TELLUS

GROUP ANNUAL TECHNICAL REPORT FOR EL27972 "CHARLOTTE" AND EL27974 "CENTRAL RAILROAD" FOR PERIOD ENDING 20TH SEPTEMBER 2015

| 12th November 2015

Titleholder:	Tellus Holdings Ltd
Operator:	Tellus Holdings Ltd
Tenements:	EL27972 Charlotte, EL27974 Central Railroad
Project Name:	Chandler Project
Report Title:	Group Annual Technical Report for EL27972 “Charlotte” and EL27974 “Central Railroad”, for the period 21 September 2013 to 20 September 2015
Author:	Jaime Livesey
Target Commodity:	Halite (Sodium chloride) and trace minerals
Date of Report:	12 November 2015
Datum/zone:	GDA94 / zone 53
250K map sheet:	SG5302 Rodinga, SG5305 Kulgera, SG5306 Finke
100K map sheet:	5648 Charlotte, 5748 Rodinga, 5547 Erldunda, 5647 Idracowra
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EXECUTIVE SUMMARY

The Chandler Project consists of six exploration licenses held by Tellus Holdings Ltd ("Tellus"), located in the Amadeus Basin, approximately 130km south of Alice Springs. This group annual report relates to two of the exploration licenses; EL27972 Charlotte and EL27974 Central Railroad for the reporting period ending 20th September 2014.

The Chandler Project is targeting subsurface salt deposits to assess potential evaporitic mineralisation within the Amadeus Basin. Two known salt units are present in the Chandler project area, namely the Chandler Formation and the deeper Gillen Salt Member.

Exploration activities to date indicate a significant thickness of massive to semi massive halite exists within the Chandler Formation at a depth of approximately 700-1000m.

Exploration activities by Tellus over the Chandler Project have included initial assessment of open file geochemical and geophysical data, detailed review of petroleum well data, seismic interpretation and modelling, geochemical analysis and mineralogical investigation of core samples from previously drilled petroleum wells and from two drillholes completed by Tellus in 2013-2014.

During the reporting period Tellus progressed feasibility and environmental activities, to support mine planning studies and environmental impact statement (EIS) studies.

1 INTRODUCTION

The Chandler Project is located in the Amadeus Basin, approximately 130km south of Alice Springs. This group annual report relates to two granted exploration licences EL27972 Charlotte and EL27974 Central Railroad, which are two of six licences held by Tellus which are collectively referred to as the Chandler Project.

2 PROJECT DESCRIPTION

The Chandler Project is targeting subsurface salt deposits to assess potential evaporitic mineralisation within the Amadeus Basin. Two known salt units are present in the Chandler project area, namely the Chandler Formation and the deeper Gillen Salt Member. Exploration activities by Tellus over the Chandler Project have included initial assessment of open file geochemical and geophysical data, detailed review of petroleum well data, seismic interpretation and modelling, geochemical analysis and mineralogical investigation of core samples from previously drilled petroleum wells and from two drillholes completed by Tellus in 2013-2014.

3 LOCATION

The tenements are located in the southern part of the Northern Territory. Alice Springs is the nearest major town, situated approximately 130km north along the Stuart Highway from EL27972. The area can be accessed via graded roads running east from the highway, as well as station tracks to water bores and boundary fences. The Central Australian Railway runs through the middle of EL27974 (Figure 1). The tenements occur on the following 1:250,000 sheet areas; Rodinga SG5302, Kulgera, SG5305; Finke, SG5306 and on the 1:100000 sheet areas; Charlotte (5648), Rodinga (5758), Erldunda (5547) and Idracowra (5647).

