2018

MINING MANAGEMENT PLAN

ELs 28473, 28498, 29509, 31224 & 31284 - AILERON - REYNOLDS PROJECT (includes the NOLANS PROJECT)

A0192-01

December 2017

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The MMP must be endorsed by a senior representative of the company who has the appropriate level of delegation.

	Author	Reviewed by	Approved by
Date	8 December 2017	11 December 2017	11 December 2017
Name	Holly Edgar	Brian Fowler	Brian Fowler
Signature			

I, Brian Fowler, General Manager NT & Sustainability, declare that to the best of my knowledge the information contained in this Mining Management Plan is true and correct and commit to undertake the works detailed in this plan in accordance with all the relevant Local, Northern Territory and Commonwealth Government legislation.

SIGNATURE: .....

DATE: 12/12/2017

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Amendments

Section	Amendment
General	New template used, therefore changes are found throughout document. Updated Application for Authorisation and Nomination of Operator forms provided, as EMEL 30510 expired and removed from project. ELs 29509, 31224 and 31284 also added to MMP.
1.1 Organisational structure	Organisational structure updated. Addition of site responsibilities to section.
2.0 Identified Stakeholders and Consultation	Updates to stakeholders.
3.0 Project Details	Addition of ELs 29509, 31224 and 31284. Updated map to remove EMEL30510 and add ELs 29509, 31224 and 31284.
4. Current Project Site Conditions	Updated information inserted to comply with updated template. Information on infrastructure and bag farm requested from the 2017 approval in lieu of a MMP inserted into this section.
5.5 Environmental Audits, Inspections and Monitoring	Updated information inserted to comply with updated template.
5.6.1 Objectives and Targets	Updated information inserted to comply with updated template.
5.6.2 Performance Reporting	Updated information inserted to comply with updated template.
Appendix 2	Updated location map inserted to reflect tenement removals/additions.
Appendix 6	ILIS Reports updated.
Appendix 10	Copy of Environmental, Health, Safety and Community Policy signed by Arafura.

Appendix 11	Native Title Determination and DPIR STRIKE searches added to this section for ELs 29509, 31224 and 31284.
Appendices 12, 13 & 14	Updated guidelines inserted. Environmental Incident Reporting form added to Appendix 12.
Appendix 16	Removal of Residual Disposal Report at Appendix 16 and replaced with 2015 Appendix 17, Radiation Management Plan.
Appendix 18	Removal of 2015 Pre & Post Collar Radioactivity Data. Addition of Bore Location Map.
Appendix 19	Addition of Disturbance Maps
Appendix 20	Addition of Disturbance & Rehabilitation Register
Appendix 21	Addition of 2016 Rehabilitation Report (includes rehabilitation checklist and photographs)
Appendix 22	Addition of Disposal of Bulk Mineralised Samples Report
Appendix 23	Addition of 2018 Proposed Works

1 Operator Details

Operator Name:	Arafura Resources Limited ("Arafura" or "the Company")
Key Contact Person/s:	Brian Fowler / Richard Brescianini
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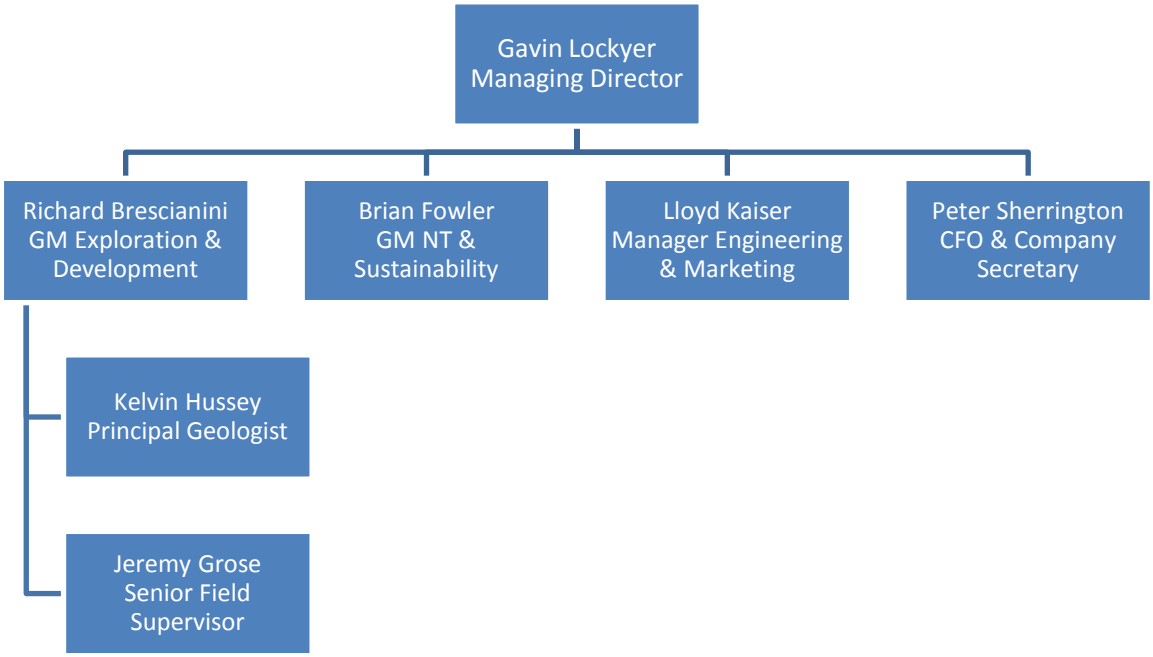
1.1 Organisational Structure



Kelvin Hussey, Principal Geologist will be responsible for environmental management of the exploration program on site. Jeremy Grose, Senior Field Supervisor will act as the Radiation Safety Officer on site.

1.2 Workforce

In preparation for drilling programs, 1-2 contractors are on site for roadwork and site clearing activities. A 3-4 person crew is present at all times during drilling operations. The crew may work on a shift basis. Drilling operations are under the control of an experienced drilling manager, and supervised by Arafura personnel. Drilling crews commute daily from Aileron Roadhouse.

Rehabilitation operations generally require a 2-4 person crew, commuting daily from Aileron Roadhouse. In line with Arafura's policies and in the interests of maintaining community relationships, local Aboriginal field assistants will be engaged wherever possible. This is generally facilitated by the Central Desert Regional Council or the Central Land Council.

The Responsible Person for the Nolans Project is Arafura's Principal Geologist, Kelvin Hussey.

2 Identified Stakeholders and Consultation

The identified stakeholders are:

- Northern Territory Department of Primary Industry and Resources ("DPIR") – *Mineral Titles Act 2010, Mining Management Act;*
- Northern Territory Department of Land Resource Management ("DLRM") – *Bushfires Act, Weeds Management Act, Control of Roads Act; Soil Conservation and Land Utilisation Act; Pastoral Lands Act;*
- Northern Territory Department of Business - *Work Health and Safety (National Uniform Legislation) Act 2011; Radioactive Ores and Concentrates (Packaging and Transport) Act (NT);*
- Northern Territory Department of Lands, Planning and the Environment - *Heritage Conservation Act;*
- Aboriginal Areas Protection Authority - *Northern Territory Aboriginal Sacred Sites Act;*
- Northern Territory Environment Protection Authority – *Environment Assessment Act, Environmental Offences and Penalties Act; Water Act, Waste Management and Pollution Control Act;*
- Commonwealth Department of the Environment - *Environment Protection & Biodiversity Conservation Act 1999;*
- Commonwealth Australian Radiation Protection and Nuclear Safety Agency - Code of Practice for Safe Transport of Radioactive Materials 2001;
- NT Portion 703 - PPL 1097 – Aileron Station – Aileron Pastoral Holdings Pty Ltd ("APH");
- NT Portion 725 - PPL 1030 – Pine Hill Station – Australian Green Properties Pty Ltd;
- NT Portion 748 – PPL 1177 – Napperby Station – Hale River Holdings Pty Ltd;
- NT Portion 4347 – Northern Territory Department of Lands, Planning and the Environment;
- NT Portion 747 – PPL 1178 – Napperby Station – Hale River Holdings Pty Ltd;
- NT Portion 1811– Telstra Corporation Limited; and
- CLC, on behalf of the Native Title holders of the area.

