

# ENVIRONMENTAL AUDIT REPORT FOR DAMARAN EXPLORATION NAMIBIA'S PROSPECTING ACTIVITIES ON EPL'S 4818 & 4833 ON THE BOUNDARY BETWEEN THE ERONGO AND OTJOZONDJUPA REGIONS



*Prepared For*

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## NON-TECHNICAL SUMMARY

### OVERALL OVERVIEW

Epangelo Mining Company (the Proponent and partner of Damaran Exploration Namibia (Pty) Ltd) received an Environmental Clearance Certificate (ECC) dated 05 April 2018 to undertake exploration drilling activities on Exclusive Prospecting Licenses (EPLs) 4833, and 4818 to explore for copper, gold and cobalt..

The two EPLs are located in Erongo Region (EPL 4817) and EPL 4833 along the boundary of Erongo and Otjozondjupa regions respectively. EPL 4818 measures in at 33,666 ha in size lies almost exclusively within the Okombahe Reserve. EPL 4833 measures in at 99,934.40 ha in size and covers thirty one (31) commercial farms.

While their operations stimulate diversification in the national economic and development activities, consequently creating employment opportunities and trickling benefits to the larger Namibian population, it poses the risks of unprecedented negative environmental impacts.

The environmental clearance certificate provides approval for the proponent to undertake the following exploration or prospecting activities:

- Geological mapping: this mainly entails a desktop review of geological area maps and ground observations.
- Lithology geochemical surveys: rock samples shall be collected and taken for trace element analysis. Also, trenches or pits may be dug (in a controlled environment e.g. fencing off and labelling activity sites) adopting manual or excavator to investigate the mineral potential. At all times, the landowner and other relevant stakeholder will be engaged to obtain authorisation where necessary.
- Geophysical surveys: entails data collection of the substrata, by air or ground, through sensors such as radar, magnetic and electromagnetic to detect any mineralization in the area.
- Drilling: Should analyses by an analytical laboratory be positive, holes are drilled and drill samples collected for further analysis. This will determine the depth of the potential mineralization. If necessary new access tracks to the drill sites will be created and drill pads will be cleared in which to set the rig.

The audit findings, suggests that with a combine (compliance, repeated and not applicable) ranking percentage of 89 % (Fig. 3), Epangelo Mining Company's prospecting activities can be confidently declared as compliant. Critically, the non-compliant (minor non-compliance) ranking causing a compliance deficit leans significantly towards the positive tip of scoring scale, implying partial adherence with the given EMP / ECC conditions.

### ENVIRONMENTA COMPLIANCE REQUIREMENTS

Hence, Moring Environmental Consultants was appointed by Damaran Exploration Namibia to undertake the audit and present this report to the Department Of Environmental Affairs and Forestry in the Ministry of Environment, Forestry and Tourism for obtaining a renewed ECC.

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# 1 PROJECT BACKGROUND

## 1.1. PROJECT ACTIVITIES

Epangelo Mining Company (the Proponent and partner of Damaran Exploration Namibia (Pty) Ltd) received an Environmental Clearance Certificate (ECC) dated 05 April 2018 to undertake exploration drilling activities on Exclusive Prospecting Licenses (EPLs) 4833, and 4818 to explore for copper, gold and cobalt.

The environmental clearance certificate provides approval for the proponent to undertake the following exploration or prospecting activities:

- Geological mapping: this mainly entails a desktop review of geological area maps and ground observations. This includes the review of geological maps of the area and on-site ground traverses and observations and an update where relevant, of the information obtained during previous geological studies of the area.
- Lithology geochemical surveys: rock samples shall be collected and taken for trace element analysis to be conducted by analytical chemistry laboratories to determine if sufficient quantities of base & rare or precious metal or other minerals of interest are present. Also, trenches or pits may be dug depending on the commodity (in a controlled environment e.g. fencing off and labelling activity sites) adopting manual or excavator to further investigate the mineral potential.

These consists of small pits ( $\pm 20\text{cm} \times 20\text{cm} \times 30\text{cm}$ ) will be dug where 1 kg samples can be extracted and sieved to collect 50 g of material. As necessary, and to ensure adequate risks mitigation, all excavations will either be opened and closed immediately after obtaining the needed samples or the sites fenced off until the trenches or pits are closed. At all times, the landowner and other relevant stakeholder will be engaged to obtain authorisation where necessary.

- Geophysical surveys: entails data collection of the substrata (in most cases service of an aero-geophysical contractor will be sourced), by air or ground, through sensors such as radar, magnetic and electromagnetic to detect any mineralization in the area, and are conducted to ascertain the mineralisation.

Ground geophysical surveys shall be conducted, where necessary using vehicle-mounted sensors or handheld by staff members, while in the case of air surveys the sensors will be mounted to an aircraft, which then flies over the target area.

- Drilling: Should analyses by an analytical laboratory be positive, holes are drilled and drill samples collected for further analysis. This will determine the depth of the potential mineralization. If necessary new access tracks to the drill sites will be created and drill pads will be cleared in which to set the rig. Two widely used drilling options may be adopted, these are the reverse circulation drilling and/or diamond-core drilling.

A typical drilling site will consist of a drill-rig, drill core and geological samples store and a drill equipment parking and maintenance yard (including a fuel and lubricants storage facility).



