086.00 179.00 179.00	R 90.00 R 1280.00 R 400.00 R 400.00 R 26 650.00 R 400.00 R 400.00 R 400.00 R 400.00 R 400.00 R 300.00 R 135.00 R 90.00 R 380.00 R 320.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 50.00 R 26 50.00 R 22 500.00 R 22 500.00 R 393.60 R 363 420.00 R 363 420.00 R 363 420.00 R 363 420.00 R 142 200.00 R 363 420.00 R 191 200.00 R 192 200.00 R 192 200.00 R 192 200.00 R 193 200.00 R 194 200.00 R 195 200.00 R 19	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 55 56 57 58 59 60 61 62 63 64 65 66 67 77 73 74 75 76 77 78 79 80 81	17 15 38 38 41 42 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35 44 83 86 93 95 96	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MWW Dam Supp Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Oli store Generator farm Plant - Building Plant - Buildi	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.6 3.7 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6	m² t m² m² m² m² m² m²	424.00 600.00 147.00 210.00 210.00 1.00 1.00 1.00 1.00 1.	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 400.00 R 26650.00 R 400.00 R 90.00 R 400.00 R 90.00 R	R 38 160.00 R 768 000.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 393.60 R 393.60 R 142 200.00 R 142 200.00 R 363 3420.00 R 142 200.00 R 25 361 643.60 R 142 200.00 R 165 360.00 R 165 360.00 R 17 360.00	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 80 80 80 80 80 80 80 80 80	17 15 38 38 41 42 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35 36 44 42 83 86 93 95 96	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder House Winder House Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Oil store Generator farm Plant - Building Plant -	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 3.7 3.7 3.1 3.1 3.1 3.1 3.1 3.1 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	m² t m² m² m² m² m² m²	424.00 600.00 147.00 147.00 210.00 210.00 1.00 1.00 1.00 1.00 1.	R 90.00 R 1280.00 R 1280.00 R 400.00 R 400.00 R 26650.00 R 400.00 R 400.00 R 400.00 R 400.00 R 90.00 R 90.00 R 300.00 R 300.00 R 300.00 R 300.00 R 320.00	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 363 420.00 R 142 200.00 R 142 200.00 R 363 420.00 R 142 200.00 R 142 200.00 R 197 100.00 R 197 100.	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 67 68 69 60 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 86 87 87 87 87 87 87 87 87 87 87	17 15 38 38 41 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 44 42 83 86 93 95 96	Contractors Carports Headgear Structural concrete Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder House Winder House Winder House Ownshops sink and perm Main Store Fan and electrical motor store Workshop sink and perm Main Store Cas bottle store Chemical Store Gas bottle store Chemical Store Generator farm Plant - Building Plant	2.6.1 2.2 4.1 4.3 2.4.2 4.3 4.3 4.3 4.3 4.2 8.4 2.6.1 4.3 3.7 3.1 3.1 3.1 3.1 3.1 3.6 3.6 3.7 3.6 3.6 3.7 3.6 3.6 3.7 3.6 3.6 3.7 3.6 3.6 3.6 3.6 3.7 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6 3.6	m²	424.00 600.00 147.00 210.00 147.00 210.00 1.00 1.00 1.00 1.00 1.00 1.00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 300.00 R 300.00 R 300.00 R 300.00 R 300.00 R 320.00	R 38 160.00 R 768 000.00 R 84 000.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 32 500.00 R 363 420.00 R 363 420.00 R 363 420.00 R 363 420.00 R 363 640.00 R 142 200.00 R 363 640.00 R 10 620.00 R 10 620.0	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 77 78 79 80 81 82 83 84 85 86 87	17 15 38 38 41 42 42 42 60 61 78 104 13 13 14 14 18 24 25 31 32 33 34 48 28 33 36 44 82 83 93 95 96 11 22 33 44 56 66 77 86 78 96 96 97 97 97 97 97 97 97 97 97 97 97 97 97	Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam MW Dam Sump Water Canal Plant - covered parking Plant - Waste silo Sub - Total for demolitioning of all structural structures Demolitioning of workshops and stores