

# PROSPECTING WORK PROGRAMME

SUBMITTED FOR A PROSPECTING RIGHT APPLICATION  
WITH BULK SAMPLING



**mineral resources**

Department:  
Mineral Resources  
REPUBLIC OF SOUTH AFRICA

Name of Applicant:

**JACOBUS SMIT**

**ID NR: 590620 5091 088**

**SLYPSTEEN 42**

**AS REQUIRED IN TERMS OF SECTION 16 READ TOGETHER WITH REGULATION 7(1)  
OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT (ACT 28 OF  
2002)**

**1. REGULATION 7.1 (a)**

**FULL PARTICULARS OF THE APPLICANT**

***Table 1: Applicant's Contact Details***

<b>ITEM</b>	<b>COMPANY CONTACT DETAILS</b>
Name	Jacobus Smit
Tel no	053 963 2008
Fax no	053 963 2009
Cellular no	083 297 6070
Email address	twomoons@eafritronics.co.za
Postal address	P.O. Box 754 Schweizer-Reneke 2630

***Table 2: Consultant's Details***

<b>ITEM</b>	<b>CONSULTANT CONTACT DETAILS (If applicable)</b>
Name	Japie van Zyl Attorneys
Tel no	053 963 2008
Fax no	053 963 2009
Cellular no	082 924 6687
Email address	japie@japievzylprok.co.za
Postal address	P.O. Box 960 Schweizer-Reneke 2780

2. REGULATION 7(1)(b)

**PLAN CONTEMPLATED IN REGULATION 2(2) SHOWING THE LAND TO WHICH THE APPLICATION RELATES**

See annexure "B"

3. REGULATION 7(1)(c)

**THE REGISTERED DESCRIPTION OF THE LAND TO WHICH THE APPLICATION RELATES**

1. Remaining extent of the farm Slypsteen 42;  
Registration Division: Hopetown RD  
Extent: 1268.6895 hectares  
Province: Northern Cape

4. REGULATION 7(1)(d) and (e)

**THE MINERAL OR MINERALS TO BE PROSPECTED FOR**

*Table 4.1: Minerals to be prospected for*

ITEM	DETAIL
Type of mineral(s)	Diamonds Alluvial (DA) Diamonds General (D)
Type of mineral continued	n/a
Locality (Direction and distance from nearest town)	The property is located approximately 41km South West of Hopetown towards Douglas in the Northern Cape Province.
Extent of the area required for prospecting	1268.6895 hectares
Geological formation	1. Ventersdorp Supergroup Lavas belonging to the Ventersdorp Super Group represent the oldest geological formation encountered. The lava succession andesitic amygdaloidal lavas, brecciasand medium to fine grained porphyritic lavas. This

supergroup is found only in the southern and the south-western Transvaal and part of the Northern Cape Province. It is composed predominantly of andesitic lava, tuff and agglomerate with subordinate, interbedded sedimentary rocks. In the Klipriviersberg and the Suikerbosrand its relation with the underlying Witwatersrand Supergroup is paraconformable this relation also applies to the area north-east of Klerksdorp. East of Johannesburg city centre the supergroup transgresses towards the north, onto the Archaean granite. This also takes place between Klerksdorp and Ventersdorp, where the relationship with the older rocks is unconformable.

The supergroup is subdivided into a lower or Kliprivierberg Group and a succeeding or platberg Group with the Bothaville and Allanridge Formations occurring above the latter. The Makwassie Porphyry formation of the Platberg Group is the chronohorizon demarcating the top of the Randian Erathem. The formations present stratigraphically above this horizon, viz. the Rietgat, Bothaville and Allanridge formations, will therefore be discussed under the Vaalian Erathem. The rocks of the Ventersdorp Supergroup which fall within the Randian Erathem are indicated on the map as the Klipriviersberg Group and the Kameeldoorns and Makwassie Formations.