## 1.2. PROJECT LOCATION

The two EPLs are located in Erongo Region (EPL 4818) and EPL 4833 along the boundary of Erongo and Otjozondjupa regions respectively (Fig. 1). EPL 4818 extend across an area of 33,666 ha in size and lies almost exclusively within the Okombahe Reserve, while EPL 4833 extend across an area of 99,934.40 ha in size and covers thirty one commercial farms (Fig. 2).

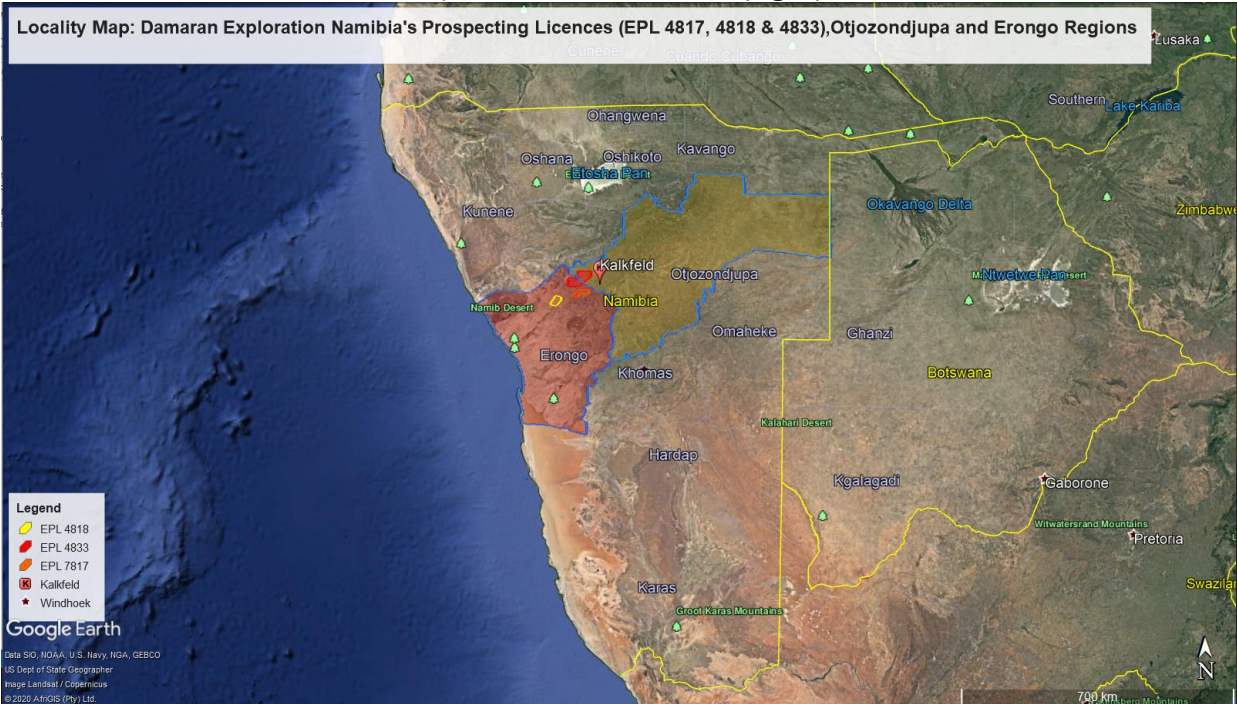


Fig. 1: Locality map of the proposed exploration activity's site or area in the Otjozondjupa Region, Namibia.

