



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT:

Klei Minerale (Pty) Ltd, Reg. No. 1997/005698/07

REFERENCE NUMBER:

PROSPECTING WORK PROGRAMME

**SUBMITTED FOR A PROSPECTING RIGHT APPLICATION
WITHOUT BULK SAMPLING**

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)

STANDARD DIRECTIVE

All applicants for mining rights are herewith, in terms of the provisions of Section 16 and in terms of Regulation 7(1) of the Mineral and Petroleum Resources Development Act, directed to submit a Prospecting Work Programme, strictly under the following headings and in the following format together with the application for a prospecting right.

1. REGULATION 7.1.(a): FULL PARTICULARS OF THE APPLICANT

Table 1: Applicant's Contact Details

ITEM	COMPANY CONTACT DETAILS
Name of Applicant	Klei Minerale (Pty) Ltd, registration number 1997/005698/07
Tel no	(012) 372 9502
Fax no:	086 657 3338
Contact Person	Elfranco Swart
Cellular no	082 782 9381
E-mail address	elfranco@sabrix.co.za
Postal address	P.O. Box 48357 Hercules, Pretoria, 0030
Physical address	Plot 95 Boekenhoutkloof Hercules, Pretoria West

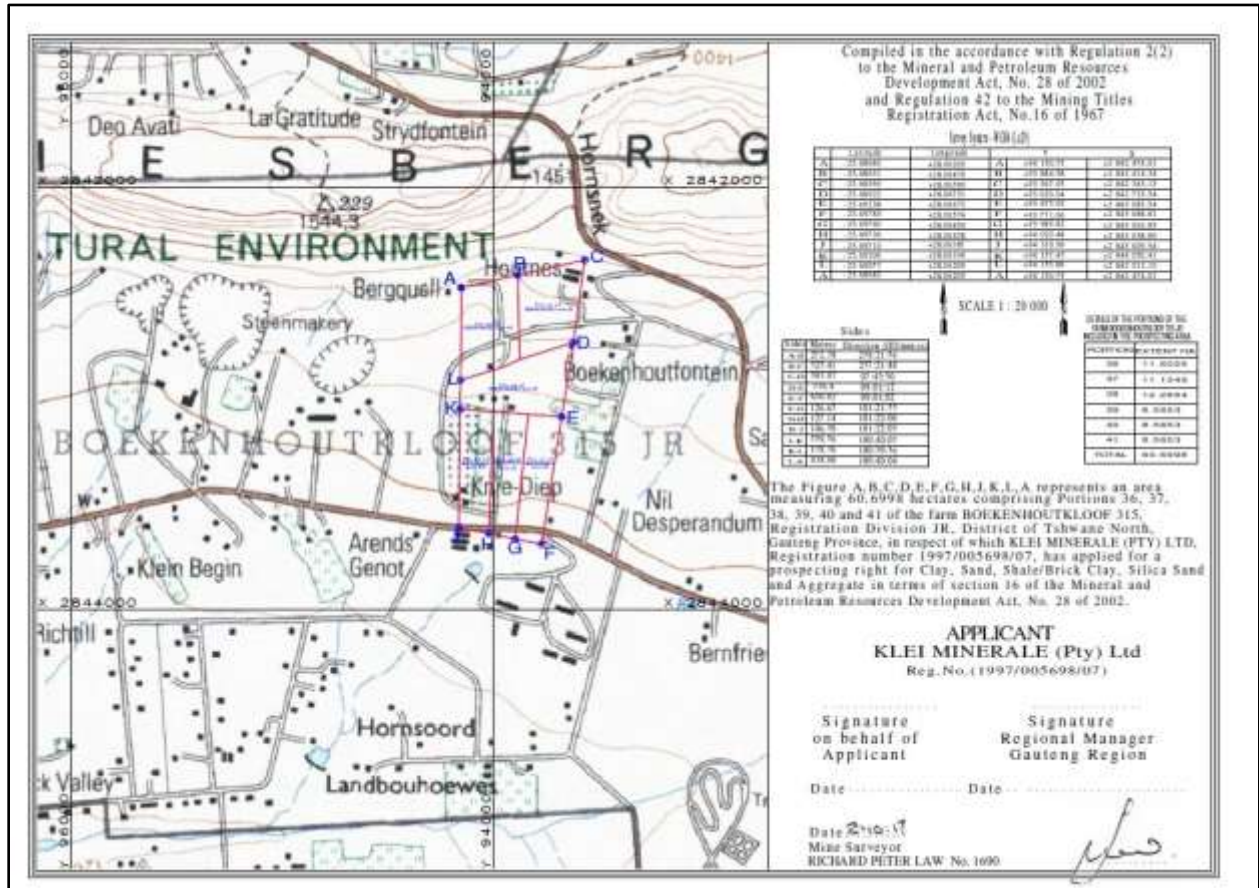
1.1 A copy of the Applicant's Certificate of Incorporation is **Annexe A** hereto.

