mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: **NCBM Explorations (Pty) Ltd.**
REGISTRATION NUMBER: **2012/184287/07**

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)

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

Table 1: Applicant's Contact Details see draft attached

ITEM	COMPANY CONTACT DETAILS
Name	NCBM Explorations (Pty) Ltd.
Tel no	013 6999917
Fax no:	013 699 9919
Cellular no	082 3252526
E-mail address	ainslie@cuprachem.co.za
Postal address	PO Box 17633 Witbank, 1035

Table 2: Consultant's Details

ITEM	CONSULTANT CONTACT DETAILS (If applicable)
Name	NA
Tel no	
Fax no:	
Cellular no	
E-mail address	
Postal address	

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

Diagram 1: Locality plan (contemplated in regulation 2(2) read with regulation 2(3) of the MPRD Act, 2002 (Act No. 30 of 2002)

Diagram 2: Layout plan (contemplated in regulation 2(2) of the MPRD Act, 2002 (Act No. 30 of 2002)

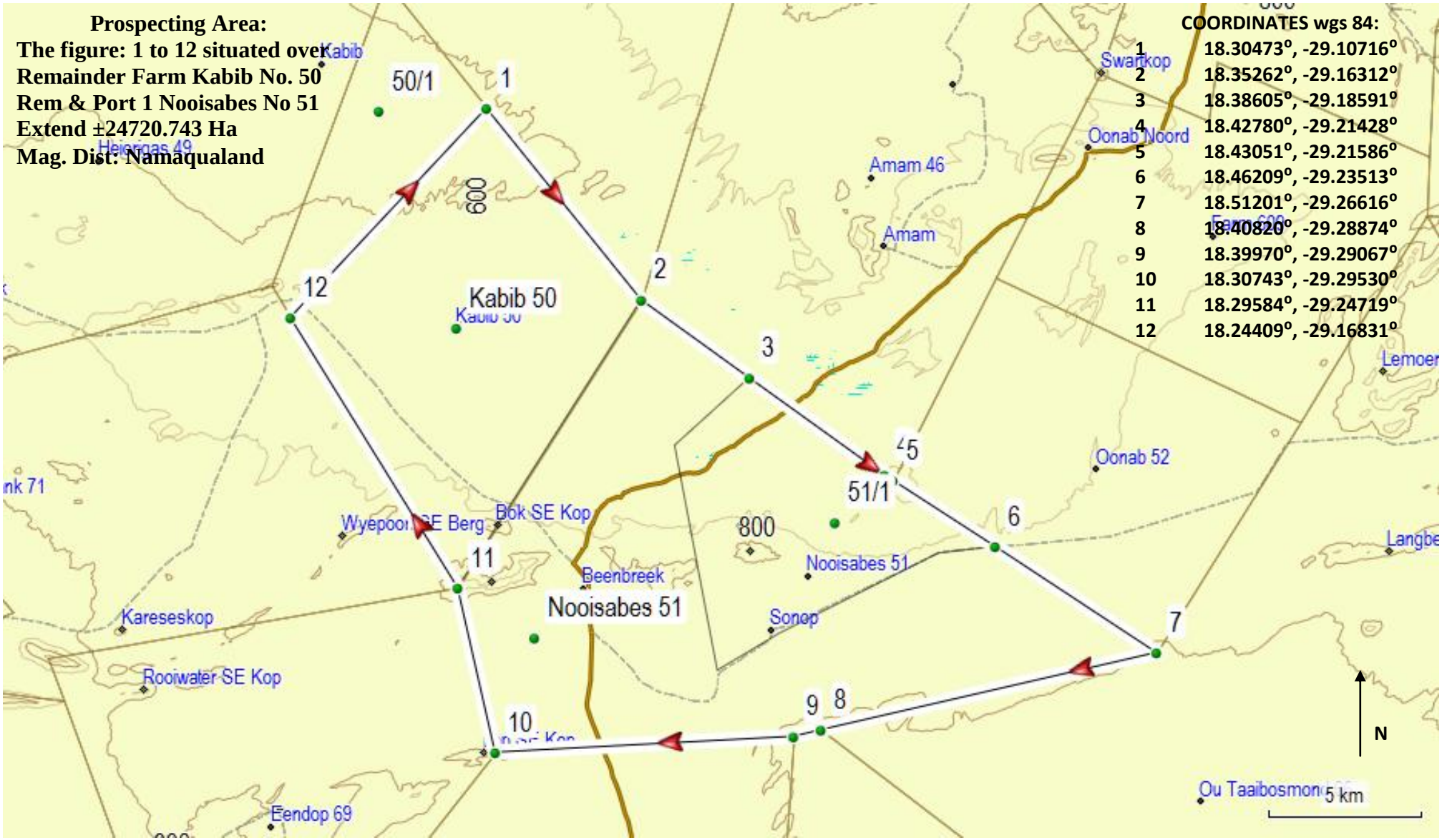


Diagram 3: Work plan – Wide spaced Reconnaissance RC drilling (2.4Km Grid)