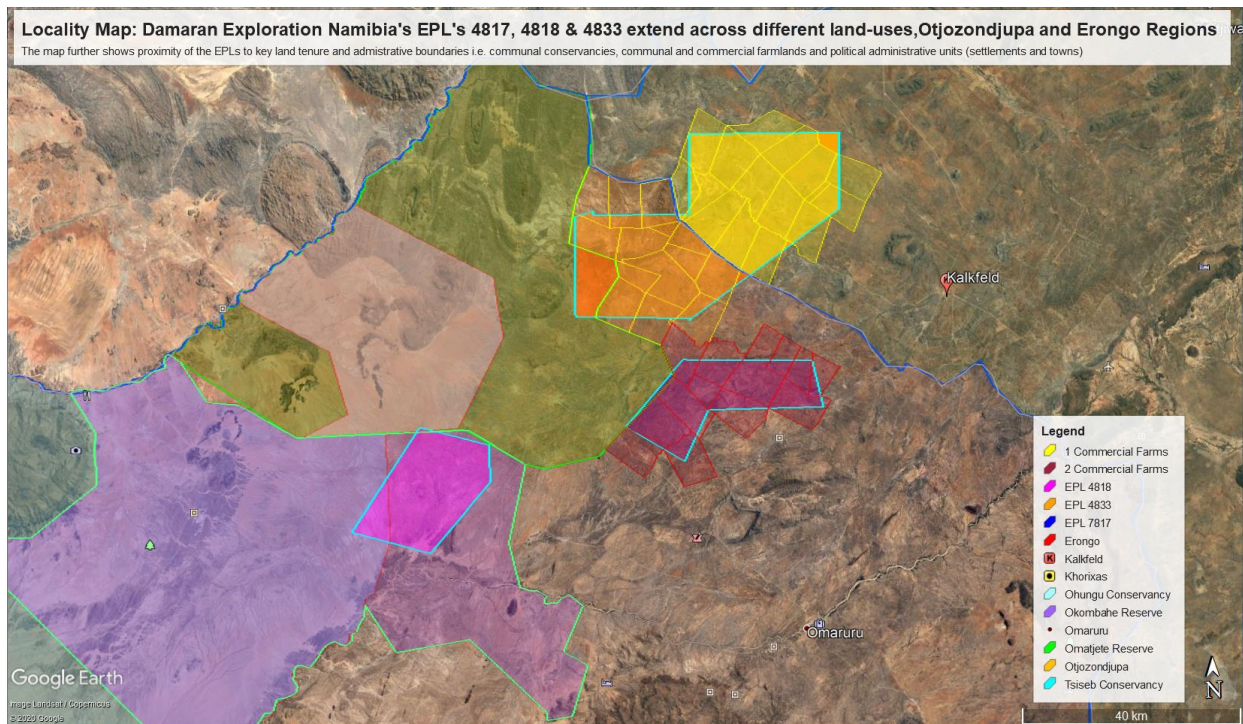


Fig. 2: Show the proposed EPLs 4818 (33,600.70 ha) and 4833 (99,934.40 ha) area or extend across various farms.

## 2 ENVIRONMENTAL OBLIGATIONS

TABLE 1: ENVIRONMENTAL MITIGATION MEASURES AND COMMITMENTS – FIELD MAPPING, GEOPHYSICAL SURVEYS AND SOIL SAMPLING				
ACTIVITY	POTENTIAL IMPACT	MANAGEMENT AND MITIGATION MEASURES	ACTION PLAN	
			Frequency	Responsible Parties
Aerial Geological survey	Air survey	<ul style="list-style-type: none"> <li>Discuss flight plans and schedule with land owners prior to air surveys.</li> <li>Avoid residences, game and livestock enclosures where possible.</li> <li>Where possible, avoid air surveys during hunting season (1 February until 30 November). Where not possible, schedule exploration activities in such a way that disturbances to hunting operations are minimized.</li> </ul>	Prior to air surveys	Project Manager Pilots
	Ground survey, mapping, soil sampling and trenching / pitting	Socio-economic	<ul style="list-style-type: none"> <li>Sign and honour agreements (Surface Use-Agreements) set out in the site-access contracts</li> <li>Schedule exploration activities in such a way that disturbances to hunting operations is minimized and notify landowner in advance of planned exploration activities</li> <li>Compile and maintain a stakeholder engagement plan, through which regular feedback regarding activities on the individual properties is conducted</li> <li>Land owners to be provided with a list of all people working on site along with a photographic key for easy identification.</li> <li>All staff operating on site will be provided with identification and proof that they are working for the applicant</li> </ul>	Throughout all operations (setting-up, survey / mapping and Drilling)
Biodiversity		<ul style="list-style-type: none"> <li>Minimized as far as is practically possible, the footprint of the area to be disturbed during surveying/mapping.</li> <li>Awareness raising and training on the value of biodiversity and need to conserve the species and systems within the project area must be conducted</li> <li>No new access tracks shall be created where alternatives exists, and speed limits signage and awareness must be enforced to prevent road kills.</li> <li>Relevant and applicable permits must be obtained for the removal of any fauna or Flora species (particularly protected species).</li> <li>Pits and trenches must be opened and closed on the same day or fenced off until such time as they can be closed, and must be dug smaller animals to exit the pits/trenches if they fall into them.</li> <li>Land owners / farmers must be consulted to help ID sites and species of conservation importance</li> </ul>	Throughout all operations activities	

POTENTIAL IMPACT		MANAGEMENT AND MITIGATION MEASURES (TABLE 1 CONT.)	ACTION PLAN	
			Frequency	Responsible Parties
Ground survey, mapping, soil sampling and trenching / pitting	Air quality	<ul style="list-style-type: none"> <li>Vehicle speeds limit of 40km/h on access routes must be enforced to limit dust, and where practical dust suppressants must be applied.</li> </ul>	Duration of mapping and surveying	Project Manager Site supervisor
	Heritage	<ul style="list-style-type: none"> <li>Consult with landowner and relevant competent authority to identify known archaeological sites on the farm (cross the EPL area)</li> <li>Adopt the search-and-find procedure in any event that archaeological resources are discovered, by reporting to the competent authority any find incidence</li> <li>Compile and maintain a chance find emergency procedure plan which includes the following: <ul style="list-style-type: none"> <li>All work at the find site must be stopped to prevent any damage;</li> <li>An appropriate heritage specialist must be appointed to assess the find and related impacts; and</li> <li>Permitting applications made to the necessary authorities, if required.</li> </ul> </li> <li>In the event that any graves are discovered during the during the exploration activities, these will be avoided and preserved as a first priority. If damage is unavoidable, prior to damaging or destroying any identified graves, permission for the exhumation and relocation of graves must be obtained from the relevant descendants (if known) and the relevant local and provincial authorities.</li> </ul>		Project Manager Site supervisor