1.2 A copy of the Applicant's Certificate to Commence Business is **Annexe B** hereto.

Table 2: Consultant's Details

ITEM	CONSULTANT CONTACT DETAILS (If applicable)
<u>Name of Company</u>	Gemecs (Pty) Ltd, registration number 1979/004409/07
Name	K Dippenaar
Tel no	013 243 0869
Fax no:	031 243 0869
Cellular no	082 773 2698
E-mail address	kobus.dippenaar@gemecs.co.za
Postal address	P.O. BOX 13520 Middelburg 1050

2. REGULATION 7(1)(b): PLAN CONTEMPLATED IN REGULATION 2(2) SHOWING THE LAND TO WHICH THE APPLICATION RELATES



Proposed Prospecting Area in the Tshwane District, Gauteng Province

2.1 A copy of the above Plan is **Annexe C** hereto.

3. REGULATION 7(1)(c): THE REGISTERED DESCRIPTION OF THE LAND TO WHICH THE APPLICATION RELATES

Farm	Reg Div	Portion	Extent Ha	District	Province
Boekenhoutkloof 315	JR	36	11.6026	Tshwane North	Gauteng
Boekenhoutkloof 315	JR	37	11.1349	Tshwane North	Gauteng
Boekenhoutkloof 315	JR	38	12.2664	Tshwane North	Gauteng
Boekenhoutkloof 315	JR	39	8.5653	Tshwane North	Gauteng
Boekenhoutkloof 315	JR	40	8.5653	Tshwane North	Gauteng
Boekenhoutkloof 315	JR	41	8.5653	Tshwane North	Gauteng

PORTIONS OF BOEKENHOUTKLOOF 315 JR INCLUDED IN PROSPECTING RIGHT AREA					
Portion	Extent Ha	Reg Div	Province	Registered Owner	Title Deed
36	11.6026	JR	Gauteng	Hartig, Frieda Elizabeth Lydia ID 190804	T9836/1965
37	11.1349	JR	Gauteng	Brauchle, Peter ID671219	T44103/2017
38	12.2664	JR	Gauteng	Sabrix Eiendomme (Pty) Ltd, Reg. No. 2006/032537/07	T42489/2017
39	8.5653	JR	Gauteng	Minnaar, Antonie Johannes Jurgens ID 2812315032009	T6419/1969
40	8.5653	JR	Gauteng	Econobiz Investments (Pty) Ltd Reg. No. 2004/023483/07	T66285/2013
41	8.5653	JR	Gauteng	Du Toit, Johan Carlo ID 7011105060081 and Anna Magaretha ID 7104130436085	T26333/2004
Total	60.6998				

Detailed list of Boekenhoutkloof 315 JR Prospecting Area Polygon (which includes Portions 36, 37, 38, 39, 40 and 41) boundary co-ordinates:

Boundary Point Co-ordinates		
No.	LATITUDE	LONGITUDE
A	-25.68683	28.06205
B	-25.68631	28.06470
C	-25.68569	28.06785
D	-25.68922	28.06731
E	-25.69238	28.06673
F	-25.69783	28.06574
G	-25.69760	28.06450
H	-25.69736	28.06328
J	-25.69710	28.06187
K	-25.69206	28.06194
L	-25.69077	28.06200
A	-25.68683	28.06205
Survey Datum: WGS84 Lat/Long Decimal Degrees		

