mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Private Bag X6076, Port Elizabeth, 6000
Tel: (041) 396 3934
Fax: 0865768004
Cnr.Diaz and Mount Roads
Mount Croix
Port Elizabeth, 6001

Enquiries: D. A. Watkins
E-mail: deidre.watkins@dme.gov.za

Reference: EC30/5/1/1/3/2/1/0028EM
Date: 26 February 2010

South African Heritage Resources Agency
P.O. Box 758
GRAHAMSTOWN
5200

Case ID: 2597

ATTENTION: MR. T. LUNGILE

Sir

CONSULTATION IN TERMS OF SECTION 40 OF THE MPRDA OF 2002: AMENDED ENVIRONMENTAL MANAGEMENT PLAN, PROSPECTING ON VARIOUS FARMS, CRADOCK, TASMAN PACIFIC MINERALS LIMITED

1. Approval for non-invasive prospecting was granted to Tasman Pacific Minerals Limited during November 2006. Attached, a copy of an amended EM-Plan for invasive prospecting received from the client.

2. Please forward any written comments or requirements your department may have in this regard, to this office no later than **25 March 2010.** Failure to do so, will lead to the assumption that your department has no objection(s) or comments with regard to the said document.

3. Consultation in this regard has also been initiated with other relevant State Departments.

4. Kindly quote the relevant file reference number in all correspondence.

Yours faithfully

REGIONAL MANAGER
EASTERN CAPE

File Number of Approved EMP: (EC) 30/5/1/1/2/28PR

DEPARTMENT OF MINERALS AND ENERGY

AMENDED ENVIRONMENTAL MANAGEMENT PLAN

Compiled in compliance with
Section 39 and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

Applicant: *Tasman Pacific Minerals Limited*

Farm: *River Glen 221 (Remaining) and various other farms (collectively known as Site 37 – refer text)*

District: *Cradock Magisterial District*

Mineral: *Uranium and molybdenum*

Date: *February 2010*

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A. BIOGRAPHIC DETAILS OF THE APPLICANT:

B 1.1 Full name (and surname) of person or company applying for permit or right	Tasman Pacific Minerals Limited
B 1.2 ID number of person or Company/ CC Registration Number	2006/001646/10
B 1.3 Postal address	Geo-Consult International (Pty) Ltd P O Box 1178, Randpark Ridge, Johannesburg, 2156
B 1.4 Physical/ residential address	Bergzicht Office Park Suites 15 and 16, Block 3 Corner Christiaan de Wet and Rooibok Street, Strubens Valley, Johannesburg, 2156
B 1.5 Applicant's telephone number	011 475 1194
B 1.6 Applicant's cellular phone number	082 3341906
B 1.7 Alternative contact's name	Mr Henri Lombard
B 1.8 Alternative contact's telephone/cell phone numbers	n/a
B 2.1 Full name of the property on which ~~mining/~~ prospecting operations will be conducted	Refer Section B2.2
B 2.2 Name of the subdivision	See attached Schedule of Farms (Appendix 1)
B 2.3 Approximate centre of ~~mining/~~prospecting area: Latitude	25° 22' 27" South
Longitude	32° 00' 00" East
B 2.4 Magisterial district	Cradock
B 2.5 Name of the registered owner of the property	See attached Schedule of Farms and Owners (Appendix 1)
B 2.6 His/her Telephone number	See attached Schedule of Farms and Owners (Appendix 2)

B 2.7 His/ her Postal address	**See attached Schedule of Farms and Owners (Appendix 2)**
B 2.8 Current uses of surrounding areas	
The entire area is characterised by a mixture of agricultural activities including crops such as maize, vegetables with irrigation, cattle and game farming.	
B 2.9 Are there any other, existing land uses that impact on the environment in the proposed mining/ prospecting area?	
No	

B. LOCATION, TOPOGRAPHY AND GEOLOGY OF THE PROSPECTING RIGHT AREA

The location, topography and surface geology of the Prospecting Right area is shown on maps 1 and 2.

C. REASON FOR AMENDMENT:

The current approved Environmental Management Plan (EMP) document (attached as Appendix 5) is a comprehensive document containing extensive description of plans to both mitigate and remediate any environmental damage resulting from the proposed prospecting activities. However, due to the nature of prospecting activities it was impossible, at the time of submission of the approved EMP, to know where any boreholes would be located and, as such, to be able to identify any site specific environmental issues that would need to be addressed. To address that necessary exclusion from the approved EMP Section 1.1 of Annexure A of the EMP "Supplement to the standard format EMPlan" undertakes that no drilling will take place without amendments to both the EMP and Prospecting Works Programme (PWP) having been lodged. Annexure A of the approved EMP further undertakes that such contemplated amendment must:

- show the location of drill holes.
- include the comments of a specialist botanist.
- contain the comments of the landowner.
- contain an updated rehabilitation fund quantum.

Section D below addresses the amendment of the PWP while Sections E-H below address the bulleted points listed above.

D. AMENDMENT OF PROSPECTING WORK PROGRAMME

An amended Prospecting Works Programme will be submitted to the Western Cape office of the Department of Minerals and Energy at the same time as this document is submitted to that office.

E. LOCATION OF DRILL HOLES AND ACCESS ROADS

As a result of prospecting activities carried out over the Prospecting Right area, known as Site 37, three sites has been identified for drilling (Maps 3-5). These areas are referred to, herein, as the **Denmark Project** (Map 3), the **Groene Vallei North Project** (Map 4) and the **Groene Valley South Project** (Map 5). The name of the project is derived from the current business name of the farm upon which the drilling is planned.

Denmark Project drilling programme

Phase 1 drilling programme

The Denmark Project borehole grid (Map 3) consists of a proposed borehole grid consisting of an initial drilling programme (Phase 1) comprising a 100m spaced grid of reverse circulation percussion boreholes. Access to the project area is provided by an existing farm road that traverses the southern margin of the proposed borehole grid as well as another farm road that passes within approximately 270m of the north-eastern margin of the proposed borehole grid (Map 3). In the north-eastern corner of the project area it will be necessary to for a new access road to be made from the existing farm road to the borehole grid (which will be approximately 270m in length) as the center of project area is divided by an approximately north-south oriented farm fence (Map 3).

On either side of the farm fence (discussed above) it is proposed that there will be a single spine road that will act as a conduit for higher volume vehicle access. An array of proposed gridline tracks will provide access from the spine roads to each of the proposed boreholes (Map 3); these will be subjected to the most minimal vehicle traffic possible

On each gridline track drilling will commence at the spine road and the drill rigs will migrate hole-by-hole away from the spine road (see drill rig migration arrows on map 3). Rigs will continue to move in the direction described until the extent of the mineralisation is exceeded (i.e. barren holes are encountered). This process will ensure the minimum traffic of the drill rig along each gridline track as well as avoiding unnecessary veld damage and drilling activity in unmineralised areas as opposed to the concept of laying out an extensive grid and drilling every hole on the grid. Rigs will not migrate laterally or diagonally between gridline tracks.

Due to the unpredictability of the location of mineralisation in the subsurface as well as the normally elongate, podiform nature of Karoo uranium deposits the Phase 1 drilling grid is much wider than the anticipated lateral extent of the mineralisation, but this is necessary to ensure intersection of the mineralisation as well as identifying its aerial extent. As such it is anticipated that, due to the focused nature of the drilling programme, many of the holes indicated on the Phase 1 grid will never be drilled (Figure 1).

Phase 2 drilling programme

The Phase 2 drilling programme consists of an infill phase of drilling on a more closely spaced (50mx50m and smaller) grid spacing. The direction of movement of drill rigs during Phase 2 will essentially mirror Phase 1 in that it will be designed so as to minimise rig traffic along each of the gridline tracks. However, it is obvious that the exact details cannot be formulated until the position and extent of the mineralisation is known. Map 3 shows the location of all 50mx50m Phase 2 boreholes as well as the location and orientation of the gridline tracks that will be utilised by the drill rig. However, Phase 2 drilling will only occur if the results of Phase 1 drilling are favorable and will be restricted to the aerial extent of the mineralisation. Accordingly, it is anticipated that a large percentage of the proposed Phase 2 holes will never be drilled.

A representative proportion of the percussion holes (approximately 5%) will also be twin drilled (i.e. within several meters of the original hole) to provide samples for molybdenum assay and to confirm the uranium grades determined by down-hole geophysics.