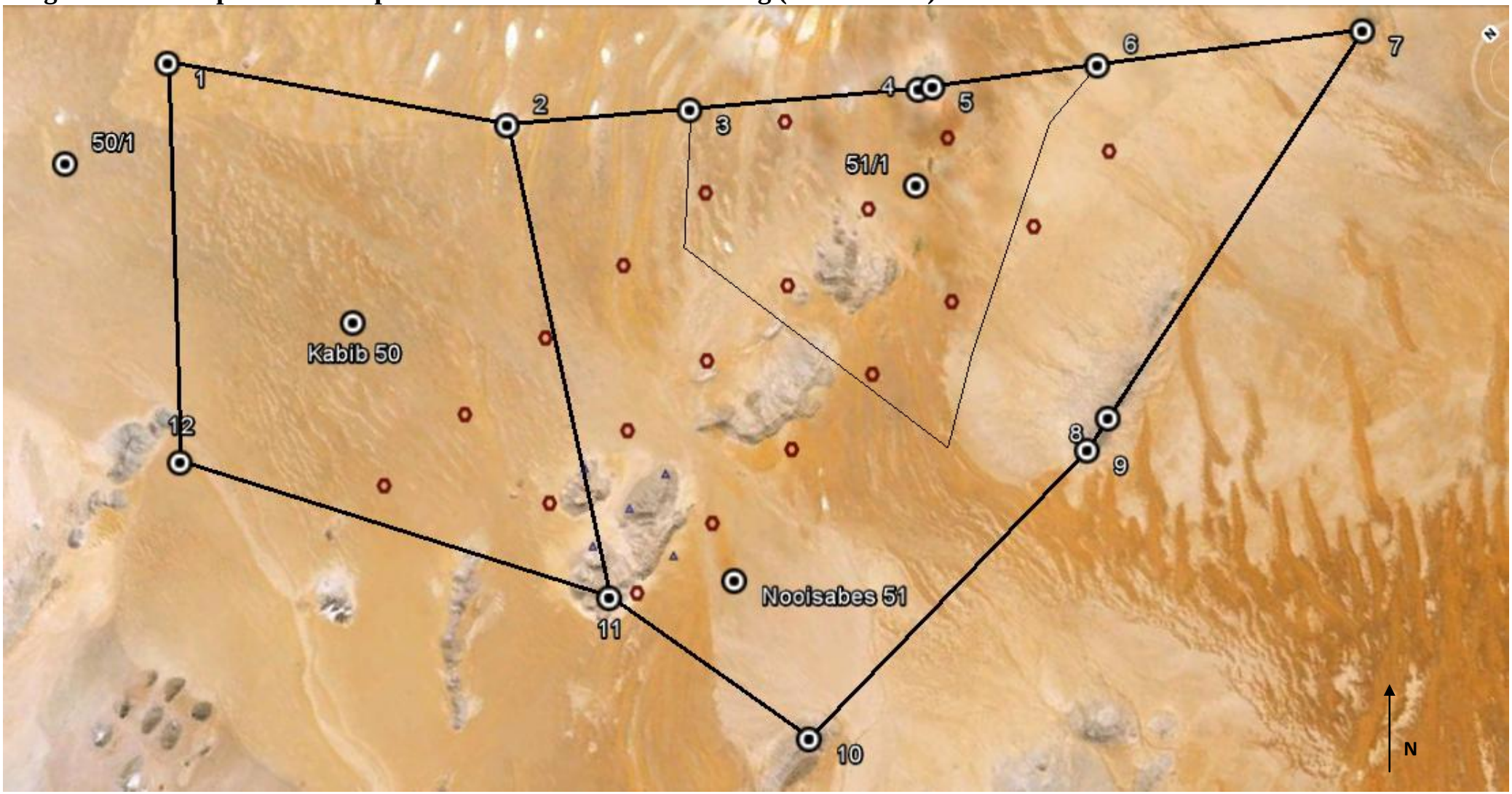