## 2. Karoo-supergroup

The Dwyka formation is found at the base of the Karoo Sequence. In the central Karoo it was deposited in a comparatively shallow basin with a rather even floor, so that the rocks in this area are practically horizontally bedded and not very thick. Towards the south

	<p>the basin deepens and the formation attains its maximum thickness of 600 to 750m in the southern part thereof. Towards the north, especially in the eastern and the south eastern Transvaal, the floor is uneven and the occurrences are patchy. The beds are scarcely 15m thick and are preserved in hollows in the uneven floor. Between Witbank and Pienaars River a number of outliers of the Dwyka formation are found on rocks of the Waterberg Group, and near Hammanskraal. Outcrops are known to occur at the base of the Karoo sequences on the Springbok flats. This indicates that the Karoo rocks on the Springbok Flats formerly linked up with those in the main Karoo basin. In the Waterberg. The Dwyka formation is composed practically throughout of rudaceous rocks, i.e. diamictite with subordinate varved shale, and mudstone containing striated and faceted pebbles, fluvio-glacial gravel and conglomerate, all presumably of glacial origin. In several localities, e.g at Nooitgedacht, north-west of Kimberley.</p>
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**4.2 Description why the Geological formation substantiates the minerals to be prospected for (provide a justification as to why the geological formation supports the possibility that the minerals applied for could be found therein)**

There are various operational alluvial diamond mines adjacent to these properties on which applications for prospecting rights have been lodged. In house information exist which substantiate the reasons for this application.

Research programmes pertaining to the diamondiferous potential of alluvial gravels on the farm Slypsteen Hopetown district have been conducted.



### 5.3 PITTING

Pits will be dug by an excavator to look for gravel. If gravel is found, the applicant will determine the composition and quality of the gravel.

### 5.4 TRENCHES

The applicant will proceed with this way of prospecting by means of the open cast / trenching method, simultaneously or after pitting depending on the information obtained from the earlier work done. The trenches will be dug to remove and to wash the gravel. It will be washed by 1 x 16 feet washing pan to determine diamond proceeds per 100 ton of gravel.

### 5.5 CONSOLIDATION AND INTERPRETATION OF RESULTS DATA

All data will be consolidated and processed to determine the diamond bearing resource on the property. This will be a continuous process throughout the prospecting work program.

## REGULATION 7(1)(h)

### ALL PLANNED PROSPECTING ACTIVITIES MUST BE CONDUCTED IN PHASES AND WITHIN SPECIFIC TIMEFRAMES

PHASE	PROSPECTING METHOD	0 - 3	4 - 6	7 - 48	49-60
1	Site Visit	x			
2	Desktop Studies		X		
3	Pitting			X	
4	Trenches			X	
5	Consolidation and interpretation of results data; Preparation of mining right application or renewal of the prospecting right.				X

REGULATION 7(1)(i)

**TECHNICAL DATA DETAILING THE PROSPECTING METHOD OR METHODS TO BE IMPLEMENTED AND THE MINE REQUIRED FOR EACH PHASE OF THE PROPOSED PROSPECTING OPERATION**

**PHASE 1 – SITE VISIT**

GENERAL	A site visit will be conducted within 3 months after execution of the Prospecting Right. It is envisaged that the information will be obtained from the site visit to do the desktop studies and other prospecting activities.
TIMEFRAME	0-3 months
COSTS	R15 000
TECHNICAL SUPPORT	Environmental Consultant – Milnex 189 CC Geologist – Pierre de Jager

**PHASE 2– DESKTOP STUDIES**

1.	GENERAL	Desktop studies will be undertaken after the site investigation has been done to determine the target areas including the identification of any infrastructure to be built and any potential problems that may need to be addressed.
2.	TIMEFRAME	3 months (4 -6)
3.	COSTS	R15 000
4.	TECHNICAL SUPPORT	Environmental Consultant – Milnex 189 CC Geologist – Pierre de Jager