Winder House Winder House Winder House Winder rope store Fan and electrical motor store Workshop sink and perm Main Store Explosives Store Gas bottle store Chemical Store Paint Store Gis bottle store Oli store Generator farm Plant - Building Plant	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m² t m³ m³ m³ m³ m³ m³ m³	424,00 600,00 147,00 210,00 147,00 210,00 1,00 1,00 1,00 1,00 1,00 1,00	R 90.00 R 1280.00 R 1280.00 R 400.00 R 300.00 R 320.00 R	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 24 650.00 R 22 500.00 R 22 500.00 R 22 500.00 R 363 420.00 R 363 420.00 R 363 420.00 R 363 420.00 R 142 200.00 R 142 200.00 R 102 361 643.60 R 152 750.00 R 10 620.00 R 10 620.00 R 10 620.00 R 10 72 755 933.00 R 12 755 933.00 R 314 470.00 R 330 1785.00 R 314 470.00 R 32 755 933.00 R 314 470.00 R 32 755 933.00 R 314 470.00 R 330 105.00 R 68 440.00 R 330 1785.00 R 191 850.00 R 191 8	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Double volume building Single storey brick building Single volume building Single storey brick building
44 45 46 47 48 49 50 51 52 53 54 55 56 60 61 62 63 64 65 66 67 77 73 74 75 76 77 78 79 80 81 82 83 84 85 86 86 87 87 87 87 87 87 87 87 87 87	17 15 38 38 41 42 42 42 60 61 78 104 13 14 18 24 25 31 32 33 34 35 96 96 1 2 2 3 3 4 4 5 6 6 7 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Contractors Carports Headgear Structural concrete Waste silo Waste silo Waste silo Water tank MW Dam MW Dam MW Dam MW Dam Mover tank Mover t	2.6.1 2.2 4.1 4.3 4.3 2.4.2 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3	m²	424.00 600.00 147.00 210.00 210.00 1.00 1.00 1.00 1.00 1.	R 90.00 R 1280.00 R 400.00 R 300.00 R 3	R 38 160.00 R 768 000.00 R 188 160.00 R 84 000.00 R 26 650.00 R 22 500.00 R 22 500.00 R 393.60 R 363 420.00 R 378 520.00 R	IBR sheeting Info received from Impala Structural concrete, 250mm thick, assume 15m high Structural concrete, 250mm thick, assume 15m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Assume concrete dam, 250mm thick, 6m high Structural concrete, 300mm thick, 2m deep Thin reinforced concrete IBR sheeting Structural concrete, 250mm thick, assume 15m high Double volume building Double volume building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single storey brick building Single volume building Single storey brick building





		Closure Costing - Leeuwkop	Closure Costs - <u>Scheduled</u>										
Item nr	ID	Task	Unit Rate Code	Unit	Quantity	Rate	Amount	Notes					
92 93	29 30	Sub-station MCC	3.2.1 3.2.1	m² m²	120.00 65.00	R 480.00 R 480.00		Single storey brick building Single storey brick building					
94 95	45 47	Sumer Sub-station Geology building	3.2.1 3.1.1	m² m²	206.40 183.00	R 480.00 R 295.00		Single storey brick building Single storey brick building					
96	48	Offices	3.1.1	m²	149.60	R 295.00	R 44 132.00	Single storey brick building					
97 98	49 50	Offices Shaft Sinker Offices	3.1.1	m² m²	149.60 124.00		R 44 132.00 R 17 360.00	Single storey brick building Portable offices					
99 100	51 52	Shaft Sinker Offices Change House	3.3	m² m²	124.00 16.00	R 140.00 R 140.00	R 17 360.00 R 2 240.00	Portable offices Portable offices					
101	53	Change House	3.3	m²	16.00	R 140.00	R 2 240.00	Portable offices					
102 103	54 55	Change House Lamp Room	3.3	m² m²	16.00 16.00		R 2 240.00 R 2 240.00	Portable offices Portable offices					
104 105	56 57	Steffanuti Stocks Shaft Sinker Offices	3.3	m² m²	16.00 124.00		R 2 240.00 R 17 360.00	Portable offices Portable offices					
106	58	Shaft Sinker Offices	3.3	m²	124.00	R 140.00	R 17 360.00	Portable offices					
107 108	76 77	Explosives bunker Weighbridge	3.1.1 1.2	m² sum	150.00 2.00	R 295.00 R 50 000.00	R 44 250.00 R 100 000.00	Single storey brick building Nominal allowance					
109 110	79 80	Plant - Admin building Plant - Induction room	3.1.1 3.1.1	m² m²	739.00 74.00	R 295.00 R 295.00	R 218 005.00 R 21 830.00	Single storey brick building Single storey brick building					
