

**Rooipoort Developments Proprietary  
Limited**

**Rooipoort Mine**

**MINING WORK PROGRAMME**

June 2012

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#### **IV. APPENDICES**

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- Appendix V: Certified copies of the title deeds in respect of the land to which the mining right relates.

## **I. INTRODUCTION**

The Rooipoort Nature Reserve, comprising some 42 000 Ha of ground, is situated approximately 60 km to the west of Kimberley, on the road to Griekwastad. The Reserve comprises several farms or portions thereof, namely Waterkolk 95, Zandplaats 102, Vogelstruispan 101, Vogelstruispan 98, Bergplaats 100, Randtplaats 96, Grasrandt 109 and Klipfontein 99. Initially mining is planned on five of these farms, as outlined below in this Mining Work Programme. These farms are Zandplaats 102, Vogelstruispan 101, Vogelstruispan 98, Klipfontein 99 and Bergplaats 100 on which economic, diamondiferous alluvial gravel deposits were located during prospecting activities.

The various Rooipoort gravel deposits, which are not continuous in extent, have an estimated total resource of some 10 million tonnes. The project is expected to have a life of mine of 10-15 years.

## II. ABBREVIATIONS

ABBREVIATION	EXPLANATION
<b>BIF</b>	Banded Ironstone Formation
<b>CAPEX</b>	Capital Expenditure
<b>cpht</b>	Carats per hundred ton
<b>IRR</b>	Internal Rate of Return
<b>LDV</b>	Light Delivery Vehicle
<b>LHD</b>	Load, Haul, Dump Truck
<b>Mt</b>	Million tons
<b>Mtpa</b>	Millions tons per annum
<b>NPV</b>	Net Present Value
<b>OMS</b>	Ore Management System
<b>OPEX</b>	Operational Expenditure
<b>ROM</b>	Run of Mine
<b>SIA</b>	Socio-economic Impact Assessment
<b>SFD</b>	Size Frequency Distribution

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### III. MINING WORK PROGRAMME

In terms of Regulation 11 (1) of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), any applicant who lodges an application for a mining right is obliged to submit a mining work programme that must contain the following information<sup>1</sup>:

**(a) Full Particulars of the Applicant**

**Rooipoort Developments Proprietary Limited (“Rooipoort Developments”)**

**Registration number:** 2011/002674/07

**Physical Address:** c/o The Company Secretary  
Rooipoort Developments Proprietary Limited  
Groot Paardevlei  
29 Magnolia Street  
Heldervlei  
Somerset West

**Postal Address:** PO Box 110608  
Hadison Park  
8306

**Contact persons name:** Arno de Villiers

**Tel No:** 082 444 2464

**Fax No:** 086 502 5680

**E-mail:** [arnodev@lantic.net](mailto:arnodev@lantic.net)

**Certified copy of certificate of incorporation:** Attached as Appendix I of the MWP

**Certified copy of the certificate to commence business:** Attached as Appendix II of the MWP

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<sup>1</sup> This amended Mining Work Programme for the Rooipoort Mine is submitted as part of an application, in terms of section 102 of the MPRDA for the amendment of the Mining Work Programme, which is brought simultaneously as part of an application, in terms of section 11 of the MPRDA, for Ministerial consent to transfer the mining right from De Beers Consolidated Mines Limited to Rooipoort Developments.

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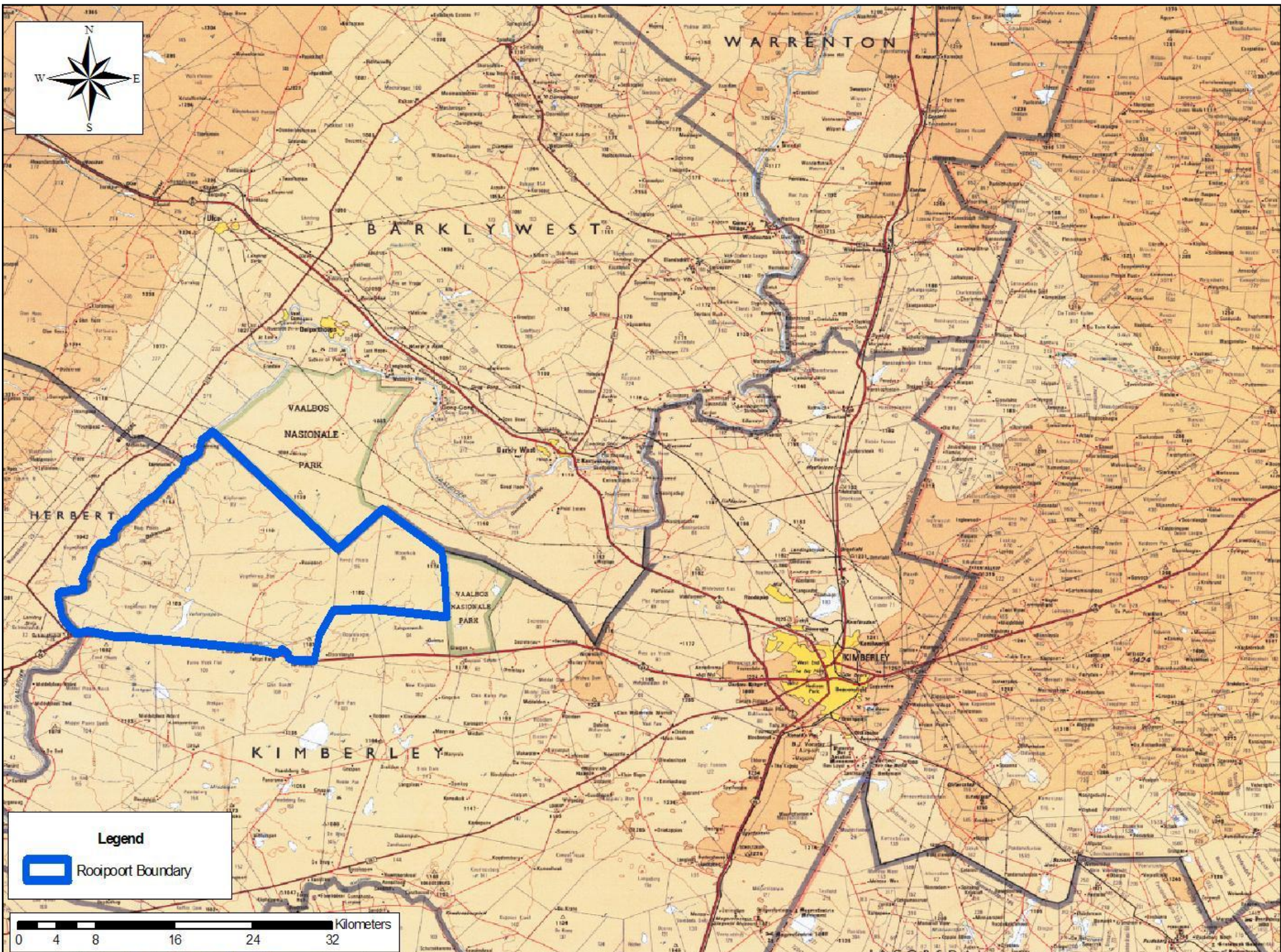
**Certified copy of the resolution if acting in a representative capacity for the company:** Attached as Appendix III of the MWP.

**(b) Plan contemplated in regulation 2(2), showing the land and mining area to which the application relates**

The Rooipoort Nature Reserve is located approximately 60 km west of Kimberley in the Northern Cape Province. The Rooipoort Nature Reserve comprises the farms Waterkolk 95, Zandplaats 102, Vogelstruispan 101, Vogelstruispan 98, Bergplaats 100, Randtplaats 96, Grasrandt 109 and Klipfontein 99. All of these properties are currently owned by De Beers Consolidated Mines Ltd. The four proposed mining areas (Diamond Koppie, M5, M6 and L2), situated on five of these farms (Zandplaats 102, Vogelstruispan 101, Vogelstruispan 98, Klipfontein 99 and Bergplaats 100), are reached via a private gravel road from the Kimberley/Griekwastad N8 national road.