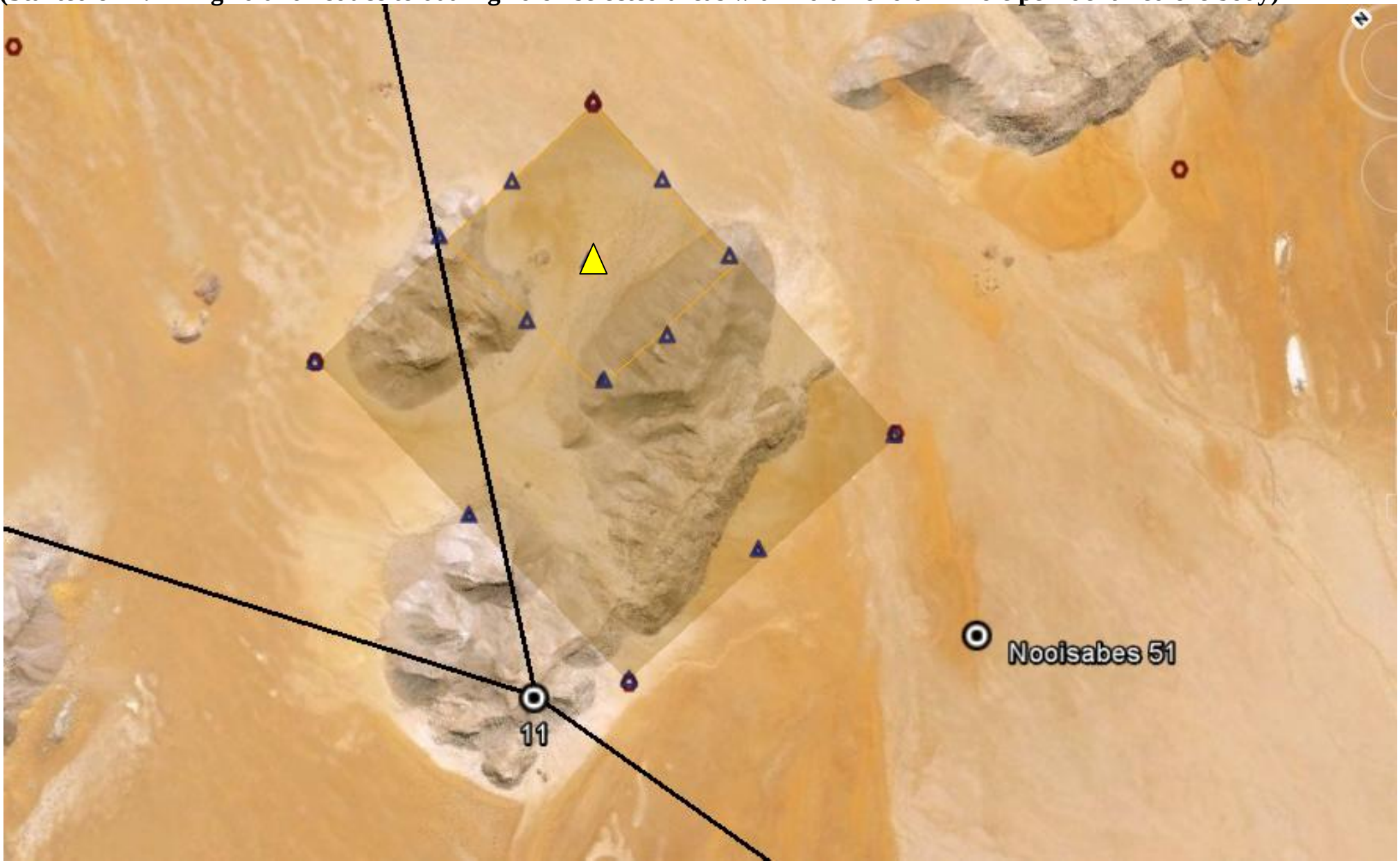