Regular communications are maintained with the pastoral lessee/s, their onsite managers and personnel (where present), and other stakeholders, updating them on activities as required. Details of mobilisation and demobilisation of each phase of drilling or other substantial disturbance activities are notified to the parties in advance. Stakeholders are informed if the scope of activities changes materially when operations are in progress. Personnel employed by Aileron, Pine Hill and Napperby

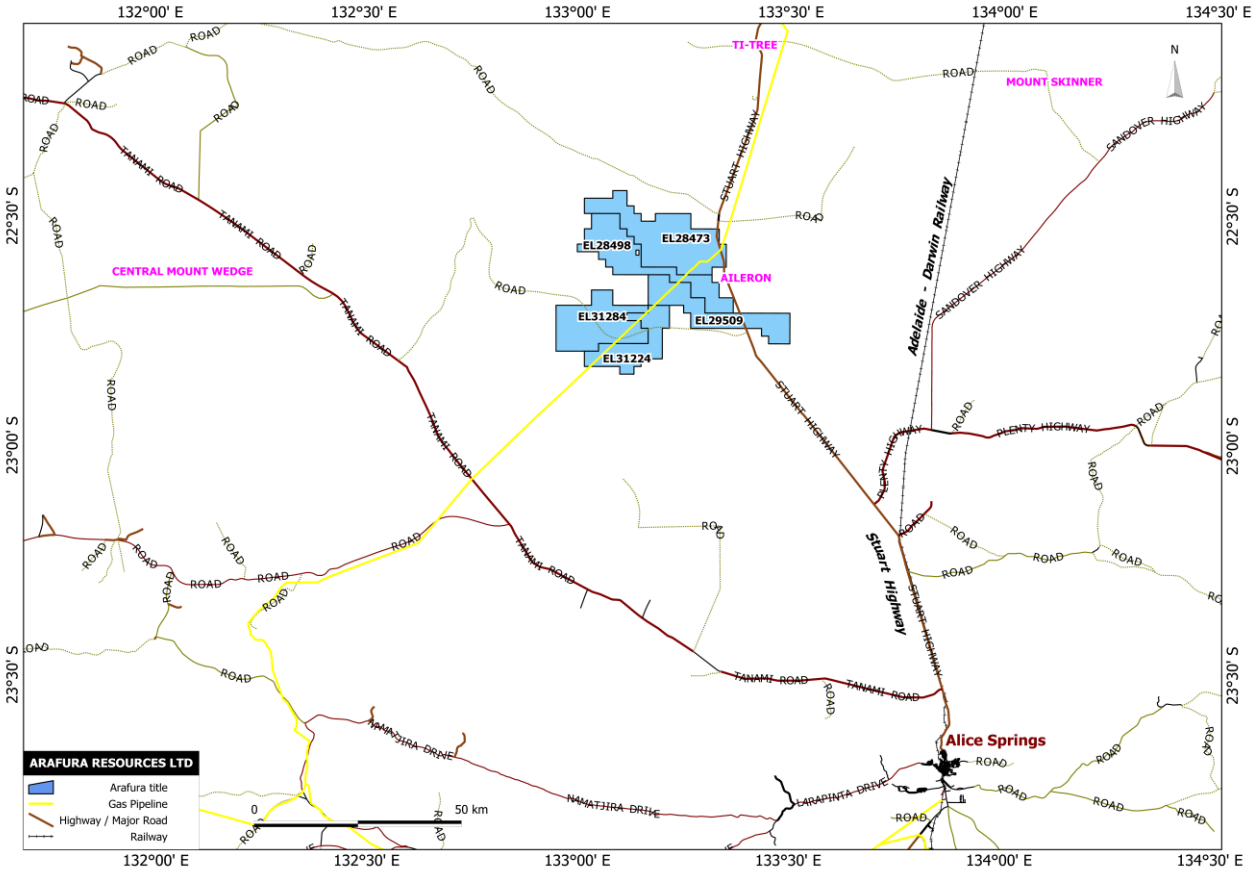
stations have been used to assist in exploration and rehabilitation activities from time-to-time and it has been standard practice over many years for Arafura to consult with pastoral lessees regarding all its activities.

Aileron Station (NT Portion 703 - PPL 1097) was purchased by new owners APH on 2 July 2015, and first written communication from APH was received on 29 July 2015 advising of the same. In response to both parties' desire to formalise a set of principles outlining their respective rights and obligations on Aileron Station, APH drafted a Code of Conduct which was sent to Arafura on 5 October 2015. On 27-28 October 2015, Arafura responded with a revised draft Co-existence Agreement / Code of Conduct. A copy of these draft documents is attached as Appendix 17. To date, no response to Arafura's revisions aimed at finalising the arrangement has been received from APH despite repeated requests by Arafura to engage on this matter.

3 Project Details

Project Name:	Arafura Resources Nolans Project
Authorisation No.	A092-01
Location:	135 kilometres north-northwest of Alice Springs
Site Access:	Via Stuart Highway and station tracks
Mining Interest/s:	ELs 28473, 28498, 29509, 31224 & 31284
Title holder/s:	ELs 28473, 28498, 29509, 31224 & 31284 - Arafura Resources Limited – 100% STRIKE title reports attached at Appendix 1

Location maps and site plans:



Location map – ELs 28473, 28498, 29509, 31224 & 31284. A copy of the map is attached at Appendix 2.

3.1 Previous Activities and Current Status

Historical Mining/Exploration

Extensive historic exploration and associated disturbances have occurred in this area. Arafura has drilled in excess of 1,100 holes using combinations of RC, RAB and diamond core drilling. Of these, 676 holes have been drilled to delineate the lateral and depth extents of the Nolans Bore rare earth-phosphate-uranium deposit ("Nolans Bore"), located approximately 13 kilometres northwest of Aileron Roadhouse.

The area of the project also contains pastoral management infrastructure comprising roads, fences, gates, cattle yards, stock watering bores and surface dams. The area around Nolan Bore is impacted from these pastoral activities as it is used to muster, hold and move stock from time-to-time.

Drilling has been conducted on site in a number of campaigns which started in 2001. During the Company's initial programs, and in support of systematic drilling, grid lines were cleared using 'blade up' methodology. Since these initial programs the intensity of drilling activity has increased culminating in a very comprehensive resource definition program in 2011 which comprised both RC and diamond core drilling. All grid lines that are not required for ongoing drill access have been subsequently closed down from activities.

In addition to drilling, costeaning has been conducted together with surface and downhole geophysical surveys, environmental surveys and dewatering studies.

The area has been progressively rehabilitated by Arafura after each drilling campaign. There are only three holes that remain accessible for ongoing equipment calibration use. All other holes have

been closed in accordance with Department of Primary Industry and Resources ("DPIR") guidelines. Rehabilitation of drill holes comprises:

- Removing all sample bags from the drill site, including drill residues;
- Cutting PVC collars below ground level, plugging the hole and backfilling in accordance with DPIR guidelines; and
- Removing any rubbish including excess PVC and two-part foam residue.

Residue material from these drilling campaigns has been buried on site in and around the current disposal pit located on the northern part of the Nolans Bore deposit. The exception is mineralised bulk sample material collected from the deposit in 2010. These samples are stored in bulka bags in an approved fenced residue storage area located approximately 600 metres southeast of the deposit.

There have also been a significant number of metallurgical test work programs completed at offsite facilities since 2005, and most of the unused residue material from these programs has been returned to the fenced residue storage area in bulka bags or 200-litre drums. Some of these test work residues have been buried on site consistent with conditions mandated by DPIR authorisations.

The area selected for residue burial is flat lying. It has an underlying indurated hardpan layer sitting directly above and in contact with Nolans Bore mineralisation. This layer is of varying depth and thickness but in the current pit area is around three metres below surface and up to 1-3 metres thick. All residues disposed of in this and previous pits have been covered with a minimum of one metre of substrate. Surface radioactivity readings over the Nolans Bore deposit including the most recent rehabilitated disposal pit area are included in Appendix 16, as is a map of the same area showing the depth to the top of the deposit from drilling. These results clearly indicate that one meter of cover provides adequate shielding for residue material, and that radioactivity levels are not materially different to those experienced elsewhere over the deposit area where natural cover exists. The results also highlight a number of areas where radioactivity readings are significantly higher than at the pit. This indicates that that shallow thorium- and uranium-bearing rare earths mineralisation is widespread across the surrounding area.

Following the Company's 2011 dewatering investigation, groundwater monitoring from the main dewatering bore at the Nolans Bore deposit has been completed and these results were presented in Appendix 16 of the 2015 MMP. This and other nearby bores are monitored periodically (around twice per year) when equipment is available. At this stage, they will not be grouted as it planned that they will all be lost when the mining operations commence. If mining does not take place, the Company intends to rehabilitate these bores in accordance with DPIR AA7-029 guidelines. More recently rising stage samplers have been installed into Kerosene Camp Creek which runs across the Nolans Bore deposit and analytical data from this was also included in Appendix 16 of the 2015 MMP. Nil interaction between leachate and groundwater is expected.

Closure objectives have been met. All areas used for activities are left in a clean and tidy state with no significant environmental disturbance or erosion.

- All but three holes are closed and capped in accordance with DPIR guidelines and gridlines are closed down that are no longer needed;
- All previous disposal pits are covered and show no evidence of erosion or exposure of underlying material. They are regularly checked and there is no evidence of erosion or exposure of materials within these pits. Similarly, an analysis of the nearby array of groundwater monitoring bores indicates no evidence of groundwater contamination from materials within these pits (as per Appendix 16 of the Company's 2015 MMP); and
- Signs are installed on the access road into the site and on the fenced residue storage area advising that radioactive material is present. Arafura has not specifically installed signs on or

around the residue burial area as the entire deposit area of over ten hectares is radioactive, and the residue burial area is completely surrounded by the deposit.