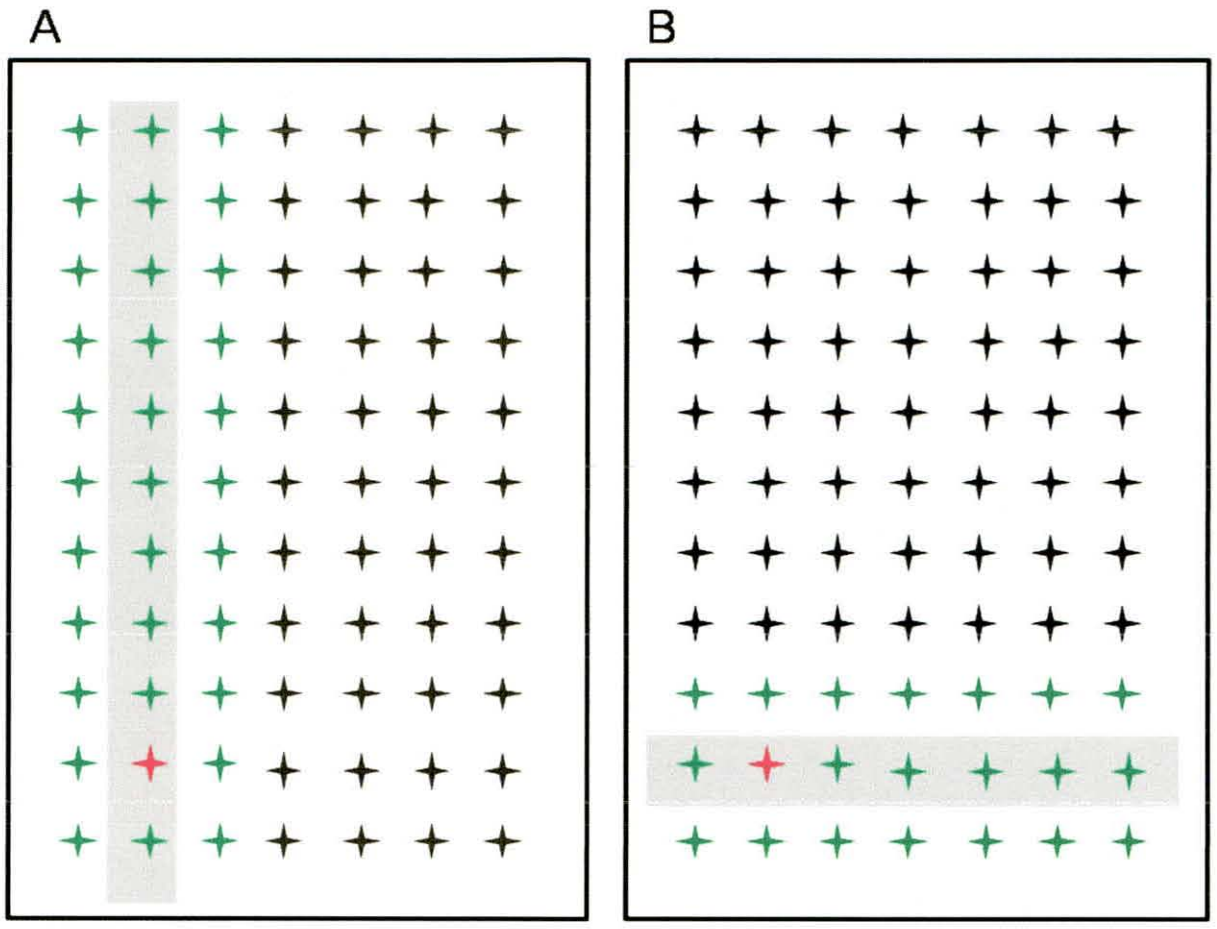

Figure 1. A hypothetical drill grid (all stars) has been designed to delineate the orientation of a mineral body extending away from an outcropping radiometric anomaly (the red star). In case (A) the mineralisation extends to the north of the anomaly, while in case (B) the mineralisation extends to the east. The green crosses represent the boreholes that would actually need to be drilled to completely delineate the ore body (shown in grey). Clearly, two very different shaped boreholes arrays are required, but in either case the majority of the planned boreholes would never be drilled if the drilling commences at the anomaly and the drilling programme is fanned out until holes become barren of mineralisation.

Groene Vallei North drilling programme

The drilling programme on the Groene Vallei North Project area (Map 4) will consist of a single phase of drilling with a small number of reverse circulation percussion boreholes distributed around a 50mx50m grid.

Access to the project area is via an existing farm road, but a new access track of approximately 950m length will have to be made to connect the farm road the proposed borehole grid. Aspects of the design and location of this new road are discussed in Section F below.

Only 15 boreholes are planned for this borehole grid. It is proposed that they will be accessed via a single spine road that connects with all three gridline tracks. The direction of drill rig migration will commence at the spine road and move hole-by-hole along the gridline track away from the starting point (Map 4). The rig will continue to move until holes barren of mineralisation are encountered. This will minimalise the number of holes to be drilled and, thus, veld disturbed. No vehicle traffic will be permitted either laterally of diagonally between gridline tracks.

It is anticipated that the drilling activities outlined for the Groene Vallei North Project will only take place should the results of drilling in the Denmark Project prove favorable. Thus, the two drilling programmes will not occur simultaneously.

Groene Vallei South drilling programme

The drilling programme on the Groene Vallei South Project area (Map 5) will consist of a single phase of drilling with a small number of reverse circulation percussion boreholes distributed around a 50mx50m grid.

Access to the project area is via an existing farm road, but a new access track of approximately 170m length will have to be made to connect the farm road the proposed borehole grid. Aspects of the design and location of this new road are discussed in Section F below.

Only 5 boreholes are planned for this borehole grid. It is proposed that they will be accessed via a single spine road that connects with the two proposed gridline tracks. The direction of drill rig migration will commence at the spine road and move hole-by-hole along the gridline track away from the starting point (Map 5). No vehicle traffic will be permitted either laterally of diagonally between gridline tracks.

It is anticipated that the drilling activities outlined for the Groene Vallei North Project will only take place should the results of drilling in the Denmark Project prove favorable. Thus, the two drilling programmes will not occur simultaneously.

F. COMMENTS BY SPECIALIST BOTANIST

A specialist botanical study (containing observations on fauna and palaeontology) was conducted over the Taaiboschfontein Project area (Map 3) and is attached as Appendix 4. In that study it should be noticed that the Taaiboschfontein Project area is referred to as the farm Yzervarkspoort. In map 1, herein, as well as in the approved Prospecting Right the farm is identified as Farm 262 (the name Yzervarkspoort is redundant).

The following observations and recommendations form part of that report. Those points and Tasman Pacific Minerals Limited's responses and undertakings do not replace those environmental damage mitigation and environmental rehabilitation procedures outlined in the currently accepted EMP, but rather serve as an amplification of those measures.

The specialist report stipulates that "**no botanical, zoological, or palaeontological grounds were found for rejecting the proposed exploration**". However, the following points and recommendations emanate directly from that report and are designed to either mitigate environmental damage or facilitate recovery of vegetation following completion of the proposed drilling programmes. Note that the comments and recommendations emanating from the specialist environmental report are shown below in black text and the statements of intent by Tasman Pacific Minerals Limited are shown as blue text. The comments and recommendations flowing from the specialist environmental report fall within two main spheres of concern; these two sections are identified using headings in red text. Similarly, an undertaking by Tasman Pacific Minerals Limited to involve a specialist botanist in quality control of the veld rehabilitation process is also indicated using a heading in red text.

The following points were suggested to minimise ecological damage:

• Appoint Environmental Conservation Officer (ECO) to advise drilling team on environmentally acceptable behaviour and make regular inspections. The ECO should be held accountable for the state of tracks, drill sites and campsites on completion of the exploration.

An Environmental Conservation Officer (ECO) will be appointed for each project area. The person so appointed will be fully briefed on the requirements of the post and the necessity to make regular inspections. The ECO will be held responsible by the company to ensure environmentally acceptable behaviour by all involved during the drilling programme as well as ensuring all drill sites and that tracks are in an appropriate state at the completion of the drilling programme.

• Avoid driving on clay roads with heavy vehicles during wet conditions.

Driving on wet clay roads with heavy vehicles will be avoided wherever possible.

• Plan drilling operation on the drilling grid so as to minimise the number of times that a vehicle passes along a new veld track.