4 TENURE

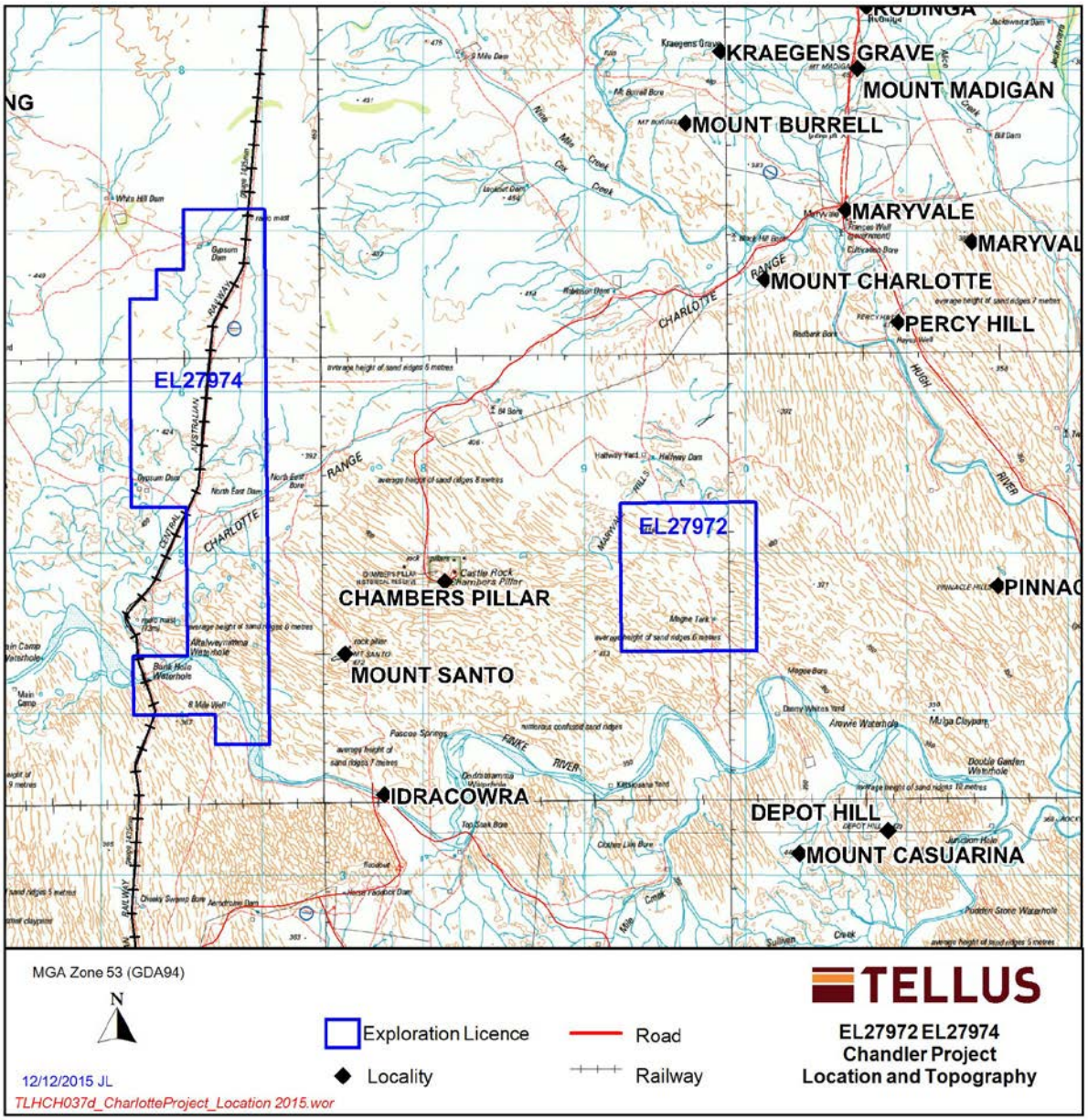
Exploration licence EL27972 “Charlotte” and EL27974 “Central Railroad” were granted to Tellus Holdings Pty Ltd on the 20th October 2010 for a 6 year term (Table 1).

EL27974 was partially relinquished in October 2012 reducing from 285 to sub-blocks to 143 sub-blocks and in October 2014 reducing to 72 sub-blocks.

Table 1: Details of Exploration Licence EL227972 and EL27974 held by Tellus Holdings

TENURE	NAME	STATUS	EFFECTIVE_DATE	EXPIRY_DATE	SUBBLOCKS
EL27972	Charlotte	Grant	20/10/2010	19/10/2016	25
EL27974	Central railroad	Grant	20/10/2010	19/10/2016	72

Figure 1: Project Location and Topography



5 REGIONAL GEOLOGY

The Amadeus Basin is an asymmetrical, east-west trending, intracratonic depression covering 155000 sq km of central Australia (Figure 2).