2015 Work Completed

On 27 October 2015, a letter was submitted to DPIR which requested re-approval to dispose of bulk mineralised ore samples and beneficiation / comminution test work reserves and residues located in the Nolans infrastructure and "bag farm" area (a.k.a. "fenced residue storage area"). into the-then residue disposal pit. DPIR confirmed its prior approval for these works on 13 November following a site inspection by DPIR mining officers on 3 November.

This work was subsequently deferred until 2016. (see Section "2016 Work Completed"). Nevertheless, Arafura completed a general clean-up of the area during 23 to 30 November 2015 which included:

- identification and marking of mineralised bulk samples selected for retention; and
- collection of spear samples of selected test work residues for subsequent analysis and leachate test work.

2016 Work Completed

The proposed works outlined in the 2016 MMP for EMEL 30510 were not conducted. This was due to Arafura adopting a more efficient metallurgical flowsheet in June 2016 (refer to Arafura's ASX release 28/6/16) which eliminated the requirement for carbonate material (the exploration target on EMEL 30510) for use in waste liquor neutralisation. EMEL 30510 expired on 20 April 2017.

On EL 24873, bulk mineralised ore samples and comminution/beneficiation material were disposed of in the current residue disposal pit in July-August 2016. A report detailing the process and completion of the material burial program is attached at Appendix 22. Progressive photographs are contained within the report and Appendix.

Samples were removed from the bag farm and an updated inventory is provided in Section 4.

A residue disposal pit was excavated adjacent to the-then pit. Maximum pit dimensions are 60 metres long x 10 metres wide x 3 metres deep.

Arafura also continued to address comments received via the eight-week public review of the project's draft Environmental Impact Statement ("EIS"), via targeted non-substantial disturbance field work.

The program of environmental baseline monitoring continued with ground and surface water data collection in water bores at the Nolans site, and from rising stage samplers in creeks across the project area, respectively.

2017 Work Completed

Nil on site disturbance took place during 2017.

The program of environmental baseline monitoring continued with ground and surface water data collection in water bores at the Nolans site, and from rising stage samplers in creeks across the project area, respectively.

A Disturbance and Rehabilitation Register is located at Appendix 20. This contains the updated disturbance and rehabilitation figures for the Project. Maps showing the current disturbance on site are located in Appendix 19.

3.2 Proposed Activities

Mining Interests (i.e. titles)	EL 28473	EL 28498	EL 29509	EL 31224	EL 31284
What time of the year will exploration occur?	2018 Field Season	2018 Field Season	2018 Field Season	Nil	Nil
How long is exploration expected to occur?	4-6 months	4-6 months	4-6 months	Nil	Nil
Type of drilling (i.e. RAB, RC, Diamond, aircore)	58 Diamond 128 RC	Nil	Geotech holes- Drilling type TBA	Nil	Nil
Target commodity	REE-P-U Nolans Bore deposit	REE-P-U	REE-P-U	Nil	Nil
Is drilling likely to encounter radioactive material?	Yes	N/A	No	Nil	Nil
Number of proposed drill holes	58 Diamond 128 RC 8 Geotech- Type of drilling TBA	N/A	6 Geotech- Type of drilling TBA	Nil	Nil
Maximum depth of holes	TBA	N/A	TBA	Nil	Nil
Number of drill pads **(Length: 25 x Width: 20m)**	194 **9.7 Ha**	N/A	6 **0.3 Ha**	Nil	Nil

Is drilling likely to encounter groundwater? **(Y, N, unsure)**	Unsure	N/A	Unsure	Nil	Nil
Number of sumps **(Length: 3 x Width: 3 x Depth: 2 m)**	194 **0.1746 Ha** **3,492 m³**	N/A	6 **0.0054 Ha** **108 m³**	Nil	Nil
Length of line / track clearing **(Kilometres: x Width: m)**	Nil	Nil	Nil	Nil	Nil
Test pit (3m x 0.6m x 2m deep)	53 **0.00954 Ha** **190.8 m³**	15 **0.0027 Ha** **54 m³**	22 **0.00396 Ha** **79.2 m³**	Nil	Nil
Total bulk sample (tonnes) **(Length: x Width: x Depth: m)**	Nil	Nil	Nil	Nil	Nil
Will topsoil be removed for rehabilitation purposes?	Yes	Yes	Yes	Nil	Nil
Previous disturbance yet to be rehabilitated on title (ha) if known	Nolans camp & bag farm – **3.375ha** Gridlines – **66.95ha** (naturally revegetating)	Nil	Nil	Nil	Nil
Camp **(Length: x Width: m)**	As above	Nil	Nil	Nil	Nil

Total area disturbed (hectares)	**80.20914 Ha**	**0.0027 Ha**	**0.30936 Ha**	Nil	Nil
Other: Ongoing environmental monitoring, biodiversity, surface and groundwater, radioactivity.	Yes	Yes	Yes	Yes	Yes

Works during the 2018 field season will be conducted on ELs 28473, 28498 and 29509.

Phase 1 on EL 28473

Drilling program to upgrade resource definition and classification of the Nolans Bore deposit, wholly within areas previously disturbed and rehabilitated.

- Blue squares: 58 inclined HQ3 diamond core holes drilled into the Nolans Bore deposit, each with an adjacent sump (about 3m x 3m x 2m). Sumps to be back-filled after they have dried out and no longer required. Drill core samples to be processed and cut on site at Arafura's infrastructure/bag farm area. All cutting residues will be directed into a small sump, collected and buried. Drill core to be transported to Arafura's Darwin warehouse for safe storage at the end of the program.
- Green circles: 128 inclined RC drill holes (140mm) drilled into the Nolans Bore deposit, each with an adjacent sump (about 3m x 3m x 2 m). Sumps to be back-filled after they have dried out and no longer required. RC residues to be collected and placed in Arafura's existing disposal pit, and then covered with a minimum of 1m of local benign soil as per previous DPIR rehabilitation guidelines. Representative RC chip trays to be stored in Arafura's Darwin warehouse at the end of the program.
- Re-commission Arafura's sample preparation and core processing areas, and ablution facilities (within Arafura's infrastructure/bag farm area) as per 2011 to minimise the transport of radioactive material off-site for assay.

Phase 2 on ELs 28473, 28498 and 29509

Geotechnical work programs to support the development of the Nolans Project, across the entire project area.

- Red diamonds: 90 shallow test pits dug by backhoe to bedrock/refusal. These shallow pits will target the Kerosene Camp Creek diversion, tailings storage facility ("TSF"), residues storage facilities ("RSF"), and other project infrastructure, including access roads. Pit sizes will depend on width of the backhoe bucket and the depth to bedrock. Pits are expected to be about 2-3m long, 0.6m wide and 0.5-2m deep. Each pit will be back-filled immediately after they have been photographed, mapped and sampled. Indicative locations are shown.
- Yellow triangles: 14 shallow vertical holes for geotechnical purposes. The precise locations, size and type of drilling is yet to be determined. Indicative locations are shown.

Maps showing the proposed works are located in Appendix 23.

4 Current Project Site Conditions

Site Conditions	Description
Geology & Local Geology	The licences are located within the Aileron Province, which forms part of the Arunta Region. A poly-deformed and metamorphosed basement terrain along the southern margin of the North Australian Craton. The region is unconformably overlain by the Ngalia, Amadeus, Murraba, Georgina and Eromanga Basins. It has a largely faulted relationship with the Warumpi Province (formerly Southern Arunta Province) and Irindina Province, plus a transitional relationship with Tanami Region. The region contains variably weathered bedrock on erosional plains, rises, low hills, hills, mountains and plateau surfaces with variably metamophosed clastic sediments, meta volcanic rock, calc-silicate rocks, metapelite, dolerite, felsic and mafic gneiss, and granite. The alluvial lowlands consist of extensive areas of red earths, which support acacia shrublands and spinifex covered red sands. Soils are skeletal or absent on the outcrops and ranges. There are also patches of calcareous earths and marble. The region hosts a variety of commodities including metamorphosed VMS and carbonate replacement Pb-Zn-Cu, iron-oxide Cu-Au, orogenic Au, W(-Mo), Sn, mafic-hosted Ni-Cu, vermiculite, hydrothermal U, and apatite- and pegmatite-hosted REE-U(-P). The DPIR STRIKE database lists the area of ELs 28473, 28498, 29509, 31224 and 31284 as a major exploration target for base metals, Ni-Cu, uranium, mafic-hosted vanadiferous magnetite, REE and orogenic gold. Large areas remain significantly under-explored.
Hydrology	The watercourses generally flow north, with larger rivers occurring in the east of the bioregion. The Sandover and Bundey Rivers have wide sandy beds and flow to the northeast. The Marshall and Plenty Rivers flow east along the northern edge of the Harts Range before flowing into the Simpson Desert. There are numerous short drainage channels west of the Stuart Highway originating in rocky outcrops. Some of these form part of the Lander and Hanson river systems, which flow into the Tanami. Kerosene Camp Creek, Woodforde River and numerous other unnamed minor waterways are located within the title area. The Nolans Bore prospect is in the upper catchment of the Woodford River. Kerosene Camp Creek, ephemeral gullies and sheet wash drain the prospect area.