**TABLE 2: ENVIRONMENTAL MITIGATION MEASURES AND COMMITMENTS – BASE-CAMP AND DRILL SITE ESTABLISHMENT**

ACTIVITY	POTENTIAL IMPACT	MANAGEMENT AND MITIGATION MEASURES	ACTION PLAN	
			Frequency	Responsible Parties
Setting-up and Operational Activities at Base camp and Drill sites	Air quality – dust and gaseous emissions	<ul style="list-style-type: none"> <li>The movement of drilling related vehicles on the unpaved access track will be on a small scale</li> <li>Vehicle speeds limit of 30km/h on access routes must be enforced to limit dust, and where practical dust suppressants must be applied.</li> <li>Vehicles and the drilling rig will be maintained in good working order</li> </ul>	During setting-up and drilling	Project Manager Site supervisor
	Noise	<ul style="list-style-type: none"> <li>Drill site are to be cited more than 200 metres away from any residential infrastructure</li> <li>Drill operations are to be limited to daylight working hours (07 am – 17 pm) so as to avoid noise generation during resting hours</li> <li>Vehicle speeds limit of 30km/h on access routes must be enforced to limit dust, and where practical dust suppressants must be applied.</li> </ul>	During setting-up and Drilling	Project Manager Site supervisor
	Biodiversity	<ul style="list-style-type: none"> <li>Refer to biodiversity management measures relating to ground surveying, mapping and sampling (<b>Table 1</b>).</li> <li>A floral survey of all drill sites need to be conducted prior to establishment to ensure that no protected (under the Ministry of Environment and CITES) species are destroyed.</li> <li>Provide appropriate portable toilet facilities for the exploration workers at the drill sites</li> </ul>	During setting-up or Establishment	Project Manager Site supervisor
	Land use	<ul style="list-style-type: none"> <li>The drilling activities footprint must be minimized as far as is practically possible i.e. drill sites must be demarcated and fenced off with tape to ensure that all scheduled activities are contained and all tapes removed upon completion.</li> <li>Agree on relevant compensation with land-owners where impacts on existing land-uses cannot be avoided</li> </ul>	During setting-up or Establishment	Project Manager Site supervisor
	Soil Erosion	<p>To minimize erosion access tracks should be created as follow:</p> <ul style="list-style-type: none"> <li>Follow contour lines as much as practically possible</li> <li>Erect berms to minimize soil erosion during rain events</li> <li>Don't create furrows, channels etc. which could lead to soil erosion</li> </ul>	During setting-up or Establishment	Project Manager Site supervisor
	Heritage	<ul style="list-style-type: none"> <li>Refer to heritage management measures relating to ground surveying, mapping and sampling (<b>Table 1</b>)</li> </ul>	During Drilling	Project Manager Site supervisor
	Socio-economic	<ul style="list-style-type: none"> <li>Refer to socio-economic management measures relating to ground surveying, mapping and sampling (<b>Table 1</b>)</li> <li>Discuss water use with landowner in case of diamond drilling</li> </ul>	During setting-up and Drilling	Project Manager Site supervisor

**TABLE 3: ENVIRONMENTAL MITIGATION MEASURES AND COMMITMENTS – DRILLING ACTIVITIES**

ACTIVITY	POTENTIAL IMPACT	MANAGEMENT AND MITIGATION MEASURES	ACTION PLAN	
			Frequency	Responsible Parties
- Drill borehole - Contain all drilling water in the sump and allow to settle - Log the drill core and place on core trays - Maintain ablation	Contamination of Soil / hydrocarbon spillages	<ul style="list-style-type: none"> <li>Hazardous substances, spillages containment such as impermeable floors and bunded trays must be employed to contain a 110% of the volume of the hazardous substances stored and handled on site</li> <li>All refueling and any maintenance of vehicles will take place on impermeable surfaces.</li> <li>Spill kits will be readily available and provided to employees and/or contractors,</li> <li>Epangelo will provide training and environmental awareness to its employee and contractors on the use of spill kits in order to enable containment and remediation of pollution incidents.</li> <li>A PVC lined sump will be used for collection of oils and silt contained in the drilling water</li> <li>No drilling activities to take place in close proximity (within 500 m) of any farm dam, and 200 m from residential infrastructure.</li> </ul>	During drilling activities	Project Manager Site supervisor
	Groundwater contamination	<ul style="list-style-type: none"> <li>Refer to management measures relating to contamination of soils.</li> <li>Licenses in terms of the Water Resource Management Act (Act No. 11 of 2013) will be obtained for all drilled holes (not just boreholes).</li> <li>Provide appropriate toilet facilities for the exploration workers on the site or agree with landowner to use certain facilities on the farm.</li> </ul>	During drilling activities	Project Manager Site supervisor
	Land use	<ul style="list-style-type: none"> <li>Refer to land use management measures relating to drill site establishment (Table 2)</li> </ul>		Project Manager Site supervisor
Water abstraction	Groundwater quantity	<ul style="list-style-type: none"> <li>An agreement to abstract water from existing boreholes must be included in the land access agreement.</li> <li>Water use licenses in terms of the Water Resource Management Act (Act No.11 of 2013) will be obtained for all boreholes.</li> <li>Water levels will be measured prior to abstraction, during abstraction (daily) and after completion. Levels will be reported to land owners.</li> <li>Should water be reached during drilling the landowners will be informed. Should the landowners wish it; the holes will be cased and left for use by the farmers (liability relating to the boreholes will then be transferred to the landowners).</li> </ul>	Overall operations (setting-up, drilling and domestic consumption)	