4. REGULATION 7(1)(d) and (e): THE MINERAL OR MINERALS TO BE PROSPECTED FOR

4.1 Minerals to be prospected for

ITEM	DETAIL
Type of mineral(s)	(CS) Shale/Brick Clay; (Cy) Clay (General); (Q) Silica Sand (General); (Qy) Sand (General); (Rm) Aggregate
Locality (Direction and distance from nearest town)	14 km south-west of Pretoria CBD, Gauteng
Extent of the area required for prospecting	60.6998 ha
Geological formation	Sedimentary rocks of the Silverton Formation of the Pretoria Group (which forms part of the Transvaal Supergroup) and Diabase Intrusions are the main lithologies present. Sedimentary rocks of the Magaliesberg Formation of the Pretoria Group (which forms part of the Transvaal Supergroup) and Igneous rocks of the Lower Zone of the Rustenburg Layered Suite (which forms part of the Bushveld Complex) are found to the north of the proposed prospecting area.

4.2 Description why the Geological formation substantiates the minerals to be prospected for

The surface geology of Boekenhoutkloof 315 JR, Portions 36, 37, 38, 39, 40 and 41 (located roughly 14 km south-west of Pretoria CBD) is dominated by rocks of the Silverton Formation of the Pretoria Group (which forms part of the Transvaal Supergroup) and Diabase Intrusions (of Transvaal Supergroup age). Magaliesberg Formation lithologies (of the Pretoria Group) and rocks of the Lower Zone of the Rustenburg Layered Suite are found to the north of the proposed prospecting area, as indicated by the 1:250 000 geological map (see Figure 2). The Silverton Formation (indicated in light brown with the code "Vsi" on the geological map) is composed predominantly of shale (with some minor occurrences of hornfels and

chert). Diabase (indicated as light green with the code “di” on the geological map) intruded the Silverton Formation and Magaliesberg Formations as dykes and sills (see Figure 1). The Magaliesberg Formation (shown in hatched purple on the geological map with the code “Vm”) consists mainly of quartzite with some minor hornfels present.

The shale contained within the Silverton Formation weathers to clay on surface. This clay present in the area can be used in various applications with numerous quarries and brickworks located in the region (Figure 3). Several operating clay mines and clay deposits are shown on the geological map in the vicinity of the proposed prospecting area. These clay mines and clay deposits are indicated with the code “CL” on the geological map.

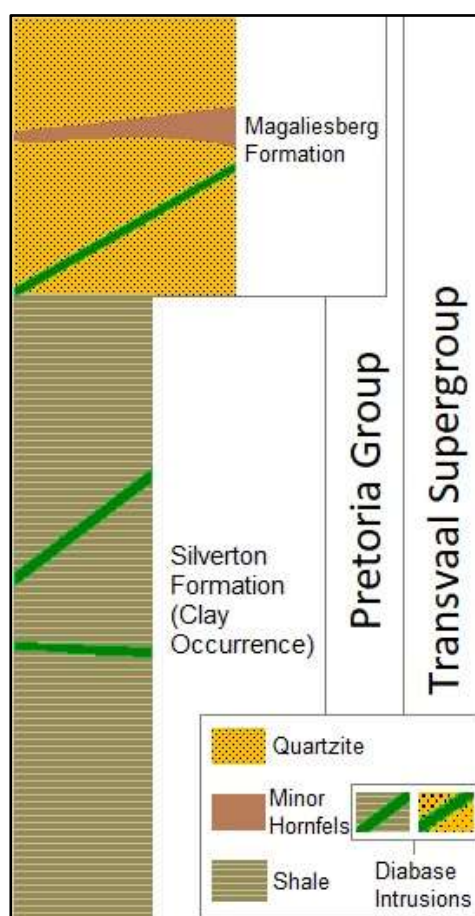


Figure 1: General Stratigraphic Column of region (After Eriksson et al, 2006)

- 4.3 Attach a geological map that justifies the description why there is a possibility that the minerals applied for could occur on the land concerned.