	Nolan Bore (RN 11769) was drilled on Aileron Station in 1978 to a total depth of 51.85 metres and (unknowingly) into the central part of the Nolans Bore deposit. Until it was decommissioned in 2011 by the-then pastoralist, the bore was equipped with windmill, tanks and troughs for pastoral purposes. Arafura drilled an alternative stock bore in 2011 (located 2 kilometres south-southwest of the deposit) to replace Nolan Bore with the agreement of the-then pastoralist. Despite this, stock water continues to be drawn from Arafura's main dewatering bore drilled into the deposit some 500 metres northwest of Nolan Bore. In 2005 Arafura drilled and equipped a new water bore (Racic's Bore; NBRC067) in the area of the main deposit to supply water for drilling. Drinking water is sourced external to the site, purchased in bulk from Alice Springs, or from Aileron Roadhouse. A map generated from NR Maps, which shows the locations of known bores in the area is located at Appendix 18. ELs 28473 and 28498 lie within the Ti Tree Water Control District, and EL 29509 is partly within it. A copy of the Surface & Water Management Area report for the Burt bioregion is attached at Appendix 5.
Flora	Vegetation varies according to soils and topography, between the alluvial red earths and sands of the lowlands, and the rocky ranges, hills and rises. Mulga is widespread throughout the bioregion. Mulga woodlands cover much of the alluvial red earths of the lowlands, sparse mulga shrublands grow on the rocky uplands. ELs 28473, 28498, 29509, 31224 and 31284 comprises relatively of open shrub land and hummock grassland. The most widespread community on the lowlands is Mulga (*Acacia aneura*) occurring as tall open woodland with woolly butt (*Eragrostis eriopoda*) and an open grassland understorey. Other tree and shrub species include Bloodwood (*Corymbia opaca*) and Eremophila species. On the foothills and valleys mulga forms part of mixed species woodland along with Ironwood (*Acacia estrophiolata*) and Whitewood (*Atalaya hemiglauca*) with open grassland of kerosene grass (*Aristida contorta*). Hummock grasslands and sparse shrublands dominate the sandy soils in the northern and western parts of the region. Species include Barley Blue Mitchell Grass (*Astrebla pectinata*), and Smooth Barked Coolibah (*Eucalyptus victrix*) woodland along drainage channels. On the rocky ranges and hills, acacia shrublands predominate. They include tall shrubland of mulga or Witchetty Bush (*Acacia kempeana*), Eremophila forbs and grasses. Eucalypts form low open woodland in some areas (*Corymbia opaca, E. terminalis & E. pachyphylla*). There are also hummock grasses such as Soft

	Spinifex (*Triodia pungens*) and spike flower spinifex (*Trodia spicata*) with low open woodland of mixed species including mulga and bloodwood. Gorges and associated rocky country provide refuge for rare and relict plants. Seventeen rare and relict plant species were found in the Dulcie Ranges, or 19% of total known from central Australia. Reeds, rushes and ferns are found in gorges with permanent and semi -permanent waterholes. In 2006-2007 Lowe Ecological Services conducted a flora and fauna survey, the results of which were attached to the MMP submission for that period. Supplemental and additional regional surveys have been provided in Arafura's EIS documentation in 2016. Copies of the Charles Darwin University ("CDU") natural resources site report and the Environment Protection and Biodiversity Conservation ("EPBC") report for the project are attached at Appendices 3 and 4 respectively.
Fauna	There are 8 recorded threatened species within the region. Rare and threatened species include the grey falcon (*Falco hypoleucus*), Golden Bandicoot *(Isoodon auratus)* and the Black-footed Rock Wallaby (*Petrogale lateralis*). The region contains a significant array of bird species, including the Mulga Parrot (Psephotis varius), Bourke's Parrot (*Neopsephotus bourkii*), Hooded Robin (*Melanodryas cucullata*), Red-capped Robin (*Petroica goodenovii*) and Grey Honeyeater (*Conopophila whitei*). Other native species include Lesser Hairy-footed Dunnart (*Sminthopsis youngsoni),* Red Kangaroo *(Macropus rufus)* and the Centralian Blue-Tongued Lizard *(Tiliqua multifasciata).* Three species of fish have been recorded in the Dulcie ranges. Some species of land snail are endemic to the region In 2006-2007 Lowe Ecological Services conducted a flora and fauna survey, the results of which were attached to the MMP submission for that period. Supplemental and additional regional surveys will be provided in Arafura's EIS documentation in 2016. Only one listed vulnerable species has been noted in Arafura's past surveys, the Black-footed Rock Wallaby (*Petrogale lateralis*). Supplemental and additional regional surveys have been provided in Arafura's draft EIS documentation in 2016. Copies of the CDU natural resources site report and the EPBC report for the project are attached at Appendices 3 and 4.

Pest Species	Pest animals include cats and donkeys and patchy but intense rabbit infestations. Feral cats and foxes are likely to have contributed to the decline in mammal species. Other pest species include goats, house mice, camels and cattle. Fifteen weed species have been identified within the bioregion. The proportion of weeds to native flora is amongst the highest recorded for NT bioregions and includes buffel grass (*Cenchrus ciliaris*), Devil's Rope Cactus (*Cylindropuntia imbricata)* and the Common Prickly Pear (*Opuntia stricta var. stricta*). Copies of the CDU natural resources site report and the EPBC report for the project are attached at Appendices 3 and 4.
Land Use	The dominant land use is pastoral activity. Stations have mostly been stocked with cattle, but sheep have also been grazed in the past. A strong horticultural industry has also been developed in the Ti Tree Basin area to the north of the project area. Many small mining ventures have been established but none have been extensive or long lasting. EL 28473 falls within NT Portions 703, 725, 748, 4347 and 1811. EL 28498 falls within NT Portions 703, 725, 748 and 3697. EL 29509 falls within NT Portion 703. ELs 31224 and 31284 fall within NT Portions 703 and 747. Copies of the ILIS landholder reports are attached at Appendix 6.
Historical, Aboriginal, Heritage Sites	There are nil known historical, archaeological or heritage places within the licence areas. Historical and archaeological search results are attached at Appendix 7. Heritage search results are attached at Appendix 9. There are numerous recorded sacred sites with the licence areas; however, none will be impacted on during exploration. A copy of the Abstract of Records from the Aboriginal Areas Protection Authority ("AAPA") is attached at Appendix 8. Additional site regional surveys have been provided in Arafura's draft EIS documentation in 2016.

	ELs 28473, 28498, 29509, 31224 and 31284 fall within the area of Native Title Claim NTD2007/002 – Aileron. ELs 31224 and 31284 also fall within the area DCD2013/001- Napperby. National Native Title Tribunal (“NNTT”) and DPIR STRIKE search results are attached at Appendix 11.

Arafura engaged GHD to prepare an EIS on the Nolans Project. The draft EIS was lodged with the NT EPA in May 2016 for an eight-week public review, where stakeholders submitted comments to the EPA. In February 2017, Arafura submitted a comprehensive supplementary report to the draft EIS, which addressed the stakeholder comments. Further data and information was requested by the NT EPA to better inform the assessment process.

Following the completion of additional focused studies during mid-2017, Arafura prepared and lodged an additional report that complements the draft EIS and the supplementary report, with the NT EPA in October 2017.

A copy of the draft EIS can be obtained from https://www.arultd.com/projects/nolans/eis.html.

As requested in the approval letter of the 2017 letter in lieu of a MMP, below is a summary of material remaining at the bag-farm.

Material	Number	Volume (tonnes)	Containers (20-foot)	Location
Ore (bulk Bauer samples)	112 bulka bags	80	-	Bag farm
Hydrometallurgical residues	222 bulka bags	170	17	Nolans Bore (alongside residues disposal pit)
	208 bulka bags[1]	160	11	Bag farm

[1] Much of this category of material is stored outside

Updated infrastructure figures are within the security calculation at Appendix 15. A small concrete pad where the core saws were set up has been added. Used bulka bags stored in shipping containers from the 2016 bulk sample clean-up have also been added.

5 Environmental Management System

Arafura is a small company that ensures responsible environmental management through a series of sensible precautions and procedures in which unnecessary damage to the environment is minimized by careful, selective exploration techniques and, where possible, early remedial works to allow the short growing season of the region to have optimum benefit.

The key contact person/s will be responsible for the overall environmental management and rehabilitation of the site and to honour the commitments made within this MMP.