Figure 1 below shows the General Locality Map of Rooipoort, exhibiting the location of the Rooipoort Mine in relation to South Africa's provinces and major centres.

***The plan contemplated in regulation 2(2) showing the land and mining area to which this application relates is provided in Appendix IV.***



**Figure 1:** The general locality map of the Rooipoort Nature Reserve, on which mining has been proposed.



**(c) Registered description of the land or area to which the application relates**

The farms comprising the Rooipoort Nature Reserve are located within the Kimberley Magisterial District of the Northern Cape Province. In particular, the Rooipoort Nature Reserve falls under the jurisdiction of Frances Baard District Municipality, very close to its western border with the Pixley Ka Seme District Municipality.

***Refer to Appendix V for certified copies of the title deeds in respect of the land to which the application relates.***

**(d) Details of the identified mineral deposit concerned with regard to the type of mineral or minerals to be mined, its locality, extent, depth, geological structure, mineral content and mineral distribution****Mineral to be mined:**

Code	Mineral	Type
DIA	DIAMOND	Diamond
DA	DIAMOND (ALLUVIAL)	Diamond
D	DIAMOND (GENERAL)	Diamond
DK	DIAMOND (KIMBERLITE)	Diamond

**Locality of the mineral deposit in relation to the nearest town/city:**

The mining areas are situated on five of the eight farms that comprise the Rooipoort Nature Reserve, namely Zandplaats 102, Vogelstruispan 101, Vogelstruispan 98, Klipfontein 99 and Bergplaats 100. These farms are located approximately 60 km west of Kimberley in the Northern Cape Province (Figure 1).

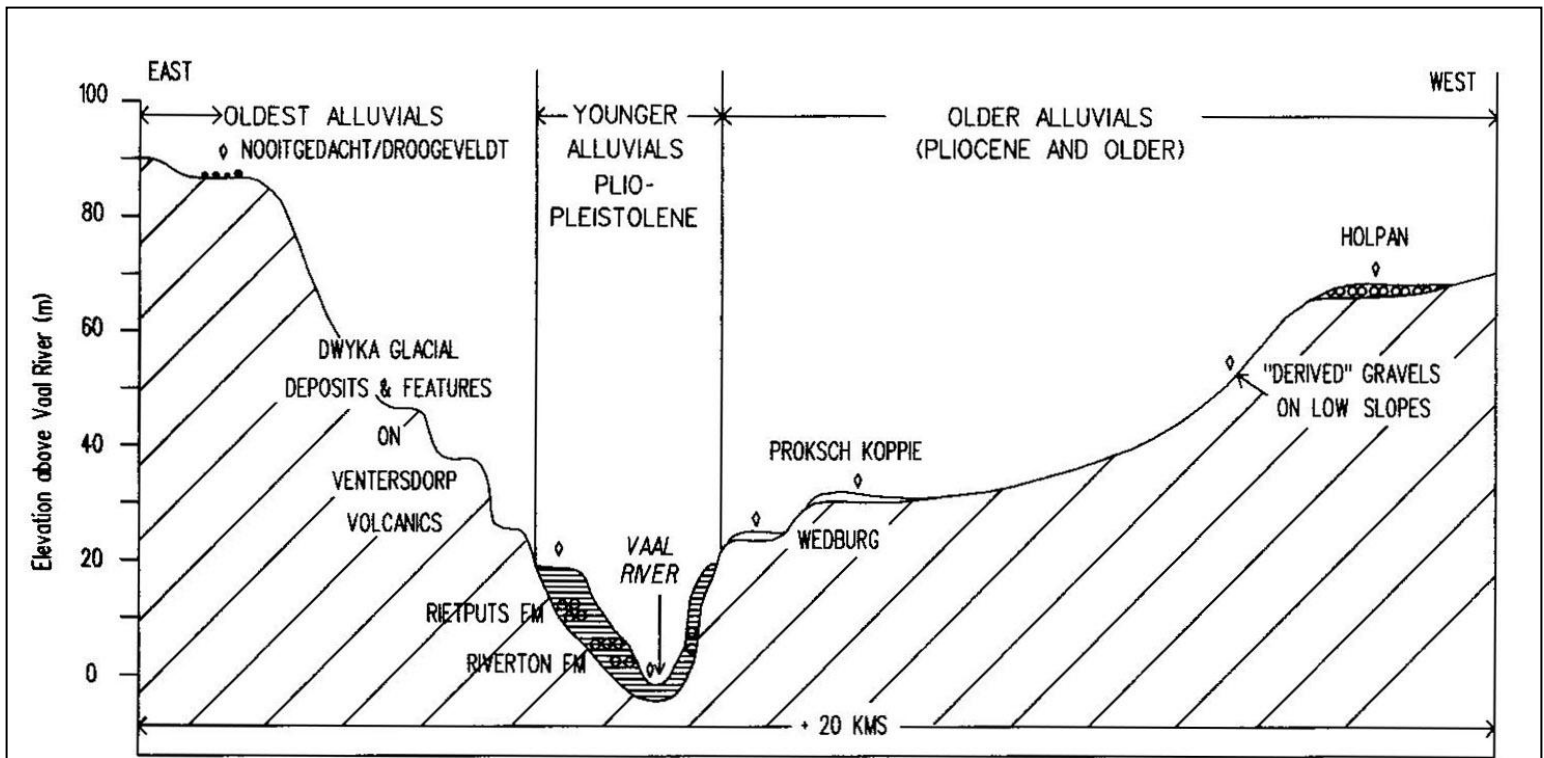
**Brief description of the geological structure of the mineral deposits, their extent, and depth:**

The oldest and predominant rock type on the Rooipoort Nature Reserve is the Archaean (2.7 Ga) Andesitic lavas of the Allanridge Formation, Ventersdorp Supergroup. Quartzites and slates of the Paleo-proterozoic Vryburg Formation, Griqualand West Sequence occur to a lesser extent and rest unconformably on the Ventersdorp lavas. Also resting unconformably on the Ventersdorp lavas are Carboniferous Dwyka Group glacial deposits of the Karoo Supergroup, however, these are preserved

mostly in the vicinity of the Vaal River and in adjacent pre- Karoo valleys. Many of these lithologies are covered by recent red Hutton sands.

Cretaceous kimberlites have intruded the Ventersdorp volcanics and Karoo rock types on Rooipoort, but from previous exploration results are not deemed to be of any economic value.

Cainozoic gravels of the Paleo-Vaal and its related tributaries also occur on Rooipoort. These gravel deposits, laid down in a series of terraces (Figure 2), contain diamonds and are the core of this application. In particular, diamonds are to be mined from alluvial gravel deposits occurring either adjacent to the Vaal River or from higher level terrace deposits. Four areas (Diamond Koppie, M5, M6 and L2) situated on five of the Rooipoort farms, (Zandplaats 102, Vogelstruispan 101, Vogelstruispan 98, Klipfontein 99 and Bergplaats 100), have been identified for mining.