The drilling programme detailed above (Section E) is designed to limit, as much as possible, drilling to only those areas that contain mineralisation. Similarly, drill rig mobility is strictly controlled as access between boreholes is limited to a number of defined gridline tracks and the migration direction and point of initial drilling is so designed to produce the minimum traffic of the rig along the access path. A third point in the damage mitigation process is that the total length of the access tracks is kept to a minimum to facilitate foot access (where ever possible) from spine roads of existing farm roads.

• Do not repair vehicles or replace oil and hydraulic fluids on vehicles in the veld.

Vehicular and equipment repairs and maintenance modalities will conform to Section F 2.4 of the approved EMP. It is implicitly stated in Section F 2.4.1 of that document that no vehicle will be extensively repaired in any place other than the prescribed maintenance yard. The appropriate control on vehicle repairs and maintenance will be tasked to the ECO.

• Accommodate personnel at a farmstead rather than at a veld campsite.

If suitable habitable structures exist and are made available, following consultation with the landowner, they will be used to house drilling staff during the exploration programme. All other staff will be housed off site in a town. If a camp site is required to accommodate drilling staff during the programme all aspects of campsite establishment (e.g., toilet facilities, waste water and refuse disposal and

rehabilitation of the camp) site will be according to Section F2.3 of the approved EMP. Those provisions will be will be constantly monitored by the ECO to ensure appropriate maintenance of standards.

•The access road on Groene Vallei will need to be carefully planned and managed to minimise future erosion (stated in Point 2 of the executive summary of the environmental report).

The access rood referred to in this point is that for the Groene Vallei North Project. It should be noted that the location of the road (Map 4) has been planned to minimise its gradient over the entire extent, as well as avoiding all water drainage lines. In so doing the risk of later erosion related to slope is minimised as much as possible.

It should be noted that the number of proposed boreholes in the Groene Vallei North Project is minimal (i.e. 15). As such, even if all holes are eventually drilled the amount of vehicular traffic necessary to access the project area will be commensurately minimal; wear and tear on the road surface will be commensurately light.

Although not mentioned in the environmental report a very short new access road will be required to connect the Groene Valley South Project area to the existing farm road (approximately 170m; see Map 5). This road will be located on the valley floor and the lowermost slopes of Nelskop and, as such, the slope of the area is not seen as a major problem. In addition only 5 boreholes are planned and so vehicular traffic necessary to access the project area will be commensurately minimal; wear and tear on the road surface will be commensurately extremely light.

In addition to the above points the undertaking is given below that, subject to consultation with the landowner, berms leading water into stone-packed channels will be constructed as suggested by the specialist environmental report (Appendix 4) on any road built on a gradient.

On completion of the prospecting, the following actions should be taken to facilitate recovery of vegetation on vehicle tracks and around boreholes:

• Replace any large stones removed to facilitate vehicle access on veld tracks and near boreholes. This is particularly applicable at Groene Vallei where a new access track will be required on a stony hillside

All large stones that are removed from tracks, roads and borehole collar sites, to facilitate vehicular access will be replaced once the area is no longer required. A team of people from the local community will be employed to ensure that such rehabilitation will be conducted on an ongoing basis throughout the duration of the entire drilling programme to expedite the recovery of the veld. This will further serve to minimise the un-rehabilitated foot print of the exploration programme to a minimum. That team shall also be employed for search and recovery operations prior to drill rig movements to ensure that tortoises and other wildlife are not endangered.

• Loosen compacted soil around drill sites using a pickaxe to facilitate seed trapping, water penetration and plant establishment.

This operation will be carried out by the rehabilitation teams contemplated in the above point.

•.Where tracks run down a slope, prevent accelerated runoff and soil erosion by constructing berms at maximum intervals of 20 m and leading the water off the road into stone-packed channels. This applies even where established farm tracks are being used

Where required the necessary berms and stone-packed channels will be constructed. This will follow consultation with the landowner to ensure that the structures suit the ongoing needs of the land owner.

Undertaking by Tasman Pacific Minerals Limited

Upon completion of the drilling programmes in both the Rietfontein and Matjes Kloof projects areas the services of a specialist botanist will be retained and an independent report commissioned to investigate whether rehabilitation procedures are satisfactory or if additional works are required.

G. COMMENTS BY LANDOWNER

Comments from the landowner are presented in Appendix 3.

H. UPDATED REHABILITATION FUND QUANTUM

It was indicated above (Section F) that a team of people employed from the local community (and under the supervision of the ECO) would be employed to provide ongoing veld rehabilitation from the commencement of the proposed drilling programme. It is envisaged that as soon as boreholes are no longer required to be left open (e.g. to facilitate access for geophysical logging) that the borehole, the collar site and any superfluous gridline tracks and access roads will be rehabilitated. This will have the effect of expediting veld rehabilitation, but will also effectively minimise the foot print of veld that would require rehabilitation should the company not be in a position to do so.

The attached maps 3-5 show (via the arrows indicating the migration direction of drill rigs relative to the position of access tracks, spine roads and existing farm roads) that the drilling programme has been planned to minimise vehicular traffic. Thus, it is anticipated that the majority of the gridline tracks will indeed require either none or very little rehabilitation; this is particularly so in the Groene Vallei North and South Project areas because of the small number of proposed boreholes on those areas.

The necessary berms and stone-packed channels (stipulated in Section F) will be constructed at the same time as any necessary new roads are required, as part of the road building process. These erosion control measures will not need to be constructed again and as such should not form part of any contingency to be covered by the calculation of the quantum of the Rehabilitation Fund.

As a result of the above it is anticipated that the amount of veld rehabilitation work required, at anytime should Tasman Pacific Minerals Limited be unable to complete the rehabilitation programme for any reason, will be at an absolute minimum. It is anticipated that at any juncture there would be no more than 50 boreholes and borehole collar site requiring rehabilitation. A recent quotation from a drilling company for a drilling programme in the Karoo quoted R500 per collar site for rehabilitation. Thus, it would appear reasonable to suggest that the quantum of the value of monies within the Rehabilitation Fund necessary to cover the rehabilitation of boreholes and collar sites alone would equal R25,000 (i.e. 50 holes x R500). This calculation is further supported by the case that the Denmark Project will be drilled first and the drilling will occur in two distinct phases. Drilling on the Groene Vallei North and South Project areas will only commence, if at all, after the Denmark Project drilling is completed.

The rehabilitation of new access roads and spine roads is a matter that needs to be addressed in addition to the borehole collars and boreholes. It is very unlikely that the gridline tracks will require very much (if any) rehabilitation due to the low volume of vehicular traffic any particular portion will be subjected to. Similarly, the building of berms and stone-filled channels on the existing farm roads (as per recommendations in Appendix 4) will be conducted at the onset of the drilling programme. Thus, it can be anticipated that only the rehabilitation of new access roads and spine roads will be required to be rehabilitated upon cessation of the drilling programme in each area. Map 3 indicates approximately 270m of new access road would be required, as well as approximately 620m of spine road (i.e. a total of approximately 900m).

The Groene Vallei North project contains approximately 950m of new access road and 150m of spine road (totaling 1100m), while the Groene Vallei South Project contains approximately 170m of new access road and 120m of spine road (totaling 290m). However, it is indicated, herein, that those two sites will only be drilled after the drilling on Denmark Project is completed, if at all. It is suggested that an appropriate course of action would be to calculate the appropriate Rehabilitation Fund quantum for road rehabilitation on those works required on the Denmark Project. Given the greater total of road length requiring rehabilitation on the two Groene Vallei

Project areas, should it be decided that those two areas will be drilled the appropriate Rehabilitation Fund quantum be re-addressed taking conscience of the greater road surface to be rehabilitated.

The level of rehabilitation recommended within the Specialist Environmentalist Report conducted on this area (Appendix 4) requires that large stones are replaced onto the road surface and that compacted areas be loosened using hand picks. The cost of suitable rehabilitation for a single kilometer of road can be calculated as follows:

If it assumed that 4 people would take 2 days to rehabilitate 100m of road (12.5m per a day per person)

Then,

4 staff x R250 per day per person x 2 days x 10 (represents 10 x 100m) = R20,000 per kilometer

Thus,

Rehabilitation of 0.9km of Denmark Project road = R18,000

The total amount required to be on deposit with the DME should, therefore, be R25,000 (borehole collars) plus R18,000 (roads); totalling R43,000. A bank guarantee is already lodged with the DME for R25,000 and it is accordingly recommended that this amount be increased by a further R17,000.