The Company is developing an integrated management system ("IMS") specifically for the Nolans Project; however, it will be applied Company-wide. A copy will be submitted to DPIR when completed and it is expected that this will occur in 2018 as the project moves into the Definitive Feasibility Study ("DFS") phase. EIS studies have been completed and the NT part of the EIS assessment is nearing completion. Further significant planning work and engineering is being planned as part of the project's development. This work will include geotechnical investigations, borefield design, TSF and RSF designs, process plant and accommodation village designs, and finalisation of the site layout.

A whole-of-project Risk Register has been developed for the Nolans Project as part of the EIS. Arafura has based its risk assessment methodology on the Australian Standard for Risk Management, AS 31000:2009.

5.1 Environmental Policy and Responsibilities

Arafura published its inaugural Sustainability Report which focuses on its transition from explorer to developer with the Nolans Project. This report is made available on the Company's web site (https://www.arultd.com/images/ARAFURA_Sustainability_Report_2014-15.pdf) and a copy is attached at Appendix 10. The report contains an Environmental and Social Sustainability policies and the Company operates with defined responsibilities and expectations which are covered in the induction to all employees and contractors.

The Company's objective is to operate in a responsible manner to minimise the impact on the environment. The Company believes that caring for the environment and protecting heritage is an integral part of its business. Arafura will ensure that responsible environmental performance be given equal importance along with the financial and production aspects of its business.

Arafura will:

- Integrate the principles of sustainable development into its business approach;
- Comply with all environmental legislative requirements;
- Work closely with the community and governing bodies to ensure that the best approach to environmental care is adopted;
- Encourage employees to value the heritage in the environment in which we work;
- Effectively manage the use of natural resources;
- Reduce waste, recycle and accept responsibility for the correct disposal of consumables;
- Maintain an open consultation process with all stakeholders;
- Manage and minimise workplace exposure to hazards and ecosystem disturbance;
- Adhere to DPIR recommendations for the rehabilitation of disturbed areas as sustainable ecosystems and community assets; and
- Fulfill employee and contractor educational and training requirements to equip them with the knowledge that will ensure responsible environmental performance on the project areas.

The signed Work Health Safety & Environmental Policy is located in Appendix 10.

5.2 Statutory and Non-Statutory Requirements

Statutory Requirements

- *Mineral Titles Act ("MTA") 2010 & Regulations;*
- *Mining Management Act ("MMA") & Regulations;*
- *Water Act;*
- *Work Health and Safety (National Uniform Legislation) Act 2011;*
- *Bushfires Act;*
- *Weeds Management Act;*
- *Control of Roads Act;*
- *Heritage Conservation Act;*
- *Northern Territory Aboriginal Sacred Sites Act;*
- *Environment Protection & Biodiversity Conservation Act 1999;*
- *Soil Conservation and Land Utilisation Act;*
- *Pastoral Lands Act;*
- *Environmental Offences and Penalties Act;*
- *Radioactive Ores and Concentrates (Packaging and Transport) Act (NT);*
- Code of Practice for Safe Transport of Radioactive Materials 2001;
- Conditions of MTA Exploration Licence; and
- Conditions of MMA Authorisation.

Non- Statutory Requirement

Exploration Agreement with the Central Land Council ("CLC"), dated 30 May 2003.

5.3 Induction and Training

Arafura conducts an induction for all employees and contractors prior to personnel commencing work on the site. The induction covers:

- Environmental responsibilities of the Company;
- Environmental responsibilities of the individual;
- Environmental awareness;
- Responsible operating practices; and
- Reporting procedure.

The names of employees and contractors that have participated in and completed the induction process are recorded. Records are stored at the Company's offices.

Training topics covered both in the induction and as additional training include:

- Incident reporting;
- Site inspections;
- Weed identification;
- Emergency response training; and
- Any other issues that may be raised during toolbox meetings such as fire extinguisher training and modifying procedures may be the focus of further training.

The signed Work Health Safety & Environmental Policy is located in Appendix 10.

5.4 Identification of Environmental Aspects and Impacts

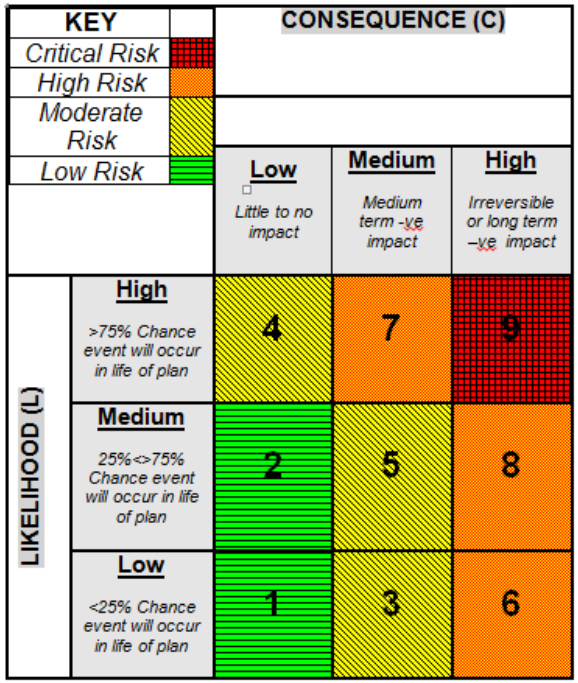
Aspect	Impact	Risk Rating	Management measures (prevention)	Management measures (remediation)
Clearing for Drill Pads/ Tracks/ Camps	Loss of native flora and fauna	Low	The drip line of a tree canopy left undisturbed to protect the tree's root ball. Maintain the smallest possible area for drill pads using blade –up technique. Re-establish / clear tracks using blade–up technique. Establish camps in cleared areas. Use established tracks wherever possible to minimise additional disturbance. In hilly or undulating areas follow ground contour to reduce likelihood of erosion.	Close/ cap drill holes as soon as possible after exploration activities have ceased. Re-spread topsoil over pads and seed, or rip; monitoring will determine if it is required. Remove all rubbish from camp areas for disposal at approved facility. Check all cleared tracks for evidence of erosion.
BioSecurity	Spread of weed pest species	Low	Ensure vehicle are clean and inspect vehicles prior to entry and exit from project area. Establish shake down areas near the exit from the project area to assist in removing	Consider liaising with stakeholders to establish a spraying campaign to control weed infestation or hand pull weeds from small areas where infestation has taken hold.

Aspect	Impact	Risk Rating	Management measures (prevention)	Management measures (remediation)
			weeds and seeds from plant and equipment. Incidences of new weed species on site will be reported to DLRM, DPIR or the pastoralist.	
Interaction with fauna	Loss of fauna	Low	All personnel are aware of the presence of threaten species at site. Vehicle speeds are limited whilst on the station to 60km / hour to reduce the potential for vehicle strike. All personnel are informed of favorable habitat locations.	All personnel are required to report siting's and near misses.
			Only sufficient fuel for the day's activities will be brought on to the work site. Spill kit will be on hand to manage fuel spills. Disturbance to flora and fauna will be managed by minimal clearing for drill pads. Noise and dust emissions will be managed with mandatory noise and dust reduction equipment on plant and machinery.	

Aspect	Impact	Risk Rating	Management measures (prevention)	Management measures (remediation)
Drilling	Hydrocarbon spills – contamination of soil, surface and ground water Dust and noise emission – pollution and disturbance to fauna. Drill cuttings (if applicable).	Low	Drill rigs on holes for long duration will have plastic sheeting placed underneath to protect the ground surface. PPE will be issued to personnel to minimize exposure to dust and noise. Fluids from each completed hole will be transferred to the sump at the next hole for continued reuse. Sumps fenced to prevent animal access and at least one side of sump is sloped to enable animals and people to egress from the sump in the circumstance where they fall in. No vertical sides. Drill cuttings placed down-hole or in an approved disposal trench.	Topsoil will be re-spread as soon as possible after cessation of drilling. Return drill cuttings down-hole or in an approved disposal trench, not spread over drill pad. Surface scans completed pre and post drilling to ensure thorough clean-up of drill residues.
Fuel Storage/Transfer	Hydrocarbon leak / spill	Low	Site storage is in bunded area in a self-bunded secure fuel storage tank. Diesel fuel will be transferred from small bulk storage in 200-litre drums or in a transfer tank on the service truck and transferred either via hand-pump or powered pump. Spill kit will be on hand at transfer point.	Small bulk storage is bunded and tank is self bunding. Fuel in sealed 200-litre drums will be carried on the service truck or in a bulk

Aspect	Impact	Risk Rating	Management measures (prevention)	Management measures (remediation)
				tank mounted on the truck. Spill kit will be on hand at transfer point.
Hydrology	Water encountered during drilling/ surface water	Low	Provision will be made to divert substantial quantities of water into drill sumps for evaporation.	Substantial quantities of water can be diverted into sumps for evaporation.
Sacred Site Intrusion	Possible intrusion into area of sacred site	Low	Manage risk by awareness of sacred sites within project area. Arafura has received several Authority Certificates from AAPA - C2001/064, C2008/205, C2013/205 and C2015/124 - for the project area. A register inspection is located in Appendix 8. Several sacred site clearances also completed by the CLC over large portions of the project area.	Knowledge of the precise location of sacred sites on the project area enables the Company to avoid intrusion into registered or unregistered sites. Several archaeological surveys have been completed over the main project area which are included in the projects EIS. Personnel are experienced in working in central Australia and understand the importance of protecting sites of cultural significance.
Waste	Effect on environment and human health. Potential to attract animal pest species.	Low	Ensure that all domestic waste continues to be disposed of at Aileron rubbish tip. Remove potential food source for animal pest species.	Maintain process of disposal of domestic waste at Aileron rubbish tip. Remove potential food source for animal pest species.