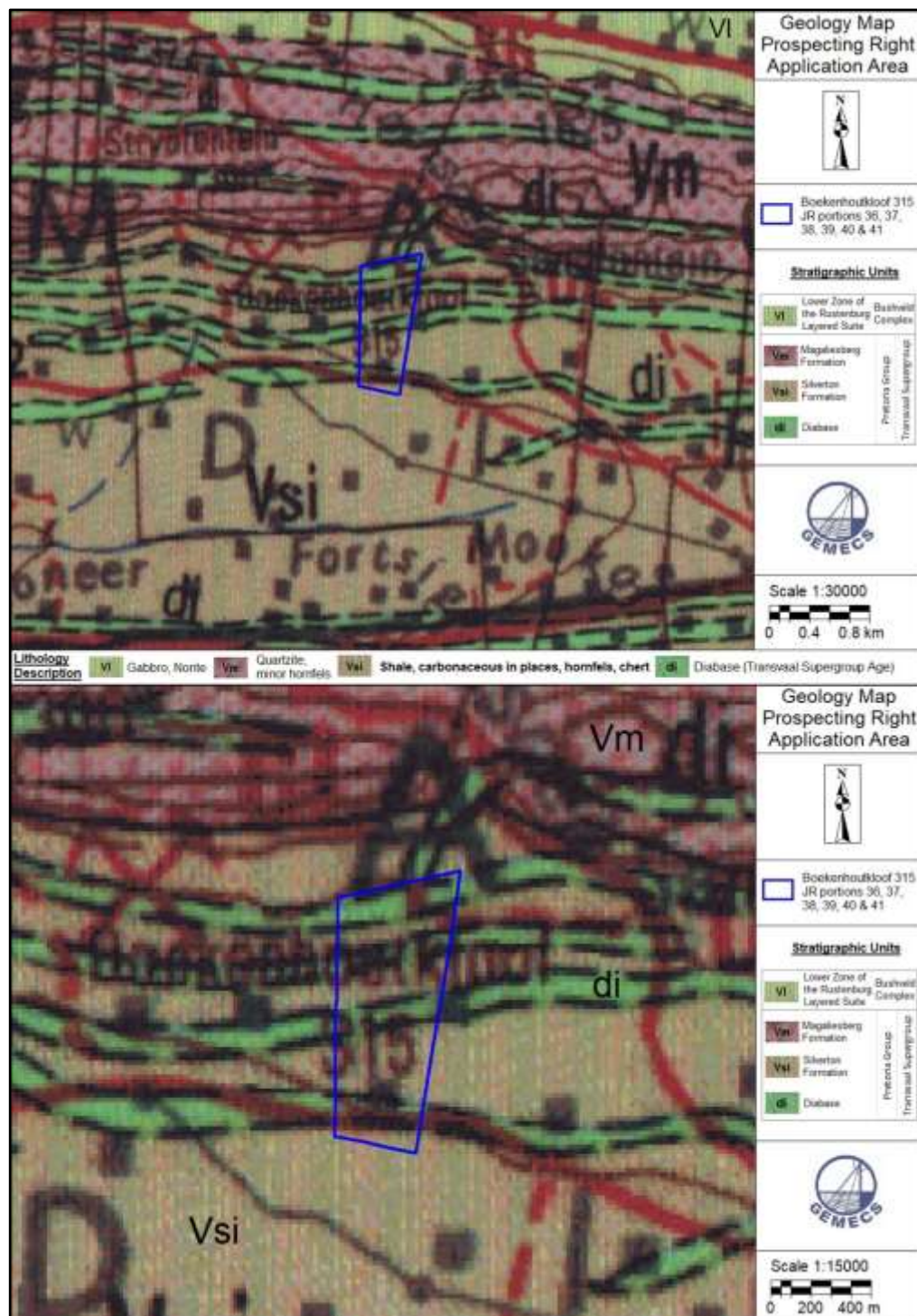


Figure 2: Maps indicating the locality of the proposed prospecting area (in blue), overlain on to the 1:250 000 Geological Map of Pretoria (Map Sheet 2528).