Diagram 4: Work plan – Infill resource RC drilling
(Started on 1.2Km grid and reduce to 600m grid on selected areas with 1 diamond drill hole per identified ore body)



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

1 Property 1:
Remainder Farm Kabib No. 50 in extend 8136.8378Ha Registered in the name of the "Plaaslike oorgangsraad-Concordia" (Nama Khoi Municipality) by virtue of title deed T25783/1997. LPI Code: C05300000000005000000

2 Property 2:
Remainder Farm Nooisabes No. 51 in extend 12218.5775Ha Registered in the name of the "Plaaslike oorgangsraad-Steinkopf" (Nama Khoi Municipality) by virtue of title deed T46682/1999. LPI Code: C05300000000005100000

3 Property 3:
Portion 1 Farm Noisabes No. 51 in extend 4365.3296Ha Registered in the name of the "Plaaslike oorgangsraad-Steinkopf" (Nama Khoi Municipality) by virtue of title deed T23537/1999. LPI Code: C05300000000005100001

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)	**Ag - silver**
Type of minerals continued	**Au - Gold**
Type of minerals continued	**Co - cobalt**
Type of minerals continued	**Cu - copper**
Type of minerals continued	**Mo - Molybdenum**
Type of minerals continued	**Ni - Nickel**
Type of minerals continued	**P.G.M. - Platinum Group Metals**
Type of minerals continued	**Pb - Lead**
Type of minerals continued	**Sn - Tin**
Type of minerals continued	**Sb - Antimony**
Type of minerals continued	**Zn - Zinc**
Locality (Direction and distance from nearest town)	Located 60Km North East of Springbok
Extent of the area required for prospecting	±24720.743 Ha
Geological formation	The rocks are predominantly hybrid migmatites with granites/granodiorites and minor maffic intrusives such as gabbro's and diorites in the form of sills and dykes.

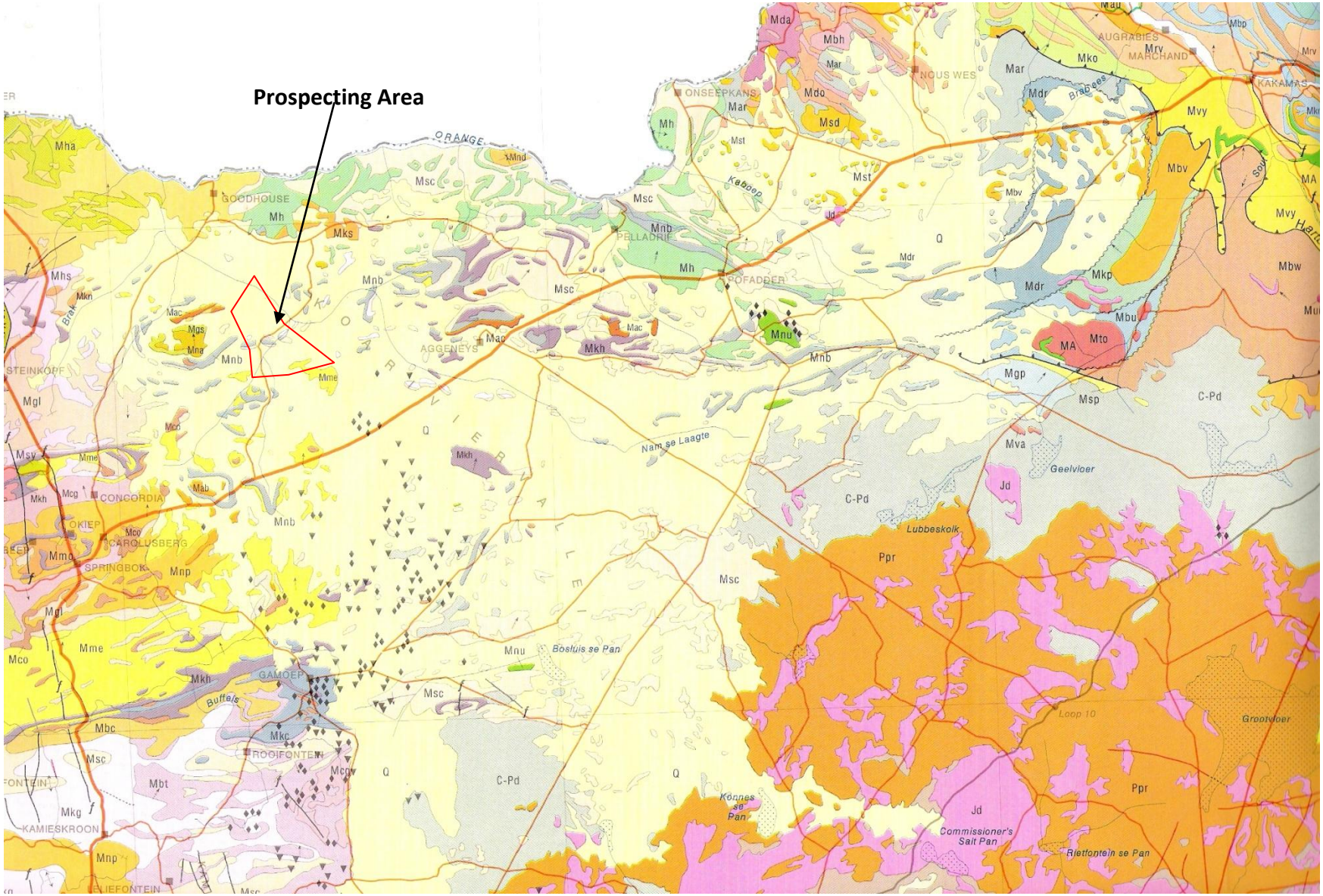
4.2 Description why the Geological formation substantiates the minerals to be prospected for