Aspect	Impact	Risk Rating	Management measures (prevention)	Management measures (remediation)
				Waste hydrocarbons and contaminated products required to be recycled to certified recycler in Alice Springs. Batteries and tyres sent to recycler.
Bushfire	Loss of natural vegetation and fauna habitat	Medium	Observe fire restrictions. Maintain fire breaks around drill equipment. Extinguishers mandatory on all vehicles and equipment. Mobile firefighting equipment on site during drill campaigns	



Sample Risk matrix and key.

Clearing of Areas

Prior to commencing operations, the site will be visually inspected for evidence of any endangered flora and fauna species identified in the CDU and EPBC reports.

Clearing will be kept to a minimum to avoid disruption to local flora and fauna species. Arafura will leave mature trees in place and establish stockpiles of topsoil for rehabilitation purposes. Any shrubs that have been removed for use in rehabilitation activities, will be kept on site with the topsoil stockpiles. Erosion control measures include managing the flow of water by contouring the affected area and by keeping natural drainage lines clear.

Wherever possible, Arafura will use established tracks to access areas where drilling is proposed.

Driving Between Drill Sites and Tenements

If sighted on the area that is intended to be worked, weeds will either be hand pulled or sprayed when they have been identified – the CDU and EPBC reports attached to the MMP will be the reference tools.

The measures listed in Sections 5.4 and 5.6.1, will be used to manage the introduction of new weeds onto the area as well as the spread of weeds off the project area. DPIR and DLRM will be notified of any new weed species found on the site.

Inspection measures will include truck and trailer bodies. If weeds are sighted brushes may be used to remove them from vehicles. Compressed air may also be used to remove weeds in hard to reach areas such as vehicle under-bodies.

Drilling

Clearing will be kept to a minimum to avoid disruption to local flora and fauna species. Wherever appropriate, Arafura will use established tracks to access areas where drilling is proposed. If possible, drill cuttings will be returned down-hole.

Noise and dust emissions will be managed with mandatory noise and dust reduction equipment on plant and machinery.

Standard practice used to date has been to pump the fluids from each completed hole to the sump at the next hole for continued reuse.

Secure storage of fuel in 200-litre drums or in transfer tank on service truck. Transfer of fuel includes the provision of spill kits to manage spillage during refueling operations.

Fuel storage/ transfer

Reasonable care will be taken when machines are being refueled on site. Plant and machinery will be fueled on site by a service truck equipped with a spill kit. Spill trays will be placed underneath machines while refueling is taking place and during minor servicing. Material absorbed from a spill will be stored in a container for disposal by the drilling contractor.

It is anticipated that only minor servicing of plant and equipment will be conducted on the site. Waste from the process will be stored for removal by the drilling contractor.

A waste disposal service in Alice Springs provided by the Grease Monkey will be recommended for use in the disposal of any hydrocarbon waste.

Hydrology

Small quantities of water may be encountered during drilling. Should water in substantial quantities be encountered, it can be contained in sumps to allow it to evaporate.

Sacred Site Intrusion

As outlined in Section 4 Arafura holds several AAPA Authority Certificates covering the project area. No intrusion into the defined area/s will be permitted. In addition, detailed cultural and heritage surveys have been complete on the project area.

Waste

All domestic rubbish will be removed from the site and disposed of in the Aileron rubbish tip.

Excess mineralised drill cuttings will be buried in an approved burial trench once the material is no longer required following receipt of analysis, and confirmation that the material will not be required for metallurgical test work. The trench is then back filled at the end of the sampling program. Excess benign drill cuttings will either be spread around the site in an appropriate manner and used in the rehabilitation of the land surface or buried if there is sufficient space in the trenches. A minimum layer of one metre of clean fill will be placed over the drill cuttings.

Collection sumps for cuttings and drilling fluids from diamond core drilling will be back-filled after contents have dried.

5.5 Environmental Audits, Inspections and Monitoring

The site supervisor will conduct a walk-through inspection of the work site prior to work commencing every day. The inspection and its results will be noted in the site diary.

Arafura may from time to time engage both internal personnel and external consultants to complete audits of its operations to assess both environmental performance and regulatory compliance.

Every inspection will monitor the below:

- Surface water;
- Groundwater;
- Invasive species;
- Flora and fauna;
- Hydrocarbons and hazardous materials areas and containers;
- Waste;
- Noise and air quality;
- Cultural and heritage sites; and
- Any areas of erosion.

Radiation monitoring will occur during drilling and sampling programs.

Mineralisation at Nolans Bore contains low concentrations of radioactive elements thorium and uranium. In 2005, Arafura commissioned Mr Mark Sonter of Radiation Advice & Solutions Pty Ltd to monitor and provide advice on safe work site procedures and handling of mineralised rock with low-level specific radioactivity. Mark Sonter prepared a WHSE Radiation Management Plan (“RMP”) appropriate to the

Nolans Project which has been followed for all activities at the project site since this safe work procedure was written.. A copy of the RMP is attached at Appendix 16.

Arafura periodically monitors radiation levels during extended periods of exploration and checks on the potential accumulation of dust/mud of radioactive materials on vehicles and personnel. No vehicle or equipment may leave site without being cleaned to an acceptable level and the vehicle being subjected to a surface scan. This monitoring data is being used to guide future and planned work activities on the site and to assist in the development of management processes/protocols relating to radioactive materials for the project.

Upon completion of rehabilitation of drill sites and drill holes, surface scans are completed and the results are documented in a rehabilitation report accompanied by photographs illustrating the rehabilitation activities. It is understood that the prerequisite for the return of an amount lodged as security is the submission and acceptance of a comprehensive rehabilitation report accompanied by photographs showing the effectiveness of rehabilitation activities.

Monitoring techniques and frequencies are described below.

Aspect	Monitoring technique and frequency of the monitoring program	Audit and inspection technique and frequency where appropriate
Surface water	Daily visual inspections during operational periods.	Daily walk through inspections of operational work site. Scheduled inspections before and after wet season of non-operational site or after large rainfall event. *Note details in site diary.
Groundwater	Inspection of spill trays are in place underneath machinery to catch any fuel/ oil spills at the start of each shift. At the start of each shift, ensure that a spill kit of absorbent material (kitty litter) is at hand to soak up any fuel or oil spill.	Monitoring any leaks while machinery is operating and while plant and machinery are being refueled. *****Note spills and action taken in site diary.
Invasive species	All vehicles and equipment is inspected before a designated program is commenced. Employees are required to inspect their vehicles when entering and leaving a site to ensure that weeds are not transported on or off site. Inspect site for evidence of feral animal infestation – could	Daily walk through inspections of operational work site. Scheduled inspections before and after wet season of non-operational site event or after large rainfall event. *Note details in site diary.

Aspect	Monitoring technique and frequency of the monitoring program	Audit and inspection technique and frequency where appropriate
	be carcasses, scats or tracks in the case of large animals.	
Flora and fauna	Employees, contractors and visitors made aware of favorable habitat areas. Visual inspection - consult threatened species list prior to clearing an area to determine if threatened species are on site.	Prior to commencing clearing and daily walk through inspections of operational work site. Scheduled inspections before and after wet season of non-operational site event or after large rainfall event. *Note details/sightings in site diary.
Hydrocarbons and hazardous materials	Inspection of spill trays are in place underneath machinery to catch any fuel/ oil spills at the start of each shift. At the start of each shift, ensure that a spill kit of absorbent material (kitty litter) is at hand to soak up any fuel or oil spill.	While machinery is operating and while plant and machinery are being refueled. *****Note spills and action taken in site diary.
Waste	Inspect areas to ensure that all waste articles have been removed from the site as intended.	Daily walk through inspections of work area. Scheduled monthly inspection of non-operational site. *Note details in site diary.
Noise and air quality	At the start of each shift, inspect all plant and machinery are equipped with mandatory noise suppression equipment.	Visually monitoring for dust during working periods. Monitoring noise during shifts. *Note details in site diary.
Cultural and heritage sites (if applicable)	At the start of each shift, inspect any marked off areas have flagging tape in place.	Daily monitoring if working near identified site. *Note details in site diary.
Erosion and sediment control.	Daily visual inspections during operational periods.	Daily walk through inspections of operational work site. Scheduled inspections before and after wet season of non-operational site or after large rainfall event. *Note details in site diary.