I. UNDERTAKING

I, **Henri Lombard** , the undersigned and duly authorised by **Tasman Pacific Minerals Limited**, have studied and understand the contents of this amendment to the approved Environmental Management Programme and duly undertake to adhere to the conditions as set out herein, unless specifically or otherwise agreed in writing.

Signed at **Johannesburg** on this **15th** day of **February 2010**

Signatory

Designated Signatory
Designation

J. APPROVAL

Approved in terms of Section 39(4) of the Mineral and Petroleum Resources Development Act, 2002 (Act 29 of 2002).

Signed at ..... this ..... day of ..... 20.....

.....

REGIONAL MANAGER

REGION: ***Eastern Cape***

APPENDIX 1

Names of the farms comprising Site 37, the names of the registered owners of the farms as well as the extent of the land (in hectares) and the title deed number for the property.

Farm	Farm Owner	Extent (ha)	Title Deed
River Glen 221 Remainder	L. Breytenbach	1227.9871	T33178/2003
De Geerskraal Uitspanning 222 Remainder	A.T. van Heerden	414.8566	T35464/1987
Denmark 118 Remainder	A.T. van Heerden	1194.8878	T16479/1982
Denmark 119 Remainder	A.T. van Heerden	1899.7887	T16479/1982
Denmark 119 Ptn 1	A.T. van Heerden	810.2750	T16479/1982
Geers Kraal Outspan 223 Remainder	M.C.W van Heerden	104.7039	T33751/1986
Groene Vallei 226 Remainder	M.C.W van Heerden	1743.8906	T33751/1986
Farm 585 Remainder	D.C Holmes	5800.8995	T50145/1994
Farm 73 Remainder	A.S. Jordan	2255.1474	T8946/1994
River Glen 221 Ptn 1	J.Z. du Plessis	600.7130	T20218/1968
Groene Vallei 226 Ptn 1	W.H.J. van Rensburg	1493.6248	T66559/1989
Groene Vallei 226 Ptn 2	Johanna J Sieberhagen	274.0688	T31394/1973
Farm 117 Ptn 1	Johanna J Sieberhagen	239.8504	T31394/1973
Roode Heuvel 74 Ptn 2	Jakobus J Sieberhagen	20.8167	T32287/1975
Doornfontein 113 Ptn 4	Jakobus J Sieberhagen	438.4588	T10708/1975
Farm 115 Remainder	Jakobus J Sieberhagen	257.2194	T10708/1975
Oskom 116 Remainder	Jakobus J Sieberhagen	795.9511	T10708/1975
Farm 120 Remainder	I.P. Tam	139.8688	T18306/1995
Farm 590 Remainder	I.P. Tam	1378.6848	T51468/2000
Oskom 116 Ptn 1	W.M. White	795.9511	T118551/1997
		21887.6443	

APPENDIX 2

Names and contact details of the registered land owners of the farms comprising Site 37.

Farm Owner	Address	Phone number
L. Breytenbach	P.O. Box 184 Uppington 9880	054 3313663
A.T. van Heerden	P.O. Box 170 Cradock 5880	082 764 9656
M.C.W van Heerden	P.O. Box 428 Middelburg 5900	082 455 2653
D.C Holmes	10 Sering Street Cradock 5880	048 881 4634
A.S. Jordan	P.O. Box 438 Cradock 5880	072 729 3558
J.Z. du Plessis	P.O. Box 88 Cradock 5880	084 892 1853
W.H.J. van Rensburg	P.O. Box 60 Cradock 5880	083 957 8822
Johanna J Sieberhagen	P.O. Box 330 Cradock 5880	084 881 2419
Jakobus J Sieberhagen	P.O. Box 330 Cradock 5880	084 881 2419
I.P. Tam	P.O. Box 25 Cradock 5880	082 652 6610
W.M. White	10 Plymouth Road Nahoon 5241	083 391 1095

APPENDIX 3

COMMENTS BY INTERESTED AND AFFECTED PARTIES

Notification was given and consultations have been held with interested and affected parties with regard to the proposed amendments to both this Environmental Management Plan and Prospecting Works Programme. Included herein, following, are copies of such notification letters. Acknowledgement of receipt of these documents is indicated by the respective landowners upon the notification letters.

It is indicated on the notification letters that following the consultation process, as well as the provision of the proposed EMP and PWP documents to the landowners that the respective landowners indicated they had NO COMMENTS to make.

Tasman Pacific Minerals Limited

Reg No: 2006/001646/10

7 West Street Houghton 2198
PO Box 1574 Houghton 2041

Telephone: +27 (0) 11 728 7240
Facsimile: +27 (0) 11 728 1409

Verwys asseblief alle korrespondensie vir Tasman Pacific Minerals Limited na: **Posbus 1178**
Randpark Ridge
Johannesburg
2156

PER HAND

Datum: 23/11/2009

Mnr/~~Mev~~ ANDREAS TOBIAS VAN HEERDEN
POSBUS 170
CRADOCK, 5880
Tel/Sel Nr. 048 881 2526 / 082 764 9656.

Eiendombeskrywing:
RESTANT VAN DIE
PLAAS DENMARK 119,
DISTRIK CRADOCK

Geagte Meneer,

PROSPEKTEERREG VIR URAAN EN MOLIBDEEN:KENNISGEWING EN KONSULTASIE – WYSIGING VAN GOEDGEKEURDE OMGEWINGSBESTUURSPLAN EN VERGOEDINGSOOREENKOMS VIR TOEKOMSTIGE OPPERVLAKTE EKPLORASIE BOORWERK

Tasman Pacific Minerals Limited ("Tasman") is die houer van 'n Prospekteerreg vir uraan en molibdeen oor u eiendom.

Ingevolge die goedgekeurde Omgewingsbestuursplan ("OBP") wat van toepassing is op die Prospekteerreg mag geen ekplorasie booraktiwiteite wat die oppervlakte van die aarde versteur toegelaat word alvorens die OBP gewysig word om vir sodanige oppervlakte ekplorasie boorwerk voorsiening te maak nie.

Tasman het 'n onderneming aan u, as grondeienaar ,en aan die Departement Minerale en Energie ('DME") gegee dat Tasman botaniese kundiges sal aanstel om omgewingsinpakstudies te onderneem ten einde te bepaal hoe die omgewing geraak sal word deur sodanige ekplorasie boorwerk, en om voorkomende maatreels daar te stel om die omgewing te rehabiliteer ten einde seker te maak dat sodanige aktiwiteite die minste skade aan die omgewing veroorsaak. Om die waarheid te se,'n wyer reeks van studies was onderneem wat dierkunde, argeologiese en oudheidskunde deel van die verwysings raamwerk gemaak het.

Ingevolge die bepalings van die Mineral and Petroleum Resources Development Wet, Nr. 28 of 2002 ("MPRDA") is die Prospekteerwerksprogram ("PWP") ook gewysig om oppervlakte boorwerk in die toekomstige ekplorasie fases in te sluit.

Tasman het ook 'n onderneming aan u as grondeienaar gegee dat 'n Oppervlakte – ooreenkoms ook met u gesluit sal word waarin die terme en voorwaardes van oppervlakte toegang na u eiendom gereel sal word met betrekking tot toekomstige ekplorasie boorwerk.

Die nodige en vereiste omgewingstudies deur kundiges is nou op u eiendom voltooi en die nodige wysigings aan die konsep gewysigde OBP en PWP is opgestel.

Goedkeuring van die terme en voorwaardes van die Oppervlakte – ooreenkoms is ook vanaf die bestuur van Tasman verkry.

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Private Bag X6093

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Site 49: Ref: 648/2007(PR)

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Die uwe,

Ek/Ons as bogenoemde(s) erken hiermee ontvangs van bostaande dokumentasie, en erken dat konsultasie met my/ons gevoer is.

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Handtekening

23/11/09

Datum

Tasman Pacific Minerals Limited

Reg No: 2006/001646/10

7 West Street Houghton 2198
PO Box 1574 Houghton 2041

Telephone: +27 (0) 11 728 7240
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Verwys asseblief alle korrespondensie vir Tasman Pacific Minerals Limited na: **Posbus 1178**
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PER HAND

Datum: 23/11/2009

~~Mnr~~/Mev M. C. W VAN HEERDEN
POSBUS 428
MIDDELBURG 5900
Tel/Sel Nr. 049-8424177 / 0824552653

Eiendombeskrywing:
RESTANT VAN DIE
PLAAS GROENE VALLEI 226
DISTRIK CRADOCK
.....