111 112	81 84	Plant - Office Plant - Sub-station	3.1.1 3.2.1	m² m²	154.00 3.70	R 295.00 R 480.00	R 45 430.00 R 1 776.00	Single storey brick building					
113 114	85 97	Plant - Sub-station Plant - building	3.2.1 3.1.1	m² m²	5.00 120.00	R 480.00 R 295.00	R 2 400.00 R 35 400.00	Single storey brick building					
		Sub - Total for demolitioning of permanent brick structures and	0.111		120.00	100.00		ongre area, change					
115 116		temporary structures Removal of all surface related finishes											
117 118	26 46	Surface cable yard PFC yard	4.5 4.5	m² m²	30.00 1199.00			Assume 250mm thick concrete Assume 250mm thick concrete					
119 120	47 73	Geology yard General surface bed	4.5 4.4	m² m²	473.00 10610.85		R 279 070.00 R 2 281 332.75	Assume 250mm thick concrete Assume 150mm thick concrete					
121	90	Plant - Laydown areas	4.5	m²	224.00	R 590.00	R 132 160.00	Assume 250mm thick concrete Assume 250mm thick concrete					
122	91 92	Plant - Laydown areas Plant - Laydown areas	4.5	m² m²	119.00 163.00	R 590.00	R 96 170.00	Assume 250mm thick concrete					
124 125	103	Plant - Laydown areas Sub - Total for removal of all surface related finishes	4.5	m²	1006.00	R 590.00	R 593 540.00 R 4 177 592.75	Assume 250mm thick concrete					
126 127	32	Removal of all linear items Fencing to explosives store	5.5.3	m	85.00	R 27.00	R 2 295.00						
128 129	37 39	Reef and waste conveyor Reef conveyor	5.1.5 5.1.5	m m	406.00 252.00		R 259 840.00	Suspended conveyor Suspended conveyor					
130	62	Waste conveyor	5.1.2	m	1226.00 11100.00	R 265.00	R 324 890.00	Overland conveyor					
131 132	63 64	Return water pipeline Tailing delivery pipeline	5.2.2 5.2.2	m m	11295.00	R 48.00	R 542 160.00	200-350mm steel pipelines 200-350mm steel pipelines					
133 134	65 66	Pipeline from sump to PCD Emergency pipeline from concentrator to dam	5.2.2 5.2.2	m m	348.00 221.00			200-350mm steel pipelines 200-350mm steel pipelines					
135 136	67 68	Distribution pipelines Water main pipeline	5.2.2 5.2.2	m m	4780.00 1870.00		R 229 440.00 R 89 760.00	200-350mm steel pipelines 200-350mm steel pipelines					
137	69	Fire main pipeline	5.2.2	m	1870.00 3600.00	R 48.00	R 89 760.00	200-350mm steel pipelines					
139	74 75	Perimeter fencing Perimeter fencing to tailings complex	5.5.3 5.5.3	m m	5509.00	R 27.00	R 148 743.00						
140 141	76 105	Perimeter fence to explosives bunker Plant - Steel gantry's with delivery pipelines	5.5.3 2.3.1	m m²	201.00 1204.00		R 5 427.00 R 128 828.00	Assume 100kg of steel per m²					
142 143	106	Plant - Security fencing Main water pipeline	5.5.3 5.2.3	m m	1333.00 4669.00	R 27.00 R 64.00							
144 145		Sub - Total for removal of all linear items Rehabilitation of roads					R 2 974 542.00						
146		Entrance road	1.1	na	0.00		R -	Assume will remain					
147 148		Minor gravel road to explosives bunker Sub - Total for rehabilitation of roads	8.3	m²	5864.00	R 4.00	R 23 456.00 R 23 456.00						
149 150		Disposal of demolition waste Sorting and screening of waste	6.1	%	23254923.35	2.50%	R 581 373.08	2.50%					
151		Disposal of demolition waste	6.2.1	m³/km	51480.00		R 8 236 800.00	Assume 50km distance					
152 153		Sub - Total for disposal of demolition waste Sub - Total for infrastructural aspects					R 8 818 173.08 R 45 225 596.43						
154 155		Mining Aspects											
156		Open pit reclamation including final voids and ramps	11	na	0.00	D	D						
15/		Not applicable	1.1	na	0.00	К -	_						
158 159		Sub - Total open pit reclamation including final voids and ramps Sealing of shafts and inclines					R -						
160 161	15 23	Service and Production Shaft Refrigeration shaft	7.1.15 7.1.11	sum	1.00	R 2 573 324.00 R 1 838 850.00	R 2 573 324.00 R 1 838 850.00	10m Diameter 8m Diameter					
162	28	Vent Shaft	7.1.11	sum		R 1838 850.00	R 1 838 850.00	8m Diameter					
163 164		Sub - Total for sealing of shafts and inclines Rehabilitation of overburden and spoils					R 6 251 024.00						