TABLE 4: ENVIRONMENTAL MITIGATION MEASURES AND COMMITMENTS – RELEVANT TO ALL EXPLORATION AND CLOSURE / REHABILITATION ACTIVITIES				
ACTIVITY	POTENTIAL IMPACT	MANAGEMENT AND MITIGATION MEASURES	ACTION PLAN	
			Frequency	Responsible Parties
All exploration activities	Social – provision of toilet facilities during Operational Phase	<ul style="list-style-type: none"> <li>Provide appropriate toilet facilities for the exploration workers on the site or agree with landowner to use certain facilities on the farm.</li> </ul>		Project Manager Site supervisor
	Solid and Effluent Waste Management during Operational Phase	<ul style="list-style-type: none"> <li>Waste generated will be handled in accordance with the contract signed with the landowner.</li> <li>Suitable receptacles for waste disposal will be provided at appropriate locations on site. These receptacles will be clearly marked for different waste types.</li> </ul>		
	Hazardous Waste Management during Operational and Closure & Rehabilitation	<ul style="list-style-type: none"> <li>Employees and contractors will be sensitized on correct waste disposal and sustainable practices e.g. recycling.</li> <li>Waste will be removed from site and disposed-off at a suitable licensed waste disposal facility.</li> <li>Hazardous waste (including hydrocarbon contaminated material/soil) will be disposed of at a licenced hazardous waste disposal facility (Kupferberg).</li> </ul>		
	Waste management during Closure and Rehabilitation	<ul style="list-style-type: none"> <li>Decommission ablution facilities</li> <li>Ensure that all waste generated during activities is removed from the site and disposed of appropriately</li> </ul>		
	Land-use During / Post Closure and Rehabilitation	<ul style="list-style-type: none"> <li>Land owners will be invited to carry out site inspections following rehabilitation in order to ensure that it has been carried out suitably.</li> </ul>		Project Manager Site supervisor

### 3 AUDIT METHODOLOGY

To ensure that development activities are undertaken in an economic, social and environmental sound / sustainable manner, the Namibian Constitution and Environmental Management Act No. 7 of 2007 provides for an environmental assessment process. The purpose of the environmental assessment is therefore to ensure compliance of a development operations with the environmental legislation in respect to managing potential impacts associated with the exploration activities.

In this instance the, an environmental Audit has to be undertaken to assess whether the Epangelo Mining Company's operation were undertaken in compliance with the ECC Conditions: The specific objectives of this report is therefore to:

- Review the initial environmental assessment documents (including ECC Conditions) in order to identify the potential impacts that requiring mitigation and compliance.
- Conduct ground verification to ascertain compliance in respect to implementation of the approved EMP measures and ECC conditions by Epangelo Mining Company
- Compile an Environmental Audit report for submission to effect the renewal of the Environmental Clearance Certificate for continuation of the prospecting activities on the two EPLs 4817 and EPL 4833.

The audit was conducted adopting a three phase approach consisting of 1.) A desktop study, which entails a detailed review of the EIA and EMP documents previously submitted to the Department of Environmental Affairs (DEA), 2.) A Site visit / inspection, to conduct ground verification of the operations or activities undertaken during the current review period, and 3.) Reporting and submission of both the Audit Report and a Revised EMP to DEA for an ECC renewal consideration. These three phases are concisely presented below.

#### 3.1 Desktop study

The Environmental Scoping and Management Plan reports for exploration drilling activities on Exclusive Prospecting Licenses (EPLs) 4818 and 4833 in the Erongo and Otjozondjupa Regions were obtained from Epangelo Mining Company through Damaran Exploration Namibia, and reviewed in order to identify the potential impacts that require mitigation on the ground. An environmental checklist was then developed, to guide the audit conducted in July 2020.

#### 3.2 Site visit and Inspection

Moringa Environmental Consultants cc conducted, in collaboration with Damaran Exploration Namibia's country manager a site visit and inspection on the 15<sup>th</sup> July 2020. This consisted of a site walkover to inspect the different sections of the operations including drilling sites, basecamp, and equipment maintenance workshop and onsite ablution facilities.



**Fig. 3:** Shows an illustrative compilation of photos (fuel storage, drilled hole, spill kit and flora around drill sites) taken during the site visits



### 3.3 Reporting and submission to the DEA

The audit concludes that although the Epangelo Mining Company's prospecting activities has been dormant for the most of the ECC's clearance validity and review period, the ECC's condition requires that continuous monitoring and reporting is done.

This environmental audit report therefore compiles several reports and provides recommendations to DEAF for the ECC renewal consideration through rigorous:

- A comparison of what was recommended in the EMP to what is currently being done / implemented on site, and a
- Synopsis of results obtained during the monitoring of Epangelo's prospecting activities impacts on water resources and the socio-economical aspect of the receiving environments.

Overall, to reach the conclusion on compliance, all environmental obligations (**Tables 1 – 4**) were findings were assessed and ranked according to the colour coded scoring criteria (with a value assigned) portrayed in **Table 5**. The colour coding assigned to the rankings is used to visualize of compliance performance in terms of a four (4) scoring categories of non- / compliance i.e. compliant, non-compliant (*minor, moderate, and major*), repeated condition and not applicable. The latter scores are necessary in separating or to indicate which conditions are not applicable to the on-site activities and which are repeat conditions that have already been scored.

**Table 5: Scoring Categories**

RANKING	SCORE
Compliant	2
Minor non-compliance	1
Noted/Not Applicable	0
Repeat Condition	-
Moderate non-compliance	-1
Major non-compliance	-2

Description of scores: audit findings are ranked according to the following criteria:

**Noted/Not Applicable:**

- The specific condition is not relevant to the current on-site activities.

**Repeat Condition:**

- The specific condition is a repeat of a previous condition.

**Compliant:**

- Damaran Exploration complies with the conditions as stated in the EMP.

**Non-compliance:**

- *Minor non-compliance*, isolated observations demonstrating that full compliance to the environmental requirements on site have not been, or will not be, fully achieved.
- *Moderate non-compliance*, substantial failure to meet the environmental requirements for the project, a possibility of substantial environmental degradation and/or pollution, and/or objective evidence is observed raising doubt as to the integrity of data or records inspected
- *Major non-compliance*, there is a critical failure against legal requirements or management response that presents an immediate or significant risk that could result in prosecution and/or adverse legal findings due to failure to meet regulatory requirements; result in immediate injury or serious injury; result in prolonged business outage; and/or could result in serious damage to the project's reputation.