Geagte Meneer,

PROSPEKTEERREG VIR URAAN EN MOLIBDEEN:KENNISGEWING EN KONSULTASIE – WYSIGING VAN GOEDGEKEURDE OMGEWINGSBESTUURSPLAN EN VERGOEDINGSOOREENKOMS VIR TOEKOMSTIGE OPPERVLAKTE EKPLORASIE BOORWERK

Tasman Pacific Minerals Limited ("Tasman") is die houer van 'n Prospekteerreg vir uraan en molibdeen oor u eiendom.

Ingevolge die goedgekeurde Omgewingsbestuursplan ("OBP") wat van toepassing is op die Prospekteerreg mag geen ekplorasie booraktiwiteite wat die oppervlakte van die aarde versteur toegelaat word alvorens die OBP gewysig word om vir sodanige oppervlakte ekplorasie boorwerk voorsiening te maak nie.

Tasman het 'n onderneming aan u, as grondeienaar ,en aan die Departement Minerale en Energie ('DME") gegee dat Tasman botaniese kundiges sal aanstel om omgewingsinpakstudies te onderneem ten einde te bepaal hoe die omgewing geraak sal word deur sodanige ekplorasie boorwerk, en om voorkomende maatreels daar te stel om die omgewing te rehabiliteer ten einde seker te maak dat sodanige aktiwiteite die minste skade aan die omgewing veroorsaak. Om die waarheid te se,'n wyer reeks van studies was onderneem wat dierkunde, argeologiese en oudheidskunde deel van die verwysings raamwerk gemaak het.

Ingevolge die bepalings van die Mineral and Petroleum Resources Development Wet, Nr. 28 of 2002 ("MPRDA") is die Prospekteerwerksprogram ("PWP") ook gewysig om oppervlakte boorwerk in die toekomstige ekplorasie fases in te sluit.

Tasman het ook 'n onderneming aan u as grondeienaar gegee dat 'n Oppervlakte – ooreenkoms ook met u gesluit sal word waarin die terme en voorwaardes van oppervlakte toegang na u eiendom gereel sal word met betrekking tot toekomstige ekplorasie boorwerk.

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*Ek/~~Ons wil kommentaar lewe~~r/ wil nie kommentaar lewer nie.

* skrap wat nie van toepassing is nie

.....

Handtekening

.....

Datum

APPENDIX 4

Tasman-Pacific Minerals Prospecting Right 37

Farms Denmark and Groene Vallei

Specialist Assessment: Flora and Fauna

2009.09.27

Prepared for Geo-Consult International (Pty) Ltd,
On behalf of Tasman-Pacific Minerals Ltd
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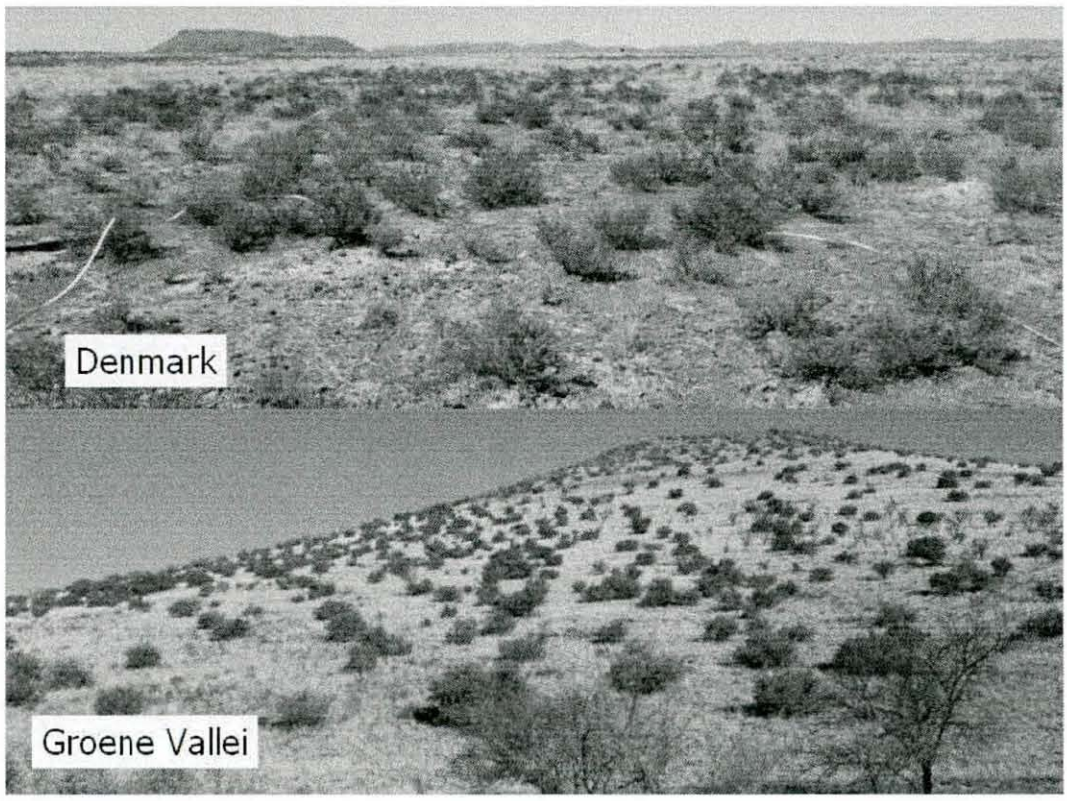
Website www.geoconsult.co.za



by

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Contents

Executive summary

1. Botanical specialist assessments were carried out on three proposed uranium exploration Drill Grids (TP37 Denmark and TP37 Groene Vallei (east and west) sites, in the quarter degree map squares 3225AB & BB, northwest of Cradock;
2. No botanical, zoological, or palaeontological grounds were found for rejecting the proposed exploration on any of the sites, however the access road on Groene Vallei will need to be carefully planned and managed to minimise future erosion;
3. An Environmental Control Officer should be appointed by the exploration company and held responsible for the state of the environment on completion of exploration;
4. Exploration should be planned so as to minimise driving across the veld and up steep inclines;
5. No vehicles should be dismantled or serviced in the veld;
6. On completion of exploration, berms should be built on all tracks (including established farm tracks) on gradients that are used by heavy vehicle.
7. Rocks removed to facilitate vehicle access should be replaced, and compacted bare ground should be loosened and pitted, and covered with branches or stones to facilitate the return of vegetation.

Terms of Reference

As part of the process of amending the EMP documents we require a report for each site from you indicating:

1. Describe the botany of each proposed borehole grid, and highlight any the areas that are particularly vulnerable or sensitive.
2. Indicate appropriate veld remediation processes for any disturbed areas.
3. Indicate where access roads should not be located (if any such places exist) and appropriate rehabilitation measures that should be employed for the roads.
4. Highlight any sites of zoological, palaeontological or archaeological sensitivity in your report for subsequent follow-up work to be done.

Landscape context of proposed Drill Grids

Prospecting Right TP37 lies approximately 30 km northwest of Craddock and 7 km north of the Mountain Zebra National Park (**Figure 1**) in quarter degree mapping units 3225AB and 3225BB. The Paulsrivier drains the area. Within Prospecting Right 37, three Drill Grids have been proposed (**Figure 2**), namely an area of ca. 58 ha on Denmark 119 and two small areas (1.2 and 4.5 ha) on Groene Vallei 226a.

Vegetation types occurring in prospecting TP37 are Eastern Upper Karoo and Tarkastad Mountain Shrubland (**Figure 1**) as defined and mapped by Mucina and Rutherford (2006). Rainfall at Cradock averages 315 mm/year and falls mainly in the warmer months, November to April (Desmet & Cowling 1999).

Eastern Upper Karoo vegetation occurs on plains with shallow sandstone and mudstone-derived soils. It covers 4,982,132 ha of which only 2% has been transformed (by dam building), however the vegetation type is poorly protected with only 1% falling within national parks and other statutory protected areas (Rouget et al. 2005). The vegetation is characterized by dwarf Karoo shrubs, but grasses become prominent after summer rain.