Only the northern section, north of 29 degrees has relatively good rock exposure. On the western margin, the rocks are predominantly hybrid migmatites with granites/granodiorites and minor maffic intrusives such as gabbro's and diorites in the form of sills and dykes. Around Henkries there is a sizeable granite outcrop, which has undergone muscovite alteration. Continuing East, granite and granitoid emplacements predominate and are then replaced by metamorphosed schists and phyllites. The few exposures to the South of the river belt are mainly granitic. In all instances the grade of metamorphism shows a strong decline in intensity from West to East.

With the exception of the dykes, all these rocks are Precambrian in age and form part of the Kheis System of the Namaqua Metamorphic Complex. There are a great many lithological types, many of which grade into one another and are genetically related, making mapping difficult. It is evident that there were a number of phases of intrusion and metamorphism.

Pegmatite dyke swarms are stand-out features in the mafics, migmatites and older granite suites. These are largely the homogeneous, unzoned types, with occasional zoned bodies carrying classical mineralisation.

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.



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

AND

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

AND

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

This application employs a phased approach, where the work program is divided into several sequential sections. At the end of each section there will be a brief period of compiling and evaluating results. These results will not only determine whether the project proceeds, but also the manner in which it will go forward. Essentially, the Company will only action the next stage once satisfied with the results obtained. In addition, smaller, non-core parts of the work program will be undertaken if warranted.

Essentially the program can be summarized as:

Phase	**Activity**	**Timeframe**
Phase 1	Aerial surveys	2 years
	Geological Mapping	
	Geochemical Survey	
	Data Compilation	
Phase 2	Reconnaissance and resource Drilling	2 years
	Data Processing	
Phase 3	Pre-feasibility report and resource statement Application for Mining Right or Rehabilitation and closure	1 year

It is not possible to give details of the drilling program before the surveys and surface work phase 1 is completed. In the event that more information becomes available or that an ore body is located at an earlier stage, then an amended program will be put forward for the DMR's approval.

No bulk sampling work is to be carried out during this prospecting program.

Initial prospecting will be carried out by the company itself, utilizing its own in-house geologists to conduct and oversee the work. Drilling will be outsourced to a local drilling company. The methods detailed below would be used to investigate the prospecting area

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

Table 5.1

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)
Phase 1	**NON – INVASIVE (2 years)**					
	Desk-to survey	geologist	12 months	All past information & results. Initial report	Months 12	Geologist
	Geological mapping	Samplers, geologist	2 months	Geological map of area	Months 18	Geologist
	Geochemical survey	Geologist	6 months	Geochemical map and targets	Months 24	Geologist
	Interpretation	Geologist	3 months	Sections, plans and report	Months 24	Geologist
	Drilling plans	Geologist	1 months	Exact locations, orientations, contract	Months 24	Contracted driller Site manager
Phase 2	**INVASIVE PROSPECTING (2 years)**					
	Scout reconnaissance drilling	Foreman, driller, labour, geologist	6 months	Drill samples, assay	Months 36	Geologist & compliance officer
	Resource Infill drilling	Labour, driller, geologist	12 months	Foreman, labour, driller, geologist	Months 36	Contractor and site manager
	Specialist core studies	Several specialists	2 months	Mineralogy, rock mechanics	Months 48	Mineralogist
	Metallurgical testwork	Consulting metallurgist	3 months	Information on crushing, milling, recovery and equipment	Months 48	Metallurgist
	Interpretation of results	Geologist	1 months	Technical reports	Months 48	Geologist, mining engineer