The oldest elements of the Amadeus Basin are Neo-Proterozoic units having a very restricted known extent. These units consist of clastic sedimentary rocks and basalts along the south western margin of the basin (Mount Harris Basalt, Bloods Range Beds, Dixon Range Beds) and an unnamed succession of sedimentary rocks, basalt and dacite near Kintore in the north-west. The units have been interpreted as a rift sequence marking the opening of the Amadeus Basin (Lindsay and Korsch, 1989).

The fluvio-volcanic rift sediments are unconformably overlain by epeirogenic clastics of the Heavitree / Dean quartzites, followed by carbonates and evaporites of the Bitter Springs Formation. The Bitter springs Formation is terminated by an erosional surface upon which shallow marine and glacigene sediments of the Inindia Beds and its equivalents in the northern Amadeus Basin were deposited. An unconformity surface within the Bitter springs Formation at or near the top of the Gillen Member has wide extent and can be used as a seismic marker.

The top of the Inindia Beds is marked by a flooding surface upon which deeper water pelagic and turbiditic sediments accumulated. This deeper marine sequence is known as the Winnall beds in the south and the Pertatataka Formation in the north. It shallows upward into shallow marine and fluvial clastics in the south west and oolitic platform carbonates of the Julie Formation in the north. The Inindia Beds are thickest in the west and centre of the basin and are absent from the eastern margin of the basin.

The Late Proterozoic phase of deposition was terminated in the south by the Petermann Ranges Orogeny, a period of mountain building, recumbent folding and northward overthrusting (Wells et al. 1970). Molasse sediments were shed north and north-east from uplifted areas and accumulated in a foreland style basin immediately before the rising orogen (Mt Currie Conglomerate, Ayers Rock Arkose), bypassed the middle and eastern fringes of the basin, and accumulated as a prograding deltaic sequence in the north (Arumbera Sandstone).

The Petermann Ranges Orogeny shaped the framework of the Palaeozoic basin, and a northern trough initiated at this time persisted through most of the Palaeozoic. The southern central and south eastern parts of the basin remained uplifted. Palaeozoic sequences in these areas are generally thin with common significant breaks in accumulation.

During the early Cambrian, continental sedimentation persisted in the north-west (Cleland Sandstone), while shallow marine shales, carbonates and evaporites were deposited in the north-east (Shannon, Giles Creek and Chandler Formations). A widespread transgressive cycle in the Late Cambrian resulted in the deposition of the Goyder Formation.

Two transgressive cycles during the Ordovician resulted in the alternating deposition of tidal flat/barrier bar sands and deeper marine, euxinic muds and silts (Pacoota Sandstone, Horn valley Siltstone, Stairway sandstone, Stokes Siltstone). These sediments form the source-reservoir-seal sequence of the Mereenie and Palm valley hydrocarbon fields in the north-western Amadeus Basin. Of this Larapinta Group, only the Stairway Sandstone persists into the centre and southeast of the basin.

Marine deposition was terminated by the Late Ordovician Rodingan Movement. Uplift of the north-eastern basin resulted in the erosion of up to 3000m of Cambro-Ordovician sediments. This area became the source region for the Early Devonian Carmichael and Mereenie Sandstone. Arid climatic conditions prevailed with sediments transported by both aeolian and fluvial action into a shallow sea transgressing from the west.