Aspect	Monitoring technique and frequency of the monitoring program	Audit and inspection technique and frequency where appropriate
Radiation	During drilling and sampling programs, monitor gamma radiation, long-lived alpha emitting radionuclides in airborne dust, radon daughter exposure, and surface contamination. Geiger metres and TLD badges will be used as monitoring devices during prolonged programs. Further detailed information found in the Radiation Safety Plan in Appendix 16.	Radiation results will be made available to Arafura personnel and DPIR. All radiation result recorded in Arafura's Radiation Logbook. Further detailed information found in the Radiation Safety Plan in Appendix 16.

5.6 Environmental Performance

5.6.1 Objectives and Targets

The results of inspections/audits conducted on the project area will constitute a monitoring program. Inspections/audits will focus on:

- Management of any water that is encountered during the drilling process – water will be diverted to drill sumps;
- Water monitoring – small quantities of water flowing on the drill pad will be diverted on to surrounding land. Substantial quantities of water encountered during drilling will be diverted into drill sumps;
- Noise mitigation will be affected by ensuring that mandatory noise limiting devices fitted to plant and machinery are functioning correctly and that all personnel are equipped with personal protective equipment ("PPE"), i.e. ear muffs or ear plugs;
- Dust can be controlled by wetting down work areas and tracks, and by issuing appropriate PPE, i.e. dust masks, to personnel;
- Weeds can be controlled on site by spraying, hand pulling, inspecting vehicles and plant entering and leaving the site and by establishing a shake-down area near the exit from the site;
- Used oils, oil and air filters, grease cartridges and domestic waste from camp sites will be removed from the project area as outlined in Sections 5.4 and 5.5;
- Drill pads and holes will be capped as per the DPIR Advisory Note AA7-029 (Appendix 13);
- Tracks and gridlines, if not required to be retained by the pastoral lease holder, will be rehabilitated as per DPIR Advisory Note AA7-005 (Appendix 14). Should retention be requested by the pastoral lease holder, Arafura will provide written confirmation from the same; and
- As mentioned in Sections 5.5 and 6, upon completion of the exploration program, rehabilitation activities will be documented and photographed for lodgement with DPIR.

The responsible personnel for the above Environmental Objectives are Kelvin Hussey and Jeremy Grose.

5.6.2 Performance Reporting

The results of inspections/audits conducted on the project area will constitute a monitoring program. Inspections/audits will focus on:

- Management of any water that is encountered during the drilling process – water will be diverted to drill sumps;
- Water monitoring – small quantities of water flowing on the drill pad will be diverted on to surrounding land. Substantial quantities of water encountered during drilling will be diverted into drill sumps;
- Noise mitigation will be effected by ensuring that mandatory noise limiting devices fitted to plant and machinery are functioning correctly and that all personnel are equipped with personal protective equipment ("PPE"), i.e. ear muffs or ear plugs;
- Dust can be controlled by wetting down work areas and tracks, and by issuing appropriate PPE, i.e. dust masks, to personnel;
- Weeds can be controlled on site by spraying, hand pulling, inspecting vehicles and plant entering and leaving the site and by establishing a shake-down area near the exit from the site;
- Used oils, oil and air filters, grease cartridges and domestic waste from camp sites will be removed from the project area as outlined in Sections 5.4 and 5.5;
- Drill pads and holes will be capped as per the DPIR Advisory Note AA7-029 (Appendix 13);
- Tracks and gridlines, if not required to be retained by the pastoral lease holder, will be rehabilitated as per DPIR
- Advisory Note AA7-005 (Appendix 14). Should retention be requested by the pastoral lease holder, Arafura will provide written confirmation from the same; and
- As mentioned in Sections 5.5 and 6, upon completion of the exploration program, rehabilitation activities will be documented and photographed for lodgement with DPIR.

Monitoring and inspection findings from the reporting period are below.

Disturbance	**Monitoring and Inspection Findings (Include progress, targets, closure objectives, issues or problems identified)**
Surface water	Opportunistic sampling completed when stream flows recorded. Results in draft EIS
Groundwater	Sampling periodically completed in bores. Results in draft EIS.
Invasive species	Nil additional recorded. See draft EIS for details. Buffle grass prevalent across all areas distributed by pastoralist.
Flora and fauna	See draft EIS for results of detailed surveys across project area.

Hydrocarbons and hazardous materials	Nil recorded by Arafura. Pastoralist requested to repair ongoing minor leakage from Aileron Station diesel generator at groundwater bore on Nolans Project site. Area photographed.
Waste	Nil generated. Burial of unwanted drill samples completed after authorisation.
Noise and air quality	Nil issues - See draft EIS for details.
Cultural and heritage sites (if applicable)	Nil issues - See draft EIS for details.
Erosion and sediment control	None from Arafura activities. Erosion noted on station track between Nolans site and processing plant site following 2016-2017 large wet season events.

5.7 Emergency Procedures and Incident Reporting

The most likely cause of an environmental emergency on the project area would arise from a hydraulic oil or fuel spill. As a consequence, Arafura limits the quantities of fuel and oil on the work site to a restricted amount that can be stored in drums and on the service truck's storage tank and that contained in plant and machinery; nevertheless, there remains a risk to the environment. The emergency procedure that Arafura has in place to manage such a risk is as follows:

- Alert co-workers and report the incident/or accident to the immediate supervisor;
- Trap any spill if possible by bunding the area to prevent it from reaching any waterways and soak up as much of the spill as possible with absorbent material or sand;
- Without placing the safety of any individuals at risk, identify the source of the leak if possible and determine if it can safely be stopped;
- Notify the Emergency Services if the situation is unable to be controlled by the above measures;
- Any contaminated soil and material such as rags and blankets must be removed from the site and disposed of at a facility that is authorised to receive the material;
- Report the environmental incident or accident to the Responsible Person nominated in Section 1.2. Ensure that the details and the occurrence of the incident/ accident have been noted in the site diary;
- Reporting of any environmental incident or accident by the Responsible Person must be in accordance with s29 of the *Mining Management Act* and in line with the reporting guideline attached at Appendix 12 of the MMP; and
- Manage the threat of fire by the provision of different types of fire extinguishers capable of dealing with hydrocarbon-based fires and grass fires.

6 Exploration Rehabilitation

Disturbance	Rehabilitation Activities	Schedule (Timing)	Closure Objectives / Targets	Monitoring Techniques
Drill holes	When samples have been analysed and there is no requirement to go back down hole, the holes will be permanently plugged with plastic cones below ground level, backfilled and mounded as per DPIR Advisory Note AA7-029 (Appendix 13). If more down hole activity is proposed temporary caps will be installed.	Holes will be permanently or temporarily capped following cessation of the drilling program.	All holes will be plugged/ capped as per DPIR Advisory Note AA7-029 (Appendix 13).	Rehabilitated drill sites will be inspected within 6 months to ensure that the site is safe and stable and that there have not been any hole failures. Remediation of any failures will be undertaken immediately. Photographic record taken
Drill pads	All drill cuttings and residues are cleaned up and removed for disposal into a residue disposal pit. Any topsoil that was removed will be re-spread over the pad. Any shrubs or trees that were removed will be placed over the area to provide habitat for small fauna.	Pads may not be rehabilitated immediately after drilling ceases if down-hole work is proposed. If no more work is proposed, pads will be rehabilitated after drilling ceases as per DPIR Advisory Note AA7-029 (Appendix 13).	All drill pads will be rehabilitated after drilling ceases as per DPIRAdvisory Note AA7-029 (Appendix 13). Drill pads will be left in a safe and stable condition as soon as possible after the end of drilling program.	Rehabilitated drill pads will be inspected within 6 months to ensure that the site is safe and stable and that regrowth on the area is satisfactory. Photographic record taken

Disturbance	Rehabilitation Activities	Schedule (Timing)	Closure Objectives / Targets	Monitoring Techniques
Sumps	Sumps will not be filled until all water has been pumped out or evaporated. Polyurethane liners will be removed if applicable for disposal at an approved facility.	If no further work is proposed sumps will be rehabilitated after drilling ceases as per DPIR Advisory Note AA7-029 (Appendix 13).	All sumps will be rehabilitated after drilling ceases as per DPIR Advisory Note AA7-029 (Appendix 13). Sumps will be left in a safe stable condition as soon as possible after the end of drilling program.	Rehabilitated sumps will be inspected within 6 months to ensure that the site is safe and stable and that regrowth on the area is satisfactory. Photographic record taken
Costeans	As soon as practicable after the completion of work, the costeans will be backfilled and consolidated using the excavator bucket or track. Topsoil and subsoil which will be removed and stored separately at the start of work will be spread as the top layer. The seed store in this soil will provide the required vegetative cover after rain.	Costeans will be backfilled after they are geologically logged, photographed and channel sampled before excavation equipment is demobilised.	Stable area that is slightly raised above natural surface to divert natural flow away from trench footprint.	Visit the area periodically to inspect and remediate if required. Before and after photography to record progress.
Bulk sample (test) pits	As soon as practicable after the completion of the sampling of the test pits, the pits will be backfilled and consolidated using the excavator bucket or track. Topsoil and subsoil which will be removed and stored separately at the start of	Test pits will be backfilled as soon as practicable after the completion of the sampling of the test pits.	Stable area that is slightly raised above natural surface to divert natural flow away from trench footprint. Slopes will be reduced to a 1V:4H gradient or less.	Visit the area periodically to inspect and remediate if required. Before and after photography to record rehabilitation progress.

