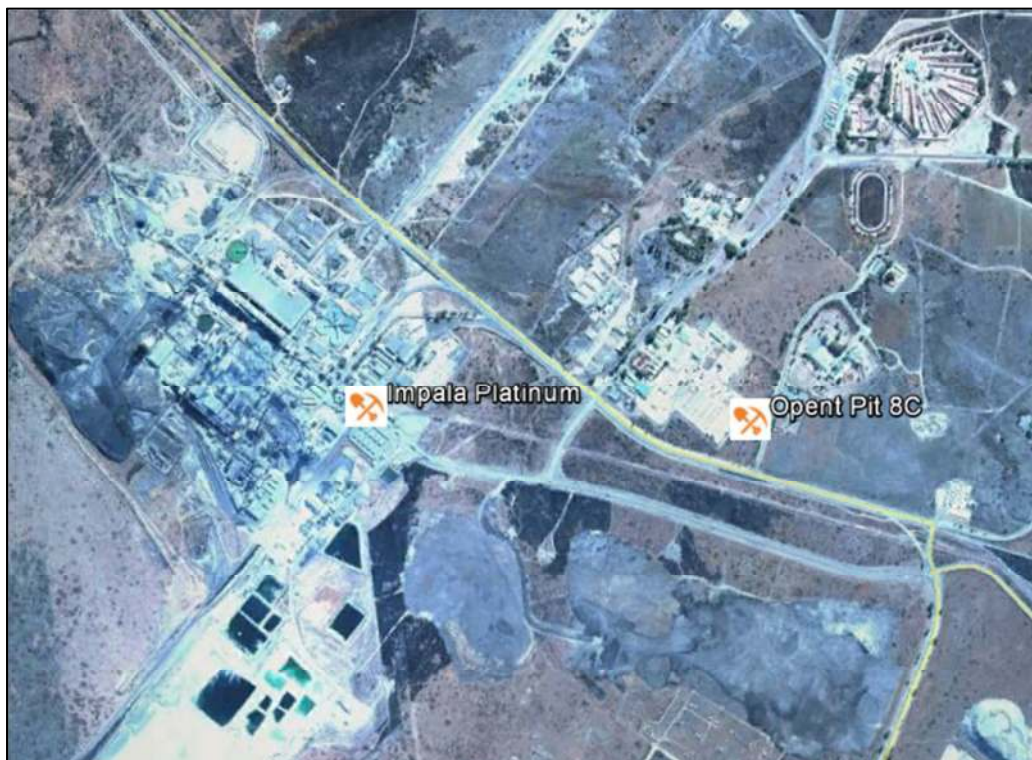


IMPALA PLATINUM LIMITED



Closure Costing Report for Proposed New Open Pit 8C



SEPTEMBER 2012

Document History and Status

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Document Title: Closure Costing Report for Proposed New Open Pit 8C
 Report Number: RPT 00001/F
 Order Number: 4501137808
 Project Number: PN 100095

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Revision	Status	Issued To	Issue Date	Signatures	
				Author	Reviewer
0	Draft Closure Cost Report	Impala	12/09/05	LK	PH
F	Final Closure Cost Report	Impala	12/09/12	LK	PH

This Revision Distributed to	Hard Copy	Electronic Copy
Impala Platinum (Gerhard van Dyk)		Yes
SLR Consulting	Yes	Yes



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LIST OF TERMS AND ABBREVIATIONS 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
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
Site relinquishment	Receipt of closure certificate and handover to third parties for on-going care and maintenance, if required
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 Impala Platinum Limited (Impala) to assist with the preliminary closure costing of the proposed new Open Pit 8C project for their Rustenburg Operations. These closure costs were determined to form part of an authorisation process with the Department of Mineral Resources (DMR) for the proposed new project and are aligned to the DMR guideline document for new EIA/EMP applications. Closure cost estimates were calculated for the first ten years of operations and scheduled closure.

Closure costing is categorised according to the DMR guideline:

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

The closure cost estimates quantities were taken from available plans and information provided by Impala Rates used were obtained from E-TEK's existing data base and in consultation with demolition and earthworks contractors.