Figure 3: Positions of relevant adjacent and nearby properties in relation to Boekenhoutkloof 315 JR (Portions 36, 37, 38, 39, 40 and 41)

5. REGULATION 7(1)(f): A DESCRIPTION OF HOW THE MINERAL RESOURCE AND MINERAL DISTRIBUTION OF THE PROSPECTING AREA WILL BE DETERMINED

5.1 Prospecting work to be performed

Prospecting work will initially entail a high-level desktop study and potential desktop resource evaluation. This will include a data search of any previous drilling, trenching, sampling activities, exploration activities, existing maps and relevant historical data. On successful completion of this desktop study, further possible exploration drilling, trenching and resource estimations will be performed if the results warrant it.

5.2 Geochemical survey

No geochemical survey is planned.

5.3 Geophysical survey

No geophysical survey is planned.

6 REGULATION 7(1)(g): A DESCRIPTION OF THE PROSPECTING METHOD OR METHODS TO BE IMPLEMENTED

6.1 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)

Desktop studies to be undertaken over the area would include studying of geological reports, prospecting data, plans/maps, aerial photographs, topography maps and any other related geological information about this area.

6.2 Description of planned invasive activities

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

Diamond core drilling is planned to be executed on a phase by phase basis. Planned borehole depths will be determined during the desktop study, but it is estimated that drilling activities will done down to relatively shallow depths. Logging and sampling of the borehole core will be performed to evaluate the area. Trenching will involve the digging of excavation trenches down to approximately 3 metres below surface using graders and excavators. Mapping of the trench walls will then be performed.

6.3 DESCRIPTION OF PRE-/FEASIBILITY STUDIES

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

Geological modelling of gathered existing geological data and prospecting data will be performed, if the results warrant it.

6.4 COMMITMENT TO PROVIDE ADDENDUMS IN RESPECT OF ADDITIONAL PROSPECTING ACTIVITIES

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

I agree that the Addendum(s) 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 Programme.

Mark with X

ACCEPT	X
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7. REGULATION 7(1)(h): ALL PLANNED PROSPECTING ACTIVITIES MUST BE CONDUCTED IN PHASES AND WITHIN SPECIFIC TIMEFRAMES

See Table 3

8. REGULATION 7(1)(i): TECHNICAL DATA DETAILING THE PROSPECTING METHOD OR METHODS TO BE IMPLEMENTED AND THE TIME REQUIRED FOR EACH PHASE OF THE PROPOSED PROSPECTING OPERATION

See Table 3

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

Table 3

Phase	Activity (what are the activities that are planned to achieve optimal prospecting)	Skill(s) required (refers to the competent personnel that will be employed to achieve the required results)	Timeframe (in months) for the activity)	Outcome (What is the expected deliverable, e.g. Geological report, analytical results, feasibility study, etc.)	Timeframe for outcome (deadline for the expected outcome to be delivered)	What technical expert will sign off on the outcome? (e.g. geologist, mining engineer, surveyor, economist, etc)
Year 1	Non-Invasive Prospecting					
	Search and collect all relevant existing and historical data	Geologist	3 months	Historical data and reports collection	Month 3	Geologist
	Review relevant existing and historical data gathered	Geologist	3 months	Review gathered relevant existing and historical data for compilation of a desktop study	Month 6	Geologist
	Compile high-level desktop study and potential desktop resource evaluation using sourced data	Geologist	6 months	High-Level Desktop Report of the prospecting area	Month 12	Geologist

Year 1	Invasive Prospecting					
	None					
Year 2	Invasive Prospecting					
	Drilling (1-2 Boreholes)	Geologist	6 months	Prospecting Drilling Results	Month 24	Geologist
Year 2	Non-Invasive Prospecting					
	Prospecting Results Report	Geologist	3 months	Update of geological report with prospecting results	Month 24	Geologist
Year 3	Invasive Prospecting					
	Drilling (1-3 Boreholes)	Geologist	6 months	Prospecting Drilling Results	Month 36	Geologist
	Trenching (1-3 trenches)	Geologist	6 months	Trenching results and resource extents	Month 36	Geologist
Year 3	Non-Invasive Prospecting					
	Prospecting Results Report and geological modelling	Geologist	3 months	Update of geological report with prospecting results and geological modelling	Month 36	Geologist
Year 4	Invasive Prospecting					