**Figure 2:** Schematic cross section of the Vaal valley showing the relative positions of gravel platforms and terraces

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## Diamond Koppie

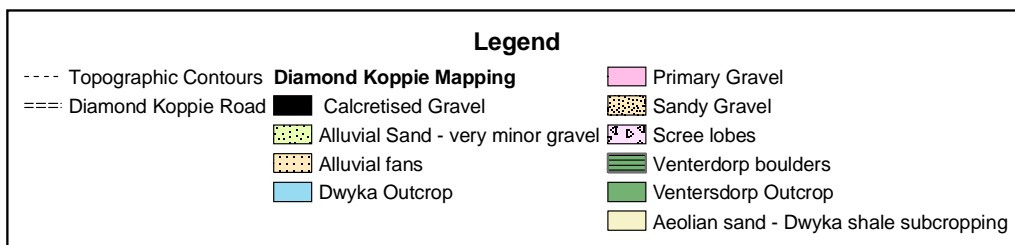
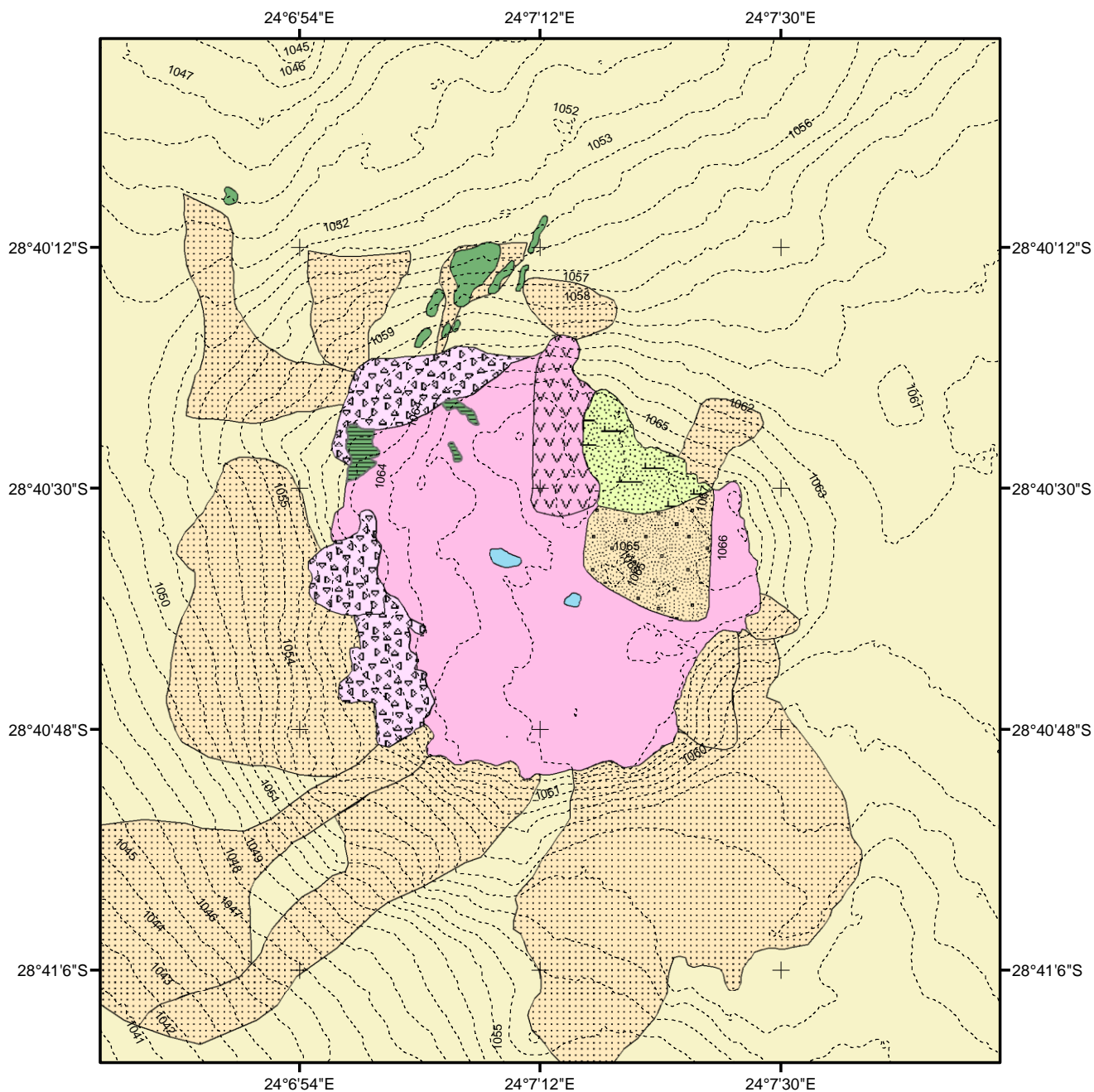
The Diamond Koppie alluvial gravel deposit, situated on the farm Vogelstruispan 98 (Appendix IV), is approximately 45 ha in extent. This terrace gravel deposit outcrops approximately 70m above the present level of the Vaal River and is correlated with the older “Holpan” terrace gravels (Figure 2). This exposed gravel deposit rests on shale bedrock.

The Diamond Koppie alluvial gravel deposit can essentially be divided into four main components (Figure 3). In general, primary Rooikoppie gravel makes up the bulk of the deposit and comprises well sorted pebble to cobble size material of mostly siliceous, resistant material including quartz, quartzite, chert, banded iron formation (BIF), agates, jaspers, Ventersdorp lava and lydianite. These partially calcretised Rooikoppie type gravels vary considerably in thickness (0.1 – 2.5m) as a result of the inconsistent dissolution of the underlying calcrete and varying degree of calcretization in the gravels.

Although mostly obscured by Red Hutton sand and hardpan calcrete, the north eastern portion of Diamond Koppie consists of fluvial sand, grading into a sandy gravel unit (Figure 3). On the western fringe of the primary gravel and down slope from it are coarse “gravel lobes” (Figure 3). These gravel lobes, with a thickness of up to 0.8m, have formed after decalcretisation of the Rooikoppie gravel, through down slope displacement as a result of creep and localised fluvial activity. The last component of the Diamond Koppie resource comprises scree gravel, which can be found up to 1500m from the edge of Diamond Koppie (Figure 3). This scree has resulted from numerous alluvial fans that overlap with one another and are most prominent on the western and southern side of Diamond Koppie. The scree gravel occurs as a surface lag and is only of single clast thickness.

Overall, the Diamond Koppie gravels represent an estimated total resource of some 470 000 tonnes, based on field mapping and pitting. The average thickness of the gravel deposit is approximately 0.4m with the maximum thickness of the gravels being 2.5m.