### **PHASE 3 – PITTING**

1.	GENERAL	The information obtained from the desktop studies will be used to draw up a pitting map. The location and GPS coordinates of where pits will be dug, will be indicated on this map (pitting location map). Pits will then be dug by an excavator on these mapped coordinated points. If gravel is found the applicant will determine the composition and quality of the gravel. It is envisaged that the pits will determine the location and intersection of mineralization.
2.	TIMEFRAME	42 months
3.	NUMBER OF PITS	100
4.	EXTENT	3m x 2m x 5m
5.	CALCULATION	Area: 1268.6895 hectares Pit every 12 hectares
6.	COSTS	R1000 x 100 = R100 000.00
7.	TECHNICAL SUPPORT	Environmental Consultant – Milnex 189 CC Geologist 1 X Excavator

### **PHASE 4 – TRENCHES**

1.	GENERAL	The applicant will proceed with this way of prospecting by means of the open cast / trenching method, after and or simultaneously pitting and depending on the results. The location where the trenches will be dug, will be determined after the gravel has been located by conducting the desktop studies and the digging of pits. The trenches will be dug on the parts of the property where the gravel is
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		located. Trenches will be sited on the resource map according to the coordinate of each of the trenches made. The trenches will be digged to remove and wash the gravel. It will be washed by a 16 feet washing pan to determine diamond proceeds per 100 ton of gravel. The trenches will be sited to determine the geological representivity. Overburden will be stripped and placed next to the trench as determined in the EMP. Gravel will be removed and transported to the plant to be washed. Tailings will be returned to the excavation to fill it up. Hereafter overburden will be dumped in the excavation where after topsoil will be placed in the excavation.
2.	TIMEFRAME	42 months
3.	NUMBER OF TRENCHES	30
4.	EXTENT	30m x 20m x 5m
5.	CALCULATION	Area: 1268.6895 hectares Trench every 63 hectares
6.	COSTS	R5000 x 20 = R200 000.00
7.	TECHNICAL SUPPORT	1 x Cummins Generator 2 x Luigong CLG862 Wheel loader 1 x Bell B30 D Dumper 2 x Liugong CLG 936D Excavator 1 x 16 Ft Pan with Conveyor
8.	TONS TO BE WASHED	30m x 20m x 1.5m x 2.2 x 30 = 59,400 tons

## **PHASE 5– CONSOLIDATION AND INTERPRETATION**

1.	GENERAL	All data will be consolidated and processed to determine the diamond bearing resource on the property. This will be a continuous process throughout the prospecting work. Each phase of prospecting will be followed by desktop studies involving interpretation and modeling of all data gathered and how the applicant will proceed with the work program in terms of activity, quantity, resources expenditures and duration. A pre-feasibility study will be done to determine the preliminary economic assessment of the resource and to determine whether additional evaluation of the deposit will be warranted to increase confidence in the resource estimation. Prospecting work will be conducted by a multi-disciplinary team to determine whether the resource can be viable exploited and if the results can support an application for a mining right.
2.	TIMEFRAME	12 months
3.	COSTS	R20 000
4.	TECHNICAL SUPPORT	Environmental Consultants, Geologist – P de Jager

**Table 5.1 The table below incorporates the information required in respect of Regulations 7(1)(f), 7(1)(h) and 7(1)(i):**

Phase	Activity	Skill(s) required	Timeframe	Outcome	Timeframe for outcome	What technical expert will sign off on the outcome?
One	<b>Non-Invasive Prospecting</b> Site Visit	Environmental Consultant, geologist	Month 0 – 3	Finalization of the prospecting work to be done	Month 3	Environmental Consultants – Milnex Geologist – Pierre de Jager
Two	<b>Non-Invasive Prospecting</b> Desktop Studies	Environmental Consultant, geologist	Month 4 - 6	The finalization of the map for pitting	Month 6	Milnex – Environmental Consultants
Three	<b>Invasive Prospecting</b> Pitting	Environmental Consultant, geologist	Month 7 - 48	Obtaining information about location of the gravel and where bulk samples will be made	Month 48	Milnex - Environmental Consultants Geologist - Pierre de Jager
Four	<b>Invasive Prospecting</b> Trenches	Environmental Consultant, Machine Operators, Pan Operators, Mine Health and Safety, Environmental	Month 7 - 48	The determination of the diamond resource bearing resource, the extent of the resource, the life of mine, diamond proceeds per 100 tons of gravel washed (cpht) and average price per carat for the diamonds	Month 48	Milnex - Environmental Consultants Geologist – Pierre de Jager
Five	<b>Non-Invasive Prospecting</b> Consolidation and interpretation of results	Environmental Consultant,geologist	Month 49 – 60	The extent of the resource, The life of mine	Month 60	Milnex - Environmental Consultants Geologist - Pierre de Jager