Disturbance	Rehabilitation Activities	Schedule (Timing)	Closure Objectives / Targets	Monitoring Techniques
	work will be spread as the top layer. The seed store in this soil will provide the required vegetative cover after rain. Slopes will be reduced to a 1V:4H gradient or less.			
Residue disposal pits	After residue disposal pits are filled, they will be covered with one metre of benign (non-radioactive) substrate that will have been stockpiled from the original excavation of the pit. Part-filled pits are similarly covered by a layer of benign material to provide an adequate level of shielding.	Residue pits could remain open for some time due to the progressive and campaign nature of the Company's test work programs.	Stable area that is slightly raised above natural surface to divert natural flow away from disposal pit footprint. On closure of each disposal pit, a pit closure report is prepared which would include: • Location of the proposed storage (GPS coordinates) and dimensions of the pit; • Photographic confirmation of the construction of the pit; • Photographic confirmation of the	Rehabilitated residue disposal pits will be inspected periodically to ensure that the site is safe and stable, no erosion has occurred, and that regrowth on the area is satisfactory. Photographic record taken Record of surface scan radiation results following closure.

Disturbance	Rehabilitation Activities	Schedule (Timing)	Closure Objectives / Targets	Monitoring Techniques
Residue disposal pits cont…			pre-closure sample location within the pit indicating depth; • Measured gamma dose rates (or scintillometer rates) before construction and after closure; and • Evidence that a minimum one metre of benign substrate was used to cover buried residue samples and that the cover is effective as a control measure for radiation levels.	
Tracks / Gridlines	Existing tracks to be cleaned up if required using blade-up technique. If compaction occurs they will be ripped prior to closure of the site as per DPIR Advisory Note AA7-005 (Appendix 14), unless required to remain in place by the pastoralist.	Tracks/gridlines will be rehabilitated as per DPIR Advisory Note AA7-005 (Appendix 14) upon closure of the Authorisation unless required to remain in place by the pastoralist.	Tracks/gridlines will be rehabilitated as per DPIR Advisory Note AA7-005 (Appendix 14) unless required to remain in place by the pastoralist	Rehabilitated tracks/gridlines will be inspected within 6 months to ensure that they remain safe and stable and that regrowth on the area is satisfactory. Photographic record taken
Sample bags	Mineralised cuttings will be collected in poly bags. Disposal in accordance with	Small samples to be placed in calico bags for laboratory assay. Poly bags will remain until assay results are	Remove poly bags from the site for disposal. Mineralised	Inspect area within 6 months to ensure that no poly bags

Disturbance	Rehabilitation Activities	Schedule (Timing)	Closure Objectives / Targets	Monitoring Techniques
	DPIR Advisory Note AA7-029 (Appendix 13).	known, bags will then be emptied into a burial trench. Poly bags will be removed from site for disposal.	cuttings to be placed in burial pit. Other cuttings will be dispersed around the site and raked over as per DPIR Advisory Note AA7-029 (Appendix 13).	remain and that the area is safe and stable.
Camp	Infrastructure consists of portable buildings and water tanks. A septic system has been installed on the site at Nolans in accordance with Central Desert Regional Council requirements.	Infrastructure should be removed on completion of exploration of the area. It should be noted that on grant of ML 26659, within which the portable infrastructure is located, fixed infrastructure may replace the portable infrastructure.	If removal of infrastructure occurs, the area will be levelled and contoured (if required) to conform with surrounding areas.	The camp site will be inspected within 6 months to ensure that it remains safe and stable and that regrowth on the area is satisfactory. Photographic record taken

Note: The term "mineralised cuttings" in the above table refers to samples of primary, or crushed/ground, or physically (not chemically) upgraded mineralisation, whether acquired by RAB, RC or large (780mm) or relatively small (BQ/NQ/HQ/PQ) diameter diamond core drilling, all of which is Naturally Occurring Radioactive Materials ("NORM"). These are buried. "Other cuttings" refer to samples of country rock which, in most cases, isn't NORM. These are dispersed around the site and/or buried.

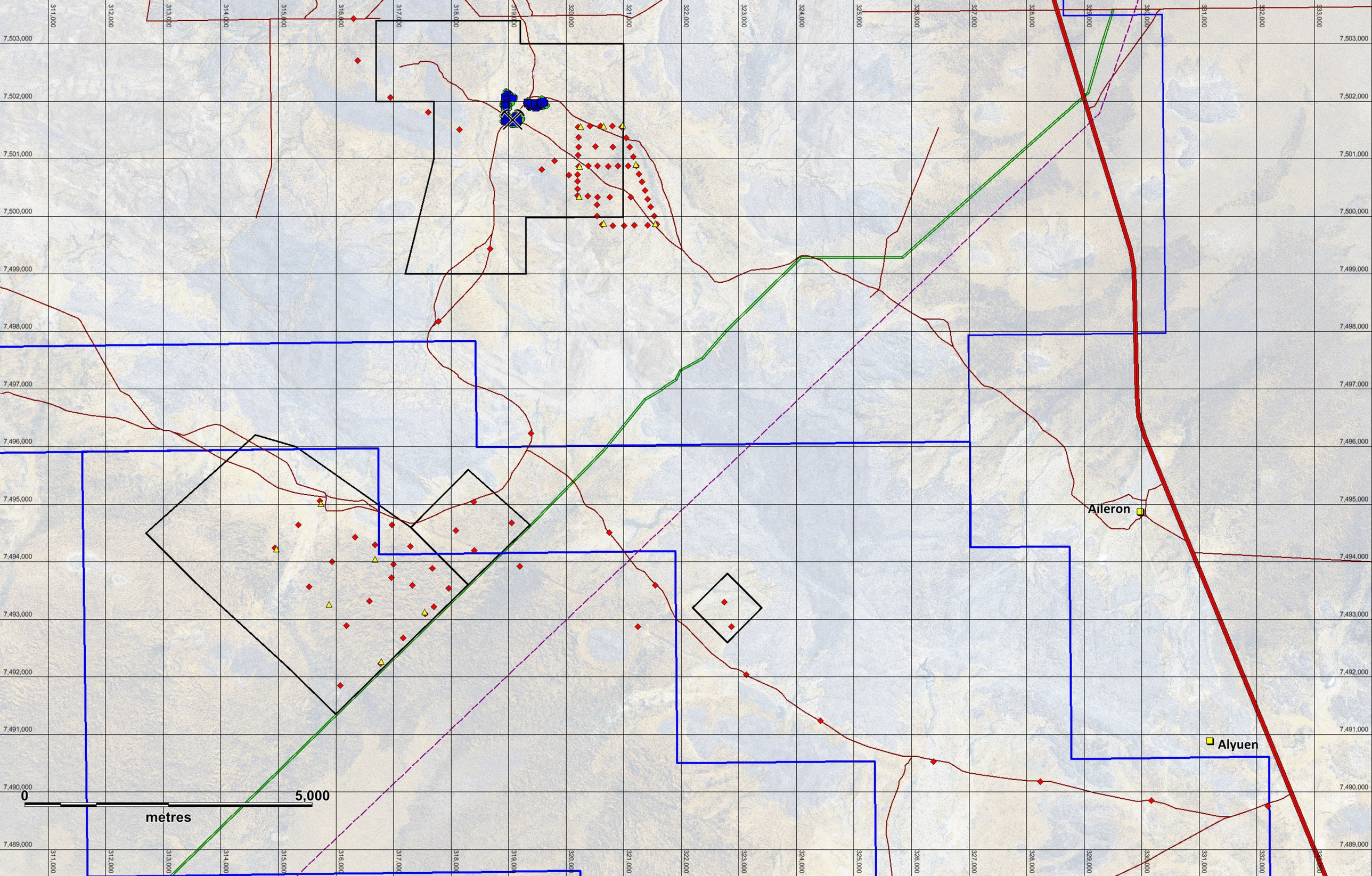
A Rehabilitation Checklist is provided in the Rehabilitation report in Appendix 21.

6.1 Exploration Rehabilitation Register

Attached at Appendix 20 is Disturbance and Rehabilitation Register. This contains the updated disturbance and rehabilitation figures for the Project.

A rehabilitation report from 2016 has also been attached at Appendix 21. A drill hole summary and checklist are provided in the report. Photographs of progressive rehabilitation are also provided in the report.

318,800
319,000
319,200
319,400
319,600
7,502,000
7,501,800
7,501,600
0
200
metres


Aileron
Alyuen
0
5,000
metres