## Geological Sub-division of Gravel on Diamond Koppie

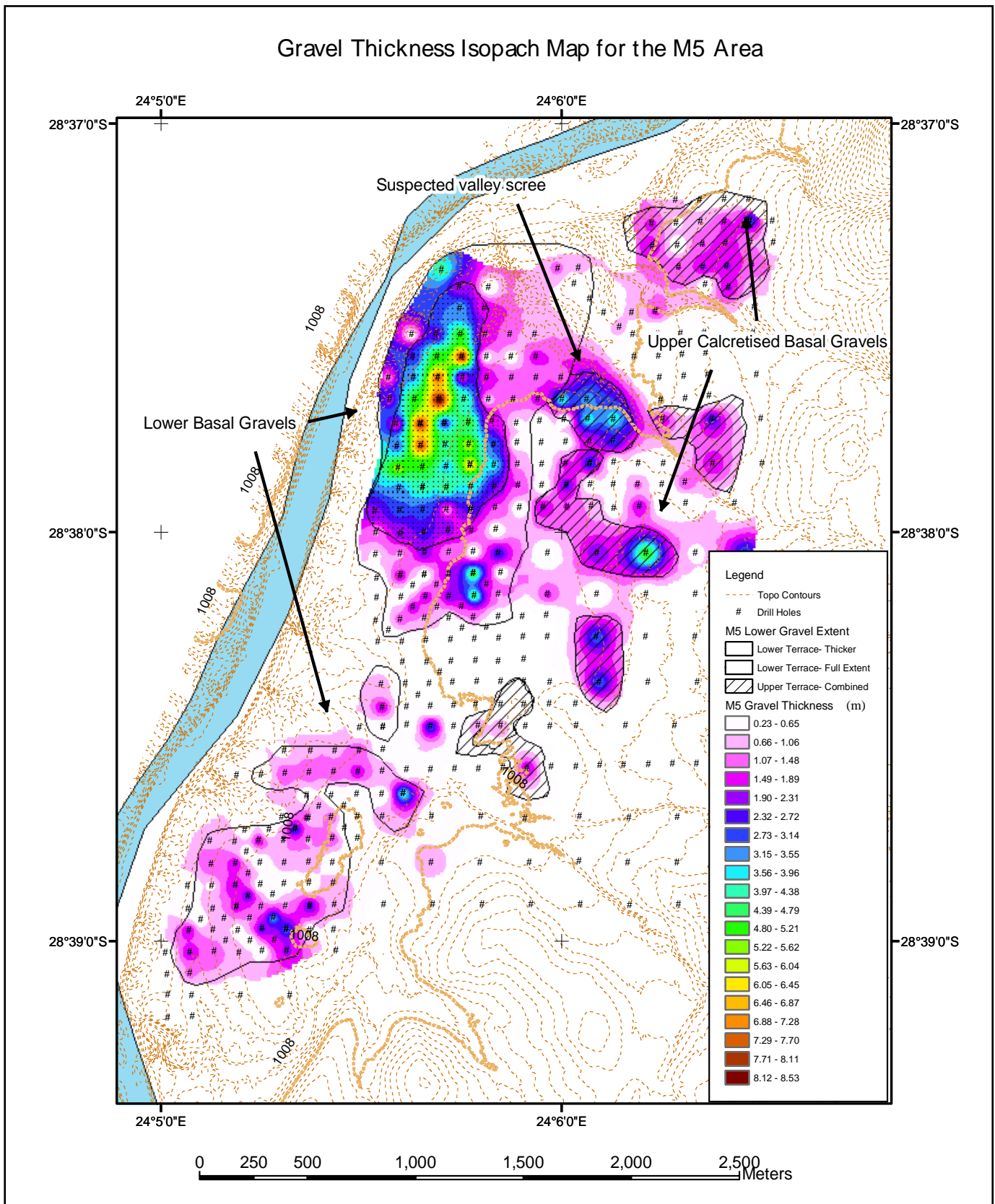


**M5 Area**

The M5 area, straddling the farms Vogelstruispan 101, Vogelstruispan 98 and Bergplaats 100 (Appendix IV), represents the largest of the gravel deposits. It occurs downstream of the Bergplaats gorge. It is believed that as the river widened into a Dwyka sub-basin below the gorge, the velocity of the river decreased and deposited its bed load. The material was progressively re-worked and sorted into gravel bars with the coarser components of the bed load being deposited upstream and fining downstream.

Drilling has indicated the presence of two gravel terraces, namely a Lower uncalcretised sandy terrace gravel at a surface elevation of less than 1008m and a patchy Upper calcretised gravel terrace at a higher elevation. The bulk of the Lower gravel deposit occurs in the north of the area where a longitudinal bar has developed, coarsening upstream (Figure 4). The thicker portion of these gravels, roughly 42 ha in extent, represents an estimated deposit of 3.3 million tonnes with an average gravel thickness of 3.95m beneath an overburden of approximately 8 m of red Hutton sands. The remainder of the Lower terrace gravels (128 ha in extent) is estimated at 2.7 million tonnes. However, further downstream this gravel unit thins out and has an average overburden thickness of 10.9m.

The Upper terrace gravels have been dissected by recent Vaal tributaries, hence they are very patchy making it difficult to determine a realistic resource. A total of 1.6 million tonnes with an average gravel thickness of 1.33m beneath an average overburden of approximately 2.8m is estimated for these upper terrace gravels, which are roughly 60 ha in extent.



**Figure 4**

**M6 Area**

The M6 target area occurs some 5km downstream of the M5 area and is found straddling the farms Zandplaats 102 and Vogelstruispan 101 (Appendix IV). This target area is a large NNW/SSE trending floodplain directly beneath a sharp bend in the Vaal River.

Two gravel terraces lying on top of Dwyka shale bedrock were identified from the various drilling programmes conducted in the area. Terrace 1 occurs immediately adjacent to the sharp left bend in the river (Figure 5). A well defined bar feature can be recognised up to 800m in length and 200m in width (15 ha in extent). Terrace 2 is a slightly older deposit occurring at a higher elevation than Terrace 1. It occurs near the centre of the floodplain, adjacent to a shallow bend in the river, which may be responsible for the formation of this gravel bar. The gravel in this area is sometimes outcropping with cobbles and boulders seen lying on the surface. The terrace is approximately 800m in length by 200m in width (16 ha in extent). The gravel in both terraces consists of mostly cobble sized clasts in a medium to coarse sand matrix. The clasts are generally made up of Ventersdorp lava, quartzites, chert, quartz porphyry, agates and to a lesser extent BIF and fossil wood.

The two small gravels terraces within the M6 Area represent a combined deposit of some 1.5 million tonnes of gravel. The average gravel thickness for Terrace 1 is 3.4m whilst for Terrace 2 an average thickness of 1.47m has been calculated. This deposit would be marginally economic as a lower diamond grade is anticipated in this area due to lack of suitable bedrock for trap site formation.

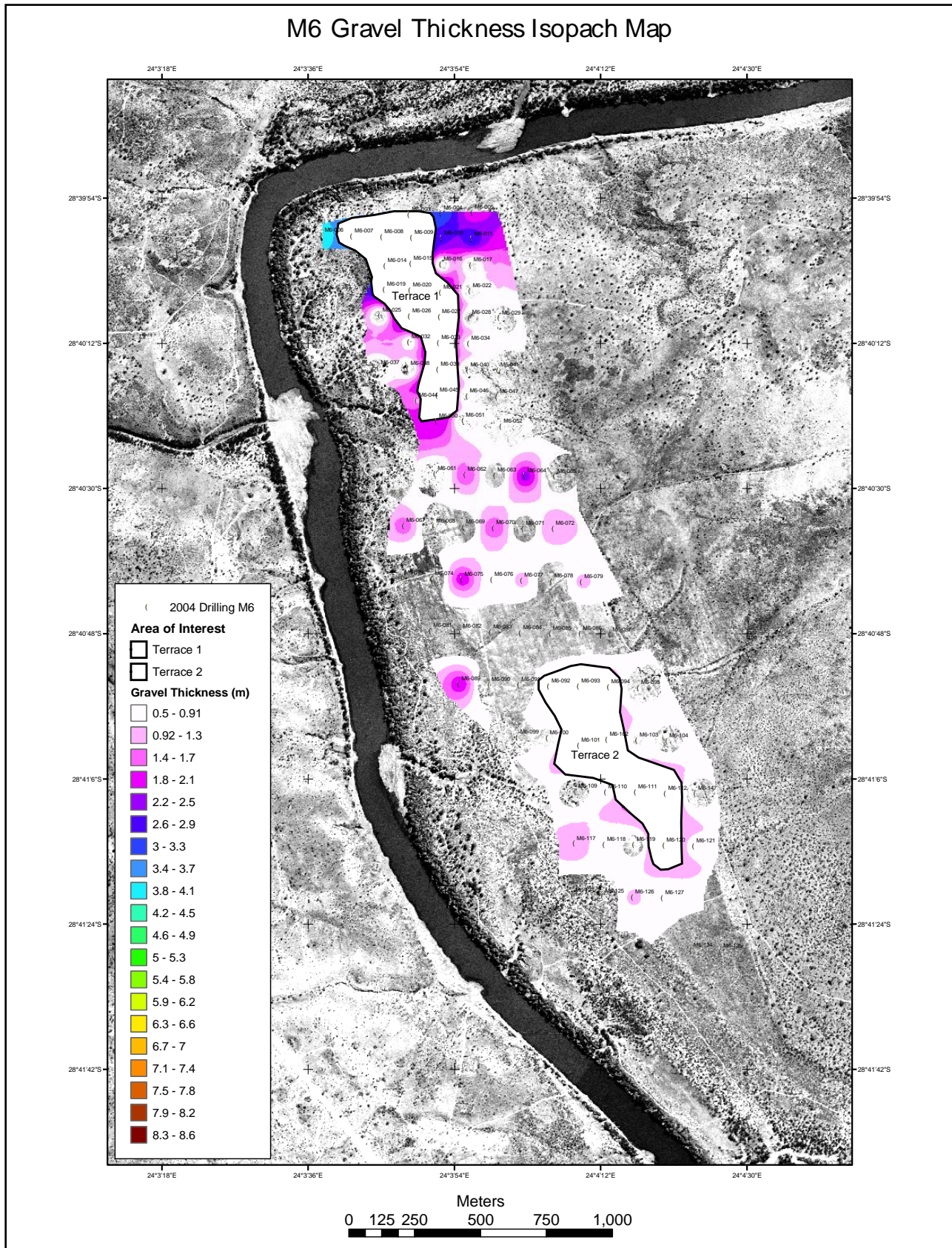


Figure 5



**L2 Area**

The L2 target area occurs immediately adjacent to the Rooipoort – Vaalbos boundary fence within the farm Klipfontein 99 (Appendix IV). The L2 area represents a recent floodplain along the Vaal River with poorly developed gravel bars.