The closure cost estimates for the proposed new Open Pit 8C at their Rustenburg Operations for Unscheduled (Year 2) R6,723,131.86 (Year 3) R663,940.64 and Scheduled closure R0 as indicated in the table below:

Executive Summary					
Tasks		Unscheduled - Year 2 (2013)	Unscheduled - Year 3 (2014)	Scheduled Closure	
Closure Aspects					
1	Infrastructural aspects	R -	R -	R	-
2	Mining aspects	R 4 994 413.00	R 29 304.00	R	-
3	General surface reclamation	R -	R -	R	-
4	Water management	R -	R -	R	-
SUB - TOTAL 1 (for infrastructural and related structures)		R 4 994 413.00	R 29 304.00	R	-
5	Post closure aspects	R 572 680.00	R 572 680.00	R	-
SUB - TOTAL 2 (for post - closure aspects)		R 629 948.00	R 629 948.00	R	-
6 Additional allowances					
6.1	Preliminary and General	R 599 329.56	R 1 758.24	R	-
6.2	Contingencies	R 499 441.30	R 2 930.40	R	-
SUB - TOTAL 3 (for additional allowances)		R 1 098 770.86	R 4 688.64	R	-
Grand - Total (for sub - total 1+2+3)		R 6 723 131.86	R 663 940.64	R	-

2 APPROACH TO COST DETERMINATION

The approach followed with the determination of the closure costs could be summarised as follows:

- Sourcing and review of project information from Impala to determine the nature and extent of the proposed new project;
- Agreement that no site visit was required as operations of the proposed new project has not commenced. Furthermore, E-TEK has a good understanding of the general site conditions and nature of operations at Impala due to the involvement in the closure costing for the whole of Impala's current Rustenburg Operations;
- Determination of the various components of rehabilitation of the specified area;
- Compilation of a Bill of Quantities capturing the quantities of the proposed new project;
- Unit rates used were obtained from E-TEK's existing data base and in consultation with demolition and earthworks contractors;
- Application of the above unit rates and associated quantities in pre-determined spreadsheets to determine the latest closure cost estimates;
- Forecast the first ten years of operations to reflect the fluctuating closure costs of the proposed new project; and
- A closure report to summarize the approach, assumptions and findings of the closure costing.

3 INFORMATION

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

Description	Person	Date
GA Drawing	Impala (Gerhard van Dyk)	14/08/2012
Project schedule	Impala (Gerhard van Dyk)	20/08/2012

4 CLOSURE CRITERIA

The following general and site specific assumptions and qualifications for each of the closure components listed in section 2 and 3 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 1-10 year forecast 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

- A portion of the new site is located on existing Impala stores, offices and surface infrastructure and will be removed before project development;
- The remainder of the new site is located on vacant veld currently used for grazing;
- The project will commence in Y2013;
- The project will be completed at the end of Y2014 with monitoring and aftercare following; and
- Concurrent rehabilitation will be implemented throughout the project; therefore it was assumed that all rehabilitation will be completed by LoM with zero liability.

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.

5.1 Infrastructural areas

No permanent structures will be erected as part of this project.

5.2 Mining areas

Open cast mining area

- General
 - Project development will commence in Y2013; and
 - The mining of pit 8C will be completed within two years.
- Open pit reclamation including final voids and ramps
 - Strip mining with a roll-over of material will be conducted;
 - Topsoil and overburden of the initial boxcut is stripped and stockpiled and mining progress;
 - Material from the initial boxcut will be stockpiled near the position of the final void;
 - Final void will be backfilled on closure with overburden. Pits are overfilled (approximately 20%) to allow for settlement of soil and to avoid ponds being formed on the backfilled area;
 - Approximately 600mm of topsoil will be replaced over the overburden;

- No allowance is made for vegetation re-establishment as the vegetation re-establishes naturally after the topsoil is placed; and
- Allowance was made for ripping and re-establishment of vegetation on stockpile footprint areas and haul roads.
- Reclamation of overburden and spoils
 - All material will be backfilled in the pit void with no residual material remaining;
 - Allowance is made to rip the stockpile footprint areas and to re-establish vegetation on these footprints; and
 - The area for access and haul roads were included under this item as rehabilitation will be similar.

5.3 General surface reclamation

Not applicable as all disturbed areas surrounding the pit is included under the item for the footprints of stockpiles and overburden areas.

5.4 Water management

Assumed no provision is required.

5.5 Post closure aspects

5.5.1 Surface water monitoring

- An overall allowance was made for the monitoring of one surface water position, 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 3 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 reclaimed areas for a five year period.

5.5.4 Care and maintenance

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

5.6 Additional allowances

The closure criteria for the following closure cost components are the same for un-scheduled and scheduled closure:

5.6.1 Preliminary and general

- Additional allowance of twelve 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 CONCLUSION

The closure costs as reflected in this report have been based on information obtained from Impala. In those cases where the required information was not available, estimates 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 through previous experience and consultation with demolition, earthworks contractors and rehabilitation practitioners. Where required, these were adapted to reflect site-specific conditions.

Notwithstanding the above, if the closure measures are implemented as envisaged, the reflected costs provide a good indication of the costs for the closure situations as calculated and should provide a good basis for making the required financial provision. The ten year forecast of closure costs is based on the assumption that all projects will start in Y2013 after the approval has been obtained from the authorities.

Appendix A: Detailed costing spreadsheet.

Appendix B: General Arrangement Drawing.

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