165 166	110	Topsoil stockpiles Rip area to alleviate compaction	9.5.1	ha	1.18	R 9 400.00	R 11 099.52	Only footprints will remain					
167		Establish vegetation	10.4.1	ha	1.18		R 16 295.04 R 27 394.56						
	1	Sub - Total for rehabilitation of overburden and spoils Rehabilitation of processing waste deposits and evaporation ponds					27 354.56						
169 170		(non polluting potential) Not applicable	1.1	na	0.00	R -	R -						
171		Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential)					R -						
172		Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)											
173	70	Settling dams	0.0		4000 5-	D 000-	D 00.100.5	Accumo 250mm contominated and incomi					
174 175		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	1320.00 1320.00	R 90.40	R 119 328.00	Assume 250mm contaminated sediment Haul sediment to tailings facility 8km					
176 177		Remove HDPE liner Breach dam wall	6.4 10.1.5	m² m	5280.00 302.00		R 34 320.00 R 66 440.00	Doze material inward to fill void					
178 179		Shape and level area Establish vegetation	10.1.1	ha	0.53	R 55 250.00 R 13 800.00	R 29 172.00	Make area free draining					
180	71A	Emergency storage dam	10.4.1	ha	0.53			A					
181 182		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	2986.50 2986.50	R 90.40	R 269 979.60	Assume 100mm contaminated sediment Haul sediment to tailings facility 8km					
183 184		Remove HDPE liner Breach dam wall	6.4 10.1.5	m² m	31861.00 714.00		R 207 096.50 R 157 080.00	Doze material inward to fill void					
185		Shape and level area	10.1.1	ha	3.19	R 55 250.00	R 176 032.03	Make area free draining					
186 187	71B	Establish vegetation Emergency storage dam	10.4.1	ha	3.19								
188 189		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2	m³ sum	2160.80 2160.80			Assume 100mm contaminated sediment Haul sediment to tailings facility 8km					
190		Remove HDPE liner Breach dam wall	6.4	m²	29000.00 688.00	R 6.50	R 188 500.00 R 151 360.00	Doze material inward to fill void					
192		Shape and level area	10.1.1	m ha	2.90	R 55 250.00	R 160 225.00	Make area free draining					
193 194	72	Establish vegetation Pollution control dam	10.4.1	ha	2.90	R 13 800.00	R 40 020.00						
195 196		Remove contaminated sediment and stockpile Load and haul contaminated sediment	9.2 1.2	m³ sum	1768.50 1768.50		R 35 370.00 R 159 872.40	Assume 100mm contaminated sediment Haul sediment to tailings facility 8km					
197		Remove HDPE liner	6.4	m²	17685.00			2. 222					





		Closure Costing - Leeuwkop					Closure C	Costs - <u>Scheduled</u>	
Item nr	ID	Task	Unit Rate Code	Unit	Quantity		Rate	Amount	Notes
198		Breach dam wall	10.1.5	m	532.00	R	220.00	R 117 040.00	Doze material inward to fill void
199		Shape and level area	10.1.1	ha	0.17		55 250.00		
200		Establish vegetation	10.4.1	ha	0.17	R	13 800.00		
									Assumed 20m strip would not have been
201	107	Waste Rock Dump				<u> </u>			rehabilitated
202		Strip topsoil and stockpile for movement of toe	9.2	m³	1717.00	R	20.00	R 34 340.00	
203		Reshape WRD	9.1.1	m³	29925.00	l P	13.50	R 403 987.50	Cut to fill action assumed 20m high at 87.5m³/per meter
203			9.1.1	- '''	29925.00	, IX	13.30	103 907.30	
		Import capping layers							Assumed 1km haul distance, 300mm thick
204			9.6.1	m³	8160.00	R	28.00	R 228 480.00	
		Import topsoil layer							Assumed 1km haul distance, 200mm thick
205			9.6.1	m³	2720.00		28.00	R 76 160.00	
206 207	108	Establish vegetation Tailings Complex	10.4.1	ha	1.36	R	13 800.00	R 18 768.00	
208	100	Seal Penstocks	7.3	sum	4.00	ь	213 200.00	R 852 800.00	Assume 4 penstocks
209		Breach wall & reshape	10.1.5	m	0.00		220.00		Not required as wall will remain
210		Rip to alleviate compaction	9.5.1	ha	0.00		9 400.00		Not required, entire area is covered
211		Establish vegetation disturbed footprint	10.4.1	ha	0.00		13 800.00		Not required, entire area is covered