The results of numerous drilling programmes indicate the presence of a sandy, pebble-cobble gravel lying beneath an overburden of red Hutton sands, on average 10m thick. The gravels, often comprising Ventersdorp lava with minor clasts of quartz, quartzite, chert, BIF, agate and chalcedony, vary between 0.10 and 2.20m in thickness, with an average thickness of 0.9 m being calculated. The thickest concentration of gravel occurs near the Vaalbos boundary fence (Figure 6) and becomes less continuous and very sandy downstream. This target contains a relatively low volume of gravel (approximately 1 million tonnes) with thick overburden and hence high stripping ratios.

# Gravel Thickness Ispoch Map for Basal Gravels on Recent Floodplain for L2 Area

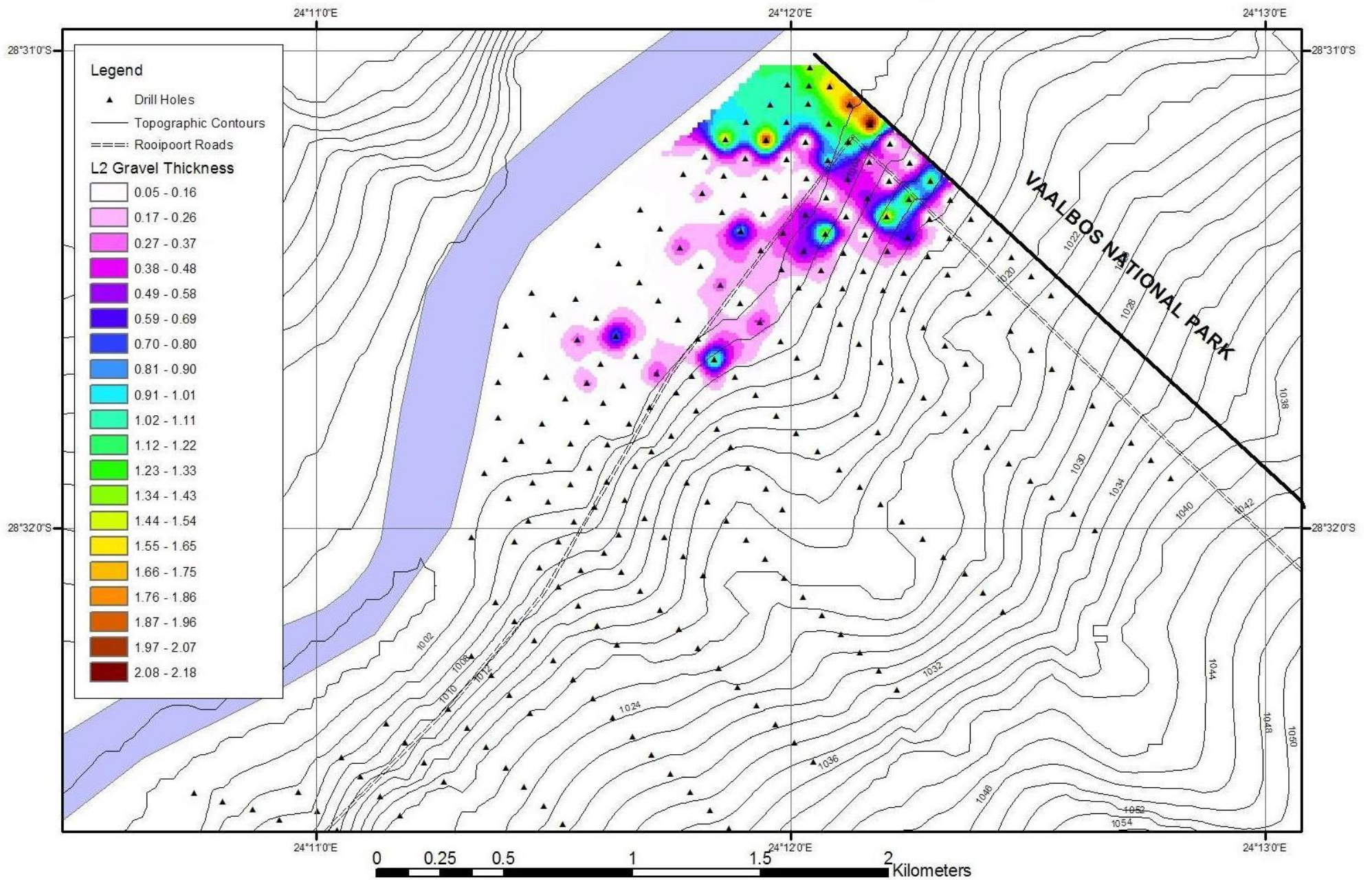
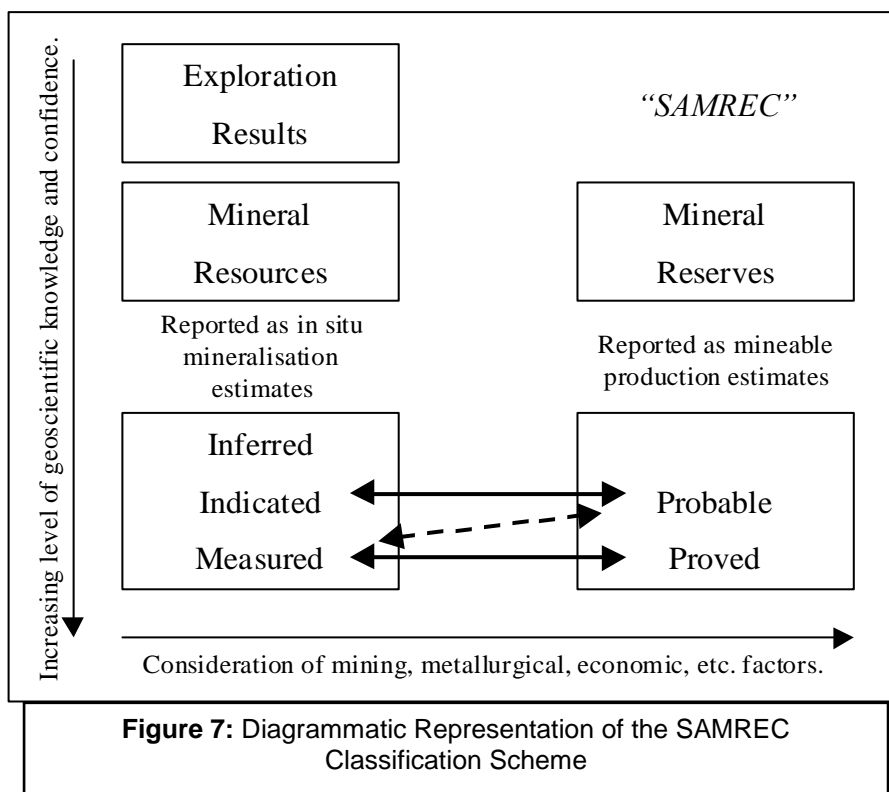


Figure 6

### Details of Proven, Indicated and Inferred Reserves/Resources:

De Beers Consolidated Mines Limited (the previous holder of the mining right) classified its Resources and Reserves according to the South African Code for Reporting of Mineral Resources and Mineral Reserves (the 'SAMREC Code'). The classification scheme is shown below in Figure 7, and depicts increasing confidence in terms of the resource with respect to geology, sampling and estimation (SAMREC 2000).



Within the SAMREC Code the resource confidence levels are defined as detailed in Table 1 below.

Table 1: The SAMREC Resource Definitions	
RESOURCE	SAMREC DEFINITION
INFERRED	That part of the resource for which tonnage, grade and mineral content can be estimated with a low level of confidence.
INDICATED	That part of the resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. Geological continuity cannot be confirmed but can be assumed.

MEASURED	That part of the resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. Geological and grade continuity can be confirmed.
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Based on the SAMREC classification scheme, the overall resource level assigned to the gravel deposits on the Rooipoort Nature Reserve at this time is given as Inferred and is shown in Table 2 below.