Tarkastad Mountain Shrubland occurs on rocky ground 1020-1780 m a.s.l, on hills and mountain slopes in the eastern Cape. It covers a total area of 423,967 ha of which 2% has been transformed by cultivation and dams. Only 1% of the vegetation type is formally protected (Rouget et al. 2005). Grasses, Karoo shrubs and a scattering of small trees characterize the vegetation.

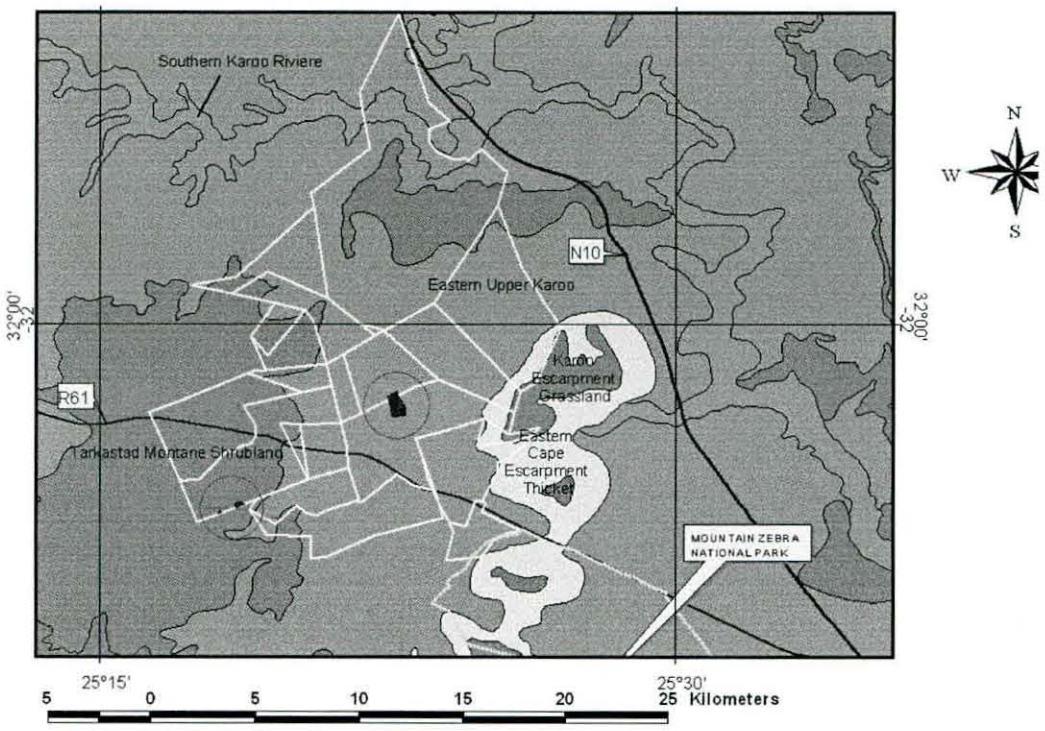

Figure 1. Prospecting Right 37 (white lines) and the proposed Drill Grids circled in red, in relation to the major roads, vegetation types and the Mountain Zebra National Park. Vegetation map from Mucina and Rutherford (2006).

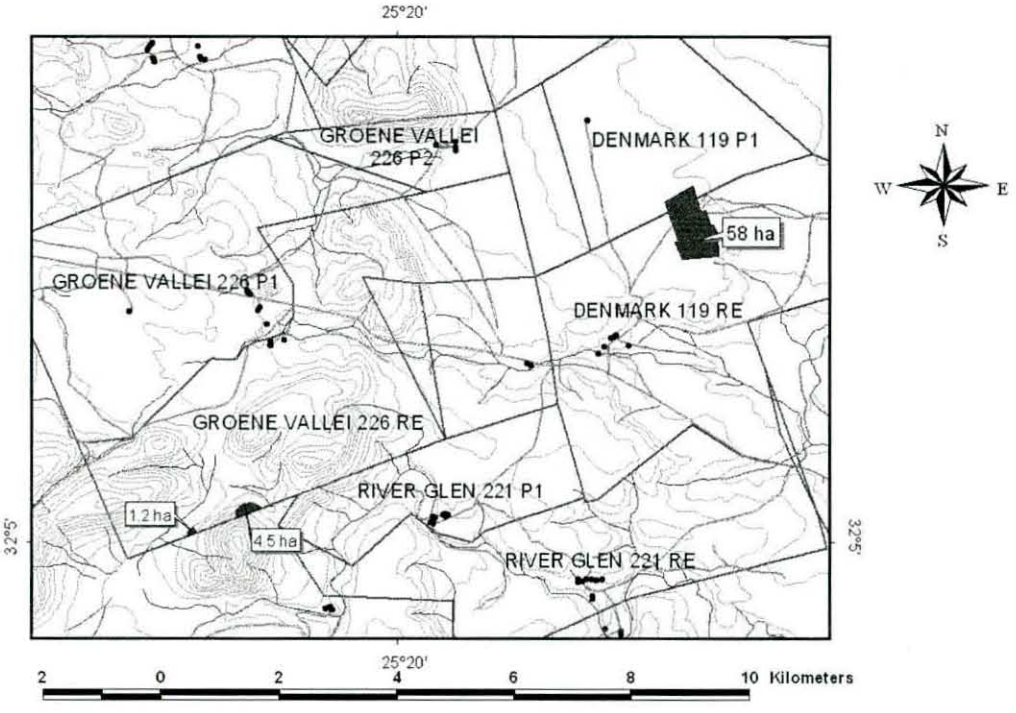

Figure 2. Position and approximate areas of the Drill Grids (shaded red) on Prospecting Right 37 in relation to drainage, topography, farm boundaries and farmsteads.

Botanical assessment

Sampling approach

The flora of the proposed Drill Grids on Prospecting Right 37 was sampled on 15 September 2009. Each vegetation sample plot comprised a central intensively surveyed area of 25m² and an extensively surveyed area (2500 m²) surrounding the plot. On Denmark we sampled 2.5% (1.5 ha; 6 plots x 2500 m^2) of the proposed flat 58 ha Drill Grid, and on Groene Vallei we sampled 35% (2.0 ha, 8 plots x 2500 m^2) of the proposed western and eastern hillside Drill Grid areas that are 1.2 ha and 4.5 ha respectively.

Canopy spread cover values (%) for angiosperm species were estimated and recorded in the central plot. All plant species recorded by two observers during a 5-minute search in the extensive plot were given a nominal cover value of 0.1%. Plant identification was based on reference collections of SJM, and on field guides (Bruyns 2005, Hartmann 2001, Jacobsen 1966, Shearing & van Heerden 1994, Smith *et al.* 1998). Nomenclature follows Germishuizen et al. (2006).

The NW corner of each 5m x 5m vegetation sample plot was geo-referenced (see **Appendix 1** for waypoints), and the following environmental data were collected:

- Canopy spread of each plant species (%)
- Maximum height of the tallest plant species
- Soil type and texture code (clay = 1 and includes sandy and silty clay, silt = 2; loam = 3 and includes sandy-clay-loam; sand = 4 and includes silty sand and gravely sand)
- Soil colour (brown, buff, grey)
- Drainage (poor, medium, good)
- Bedrock and loose stone cover (%)
- Photograph taken from the north boundary of the plot, looking south so that the plot boundary formed the lower limit of the photograph and the horizon the upper limit of the photograph. Photographs were numbered to match plot numbers (TP37-100...TP37-113), and electronically archived (JPGs) for future reference (see **Appendix 6** for list of files on accompanying CD).

In addition, we noted the presence/absence of archaeological and palaeontological material and animal species.

Botanical findings

Flora of 3225AB and BB

The flora of the area is fairly rich, probably because it spans two vegetation types. The combined flora list for the quarter degree (**Appendix 2**) comprises 412 plant species, including mosses, hepatics, ferns and vascular plants. Of these 370 are in the PRECIS data base, and an additional 42 were recorded in the present study. There are relatively few (19) alien plant species. Provincial protected status has been designated to 47 of the species, mainly Amaryllidaceae (amarylids such as *Boophane*), Apocynaceae (stapelias and hoodias), Asphodelaceae (aloes), Iridaceae (irises), Mesembryanthemaceae (vygies) and Portulacaceae (moerplante). Some of the succulents also have CITES status (*Aloe, Anacampceros, Euphorbia*). A total of 4 Red Data species (critically endangered, rare, vulnerable or declining) have been recorded for the quarter degree squares, namely *Boophane distichya* (declining), *Kniphofia acraea* (rare), *Huernia kennedyana* (rare) and *Pelargonium sidioides* (declining).