212		Establish vegetation on tailings dam slopes	10.4.2	ha	1.00		19 250.00		
213		Establish vegetation on tailings dam top	10.4.2	ha	155.00	R	19 250.00	R 2 983 750.00	Assume total top surface to be vegetated
214	109	Waste Rock Noise Barrier				_			
215		Reshape berm	10.1.1	ha	2.10	R	55 250.00	R 116 025.00	
216		Import topsoil layer	9.6.1	m³	4200.00	R	28.00	R 117 600.00	Assumed 1km haul distance, 200mm thick layer
217		Establish vegetation	10.4.1	ha	2.10		13 800.00		
2.7		Sub - Total for rehabilitation of processing waste deposits and	10.1.1	110	2:10	Ť	10 000.00	20 000.00	
218		evaporation ponds (polluting potential)						R 7 294 482.15	
219		Reclamation of subsided areas							
220		Not applicable	1.1	na	0.00	R	-	R -	
221		Sub - Total for reclamation of subsided areas						R -	
222		Sub - Total for Mining aspects						R 13 572 900.71	
223						_			
224		General Surface Reclamation							
225		Mine				1			
									Includes stockpiling of material, backfilling
						l_			of excavations in cut to fill operation and
226		Shape and level disturbed area	10.1.1	ha	20.00		55 250.00	R 1 105 000.00	
227		Rip area to alleviate compaction	9.5.1	ha	20.00	R	9 400.00	R 188 000.00	500mm deep ripping 150mm from local stockpile, assume 1km
228		Import topsoil	9.6.1	m³	30000.00	R	28.00	R 840 000.00	
229		Establish vegetation	10.4.1	ha	20.00		13 800.00		
230		Plant				H			
									Includes stockpiling of material, backfilling
									of excavations in cut to fill operation and
231		Shape and level disturbed area	10.1.1	ha	9.00		55 250.00		
232		Rip area to alleviate compaction	9.5.1	ha	9.00	ı R	9 400.00	R 84 600.00	
233		Import topsoil	9.6.1	m³	13500.00	ь	28.00	R 378 000.00	150mm from local stockpile, assume 1km load and haul
234		Establish vegetation	10.4.1	ha	9.00		13 800.00		
235		Sub - Total for General Surface Reclamation				Ť		R 3 493 050.00	
236									
237		Water Management							
									Assume none required, all mitigation
		L	l .	1		1.		L	measures will be implemented during the
238		Not applicable	1.1	na	0.00	R	-	R -	operational phase
239		Sub - Total for Water Management				₩		R -	
240		OUR TOTAL				۰			
241		SUB - TOTAL 1 (for infrastructural and related structures)						R 62 291 547.14	
242		Post - closure aspects				H			
243		Surface water quality monitoring	12.1	\/r	5.00	P	106 000.00	R 530 000.00	8 monitoring points on a monthly basis
244		Groundwater quality monitoring	12.1	yr yr	30.00		150 000.00		
245		Reclamation monitoring on reclaimed areas	12.3	ha	133.90		2 500.00		
246		Care and maintenance of reclaimed areas	12.4	ha	133.90		15 500.00		
247		Sub - Total for Post closure aspects		. ru	100.00	Ė	555.56	R 7 440 200.00	
						T			Assumed 10 percent for post closure
248		Contingencies for post closure aspects	1.2	sum	1.00	R	744 020.00	R 744 020.00	aspects
249		Sub - Total for Contingencies for post closure aspects						R 744 020.00	
250		SUB - TOTAL 2						R 8 184 220.00	
		(for post - closure aspects)						J 104 ZZ0.00	
251		Additional allowances							
252		Preliminary and General	1.2	sum			3 737 492.83		
253		Contingencies	1.2	sum	1.00	ı R	6 229 154.71	R 6 229 154.71	Assume 10 percent of sub - total 1
254		SUB - TOTAL 3						R 9 966 647.54	
		(for additional allowances) Grand - Total							
255		Grand - Total (for sub - total 1+2+3)						R 80 442 414.68	
		(101 300 - total 1+2+3)							





					Rates Table - 3	tes Table - 2012					
Unit Rate											
Code	Costing Items		Currency	'	Unit Rates	Unit	Notes				
1	Nominal cost and time related items										
	Not Applicable		Rands	R	-	na					
	Sum Rate	-	Rands Rands	R R	-	sum					
1.3	Steel and related structures		Railus	K	_	unit					
2.1	Cladding / Sheeting	:	Rands	R	21.50	m²					
2.2	Structural steelwork		Rands	R	1 280.00	t					
2.3	Super structures										
2.3.1	Light plant structures	-	Rands	R	107.00	m²	up to 100kg of steel per square meter				