	None					
Year 4	Non-Invasive Prospecting					
	Compile geological model and perform resource estimation	Geologist	3 months	Geological Model and Resource Report	Month 48	Geologist
Year 5	Non-Invasive Prospecting					
	Compile geological model and perform resource estimation	Geologist	3 months	Geological Model and Resource Report	Month 60	Geologist

9. REGULATION 7(1)(j)(i):DETAILS WITH DOCUMENTARY PROOF OF THE APPLICANT'S TECHNICAL ABILITY OR ACCESS THERETO TO CONDUCT THE PROPOSED PROSPECTING OPERATION

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

COMPETENCIES TO BE EMPLOYED *(List the legal appointments that will be made in terms of the Mine Health and Safety Act, appropriate for the type of operation)*

Geologists (no legal appointment necessary)

The applicant's technical ability and access thereto to conduct the proposed prospecting operation involves the following members:

K Dippenaar; Geological Consultant; B.Sc (Hons). Gemecs (Pty) Ltd (CV included below)

Gemecs (Pty) Ltd is a medium size geological company that renders geological and mining consulting services to the mining industry. Gemecs' office is situated in Middelburg within South Africa. The team of consultants have experience over a large range of commodities in South Africa and the Southern Africa region. These include coal, platinum group of metals, manganese, chrome, iron ore, mineral sands, coal-bed methane and uranium.

Our experience ranges over all geological aspects of geology. This includes target generation, prospecting permit applications, exploration management, drilling core description, core sampling, geophysical data capture, underground and surface mapping, geological databases, geological resource and ore body modelling, project management, grade control, conceptual studies, pre-feasibility studies, feasibility studies, due diligence studies, review and auditing of geological models, geological report writing, and Competent Person's Reports (SAMREC, JORC and CANADIAN NI43-101). With our vast experience and knowledge we can add significant value to prospecting, project approvals, execution phases and operations.

Summary CV Kobus Dippenaar

Educational Qualifications

Bachelor of Science, Honours (B.Sc Hons.) University of Pretoria, 1990.
 Bachelor of Science, (B.Sc). University of Pretoria, 1989.

Experience:

Kobus has over 25 years of experience in the mining industry, mainly on coal and environmental issues. During his career he was employed as mine, project and exploration geologist, as well as environmental manager at different operations. When he was working as a consultant, he did get exposure to different commodities in South Africa, Mozambique and in Madagascar.

Career History and main responsibilities associated with appointment:

2010 – Present. Gemecs (Pty) Ltd. Geological Consultant
 2008 – 2010: Geological Consultant
 2005 – 2008: DNZ Holdings (Pty) Ltd Manager Exploration Geology
 2004 – 2005: Geologist and Environmental Manager, Polmaise Colliery
 2001 – 2004: Environmental Superintendent and Environmental Manager Middelburg Mine Services (Ingwe Coal Corporation Ltd)
 1997 -- 2001: Senior Mine Geologist, Middelburg Mine Services (Ingwe Coal Corporation Ltd.)
 1996 – 1997: Exploration Geologist, Togara South, Queensland Australia (Trans Natal Australia)
 1991 – 1996: Mine, Exploration and Project Geologist Trans Natal Coal Corporation Ltd/ Ingwe Coal Corporation Ltd.)

Affiliations

Member of the South African Council for Natural Scientific Professions (SACNASP) and of the GSSA

Registration Number: 400079/94

Publications

In 1992 Kobus' Honours project was published in the South African Journal of Geology. "***The geology of the Greenview lamprophyric breccia vent***" *S.Afr.J. Geol.*, 1992, 95, p194-202.

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

CONFIRMED (Mark with an X)	X
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9.2 List of Appropriate equipment at your disposal (If Applicable)

Table 4: Appropriate Equipment Available

All equipment needed for any prospecting work will be sourced or contracted from suitable and qualified contractors.