## 6 REGULATION 7 (1)(g)

### **A DESCRIPTION OF THE PROSPECTING METHOD OR METHODS TO BE IMPLEMENTED**

#### **(i) DESCRIPTION OF PLANNED NON-INVASIVE ACTIVITIES:**

(These activities do not disturb the land where prospecting will take place e.g. aerial photography, desktop studies, aeromagnetic surveys, etc)

##### **1. Site Visit**

A formal site visit will be done within 90 days after the prospecting right was executed.

##### **2. Desktop Studies**

Desktop studies will be undertaken after the site investigation has been done to determine the target areas including the identification of any infrastructure to be build and any potential problems that may need to be addressed.

##### **3. Consolidation and interpretation of results data**

All data will be consolidated and processed to determine the diamond bearing resource on the property. This will be a continuous process throughout the prospecting work program.

#### **(ii) DESCRIPTION OF PLANNED INVASIVE ACTIVITIES:**

(These activities result in land disturbances e.g. sampling, drilling, bulk sampling, etc)

##### **1. Pitting**

After the desktop studies, the applicant will use the info to draw a pitting map. The location and GPS coordinates of where the first pits will be digged, will be indicated on the map also referred to as a pitting location map. Pits will then be digged by an excavator at these mapped coordinated points. If gravel is found, the applicant will determine the composition and quality of the gravel. For proper evaluation of the composition and the quality of the gravel it is necessary for the applicant

to dig these prospecting pits. It is envisaged that the pits will determine the location and intersection of mineralization. The location of the further pits to be digged will be determined as pits are digged.

**2. Trenches**

The applicant will proceed with this way of prospecting by means of the open cast / trenching method, after and or during pitting. The location of the trenches will be determined after the gravel has been located by conducting the desktop studies and the digging of pits. The trenches will be digged on the parts of the property where the gravel is located. Trenches will be sited on the resource map according to the coordinate of each of the trenches made. The trenches will be digged to remove and wash the gravel. It will be washed by a 1 x 16 feet washing pans to determine diamond proceeds per 100 ton of gravel. The trenches will be sited to determine the geological representivity. Overburden will be stripped and placed next to the trench as determined in the EMP. Gravel will be removed and transported to the plant to be washed. Tailings will be returned to the excavation to fill it up. Hereafter overburden will be dumped in the excavation where after topsoil will be placed in the excavation.

**Commitment to provide addendums in respect of additional prospecting activities**

I herewith commit to provide the Department of Mineral Resources with an addendum in respect of both the EM Plan and Prospecting Work Program regarding any future in-fill prospecting required but not described above, prior to undertaking such activities. The addendum will cover all the Regulations as per the Prospecting Work Program.

I agree that the addendums will provide for similar activities only and if the scope changes I would be required to apply in terms of Section 102 of the MPRDA for an amendment of the Prospecting Work Program.

ACCEPT	X
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**(iii) DESCRIPTION OF PRE-FEASIBILITY STUDIES**

(Activities in this section includes but are not limited to: initial, geological modeling, resource determination, possible future funding models, etc)

All data will be consolidated and processed to determine the diamond bearing resource on the property. This will be a continuous process throughout the prospecting work program.

**(iv) DESCRIPTION OF BULK SAMPLING ACTIVITIES**

This activity requires that an application in terms of Section 20 of the Act is specifically included in your application for a prospecting right and cannot be proceeded with if such permission is not specifically granted.