Phase 3	**NON INVASIVE (1 year)**					
	Completion of all site work	Labour, Environmentalist	3 months	Restoration of site	Months 60	Geologist, environmentalist
	Additional studies	Specialized inputs	3 months	Modeling, ore resources	Months 60	IT & Resource specialists
	Valuation	Mineral economist	2 months	Financial analysis, funding options	Months 60	Mineral economist
	Completion Report	All disciplines	2 months	Pre-feasibility report and resource statement	Months 60	Geologist, mineral economist. Senior manager
	Preparation of mining right or decommissioning and closure	Specialized inputs	2 months	Mining Right or closed operation	Months 60	Geologist, environmentalist

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

(i) DESCRIPTION OF PLANNED NON-INVASIVE ACTIVITIES:

Desk-top Studies

Available historic prospecting data will be scrutinized, and a working plan of the area on a suitable scale (1:5 000 or 1:10 000) compiled.

From the study of aerial photographic images available contrasting lithologies will be traced out.

Geochemical Surveys

1. Stream Sediment Sampling - 25Kg samples

Part of the prospecting area is mountainous, drained by numerous gullies, which makes stream sediment sampling an efficient reconnaissance method of exploration. Farm tracks follow the foot of the mountains which make sampling points accessible.

1.1. The first phase of stream sediment sampling will entail the sampling of mountain gullies crossed by the farm track. These will be analyzed for copper, nickel and cobalt, which are suitable 'pathfinders' for the sought mineral assemblage. Perhaps 50 samples may be collected during this phase.

1.2. Follow-up stream sediment sampling upstream of sample sites with anomalous values. This phase may be split up into multiple phases to zoom in on mineralized occurrences. Perhaps 150 additional samples may be collected during this phase.

2. Soil Sampling - 25Kg samples

Soil sampling will be conducted to investigate stream sample anomalies. The number of soil samples collected will be dependent on the degree of success of the stream sediment sampling program, but is expected to be in the 300-500 range.

2.1. The initial phase of soil sampling will consist of reconnaissance traverses conducted along the banks of gullies adjacent to the peak stream sample values.

2.2. Soil sample anomalies will be investigated by follow-up soil sampling traverses, progressively further away from the banks of gullies, to outline any geochemical anomalies.

2.3. Infill soil sampling at reduced sampling intervals along previous traverses will enable the definition of drilling targets.

Geological Mapping

As all stream and soil sampling will be conducted by an in-house well-trained and highly experienced geologist, any indications of outcropping or near-surface mineralization will be observed during the Geochemical Surveys. Geological mapping of areas of interest, identified from the geochemical surveys, will be on a scale suitable for the observed geological variability.

Geophysical Surveys

Geophysical data from previous surveys, airborne and on surface that are available will be integrated with geophysical and geological data.

Compilation of Data and Modeling

This will follow after completion of the non-invasive phase, and before the planning of the first drilling phase, and will be updated after completion of successive drilling programs.

(ii) DESCRIPTION OF PLANNED INVASIVE ACTIVITIES:
(These activities result in land disturbances e.g. sampling, drilling, bulk sampling, etc)

Drilling

Although two different types of drilling are to be applied to the project, they both have some common operations. In all instances drilling would be:
- Under close supervision of an experienced geologist
- Conducted along best practice guidelines
- Minimize environmental disturbance

In this area, most of the drilling targets are expected to be close to surface and hence drill holes should be short; in the range of 50-100 m.

Reverse Circulation Drilling.

1. Drilling targets generated during the non-invasive phase will be tested by fairly widely spaced (2.4Km grid) shallow boreholes (average 50 meters/borehole). The number of drilling targets to be tested is yet unknown, but expected to be perhaps 10 (total drilling 500 meters).
2. Further investigation of those drilling targets, where the initial drilling results are encouraging. The borehole depths during this phase will be relatively shallow as well: along strike follow-up boreholes to approximately 50 meters, and a few down-dip boreholes to some 100 meters depth. (Say) 20 boreholes totaling 1200 meters.