<b>Table 2: Mineral Resources as at 1st January 2006</b>				
<b>INDICATED</b>	SOURCE	TONNES	CPHT	CARATS
-	-	0	0	0
<b>Total Indicated Resources</b>		<b>0</b>	<b>0</b>	<b>0.00</b>
<b>INFERRED</b>	SOURCE	TONNES	CPHT	CARATS
Diamond Koppie	Primary Gravel	312,000	1	3,120.00
	Primary Calcretised Gravel	116,000	0.5	580.00
	Gravel Lobes	41,600	0.5	208.00
M5 Area	Lower Basal Gravels (Thickest)	3,325,900	0.5	16,630.00
	Lower Basal Gravels (Remaining)	2,670,080	0.2	5,340.00
	Upper Basal Gravels	1,604,688	0.7	11,233.00
M6 Area	Terrace 1	1,062,574	0.2	2,125.00
	Terrace 2	478,889	0.2	958.00
L2 Area	Floodplain Gravel	988,982	0.1	989.00
<b>Total Inferred Resources</b>		<b>10,600,713</b>	<b>0.5</b>	<b>41,183</b>
<b>DEPOSIT</b>	SOURCE	TONNES	CPHT	CARATS
-	-	0	0	0.00
<b>Total Deposit Resources</b>		<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Resources</b>		<b>10,600,713</b>	<b>0.5</b>	<b>41,183</b>

Rooipoort Developments has been doing extensive exploratory trenching and pitting on the Diamond Koppie and M6 areas since April 2011. From the results of this we have found that the original (2006) inferred resource figures (Table 2) only represents around 30% of the actual resource in these two areas. From this we infer that the resources on all the areas will be in excess of 30 million tons. From experience of mining alluvial gravels in this area, especially using a DMS plant such as is being used at Rooipoort, a grade of 0.9 cpht is not uncommon.

**(e) Details of the market for, the market's requirements and pricing in respect of, the mineral concerned**

The following note aims to provide a succinct and coherent response to the requirement contained in point (e) above. Marketing arrangements for diamonds are complex.

*Diamonds have two main uses. Their primary use is in jewellery. Diamonds whose physical characteristics make them less suited for use in jewellery have an important application as industrial tools. Both the market for jewellery and for industrial diamonds are entirely global in nature.*

*Around 50% of the diamond jewellery sold in 2006 was sold ultimately to consumers in the USA, with the rest sold in other important international markets, including Asia-Pacific, Asia-Arabia and Europe.*

*As can be seen, the market for diamonds is predominantly international. Consumer demand for diamonds at a local or regional level is limited, though at the regional level, with the increasing emergence of a wealthy and style-conscious middle-class, especially in South Africa, there is undoubted scope for the growth and development of a sustainable market for diamond jewellery in the region. On the international stage, it is increasingly wealthy middle-class consumers in China and India that are currently driving demand for diamond jewellery.*

*Rooipoort Developments will, taking into consideration all the regulatory conditions imposed, endeavour to obtain the highest prices for their diamonds by making use of the free market system available to sellers of diamonds.*

**(f) Details with regard to the applicable time frames and scheduling of the various implementation phases of the proposed mining operation, and a technically justified estimate of the period required for the mining of the mineral deposit concerned**

Rooipoort Developments will initially establish mining at the Diamond Koppie deposit. From here production capacity will be expanded to include the deposits at M5, M6 and L2. Table 3 demonstrates the critical implementation dates for the project.

**Table 3:** Implementation schedule for the Rooipoort Mining Project

<b>Rooipoort Project Implementation Schedule</b>	
<b>Project Activity</b>	<b>Start Date</b>
Establishment of site – (by Rooipoort Developments as contractor to former holder)	May 2011
Commencement of mining operations (by Rooipoort Developments as contractor to former holder)	May 2011
Production ramp up	November 2012
Mine closure	July 2020 (Onwards)

### **Life of Mine**

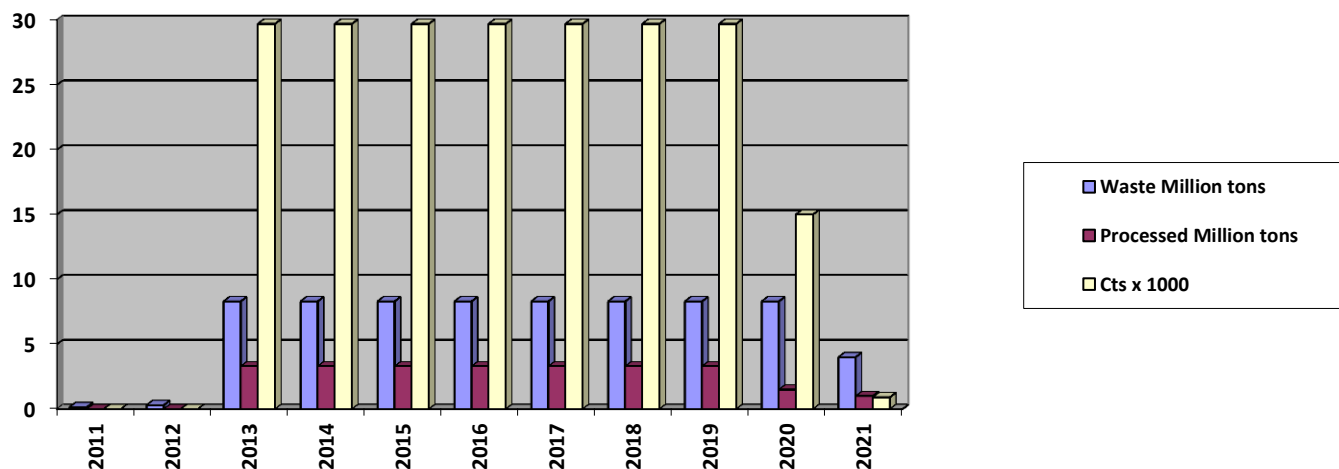
The various Rooipoort gravel deposits have an estimated total resource of some 10 million tonnes, of which only 8 million tonnes is anticipated to be of economic significance. With the overburden comprising an additional 20 million tonnes, Rooipoort Developments has determined the optimal opportunity to be a 2.772 million ton per annum mining operation. The life of mine is therefore anticipated to be at least 10 years, of which 8 years are at full production with the remaining 2 years being ramp-up and closure. The anticipated production schedule is shown in Table 4 and Figure 8 below.

Further investigations into extending the life of mine beyond 2018 will start once the mining operations have commenced.



**Table 4:** Summary of the planned production from the Rooipoort Mining Project

		Y2011	Y2012	Y2013	Y2014	Y2015	Y2016	Y2017	Y2018	Y2019	Y2020	Y2021	TOTAL
<b>Mining</b>													
Waste Stripped	tons million	0.15	0.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	3.99	<b>63.45</b>
Ore Tonnage mined	tons million	0.05	0.1	3.15	3.3	3.3	3.3	3.3	3.3	3.3	3.3	1.5	<b>21.15</b>
<b>Total tons mined</b>	<b>tons million</b>	<b>0.15</b>	<b>0.4</b>	<b>11.4</b>	<b>11.6</b>	<b>11.6</b>	<b>11.6</b>	<b>11,6</b>	<b>11.6</b>	<b>11.6</b>	<b>11,6</b>	<b>5.49</b>	<b>84.55</b>
<b>Processing</b>													
Tonnage processed	tons million	0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	1.5	<b>31.2</b>
Grade recovered	cpht	0	0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	<b>.09</b>
Carats recovered	carats	0	0	29,674	29,674	29,674	29,674	29,674	29,674	29,674	29,674	13,500	<b>250,892</b>





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**(g) A financial plan**

**i Details and costing of the mining technique, mining technology, and production rates applicable to the proposed mining operation**

**Description of Mining Technique**

All of the gravel resources on the Rooipoort Nature Reserve will be mined using the strip mining method, which utilises excavators, front-end loaders and dumper trucks.