## 6 ENVIRONMENTAL AUDIT FINDINGS

### 6.1 INTRODUCTIONS TO THE SCORING CRITERIA

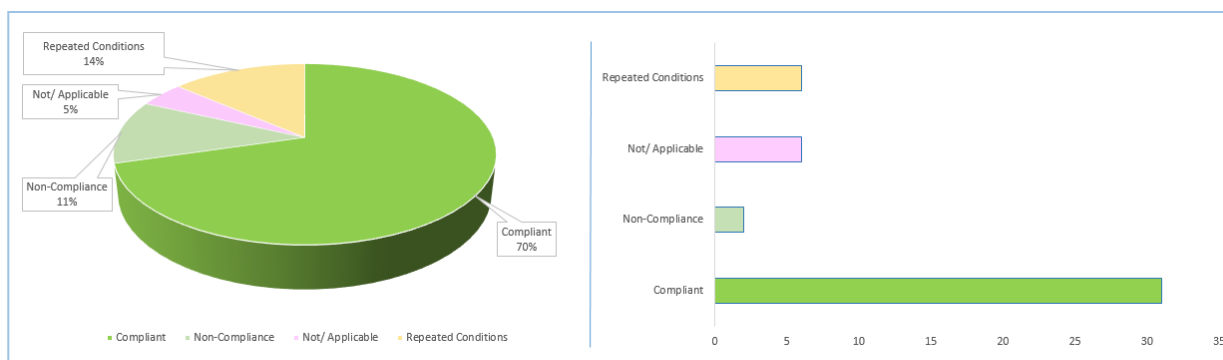
The data collected, in particular the scores obtained under the respective aspect of the prospecting activity in relation to the compliance ranking were tabulated in an excel sheet for analysis. Findings from the analysis, is interpreted as follows:

- A score range of between 80 and 100 % represents, exceptional compliance
- A score range of between 50 and 79 % represent moderate compliance
- A score below fifty (50) represents the three scale non-compliance categories i.e. “Minor non-compliance = 26 – 49 percent, “moderate non-compliance = 10 – 25 percent, and major non-compliance = 0 – 9 %.

The summary of the findings of the audit are included in (Fig. 4) of this Report. The audit findings also include practical recommendations whereby the various non-compliance issues can be corrected.

### 6.2 SYNTHESIS OF AUDIT FINDINGS

The audit findings, suggests that with a combine (compliance, repeated and not applicable) ranking percentage of 89 % (Fig. 3), Epangelo Mining Company’s prospecting activities can be confidently declared as compliant. Critically, the non-compliant (minor non-compliance) ranking causing a compliance deficit leans significantly towards the positive tip of scoring scale, implying partial adherence with the given EMP / ECC conditions.



**Fig. 3:** Shows an illustrative compilation of photos (fuel storage, drilled hole, spill kit and flora around drill sites) taken during the site visits

Where non-compliances were recorded, the auditor contextualised the non-compliance in terms of the intensity. This equates to an objective view of the seriousness of the non-compliance and then leads to recommendations where minor to moderate non-compliances have been observed. Some of the non-compliances assessed have action plans that are either being compiled or are in place and will seek to reduce and eliminate the non-compliances.

Overall, with an 89 % compliance rate Moringa Enviro Consultants is confident to provide a positive recommendation and in favour of the renewal of the Epangelo Mining Company’s expiring environmental clearance certificate by the Department of Environmental Affairs and Forestry (DEAF).

**Table 6:** Tabulation of the observed Epangelo Mining Company’s environmental compliance ranking per the respective environmental obligations

DATE	15 July 2020				SITE	EPLs 4818 and 4833	
No.	Aspect	Conditions	Status	Score	Observations	Recommendations	
1	Authorisation and Agreements (Schedules, Permits and Licences)	Where possible, avoid air surveys during hunting season (1 February until 30 November). Where not possible, schedule exploration activities in such a way that disturbances to hunting operations are minimized	Compliant	2	There has been no aerial survey’s conducted but schedule is compliant	No recommendations are applicable	
2		Sign and honour agreements (Surface Use-Agreements) set out in the site-access contracts	Compliant	2	Surface use agreements signed	Update accordingly in relation to licenses expiry / review period	
3		Relevant and applicable permits must be obtained for the removal of any fauna or Flora species (particularly protected species).	Compliant	2	Permits were obtained and if need for others will be	No recommendations are applicable, other than that they must be renewed timely	
4		Heritage compliance: compile and maintain a chance find emergency procedure plan which includes the following	Compliant	2	Procedures are in place	No recommendations are applicable	
5		Licenses in terms of the Water Resource Management Act (Act No. 11 of 2013) will be obtained for all drilled holes (not just boreholes).	Compliant	2	Water abstraction permit was obtained	No recommendations are applicable, other than that they must be renewed timely	
6		Schedule exploration activities in such a way that disturbances to hunting operations is minimized	Compliant	2	No activities occur in hunting season	No recommendations are applicable	
7		An agreement to abstract water from existing boreholes must be included in the land access agreement	Compliant	2	See condition No. 2	No recommendations are applicable, other than that they must be renewed timely	
8	Stakeholder engagement, training and awareness raising	Compile and maintain a stakeholder engagement plan, through which regular feedback regarding activities on the individual properties is conducted	Compliant	2	Stakeholder engagement plan in place and used	No recommendations are applicable	
9		Land owners to be provided with a list of all people working on site along with a photographic key for easy identification.	Compliant	2	List of all staff has been provided to land owners	No recommendations are applicable	
10		All staff operating on site will be provided with identification and proof that they are working for the applicant	Minor non-compliance	1	No specially provided staff ID cards	Design specific staff ID cards and have these available at all times	