See annexure “D” for an application in terms of Section 20 of the Act

**Table 6.1: Bulk Sampling Activities**

ACTIVITY		DETAILS		
Number of pits/trenches planned		100 Pits ; 30 Trenches		
Dimensions of pits/trenches, per pit/trench	Number of pits/trenches	Length	Width	Depth
	100 pits	3m	x 2m	x 5m
	30 trenches	30m	x 20m	x 5m
Locality		The locality of the trenches will only be determined after the field mapping has been done and the pits have been dug.		
Volume Overburden (Waste)		30m x 20m x 3.5m x 30 = 63 000m <sup>2</sup>		
Volume Ore		30m x 20m x 1.5m x 30 = 27 000m <sup>2</sup>		
Density Overburden		1.8		
Density Ore		2.2		
Phase(s) when bulk sampling will be required		Phase 4		

Timeframe(s)	Pitting: 42 months Trenches: 42 months
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**Commitment to provide for an addendum in respect of additional bulk sampling activities**

I herewith commit to provide the Department of Mineral Resources with an addendum to the Prospecting Work Program, and an Environmental Management Plan for approval prior to undertaking any future bulk sampling activities not described above.

ACCEPT	X
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**7 REGULATION 7(1)(j)(i)**

**DETAILS WITH DOCUMENTARY PROOF OF THE APPLICANT’S TECHNICAL ABILITY OR ACCESS THERETO TO CONDUCT THE PROPOSED PROSPECTING OPERATION**

**7.1 Competencies to be employed in terms of the Mine Health and Safety Act**

COMPETENCIES TO BE EMPLOYED
Mine Manager
Equipment Manager
Safety Officer
Electricians
Operators
Environmental Consultants
Geologist



I herewith confirm that I, in Table 9.1 have budgeted and financially provided for the required skills listed above.

<b>CONFIRMED</b>	<b>X</b>
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## 7.2 List of Appropriate equipment at your disposal (If applicable)

**Table D: Appropriate Equipment available**

<ol style="list-style-type: none"><li>1. 400KVA John Deere generator</li><li>2. Finlay 885+</li><li>3. Bell B30 Dumper</li><li>4. Bell B30 Dumper</li><li>5. Bell B25 Dumper</li><li>6. 3 x 936 LuiGong Excavator</li><li>7. 3 x 862 LuiGong Loader</li><li>8. Man 26 480KW Truck</li><li>9. Dyna 3 Ton</li><li>10. Tata Bus 32 seater</li><li>11. Mahindra LDV</li><li>12. Toyota D4D 3.0 Bakkie</li></ol>
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## 7.3 Technical skills provided Free of Charge

7.3.1 Information (CV's) in respect of skills already acquired

- Environmental Consultants – see annexure “E”
- CV`S of workers – “F”
- Geologist – Pierre de Jager “G”

7.3.2 Copy of the relevant contractual agreements between the service provider and the applicant relative to the duration of the planned prospecting period, where applicable

- Environmental Consultants – see annexure “E”
- CV`S of workers – “F”
- Geologist – Pierre de Jager - “G”

7.3.3 All other evidence of Technical Ability

List of Equipment – annexure “H” and Employees – annexure “F”

**8 REGULATION 7 (1)(j)(ii)**

**DETAILS WITH DOCUMENTARY PROOF OF A BUDGET AND DOCUMENTARY PROOF OF THE APPLICANT’S FINANCIAL ABILITY OR ACCESS THERETO**

As proof of the applicant’s financial ability or access thereto, the following documents are annexed:

- Letter of undertaking – annexure “I”
- Financial statements – annexure “J”