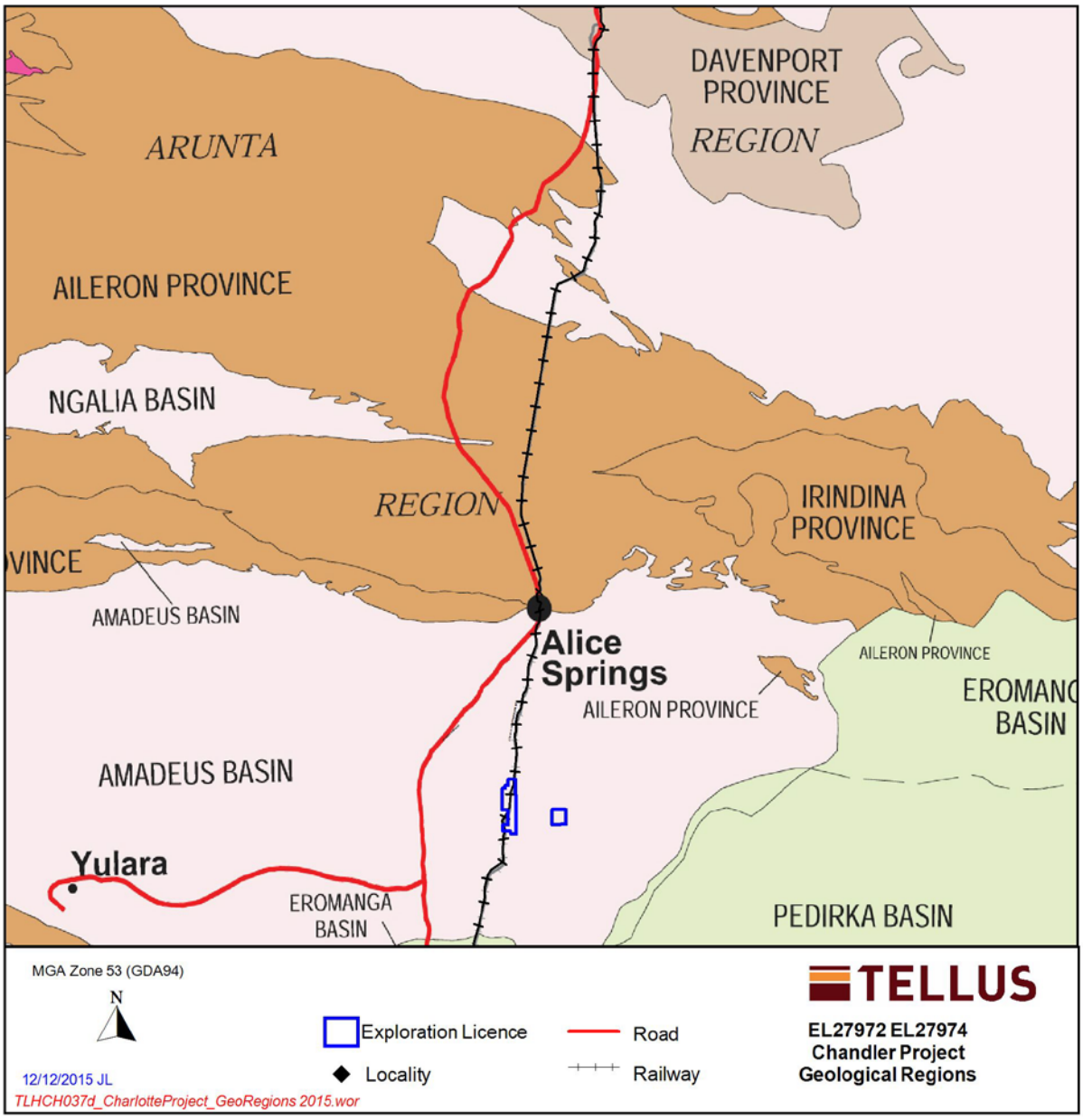
Major uplift of the Arunta block along the present northern margin of the basin commenced in the Middle Devonian. Continental deposition continued as thick molasse sediments accumulated south of the uplifted area. High depositional loading at this time contributed to movement of the Bitter Springs Formation and Chandler Formation evaporites.

A lacustrine siltstone (Parke Siltstone) was laid down conformably on the Meerenie Sandstone, and after uplift, coarser sediments were deposited (Hermannsburg Sandstone, Brewer Conglomerate). These three units, comprising the Pertnjara Group, thin and become finer grained to the south.

Uplift of the Musgrave Province and deformation of the southern Amadeus sequence culminated in the Early-Middle Devonian Finke Movement (Polly Conglomerate), after which fluvial sands of the Langra Formation and estuarine silts of the Horseshoe Bend Shale accumulated. These sediments comprise the Finke Group, which is the southern time equivalent of the Pertnjara Group, although the former sequence fines upward in contrast.