2.3.2	Medium plant structures Medium / Heavy plant structures	-	Rands Rands	R R	590.00 1 280.00	m² m²	up to 450kg of steel per square meter up to 1000kg of steel per square meter				
2.3.4	Heavy plant structures	-	Rands	R	1 900.00	m²	up to 1500kg of steel per square meter				
2.4	Steel tanks with rubber lining						,				
2.4.1	0-5m		Rands	R	10 600.00	no	diameter				
2.4.2	5-10m	:	Rands	R	26 650.00	no	diameter				
2.4.3	10-15m 15-20m	-	Rands Rands	R R	37 300.00 53 300.00	no no	diameter diameter				
2.4.5	20-30m		Rands	R	69 300.00	no	diameter				
2.5	Single steel tanks		Rands	R	5 300.00	no	small enclosed steel tanks				
2.6	Carports										
2.6.1	Carports with IBR covering	-	Rands	R	90.00	m²	excludes paving				
2.6.2	Carports with Shade net covering Buildings and related structures	Ė	Rands	R	43.00	m²	excludes paving				
3.1	Brick buildings										
3.1.1	Single storey building	Ŀ	Rands	R	295.00	m²	includes soft strip, excludes disposal of waste				
3.1.2	Double storey building	:	Rands	R	500.00	m²	includes soft strip, excludes disposal of waste				
3.2	Substations, pump stations and strong rooms			<u> </u>							
3.2.1	Single storey building Double storey or double volume building	÷	Rands	R R	480.00 690.00	m² m²	includes soft strip, excludes disposal of waste				
	Prefabricated or temporary buildings		Rands Rands	R	140.00	m² m²	includes soft strip, excludes disposal of waste				
3.4	110mm Brick wall	Ŀ	Rands	R	15.00	m²					
3.5	230mm Brick wall		Rands	R	30.00	m²					
	Workshop & Stores		Rands	R	320.00	m²	single volume buildings				
3.7	Workshop & Stores		Rands	R	380.00	m²	double volume buildings				
4.1	Concrete Heavy concrete, thickness greater than 750mm		Rands	R	1 280.00	m³	bulk and heavy reinforced concrete				
	Medium concrete, thickness between 250 and 750mm	-	Rands	R	640.00	m ^a	Heavy reinforced concrete				
	Light concrete, thickness less than 250mm		Rands	R	400.00	m³	reinforced concrete				
4.4	Floors, bases and foundations after removal of superstructure		Rands	R	215.00	m²	250mm floors with 500mm bases on 30% of the area				
4.5	Heavy duty floors, bases and foundations after removal of superstructure	:	Rands	R	590.00	m²	400mm floors with 800mm bases on 30% of the area				
4.6	Strip footings	-:-	Rands	R	135.00	m					
4.7	Column footings		Rands	R	280.00	no					
	Linear items										
5.1 5.1.1	Conveyors Overland conveyor - light, no cladding		Rands	R	215.00	m					
5.1.2	Overland conveyor - medium	-	Rands	R	265.00	m					
5.1.3	Overland conveyor - heavy		Rands	R	320.00	m					
5.1.4	Suspended conveyor - light to medium		Rands	R	535.00	m					
5.1.5	Suspended conveyor - heavy with cladding	-	Rands	R	640.00	m					
5.2 5.2.1	Pipelines Overland steel pipelines on plinths (<200mm)		Rands	R	27.00	m	5m plinth spacing, includes disposal of waste @ 10km				
5.2.2	Overland steel pipelines on plinths (200-350mm)		Rands	R	48.00	m	5m plinth spacing, includes disposal of waste @ 10km				
5.2.3	Overland steel pipelines on plinths (350-500mm)		Rands	R	64.00	m	5m plinth spacing, includes disposal of waste @ 10km				
	Overland power lines										
5.3.1	Minor lines	-	Rands	R	27.00	m					
5.3.2 5.4	Major lines Railway lines	Ë	Rands	R	80.00	m					
5.4.1	Electrified	:	Rands	R	295.00	m	excludes ballast and rehab				
5.4.2	Non - electrified	:	Rands	R	215.00	m	excludes ballast and rehab				
5.5	Fencing		_	<u> </u>							
5.5.1	Erect stock feeding	÷	Rands	R R	133.00	m m					
5.5.2 5.5.3	Erect stock fencing Dismantling of security fencing		Rands Rands	R	27.00 27.00	m m					
5.5.4	Dismantling of stock fencing	Ŀ	Rands	R	8.00	m					
5.5.5	Dismantling of steel palisade fencing	:	Rands	R	58.00	m					
5.5.6	Dismantling of concrete palisade fencing	:	Rands	R	120.00	m					
	Waste		D			0/					
6.1	Sorting and screening of waste Disposal of waste	Ë	Rands		2.5	%					
6.2.1	Disposal of waste Disposal of inert demolition waste	:	Rands	R	160.00	m³/km	50km haul distance				