**9 REGULATION 7 (1)(k)**

**A COST ESTIMATE OF THE EXPENDITURE TO BE INCURRED FOR EACH PHASE OF THE PROPOSED PROSPECTING OPERATION**

*Table 9.1*

<b>ACTIVITY</b>	<b>YEAR 1 Expenditure</b>	<b>YEAR 2 Expenditure</b>	<b>YEAR 3 Expenditure</b>	<b>YEAR 4+5 Expenditure</b>
<b>PHASE 1</b>				
Site Visit	R15 000	-	-	-
<b>PHASE 2</b>				
Desktop Studies	R15 000	-	-	-
<b>PHASE 3</b>				
Pitting	R14 285	R28 570	R28 570	R28 570
<b>PHASE 4</b>				
Trenches	R28 571	R57 142	R57 142	R57 142
<b>PHASE 5</b>				
<b>Pre-Feasibility</b>				R20 000
<b>Labour</b>	R50 000	R100 000	R100 000	R100 000
<b>Rehabilitation</b>	R40 000	R80 000	R80 000	R80 000
<b>Diesel &amp; Maintenance</b>	R30 000	R60 000	R60 000	R60 000
<b>Annual Total</b>	R192, 856	R325,712	R325, 712	R345,712
			<b>Total Budget</b>	R1, 189,992

## **10 FINANCIAL ABILITY TO GIVE EFFECT TO THE WORK PROGRAMME**

### **10.1 The amount required to finance the Work Program**

From the proposed budget it can be assumed that the amount of R1, 189, 992.00 would be required to finance the Work Program.

### **10.2 Detail regarding the financing arrangements**

- Letter of undertaking – “I”
- Financial Statements – “J”

### **10.3 Confirmation of supporting evidence appended**

- Financial Statements – “J”

## **11 Confirmation of the availability of funds to implement the proposed project**

- Financial Statements – “J”

**12 I herewith confirm that I have budgeted and financially provided for the total budget as identified in Regulation 7(1)(k).**

<b>CONFIRMED</b>	<b>X</b>
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## **13 REGULATION 7(1)(m)**

### **UNDERTAKING, SIGNED BY THE APPLICANT, TO ADHERE TO THE PROPOSALS AS SET OUT IN THE PROSPECTING WORK PROGRAMME**

*Table 13.1*

<b>Herewith I, the person whose name and identity number is stated below, confirm that I am the Applicant or the person authorized to act as representative of the Applicant in terms of the resolution submitted with the application, and undertake to implement this prospecting work program and adhere to the proposals set out herein.</b>	
<b>Full Names and Surname</b>	JACOBUS SMIT
<b>Identity Number</b>	590620 5091 088
<b>Date</b>	26 May 2016

## **ANNEXURE D**

### **APPLICATION IN TERMS OF SECTION 20 (2) PERMISSION TO REMOVE AND DISPOSE OF MINERALS**

Name of applicant: Jacobus Smit  
ID number: 590620 5091 088  
Postal address: P.O. Box 754  
Schweizer-Reneke  
2780  
Telephone number: 083 2904913  
Fax number: 053 963 2009

Description of area applied for:

1. Remaining extent of the farm Slypsteen 42;  
Registration Division: Hopetown RD  
Extent: 1268.6895 hectares  
Province: Northern Cape

The applicant hereby applies for permission to remove and dispose for own account of bulk samples of alluvial diamonds and diamonds general found on the above mentioned area.

Signed at Schweizer-Reneke on 26 May 2016.

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APPLICANT

## **ANNEXURE K: UNDERTAKING**

### **UNDERTAKING OF JACOBUS SMIT**

I, Jacobus Smit hereby undertakes to fund the application for a prospecting right in terms of sections 16 and 17 of the Mineral and Petroleum Resources Development Act and to prospect for diamonds on:

1. Remaining extent of the farm Slypsteen 42;  
Registration Division: Hopetown RD  
Extent: 1268.6895 hectares  
Province: Northern Cape

It is confirmed that there is money available for the conducting of the prospecting activities. This money will be made solely available for the conducting of the prospecting activities.

See the financial statements of J Smit attached to the application as proof of availability of funding.

Signed at Schweizer-Reneke on 26 May 2016.

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APPLICANT