The areas to be mined will be surveyed and a survey base line will be established across the working area of each resource. In the case of Diamond Koppie, blocks of 50m X 50m will be demarcated along its base line, whereas 100m X 200m strips will be demarcated for each of the remaining deposits (M5, M6 and L2). One block/strip at a time will be opened for each deposit, but **three blocks/strips will be open at any given time. One block/strip will be stripped from overburden, gravel will be removed from a second block/strip and a third block/strip will be backfilled and rehabilitated.** Any topsoil from these blocks/strips will be removed and stockpiled on the high ground side of the excavation. Overburden will also be removed and kept separate from the topsoil.

The gravels will be extracted from each block/strip using a 70 ton excavator. The gravels will be transported to the DMS plant by haul trucks (40 ton ADT's) where it will be screened through rotary barrel screens to -75mm. The remaining -75mm material will be scrubbed and screened to -32mm, +2mm, where after it will be processed through the DMS plant and the final recovery section.

Once processed, the plant's tailings and oversize material will be hauled back to the excavation and deposited in the same trench from which it was extracted. This will be performed by the same haul trucks that were used to transport the gravels from the excavation site to the plant.

During the processing of the material, the slimes will continuously be pumped back to the first excavation site and pumped into the trench. Once the plant's tailings and slimes have been returned to the excavation from which it was derived, the overburden and topsoil will be replaced.

Having mined out a designated block/strip, an adjacent block/strip to the one mined previously will be opened and the same process, as detailed above, followed.

**Technology to be used:**

Besides the earth moving equipment, such as excavators, front-end loaders and dumper trucks that will be used during mining, the use of other or additional technology seems unlikely.

**Forecast of annual production rates:**

Please see Figure 8 for the forecast of annual production rates.

**Mining operation conducted in house or contracted out:**

Rooipoort Developments will conduct mining operations in house.

**Costs applicable to mining operation:**

Table 5 below shows the mine capital and operating costs for the mining operation over the life of mine.

**Table 5: Mining Capital and Operating Costs (Un-escalated)**

MINING COSTS	TOTAL	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>Direct Variable Cost</b>	<b>349,653,344</b>	14,720,584	14,720,584	38,401,522	38,401,522	38,401,522	38,401,522	38,401,522	38,401,522	38,401,522	38,401,522	13,000,000
<b>Production Overheads</b>	<b>93,800,000 -</b>	2,500,000	5,500,000 -	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	1,800,000
<b>Direct Capital</b>	<b>156,800,000</b>	40,000,000	0	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	4,800,000 -

**NOTES:****Direct Variable Costs:**

These are costs that directly relate to production, i.e. if the item is not purchased or if a service is not carried out production will not take place. The variable costs are based on historical cost gathered over the past few years and adjusted in line with new mining methods envisage to be used in the future.

**Production Overheads:**

These are costs not directly related to production. If the item is not purchased or service not carried out production will still take place e.g.: "Supervision and General" account costs.

**Direct Capital:**

All capital costs relating to the mining process and split into expansion, stay in business and performance enhancement categories.

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ii **Details and costing of the technological process applicable to the extraction and preparation of the mineral or minerals to comply with market requirements**

**Metallurgical Extraction Process:**

During mining, the run of mine ore will be fed directly into screens at the DMS plant or stockpiled while maintenance on the plant is in progress. A front-end loader will be used to feed this material into the main feed bin of the DMS plant, which will be equipped with a vibrator feeder discharging onto a 750mm wide conveyor belt. This conveyor will feed directly on to a classifier or roll screen, which will screen off all the undesired oversize material of approximately 32mm and greater. The oversize material will be conveyed to a waste bin, from which it will be returned to the excavation site and used as backfill material.

The screened material will be fed to scrubber and magnetic belts where metal and ironstone will be removed from the material. The material will then be fed into the feed bin, 4 x 50tph DMS units and the Flowsort x-ray final recovery-system.

The tailings material will be discharged on to a dewatering screen, allowing for any -0.8mm material to be screened out and the latter recycled. The washed +0.8mm tailings material will be discharged on to a conveyor belt and conveyed to a designated discharge bin. Similarly to the coarse (+32mm) material, the tailings will be transported back to the excavation site and used to backfill the trench from which it was initially derived.

The concentrate from the DMS plant will be transported by closed conveyor to the concentrate bin and into the final recovery where the material will be processed through Flowsort x-ray machines and a greasebelt to recover any diamonds present in the concentrate.

A process flow diagram is shown in Figure 9.

**Cost of Metallurgical Extraction Process:**

Table 6 below shows the Processing capital and operating costs for the treatment plant operation over the life of mine.

**Table 6: Processing Capital and Operating Costs (Un-escalated)**

PROCESSING COSTS	TOTAL	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Direct Variable Cost	432,173,420	17,872,940	23,300,000	46,625,060	46,625,060	46,625,060	46,625,060	46,625,060	46,625,060	46,625,060	46,625,060	18,000,000
Production Overheads	97,500,000	2,500,000	5,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	5,500,000
Direct Capital	136,000,000	50,000,000	38,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	-

**NOTES:****Direct Variable Costs:**

These are costs that directly relate to production, i.e. if the item is not purchased or if a service is not carried out production will not take place. The variable costs are based on historical cost gathered over the past few years and adjusted in line with new mining methods envisaged to be used in the future.

**Production Overheads:**

These are costs not directly related to production. If the item is not purchased or service not carried out production will still take place e.g.: "Supervision and General" account costs.

**Direct Capital:**

All capital costs relating to the treatment process and split into expansion, stay in business and performance enhancement categories.

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**[Note: Please replace this plant layout diagram with the updated version.]**

**iii Details and costing of the technical skills and expertise and associated labour implications, required to conduct the proposed mining operation**

**Number of people to be employed and their respective skills requirements:**

The table below (Table 7) reflects the 5 year labour forecast (2011 to 2016) and the breakdown of labour per section. It is expected that the numbers will stay fairly constant, however, it must be noted that the final structures may be subject to change upon mining of the deposits. These estimates do not include additional contractors.

**Table 7: Manpower Estimates (5 year labour plan)**

<b>MANPOWER ESTIMATE (5 Year Plan)</b>	<b>SALARY LEVEL (Lower/Upper)</b>	<b>MONTHLY SALARY (Rand)</b>	<b>COMPLEMENT</b>
Attendant/ Assistant	Level 1U	2,500	12
Driver/ Operator	Level 2L	3, 000	73
Plant Operator	Level 2U	4, 000	30
Artisan Assistant	Level 2L	3,000	8
Artisan – Mechanic/Boilermaker	Level 4U	18,000	3
Site Foreman	Level 6L	17,000	9
Site supervisors	level 7L	25,000	8
Site Manager	Level 8U	60,000	1
Trainees/Apprentices	-	-	0
<b>Sub-Total</b>			<b>144</b>
<b>Temporary Employees</b>			<b>0</b>
<b>Total Strength / Complement</b>			<b>144</b>

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**Associated costs in respect of wages and salaries:**

The salary scales in Table 8 are applicable to the above labour outline.

**Table 8: Salary Scales**

<b>LEVEL</b>	<b>Lower</b>	<b>Upper</b>	<b>TYPICAL JOB</b>
1	R 2,100	2,500	Labourer
2	R 2,900	4,100	Driver/ Operator
3	5,500	10,000	Clerk
4	16,000	20,000	Artisan
5	R 16,500	21,000	Foreman
6	R 17,000	21,500	Junior Manager
7	R 25,000	35,000	Middle Manager
8	R 40, 265	60,000	Senior Manager
9	R 64, 425	-	Managing Director



**iv Details and costing of regulatory requirements in terms of the act and other applicable law, relevant to the proposed mining operation**

Table 9 below highlights the regulatory costs that have been identified and included in the financial plan.