6.2.2	Disposal of hazardous waste	:	Rands	R	805.00	m³	excludes transport				
6.3	Decontamination of equipment										
6.3.1	Decontamination of equipment - small projects	-	Rands		5	%	of overall dismantling of steel structures				
6.3.2	Decontamination of equipment - large projects Removal and disposal of single HDPE liner	÷	Rands Rands	R	2.5 6.50	% m²	of overall dismantling of steel structures				
7	Shaft and portals		· turido		0.50						
7.1	Shafts										
7.1.1	Sealing of vertical shaft	:	Rands	R	714 220.00	sum	3m diameter				
7.1.2	Sealing of vertical shaft	-	Rands	R	810 160.00	sum	3.5m diameter				
7.1.3 7.1.4	Sealing of vertical shaft Sealing of vertical shaft	-	Rands Rands	R R	986 050.00 1 087 320.00	sum	4m diameter 4.5m diameter				
7.1.4	Sealing of vertical shaft Sealing of vertical shaft	-	Rands		1 332 500.00	sum	4.5m diameter 5m diameter				
7.1.6	Sealing of vertical shaft	Ŀ	Rands		1 375 140.00	sum	5.5m diameter				
7.1.7	Sealing of vertical shaft	:	Rands		1 410 500.00	sum	6.0m diameter				
7.1.8	Sealing of vertical shaft	:	Rands	R	1 492 400.00	sum	6.5m diameter				





					Rates Table - 2	2012	
Unit Rate	Costing Items		Currency		Unit Rates	Unit	Notes
Code			-				
7.1.9 7.1.10	Sealing of vertical shaft Sealing of vertical shaft		Rands Rands	R R	1 599 000.00 1 719 458.00	sum	7m diameter 7.5m diameter
7.1.11	Sealing of vertical shaft		Rands	R	1 838 850.00	sum	8m diameter
7.1.12	Sealing of vertical shaft	:	Rands	R	1 982 760.00	sum	8.5m diameter
7.1.13	Sealing of vertical shaft	-	Rands	R	2 132 000.00	sum	9m diameter
7.1.14 7.1.15	Sealing of vertical shaft Sealing of vertical shaft	-	Rands Rands	R R	2 281 240.00 2 573 324.00	sum	9.5m diameter 10m diameter
7.1.16	Sealing of vertical shaft		Rands	R	2 665 000.00	sum	11m diameter
7.2	Backfill incline shaft portal		Rands	R	31 980.00	sum	
	Plug outlet and seal penstock of tailings dam	-	Rands	R	213 200.00	sum	assume 100 000m³ backfilled with waste rock <1km haul distance, excl topsoil
7.4	Plug surface holing's Seal incline shaft		Rands Rands	R	200 000.00 159 900.00	sum	
	Roads, hardstands and paving						
	Remove tar roads with 600mm layer works		Rands	R	48.00	m²	layer works buried in trench next to road or 10km load and haul, but excludes disposal of tar
	Major gravel roads with engineered surfaces	:	Rands	R R	21.00 4.00	m²	layer works buried next to road or 10km load and haul
8.3	Minor gravel roads and tracks Concrete slab or concrete liners	-	Rands Rands	R	135.00	m² m²	minor gravel roads and tracks (no layer works) - ripped, profiled and vegetated thin concrete with minimal reinforcing
	Removal of gunited embankments		Rands	R	80.00	m²	excludes disposal
8.6	Removal of brick paving & stone pitching	-:	Rands	R	38.00	m²	
9.1	Earthworks Dozing						
9.1.1	Dozing to profile dumps (60m max)		Rands	R	13.50	m³	cut to fill including final profiling
9.1.2	Bulk dozing of material (60m max)	:	Rands	R	11.00	m³	bulk dozing, no profiling
9.2	Excavation	:	Rands	R	20.00	m³	
9.3.1	Backfilling Backfilling of final void	-	Rands	R	15.50	m ^a	large volumes: 50% dozing & 50% load and haul
9.3.2	Backfilling of final void		Rands	R	27.00	m³	large volumes: 5km haul distance for bulk material
9.4	Compacting		Rands	R	3.50	m²	in layers of 250mm
9.5	Ripping Ripping of areas to alleviate compaction	_	Dondo	_	0.400.00	h -	500mm deep ripping
9.5.1 9.5.2	Deep ripping	-	Rands Rands	R	9 400.00 13 800.00	ha ha	1000mm deep ripping
9.6	Transport						0
9.6.1	Load and haul	:	Rands	R	28.00	m ^a	1km, small volumes
9.6.2	Extra over rates for hauling outside free haul distance Load and haul for 4km distance	-	Rands Rands	R R	7.80 51.40	m³/km m³/km	small volumes small volumes
9.6.4	Load and haul	-	Rands	R	13.20	m³	1km, large volumes
9.6.5	Extra over rates for hauling outside free haul distance	:	Rands	R	3.00	m³/km	large volumes
9.6.6	Load and haul for 4km distance	-	Rands	R R	163.20	m³/km	large volumes