Vegetation of proposed Drill Grid on Denmark

Environmental and vegetation data for this site are summarised in **Appendix 3a**. The proposed Drill Grid comprises a stony plain, 850 m a.s.l., sloping gently northward from the northern slopes of the Langeberg on the farm Denmark. Sandstone bedrock (Beaufort series), including calcified fluvial sediments known as "koffieklip" is exposed in places and covers about 18 % of the ground (range 0-30%). The remainder of the surface comprises loose stones (22%) and shallow, orange-brown silty sand. There are no drainage lines or pans on the proposed drilling site.

The vegetation was typical of Eastern Upper Karoo **(Figure 3a,b)** as described by Mucina and Rutherford (2006). Vegetation cover (projected canopy cover) ranged from 30-40% (average 35%), and was a uniform 0.4 m in height. Common and rather unpalatable karoo bushes, (*Eriocephalus ericoides, Stachys cuneata* and 31 other species), made up 20% of the vegetation cover, whereas 11 species of grasses (mainly *Aristida diffusa*) made up 10% of the cover (**Table 1**). Succulents were poorly represented (8 spp) and covered <1% of the ground. Emergent tall shrubs, such as *Diospyros* and *Carissa* were confined to the peripheries of bedrock outcrops. Although the site was heavily grazed and recovering from drought, the vegetation

was fairly diverse, there being between 14 and 33 species in a 2,500 m^2 plot **(Appendix 3a)**. None of the Red Data species known from the quarter degree square was encountered in the proposed Drill Grid. Uncommon protected species in the area included *Anacampceros* sp., *Aloe broomii* (only one individual present, not in plots), *Chasmatophyllum musculinum*, *Gladiolus permeabilis edulis* and *Freesia andersoniae* (on access track to Drill Grid). All these species are associated with bedrock outcrops **(Figure 3c,d,e)**.

Table 1. Contributions of the various plant life forms to total vegetation cover and species richness on the proposed Drill Grid at Denmark (TP37)

Life form	Cover (%)	Number of species
Tall shrub (>1.5 m)	0.10	3
Dwarf shrub (<1.5 m)	20.95	33
Succulent	0.57	8
Grass	10.22	11
Geophyte	0.42	5
Forb	0.32	6
Total cover (%)	32.57	66

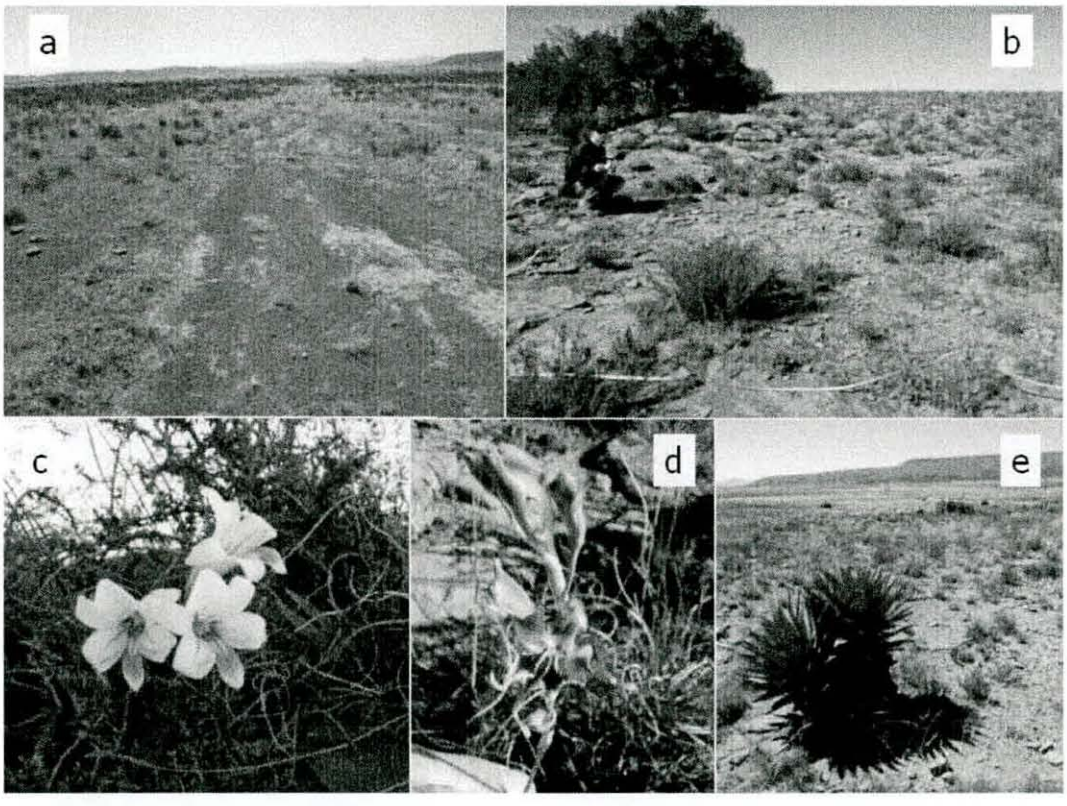

Figure 3 (a) TP37-Denmark showing access track made to the Drill Grid in 2008 by the landowner; (b) vegetation typical of stony plains. Note generally low stature of vegetation, and taller evergreen shrubs associated with bedrock outcrop, (c) *Freesia andersoniae*, (d) *Gladiolus permeabilis edulis* and (e) *Aloe broomii*

Vegetation of proposed Drill Grids on Groene Vallei

Two small Drill Grids have been proposed on the northern slopes of Nelskop on the farm Groene Vallei. The western site is 1.2 ha in area, and the eastern site approximately 4.5 ha. Both fall within the Tarkastad Montain Shrubland vegetation type as described by Mucina and Rutherford (2006). Nelskop comprises sandstone and metamorphosed sandstone (including koffieklip). The topography is moderately steep and the soils range from sandy to loamy with calcrete nodules. Bedrock cover ranged from 0-25% and covered an average of 10% of the ground, whereas loose colluvial stones, mostly dolerite (**Figure 4**), covered 86% (range 60-90%).

Figure 4 TP37-Groen Vallei (a) general view of topography. Access to the site from R61 follows the *Acacia karroo* woodland along the course of the Doringrivier; (b) moderately steep grassy slopes of Nelskop(c) *Stachys*-dominated shrubby vegetation of the western Drill Grid that lies on the lower NW-facing slopes; (d) moderately steep, rocky and grassy habitat of the eastern Drill Grid

Vegetation cover ranged from 40-60% (average 57%) On the lower-lying western grid, cover was dominated by the unpalatable shrub *Stachys cuneata*, whereas on the higher-altitude eastern grid, the vegetation was very grassy, being dominated by

Aristida diffusa (**Appendix 3b).** In general the life form composition of the vegetation at the Groene Vallei sites was grass-dominated (33% cover, 12 species), with 34 species of karoo dwarf shrubs making up about 20% of the cover. Trees (mainly *Acacia karroo*), succulents, forbs and geophytes contributed little to cover but contributed an additional 24 species (**Table 2**). The only red data listed species encountered on the site was *Boophane distichya* (gifbol), which has a declining population in the Eastern Cape and nationally (**Figure 5)** because of its use in traditional medicine. The only noteworthy protected species on this site was *Aloe striata* (coral aloe) on the upper slopes. The dwarf succulent *Euphorbia tridentata* (known mainly from the Albany district near Craddock) was particularly common in the shade of boulders (**Figure 5**) on both the proposed western and eastern Drill Grids.