**Table 9: Regulatory Costs**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>MANAGEMENT</b>											
U.I.F.	0	35,000	178,800	178,800	178,800	178,800	178,800	178,800	178,800	178,800	35,000
Royalties	0	0	15,500,000	15,500,000	15,500,000	15,500,000	15,500,000	15,500,000	15,500,000	15,500,000	7,500,000
<b>ADMIN</b>											
Rehabilitation Insurance	To be determined as part of EMP process										
<b>HUMAN RESOURCES</b>											
Skills Development Levy	0	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
ABET	0	0	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
<b>SOCIAL AND LABOUR PLAN</b>											
Local Economic Development Project Downscaling and Retrenchment	0	3,700,000	720,000	720,000	720,000	720,000	720,000	720,000	720,000	720,000	360,000
<b>SHE-SAFETY</b>											
SHE Audit	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
<b>SHE-ENVIRONMENTAL</b>											
Environmental Scoping Report Environmental Impact Assessment Environmental Management Programme	0	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000

**Note: Contractors were used for the operation until May 2012.**

**v Details regarding other relevant costing, capital expenditure requirements, and expected revenue applicable to the proposed mining operation**

**Costing details of any contingencies:**

Contingencies are the financial provision for unforeseen occurrences, which are included in the capital budgeting processes. The capital breakdown may be seen in Table 10.

**Detailed breakdown of capital expenditure:**

The proposed capital expenditure is detailed in Table 10.

**Table 10: Capital Expenditure proposed for the Rooipoort Project**

CAPITAL	TOTAL	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>Direct Capital Mining</b>												
Direct Capital Mining - Expansion	-	40,000,000	0	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	4,800,000
Direct Capital Mining - Expansion (Stripping)	-	-	-	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	0 -
Direct Capital Mining - Expansion (Development)	-	-	-	-	-	-	-	-	-	-	-	-
Direct Capital Mining - Stay in Business	-	40,000,000	-	9,000,000	9,000,000	9,000,000	9,000,000	9,000,000	9,000,000	9,000,000	9,000,000	4,800,000
Direct Capital Mining - Performance Enhancement	-	-	-	-	-	-	-	-	-	-	-	-
<b>Direct Capital Treatment</b>												
Direct Capital Treatment - Expansion		50,000,000	38,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	-
Direct Capital Treatment - Stay in Business		50,000,000	38,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	-
Direct Capital Treatment - Performance Enhancement		-	-	2,000,000	-	-	-	-	-	-	-	-
<b>General Capital</b>												
General Capital - Expansion	-	-	-	-	-	-	-	-	-	-	-	-
General Capital - Stay In Business	-	-	-	-	-	-	-	-	-	-	-	-
General Capital - Performance Enhancement	-	-	-	-	-	-	-	-	-	-	-	-



**NOTES:****Stay in Business Capital:**

This includes replacement capital, technical investigations, pre-feasibility studies and other expenditure that does not lead to additional diamond recoveries. (E.g. Major Replacement of equipment, Sampling, Pre feasibility)

**Performance Enhancement:**

Capital expenditure aimed at improving production efficiencies leading to additional recoveries. (E.g. Treatment Plant Upgrades, Liberation Upgrades)

**Expansion:**

Capital expenditure that results in an extension of the life of the mine, the establishment of a new mining operation / treatment, or an increase in the plant throughput rating or increasing the duration of operations.

**Forecast of expected annual revenue:**

Table 11 shows the escalated expected annual revenue in Rands until the year 2021

**Table 11: Forecast Revenue**

<b>Year</b>	<b>Revenue (Rand)</b>
2011	0
2012	0
2013	310,000,000
2014	310,000,000
2015	310,000,000
2016	310,000,000
2017	310,000,000
2018	310,000,000
2019	310,000,000
2020	310,000,000
2021	155,000,000

- vi **A detailed cash flow forecast and valuation, excluding financing, of the proposed mining operation, which forecast must also clearly indicate how the applicable regulatory costs will be accommodated therein**

Detail of future cash flow is shown in Table 12. The financial modelling for Rooipoort Mine has been generated on a stand-alone basis and no account has been taken of any loan financing or taxation ring-fencing. The following are assumptions that are incorporated into the cash flow forecast:

	<b>Parameter</b>	<b>Value</b>		
1	Diamond value (initial)	US\$ 1368per carat		
2	Rand/Dollar exchange rate	2011	2012	2013
		7.0	7.35	7.72
4	R.S.A inflation rate	5-6%		
5	Corporate tax rate	28%		
6	Secondary Tax on Companies (STC)	0		
7	Royalties	5% on final sale value from 2009		
8	Export duty	0%		

**NOTES:**

1. **Diamond value**

The US\$/carat pricing is subject to variation based on reactions to supply and demand fundamentals and could further improve the economics of the project should there be continued growth in the diamond market.

2. **Rand/Dollar exchange rate**

There are numerous approaches that may be utilised with respect to exchange rate forecast. Many market participants use a technical analysis approach, (i.e. charting

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market trends). Others rely on fundamental analysis, whilst others use the forward market as a benchmark.

At the end of the day, however, the prime determinant of an exchange rate is a combination of the “purchasing power parity” and the difference in interest rates between countries. These are the primary factors looked at by foreign exchange forecasters. Additional factors such as the perceived political risk of investing in a currency country will influence forecasters’ perceptions.

### **Purchasing Power Parity (PPP)**

PPP describes the manner in which a currency’s value adjusts to another currency because of the inflation differential between countries. If, for example, South Africa’s inflation rate is higher than that of the USA, the Rand should over time adjust downward (weaken) to compensate for the annual loss of value as a result of the inroads of inflation.

A key factor that a forecaster will look at is therefore the anticipated inflation rates of the relevant countries in making their forecasts.

3.

### 4. **R.S.A inflation rate**

Mean forecast from Reuters Monthly Survey of Long-term Forecasts for the South African economy used. The South African inflation rate and hence cost escalation rate has been based on the CPIX and has been capped at the upper end for long term forecasts (5%) of the inflation target range (4%-5%) in later years.

### 5. **Corporate tax rate**

Legislated company tax rate.

### 6. **Secondary Tax on Companies (STC)**

Legislated tax rate on dividend payments. All earnings are expected to be paid out as dividends and the company does not anticipate receiving dividends from another source.

### 7. **Royalties**

Royalties have been included.

**8. Export duties**

Export duties have been excluded as these have not yet been promulgated



**Table 12:** Detailed cash flow for the Rooipoort Project

**[Please note that the above table is replaced with attached spread sheet marked “table 12”]**

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**vii Details regarding the applicant's resources or proposed mechanisms to finance the proposed mining operation, and details regarding the impact of such financing arrangements on the cash flow forecast**

Rooipoort Developments intends to develop a mine on the Rooipoort Nature Reserve; while the mine is being developed the project will be cash negative for approximately the first eighteen months. This amount will be funded by way of current company cash resources and finance facilities available to Rooipoort Developments via its ultimate holding company.

Once the mine is operational an annual budget based on accepted budget processes will be submitted to the Rooipoort Developments Board for approval. The operation is financed out of cash reserves, loan facility agreements with its ultimate holding company and sales in excess of cash expenses.

**viii Provisions for the execution of the social and labour plan**

The cost provisions for the execution of the social and labour plan are shown in the detailed cash flow, Table 9, presented under section g (iv).

The Rooipoort Social and Labour Plan is based on Rooipoort Development's social investment strategy which is articulated in greater detail in the Amended Social and Labour Plan.

The following legislation and regulations are relevant to the Social Plan:

Mineral and Petroleum Resources Development Act and Regulations, 2002 (Act No. 28 of 2002);

- DME guidelines for Social and Labour Plans;
- Broad Based Socio-Economic Empowerment Charter for the South African mining industry, also known as the Mining Charter and Scorecard
- Skills Development Act
- Labour Relations Act

**(h) An undertaking, signed by the applicant, to adhere to the proposals as set out in the mining work programme**

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The undertaking in terms of the Mining Work Programme for the proposed Rooipoort Mine is made on behalf of Rooipoort Developments Proprietary Limited by Mr Sarel Potgieter.

I, Sarel Potgieter, the undersigned and duly authorised thereto by Rooipoort Developments Proprietary Limited, undertake to adhere to the proposals as set out in the Mining Work Programme, provided that future circumstances do not materially differ from the assumptions used to prepare this Mining Work Programme.

Signed at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_ 2012

Signature of applicant:

\_\_\_\_\_

Name:

\_\_\_\_\_

Capacity:

\_\_\_\_\_

#### **IV. APPENDICES**