9.3 Technical skills provided Free of Charge

- 9.3.1 Information (CV's) in respect of skills already acquired (*append*)
- 9.3.2 Copy of the relevant contractual agreements between the service provider and the applicant relative to the duration of the planned prospecting period, where applicable. (*append*)
- 9.3.3 All other evidence of Technical Ability (*append*)

10. REGULATION 7(1)(j)(ii):DETAILS WITH DOCUMENTARY PROOF OF A BUDGET AND DOCUMENTARY PROOF OF THE APPLICANT'S FINANCIAL ABILITY OR ACCESS THERETO

The Applicant submits that it is an operating clay mining company and is able to fund the planned prospecting from its operational budget. Also kindly see the funding letter from the Applicant's bankers which is enclosed as **Annexe D** and the Applicant's Board Resolution which is enclosed as **Annexe E**. A copy of the Applicant's latest audited annual financial statements is enclosed as **Annexe F**.

11. REGULATION 7(1)(k) A COST ESTIMATE OF THE EXPENDITURE TO BE INCURRED FOR EACH PHASE OF THE PROPOSED PROSPECTING OPERATION *(remember to also include prospecting fees)*

Table 5

ACTIVITY	YEAR 1 Expenditure (R')	YEAR 2 Expenditure (R')	YEAR 3 Expenditure (R')	YEAR 4 Expenditure (R')	YEAR 5 Expenditure (R')	Totals
PHASE 1 (12 months)	R60 000					R60 000
PHASE 2 (12 months)		R100 000				R100 000
PHASE 3 (36 months)			R80 000	R30 000	R30 000	R140 000
Annual Totals	R60 000	R100 000	R80 000	R30 000	R30 000	R300 000
				Total Budget		R300 000

NOTE! *If any person (including the applicant) provides services in any job or skills category at a reduced rate or free of charge, then such person's Curriculum Vitae (CV) must be attached as documentary proof of the technical ability available to the applicant.*

10. FINANCIAL ABILITY TO GIVE EFFECT TO THE WORK PROGRAMME

10.1 The amount required to finance the Work Programme.

(State the amount required to complete the work)

R300 000

10.2 Detail regarding the financing arrangements

The Applicant submits that it is an operating clay mining company and is able to fund the planned prospecting from its operational budget. Also kindly see the funding letter from the Applicant's bankers, which letter is enclosed as **Annexe D** and the Applicant's Board Resolution which is enclosed as **Annexe E**. A copy of the Applicant's latest audited annual financial statements is enclosed as **Annexe F**.

(Elaborate on the financing arrangements, in terms of where the finance will be sourced, extent to which the financing has been finalized and on the level of certainty that such financing can be secured.)

10.3 Confirmation of supporting evidence appended

The Applicant submits that it is an operating clay mining company and is able to fund the planned prospecting from its operational budget. Also kindly see the funding letter from the Applicant's bankers, which letter is enclosed as **Annexe D** and the Applicant's Board Resolution which is enclosed as **Annexe E**. A copy of the Applicant's latest audited annual financial statements is enclosed as **Annexe F**.

*(Attach evidence of available funding and or financing arrangements such as balance sheets, agreements with financial institutions, underwriting agreements, etc. and **specifically confirm** in this regard what documentation has been attached as appendices).*

11 Confirmation of the availability of funds to implement the proposed project.

The Applicant submits that it is an operating clay mining company and is able to fund the planned prospecting from its operational budget. Also kindly see the funding letter from the Applicant's bankers, which letter is enclosed as **Annexe D** and the Applicant's Board Resolution which is enclosed as **Annexe E**. A copy of the Applicant's latest audited annual financial statements is enclosed as **Annexe F**.

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

Confirmed <i>(Mark with an X)</i>	X
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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 6**

Herewith I, the person whose name and identity number is stated below, confirm that I am authorised to act as representative of the Applicant in terms of the resolution submitted with the application as Annexe E and on behalf of the Applicant undertake to implement this prospecting work programme and adhere to the proposals set out herein.	
Full Names and Surname	Elfranco Swart
Identity Number	730512 5026 084
Signature	
Date	

Copy of Applicant's Certificate of Incorporation

Annexe A

Copy of Applicant's Certificate to Commence Business

Annexe B

Copy of Regulation 2(2) Plan

Annexe C

Board Resolution

Annexe E

Applicant's Latest Audited Annual Financial Statements

Annexe F