	Load and haul for 50km distance Reclamation on disturbed areas		Rands	ĸ	163.20	m³/km	large volumes
10.1	Profiling - dozer work						
10.1.1	Shaping, leveling of infrastructural footprint areas (500mm)		Rands	R	55 250.00	ha	includes stockpiling of material, backfilling of excavations in cut to fill operation and final profiling @ave 500mm over footprint
10.1.2	Shaping, leveling of infrastructural footprint areas (750mm)		Rands	R	82 875.00	ha	includes stockpiling of material, backfilling of excavations in cut to fill operation and final profiling @ave 750mm over footprint
10.1.2	Reshaping, profiling of dumps (general)	-	Rands	R	110 500.00	ha	@arc 750mm over 150tpmit
10.1.4	Profiling of disturbed areas (general)		Rands	R	939 250.00	ha	minimal dozing to make area free draining
10.1.5	Breach dam wall & reshape 1:5	:	Rands	R	220.00	m	approx. 5m high @ 1:5
10.2.1	Import clean / removing contaminated soil Import cover material and spread (250m)		Rands	R	88 400.00	ha	2500m³ over 1km average @ R32/m³
10.2.2	Remove contaminated soil to 250mm average depth		Rands	R	127 000.00	ha	assume 4km haul distance
10.3	Capping / impermeable cover						
10.3.1	Install 2mm HDPE liner Establish vegetation	-	Rands	R	94.00	m²	includes soil amelioration, cultivation and seeding actions
10.4.1	Establishment of vegetation (general)		Rands	R	13 800.00	ha	general on flat surfaces
10.4.2	Establishment of vegetation on WRD and tailings dams		Rands	R	19 250.00	ha	general in topsoil layer on sloped areas
10.4.3	Establish vegetation on backfilled pit areas Rip and establish vegetation on stockpile footprint areas and haul	:	Rands	R	4 400.00	ha	
10.4.4	roads	:	Rands	R	5 500.00	ha	
	Plant and machinery		D	_	20.700.00	m/-1.	avaludas sita satabilahmant
11.1	Crane Tib	Ë	Rands Rands	R	38 700.00 2 800.00	p/day p/day	excludes site establishment excludes site establishment
	Excavator (20ton)	Ė	Rands	R	4 200.00	p/day p/day	excludes site establishment
	Pecker (20ton)	1	Rands	R	6 850.00	p/day	excludes site establishment
	Post closure aspects Surface water		Dond-	_	100 000 00		9 manifering points on a monthly basis
12.1 12.2	Surface water Groundwater	÷	Rands Rands	R	106 000.00 150 000.00	yr yr	8 monitoring points on a monthly basis 15 monitoring points on a quarterly basis
12.3	Reclamation monitoring	:	Rands	R	2 500.00	ha	5 years
	Care and maintenance	:	Rands	R	15 500.00	ha	5 years
	Specialists Work Specialist soil and groundwater study		Panda	R	330 000.00	Crimo	Naminal allowance not for large and complex and integrated sites
	Specialist, soil and groundwater study Basic Assessment with Public Participation	:	Rands Rands	R	250 000.00	sum	Nominal allowance, not for large and complex and integrated sites Nominal allowance, not for large and complex and integrated sites
13.3	Integrated Water and Waste Management Plan (IWWMP) and Water Use License Application (WULA)		Rands	R	220 000.00	sum	Nominal allowance, not for large and complex and integrated sites
	Waste License Application (WOLA)		Rands	R	40 000.00	sum	Nominal allowance, not for large and complex and integrated sites Nominal allowance, not for large and complex and integrated sites
	Water Treatment Cost						
14.1	Cleaning of Stormwater system	<u> </u>	Rands	R	-	sum	Nominal allowance
14.2	Cleaning of Oily and Chemical Sewer system xxxxxxxx	Ë	Rands Rands	R R	-	sum m³	Nominal allowance
14.3	yyyyyy	Ė	Rands	R	-	m ^a	
14.5	ZZZZZZZZ	:	Rands	R	-	m³	
	Boreholes Drilling of hospitals		-		00.05		Non-lead all money
15.1 15.2	Drilling of borehole Equipping of borehole (Pump, electrical and piping)	Ë	Rands Rands	R	33 000.00 55 000.00	sum	Nominal allowance Nominal allowance
	Other			Ë	50 000.00	Juill	
16.1	Unspecified	Ξ	Rands	R	-	sum	
16.2	Unspecified	<u>:</u>	Rands	R	-	sum	





	Rates Table - 2012									
Unit Ra	Costing Items		Currency	Unit Rates	Unit	Notes				
16	3 Unspecified	:	Rands	R -	sum					



Appendix B: Detailed reference maps.