DATE	15 July 2020			SITE	EPLs 4817 and 4833	
No.	Aspect	Conditions	Status	Score	Observations	Recommendations
11	Stakeholder engagement, training and awareness raising	Awareness raising and training on the value of biodiversity and need to conserve the species and systems within the project area must be conducted	Minor non-compliance	1	No formal training has been provided but awareness	Specially designed short-courses on biodiversity conservation must be conducted
12		No new access tracks shall be created where alternatives exists, and speed limits signage and awareness must be enforced to prevent road kills.	Compliant	2	Current assess is strictly limited to existing tracks	No recommendations are applicable
13		Epangelo will provide training and environmental awareness to its employee and contractors on the use of spill kits in order to enable containment and remediation of pollution incidents.	Minor non-compliance	1	No formal training has been provided but awareness	Specially designed short-courses on spillage management and appropriate use of spill kit must be conducted
14		Employees and contractors will be sensitized on correct waste disposal and sustainable practices e.g. recycling.	Minor non-compliance	1	No formal training has been provided but awareness	Awareness on appropriate waste management (disposal) must be conducted
15	Air quality – dust & gas emissions	Vehicle speeds limit of below 40km/h on access routes must be enforced to limit dust, and where practical dust suppressants must be applied.	Compliant	2	Strict compliance with speed limit was observed	No recommendations are applicable
16		The movement of drilling related vehicles on the unpaved access track will be on a small scale	Compliant	2	Strict compliance was observed	No recommendations are applicable
17		Vehicles and the drilling rig will be maintained in good working order	Compliant	2	Strict compliance was observed	No recommendations are applicable
18		Vehicle speeds limit of below 40km/h on access routes must be enforced to limit dust, and where practical dust suppressants must be applied.	Compliant	2	Strict compliance with speed limit was observed	No recommendations are applicable



DATE	XX July 2020			SITE	EPLs 4817 and 4833	
No.	Aspect	Conditions	Status	Score	Observations	Recommendations
19	Noise Pollution / Nuisance	Drill site are to be cited more than 200 metres away from any residential infrastructure	Compliant	2	No drill site in close proximity to houses	No recommendations are applicable
20		Vehicle speeds limit of 30km/h on access routes must be enforced to limit dust, and where practical dust suppressants must be applied.	Compliant	2	Strict compliance with speed limit was observed	No recommendations are applicable
21		Drill operations are to be limited to daylight working hours (07 am – 17 pm) so as to avoid noise generation during resting hours	Compliant	2	Strict compliance with working hours was observed	No further recommendations are applicable but to continue as required
22	Heritage and Land-use	The drilling activities footprint must be minimized as far as is practically possible i.e. drill sites must be demarcated and fenced off with tape to ensure that all scheduled activities are contained and all tapes removed upon completion.	Compliant	2	Evidence of footprint management and proper demarcation of sites observed	No recommendations are applicable
23		Agree on relevant compensation with land-owners where impacts on existing land-uses cannot be avoided	Compliant	2	No need was observed to date	This condition must remain valid and applicable should need arise
24		Adopt use of contour lines, avoiding creation furrows, channels, and erection of berms when creating access tracks and or digging sampling trenches to minimize erosion	Compliant	2	Evidence of appropriate tracks and drilling orientation observed	This condition remain valid and applicable should need arise
25		Invite land owners and independent environmental practitioner to conduct site inspections following rehabilitation and certify closure site closure.	Not / Applicable	0	No rehabilitation work has been conducted yet	This condition remain valid and applicable should need arise
26		No drilling activities to take place in close proximity (within 500 m) of any farm dam, and 200 m from residential infrastructure.	Compliant	2	Strict compliance has been observed	No recommendations are applicable

DATE	XX July 2020			SITE	EPLs 4817 and 4833	
No.	Aspect	Conditions	Status	Score	Observations	Recommendations
27	Biodiversity (Fauna and Flora)	Minimize as far as is practically possible, the footprint of the area to be disturbed during surveying/mapping.	Compliant	2	Evidence of footprint survey and mapping impacts	Continenence using low impact methods
28		Pits and trenches must be opened and closed on the same day or fenced off until such time as they can be closed, and must be dug smaller animals to exit the pits/trenches if they fall into them.	Not / Applicable	0	Exploration has not advance to tranches but limited to drilling only	This condition remains valid and applicable to when need for trench digging becomes necessary
29		No new access tracks shall be created where alternatives exists to prevent vegetation clearing and speed limits must be enforced to prevent road kills	Compliant	2	Current assess is strictly limited to existing tracks	No recommendations are applicable
30		A floral survey of all drill sites need to be conducted prior to establishment to ensure that no protected species are destroyed.	Minor non-compliance	1	No formal survey report provided but promised one	Evidence of written flora survey must be provided during the next review and reporting period
31		Provide appropriate portable toilet facilities for the exploration workers at the drill sites	Compliant	2	Flush toilets available to all staff	No recommendations are applicable
32		Water levels will be measured prior to abstraction, during abstraction (daily) and after completion. Levels will be reported to land owners.	Compliant	2	Strick compliance through farm borehole reporting	No recommendations are applicable
33		Avoid residences, game and livestock enclosures where possible	Compliant	2	Strict compliance observed	No recommendations are applicable
34		Where possible, avoid air surveys during hunting season (1 February until 30 November). Where not possible, schedule exploration activities in such a way that disturbances to hunting operations are minimized.	Not / Applicable	0	There has been no aerial survey's conducted but schedule is compliant	No recommendations are applicable