Cuttings (approaching 100% recovery) will be collected by cyclone in standard elongated plastic bags in 1m samples, from which representative samples for assay purposes (500 gram) will be separated by a standard sampling method. The remaining cuttings (20-25 kg/metre) will be stored for metallurgical tests at a later stage. All samples with visible mineralization will be assayed for base metals. Trace constituents will only be determined for selected samples with proven ore grades in copper, lead and zinc. Routine assaying will be conducted at regular intervals along portions of boreholes where no visible mineralization is observed. Logging of boreholes will be conducted on the entire boreholes before being sampled for assaying.

Diamond Drilling

One borehole will be drilled for each ore-body defined by R.C.-drilling for petrological studies, to identify the minerals present and the size range of mineral grains, which needs to be known for metallurgical purposes.

These boreholes will be split and quartered where assaying is warranted. One quarter will be dispatched to the assay lab, one quarter kept for a permanent record, and the halves utilized for petrological studies.

Borehole collars will be covered by numbered slabs, and the position measured by GPS. No down-hole surveys will be necessary, as the deviation of boreholes would be negligible at the planned shallow depths of drilling.

Metallurgical Sampling

R.C.-sampling generates 20-25 kg/metre drilled (10cm diameter boreholes), of which only a small fraction is needed for assaying. The mineralized portions of boreholes, as indicated by assay results, should provide sufficient material for metallurgical purposes. If necessary, more borehole cuttings can be obtained by drilling additional R.C.-boreholes.

Rehabilitation and Environmental Aspects

Early phases of prospecting will have no impact on the environment and hence no rehabilitation should be necessary. Fortuitously, this area is duplicated by large tracts of land on all sides which offer the same habitat to fauna and flora. It is also partly covered by sand

and the prospecting is of such a nature that for the initial work there will be minimal change to the original land surface. Consequently there are no foreseen major environmental issues and no expectation of longer term impacts in phase 1.
Phase 2 will only be invasive on a relatively small extent and the impact will be minimized through proper supervision. Drill rigs would mostly utilize existing roads and strong control exercised over oil usage and sump pools (the latter not applicable to R.C.-drilling). Impervious sheeting underneath the rig and sump areas (only applicable to the limited number of diamond boreholes foreseen) to catch any spills and the contaminated ground removed to an approved dump site. Original soils would finally be spread over drill locations. Overall the disturbance to the land surface would be minimal. Any rehabilitation will be guided by and comply with the recommendations of the EMPR as per the Prospecting Right regulations.

(iii) DESCRIPTION OF PRE-/FEASIBILITY STUDIES

Completion Studies and Pre-feasibility

Any program such as this culminates with an overall completion study and in this case the objective would be to provide a pre-feasibility study at a suitably detailed level for planning and to enable the commencement of financing and funding.
During the fifth and final year all data needs to be compiled, interpreted, summarized and evaluated in a final report. Several additional studies will need to be completed in order for an informed decision to be made on whether or not to proceed with development. Aside from all the information already discussed, expert input is frequently required in geohydrology, rock mechanics, statistical grade distribution, pyro- or hydro-metallurgy and other specialized fields. In addition, extra specialized studies have been allowed for to cover provision of services (power, water, labour), logistics, consumables, and all other items necessary in a pre-feasibility study.
Consequently while others costs decline in the final year, the cost of consultants is increased as much of the work is traditionally outsourced – both as an independent verification and because few companies can keep so many specialist talents on their books.
A direct follow on from the report is the ability to start looking at various funding alternatives, be they private, public or listed. In mine development it is normal because of the amounts of money involved that the latter two sources of finance predominate. These avenues often require separate reporting and the creation of relationships with key financial advisors, stockbrokers and fund managers. It is envisaged that the company would most likely follow a stock exchange listing route but the detail of this can only be determined later.

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 Programme 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 Programme.
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 Programme

Mark with X

ACCEPT	X

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
The company has a geologist immediately available along with administrative support and mine health and safety practitioners through the company's directorate and their advisors.