Table 2. Contributions of the various plant life forms to total vegetation cover and species richness on the proposed Drill Grid at Groene Vallei (TP37)

Life forms	Cover (%)	Number of species
Tree	0.20	5
Dwarf shrub	20.23	34
Succulent	0.49	8
Grass	32.96	12
Geophyte	0.11	3
Forb	0.31	8
Total	54.30	70

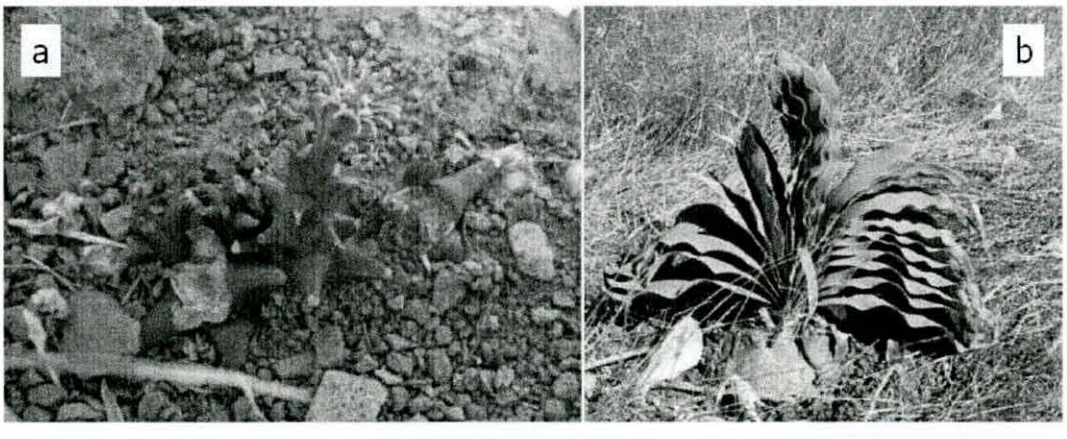

Figure 5 TP37-Groen Vallei (a) *Euphorbia tridentata*, a curious dwarf succulent largely confined to sandstones in the Cradock area, (b) *Boophane distichya* (gifbol) a protected species with declining populations in the Eastern Cape

Preliminary faunal assessment

Avifauna

There are no "Important Bird Areas" within Prospecting Right TP37 (Barnes 1998). A total of 206 bird species has been recorded in map grids 3225AB & BB (**Appendix 4**). Of these, four species are Near Threatened and seven are Vulnerable. Most of the Threatened and Vulnerable species are large birds of prey (raptors) or birds associated with ephemeral water bodies (pans, rivers). The raptors are threatened because grazing, problem animals control and other management interventions and disturbances have diminished their prey base. Large bird species, particularly Blue Crane, Denhams and Ludwigs Bustards, Black Stork and Secretary Bird, are also vulnerable to collisions with infrastructure such as power and telephone lines. Melodius Lark is threatened by loss of grassland habitat through overgrazing. It is envisaged that prospecting is likely to have minimal impact on the threatened and vulnerable avifauna; however, the impacts of widespread mining development in this region would need to be investigated in more detail.

Herpetofauna

Four species of tortoises are likely to occur in and around the proposed Drill Sites in Prospecting Right TP37 (**Appendix 5**). All species of tortoises conceal themselves beneath bushes and are vulnerable to being crushed by vehicles moving through natural vegetation. Although seven amphibian species are listed for the quarter degree map squares 3225AB & BB, it is unlikely that any of them occur on the dry sites included in this study. The Eastern Cape Dwarf Chamaeleon (*Brachypodion ventrale*) is likely to occur at Groene Vallei in the grassland with scattered thorn trees.

Heritage issues

Strap-shaped leaf fossil impressions were observed in some of the koffieklip rock on Denmark. These are likely to belong to the Permian flora of the rivers that flowed through the Southern African part of Gondwana, and are common in Beaufort series sediments. No fossiliferous rocks were found during the survey at Groene Vallei. The only materials of archaeological interest were a few bits of worked stone (flakes and cores) on proposed Drill Sites at both Denmark and Groene Vallei. All worked stone was all fine-textured, chert-like metamorphosed sedimentary rock. We have reported similar rock and similar flakes and cores throughout the Great Karoo Basin

(Ferguson et al. 2008; Milton & Dean 2007) and in the Oviston Nature Reserve in the Eastern Cape (Milton et al. 2008).

Access roads and Drill Grids

The proposed Drilling Grid at Denmark is accessible from an existing farm track (**Figure 3a**). As the area is flat and stony, and succulent comprise a very minor component of the flora, it is envisaged that any damage to the vegetation around drill sites will be reversible in the short term.

At Groene Vallei, there is a farm access track from the R61 and farmhouse, along the dry *Acacia karroo* lined drainage line to the base of Nelskop (**Figure 4a, Figure 6**). The proposed western Drill Grid at this site lies at the base of the hill and is directly accessible from this track. However, the proposed eastern Drill Grids is on the northeastern mid slope of Nelskop and will require construction of a new access track (**Figure 6**) that should follow contours to minimise the risk of later erosion.

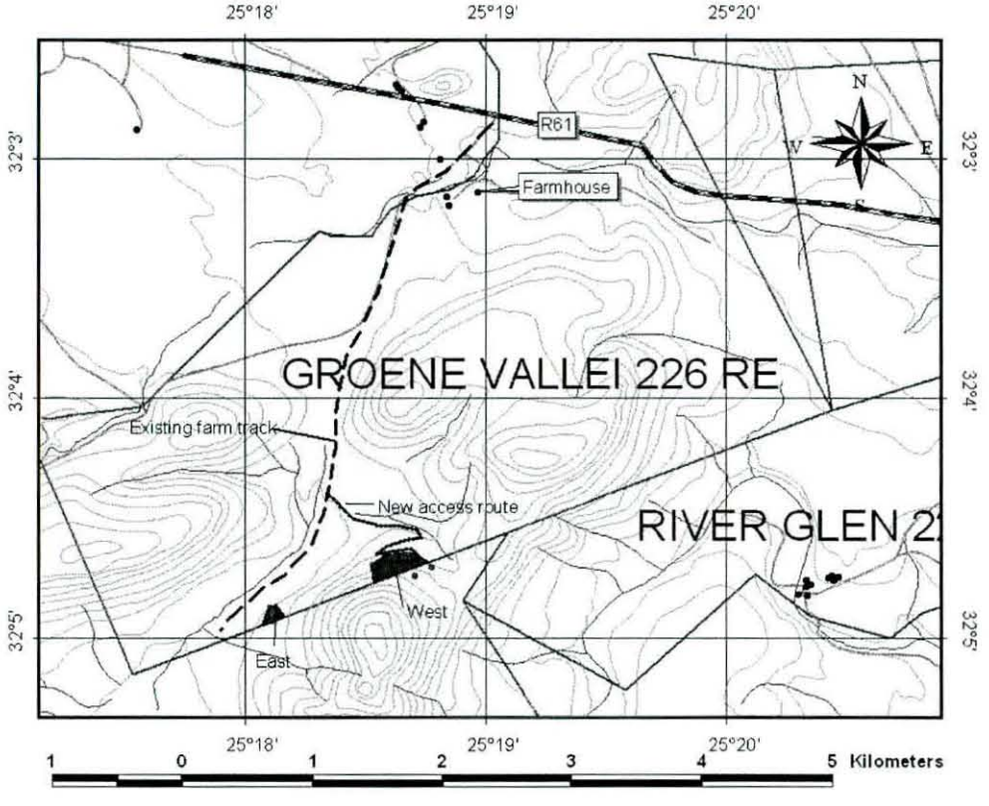

Figure 6. Groene Vallei East and West Drill Grids on in relation to existing farm track from the R61, and suggested position for new access route to West Drill Grid.

Damage mitigation and rehabilitation

The use of trucks and drilling rigs to drill cores in the Drill Grids will necessitate driving on untracked natural veld. Off-road driving, positioning and operation of drillings rigs, and deployment of personnel in natural vegetation always causes some damage to roads, sensitive habitats, vegetation and fauna. However, damage can be minimised by taking the following precautions:

- Appoint Environmental Conservation Officer (ECO) to advise drilling team on environmentally acceptable behaviour and make regular inspections. The ECO should be held accountable for the state of tracks, drill sites and campsites on completion of the exploration;
- Avoid driving on clay roads with heavy vehicles during wet conditions;
- Plan drilling operation on the Drill Grid so as to minimise the number of times that a vehicle passes along a new veld track;
- Do not repair vehicles or replace oil and hydraulic fluids in the veld;
- Accommodate personnel in a village rather than at a veld campsite

On completion of the prospecting, the following actions should be taken to facilitate recovery of vegetation on vehicle tracks and around borehole:

- Replace any large stones removed to facilitate vehicle access on veld tracks and near boreholes. This is particularly applicable at Groene Vallei where a new access track will be required on a stony hillside;
- Loosen compacted soil around drill sites using a pickaxe to facilitate seed trapping, water penetration and plant establishment;
- Where tracks run down a slope, prevent accelerated runoff and soil erosion by constructing berms at maximum intervals of 20 m and leading the water off the road into stone-packed channels (Coetzee 2005).

References

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