DATE				SITE		
No.	Aspect	Conditions	Status	Score	Observations	Recommendations
35	Waste Management and Pollution Control	Spillages containment such as impermeable floors and bunded trays are employed to contain a 110% of the volume of the hazardous substances stored and handled on site	Minor non-compliance	1	No adequate bunded trays, although there some attempts to control spills	Employ full impermeable and bunded trays at generator and workshop (Fuel storage facility)
36		A PVC lined sump will be used for collection of oils and silt contained in the drilling water	Compliant	2	Evidence of PVC lined sumps observed	No recommendations are applicable
37		Spill kits will be readily available and provided to employees and/or contractors,	Compliant	2	Spill kits available on site though under utilised	Training and or awareness of these kits seem inadequate and thus recommended
38		All re-fuelling and any maintenance of vehicles will take place on impermeable surfaces	Compliant	2	Compliance observed given the scale	Improvements might be necessary with expansion of activities
39		Provide appropriate toilet facilities for the exploration workers on the site or agree with landowner to use certain facilities on the farm.	Compliant	2	Flush toilets available to all staff	No recommendations are applicable
40		Waste will be removed from site and disposed-off at a suitable licensed waste disposal facility.	Compliant	2	Solid and Effluent wastes well managed	No recommendations are applicable
41		Hazardous waste (including hydrocarbon contaminated material/soil) will be disposed of at a licenced hazardous waste disposal facility (Kupferberg).	Not / Applicable	0	There has not been extensive use of hazardous substances on site	Condition remains valid and must be adhered to as it becomes applicable
42		Decommission temporary ablution facilities and remove all waste generated during activities from the drill site and dispose it off appropriately	Repeated Condition	-	This is only applicable at closure and rehabilitation	Condition remains valid and must be adhered to as it becomes applicable
43	Closure	Land owners will be invited to carry out site inspections following rehabilitation in order to ensure that it has been carried out suitably.	Not / Applicable	0	There has not been rehabilitation works done yet	Condition remains valid and must be adhered to as it becomes applicable
44		Decommission ablution facilities and Ensure that all waste generated during activities is removed from the base-camp site and disposed of appropriately	Repeated Condition	-	This is only applicable at closure and rehabilitation	Condition remains valid and must be adhered to as it becomes applicable

## 8 ENVIRONMENTAL STATEMENT & RECOMMENDATIONS

The audit findings, suggests that with a combine (compliance, repeated and not applicable) ranking percentage of 89 % (Fig. 3), Epangelo Mining Company's prospecting activities can be confidently declared as compliant. Critically, the non-compliant (minor non-compliance) ranking causing a compliance deficit leans significantly towards the positive tip of scoring scale, implying partial adherence with the given EMP / ECC conditions.

Where non-compliances were recorded, the auditor contextualised the non-compliance in terms of the intensity. This equates to an objective view of the seriousness of the non-compliance and then leads to recommendations where minor to moderate non-compliances have been observed. Some of the non-compliances assessed have action plans that are either being compiled or are in place and will seek to reduce and eliminate the non-compliances.

Overall, with an 89 % compliance rate Moringa Enviro Consultants is confident to provide a positive recommendation and in favour of the renewal of the Epangelo Mining Company's expiring environmental clearance certificate by the Department of Environmental Affairs and Forestry (DEAF).



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## APPENDICES

### APPENDIX A – PROJECT TEAM CURRICULUM VITAE

**APPENDIX B – PREVIOUS ENVIRONMENTAL CLEARANCE CERTIFICATE**



**REPUBLIC OF NAMIBIA**

**MINISTRY OF ENVIRONMENT AND TOURISM**

Tel: (00 26461) 284 2111  
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Cnr Robert Mugabe &  
Dr Kenneth Kaunda Street  
Private Bag 13306  
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27 March 2018

**OFFICE OF THE ENVIRONMENTAL COMMISSIONER**

The Managing Director  
Epangelo Mining Company (Pty) Ltd  
P O Box 13369  
Windhoek  
Namibia

Dear Sir/Madam

**SUBJECT: ENVIRONMENTAL CLEARANCE CERTIFICATE FOR EXPLORATION ACTIVITIES ON EXCLUSIVE PROSPECTING LICENSES 4833, 4817 AND 4818 SITUATED IN OMARURU DISTRICT, ERONGO REGION**

The Environmental Impact Assessment and Environmental Management Plan submitted are sufficient as it made provision of the environmental management concerning the project. From this perspective regular monitoring and evaluation on environmental performance should be conducted. Targets for improvements should be established and monitored from time to time.

This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project.

On the basis of the above, this letter serves as an environmental clearance certificate for the project to continue. However, this clearance letter does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from this project's activities. Instead, full accountability rests with Epangelo Mining Company (Pty) LTd.

This environmental clearance certificate is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office.

Yours sincerely,

  
Teofilus Nghitila  
**ENVIRONMENTAL COMMISSIONER**



**“Stop the poaching of our rhinos”**

*All official correspondence must be addressed to the Permanent Secretary*