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

CONFIRMED (Mark with an **X**)	X

7.2 List of Appropriate equipment at your disposal (If applicable)

Table D: Appropriate Equipment Available

This is a prospecting programme and in-house equipment would be limited to transport and small sample tools. All more sophisticated equipment such as geophysical electronics, drills, laboratory services and pilot plants would be outsourced to consultants and contractors

7.3 Technical skills provided Free of Charge

7.3.1 Information (CV's) in respect of skills already acquired (append)
02 Appen A1a PWP_Technical.pdf

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.(append)
None

7.3.3 ALL other evidence of Technical Ability (append)
The company has excellent contacts with consulting firms in S.A. and hence extra specialist expertise is available. Staffing and labor compliments would vary according to the phased activity. At the peak of the work program the following personnel is expected to be utilized:

Category	Numbers
Directors (part time)	1
Project Manager/Geologist	1
Admin (part time)	1
Consultants (part time)	1
Labour (part time)	2
TOTAL	6

Although the company would utilize a contractor for the drilling, it will continue to be supervised by in-house management. The contractor is bound to make available whatever staff, operators and workers are necessary to perform the stated level of operations. These people will not be on the company books, but are retained under the contractors company. Preference would be given to a local HDSA contractor, if available, and local labor would be hired to complete the compliment. The increase in activity would impact favorably on local employment.

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

AND

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

ACTIVITY All figures R'000's except totals	YEAR 1 Expenditure (R'000)	YEAR 2 Expenditure (R'000)	YEAR 3 Expenditure (R'000)	YEAR 4 Expenditure (R'000)	YEAR 5 Expenditure (R'000)
PHASE 1 (0 - 24 months)					
Prospecting fees Year 1 24 721 Ha X R1.00	R25k	-	-	-	-
Prospecting fees Year 2 24 721 Ha X R1.50	-	R37k	-	-	-
Site office	R30k*	-	-	-	-
Literature and desk top	R35k*	R15k*	-	-	-
Assay cost		R45k	-	-	-
Interpretation	R60K*	R80k*	-	-	-
PHASE 2 (25 - 48 months)					
Prospecting fees Year 3 15 000 Ha X R2.00			R30k		
Invasive work – drilling (RC and diamond core)	-	-	R250k	R250k	-
Updating of layout plans Performance assessment and update of financial provision			R5k		
Prospecting fees Year 4 10 000 Ha X R2.50	-	-	-	R25k	-
Sample & assay	-	-	R50k	R50k	-
Metallurgy	-	-	-	R100k	-
Interpretation & compilation	-	-	-	R120k*	-
Updating of layout plans Performance assessment and update of financial provision	-	-	-	R5k*	-
PHASE 3 (49 - 60 months)					
Prospecting fees Year 5 10 000 Ha X R3.00	-	-	-	-	R30k
Site restoration	-	-	-	-	R10k
Specialist reports	-	-	-	-	R50k
Pre-feasibility	-	-	-	-	R150k*
Financing work & mining licence application	-	-	-	-	R50k
Annual Total	**R150k**	**R177k**	**R335k**	**R550k**	**R290k**
Less free services	**R25k**	**R37k**	**R335k**	**R425k**	**R140k**
				Tot Budget	**R962k**

***NOTE! In House geologist Mr. J.T. Beukes to provides services at a reduced rate or free of charge, Curriculum Vitae (CV) attached**

10. FINANCIAL ABILITY TO GIVE EFFECT TO THE WORK PROGRAMME

10.1 The amount required to finance the Work Programme.
R1 000 000.00

10.2 Detail regarding the financing arrangements
Expenditure in phase 1 is likely to be bias towards the second half as field work reaches a peak. This will also be the time of maximum employment. In phase 2 drilling will use contract services but with various in-company management and laborers to restore the site. Drilling is by far the most expensive single item and makes up over 50% of the entire budget. Finally phase 3 is the finish of any site work and the emphasis switches to desktop compilation and interpretation by specialists. We have estimated that this will be partly in-house and partly external consultants.

NCBM Explorations (Pty) Ltd will be supported by Equisell Capital (Pty) Ltd with regard to financial resources to implement the proposed prospecting work program as set out in the resolution attached.

10.3 Confirmation of supporting evidence appended

Resolution Equisell Capital (Pty) Ltd to make R1 million available
Annual financial statements showing proof of access to necessary funds.

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

Refer 10.3 above

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

Confirmed (Mark with an X)	**X**

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

Herewith I, the person whose name and identity number is stated below, confirm that I am the Applicant or the person authorised to act as representative of the Applicant in terms of the resolution submitted with the application, and undertake to implement this prospecting work programme and adhere to the proposals set out herein.	
Full Names and Surname	**Ainslie Hendrikus Vosloo**
Identity Number	**7208155159082**