Regional deposition was terminated in the Late Devonian-Early Carboniferous by the Alice Springs Orogeny. Some earlier structures were reactivated during this period of deformation. Substantial uplift of the basement Arunta block along the current northern margin initiated movement of thrust sheets in the Alice Springs and Altunga regions, and resulted in significant structuring of the basin. North over south thrusting and reverse faulting is typical of Alice Springs orogeny deformation.

Figure 2: Geological Regions of Northern Territory (adapted from NTGS, 2006)



6 LOCAL GEOLOGY

The project area overlies 1:250K map sheets Rodinga, Finke and Kulgera. Majority of the area lies within the Rodinga mapsheet, which was geologically mapped in 1964 by the Bureau of Mineral Resources. Surface geology is shown in Figure 3 and stratigraphy is included as figure 4.

The stratigraphy within the Charlotte area has been well defined from drilling of petroleum wells Mt Charlotte 1 and Magee 1, the generalised local stratigraphy is given in Table 2 and published stratigraphic correlation across the Southern Amadeus basin is shown in figure 5.

Figure 3: Geology over EL27972 and EL27974

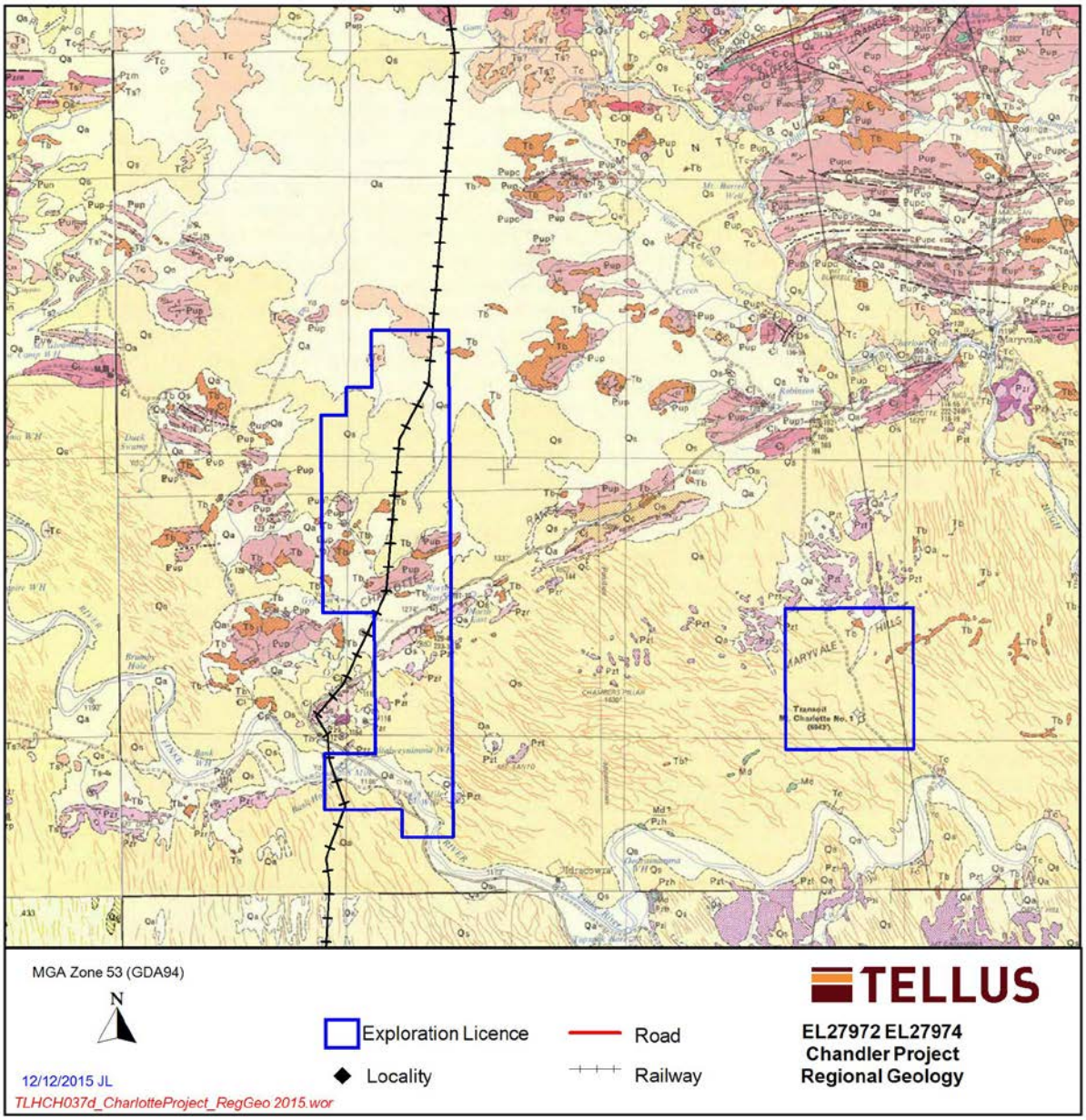


Figure 4: Stratigraphy (from Rodinga SG5302 1:250K map sheet)

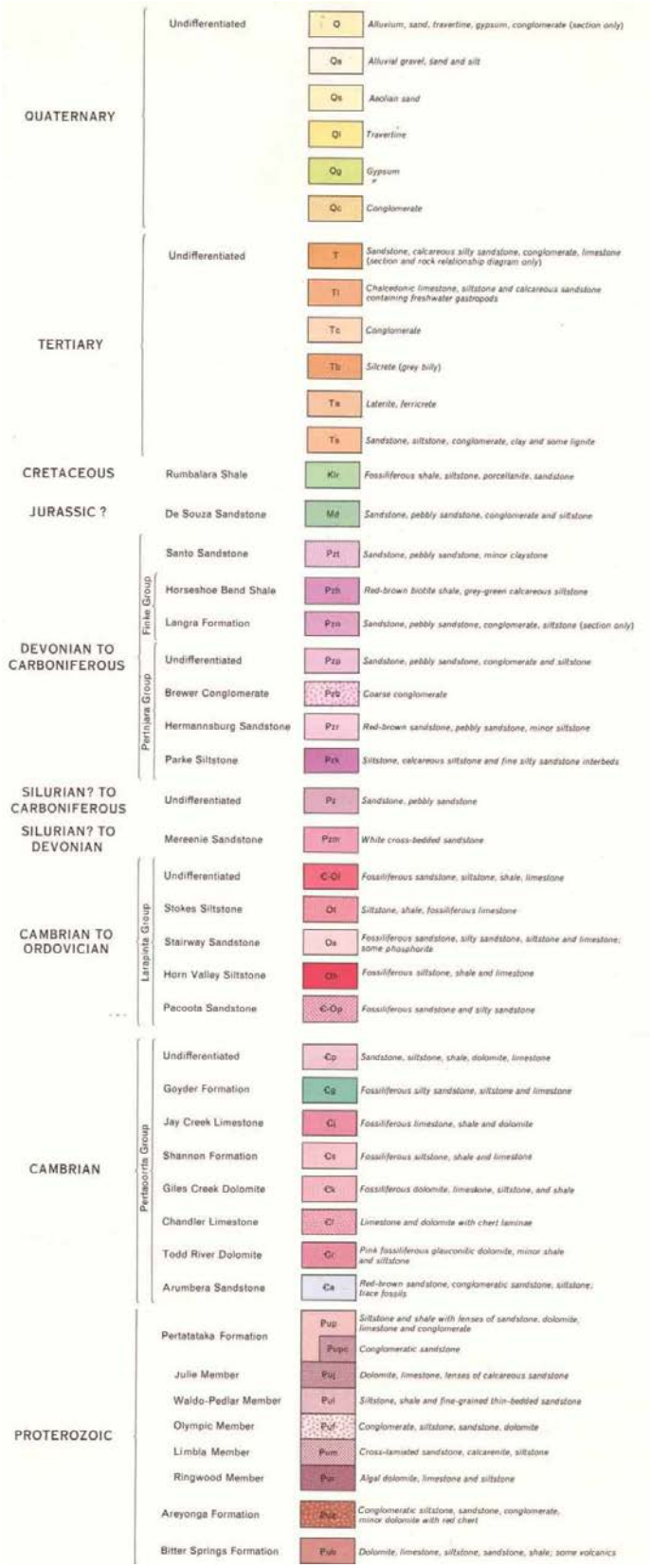
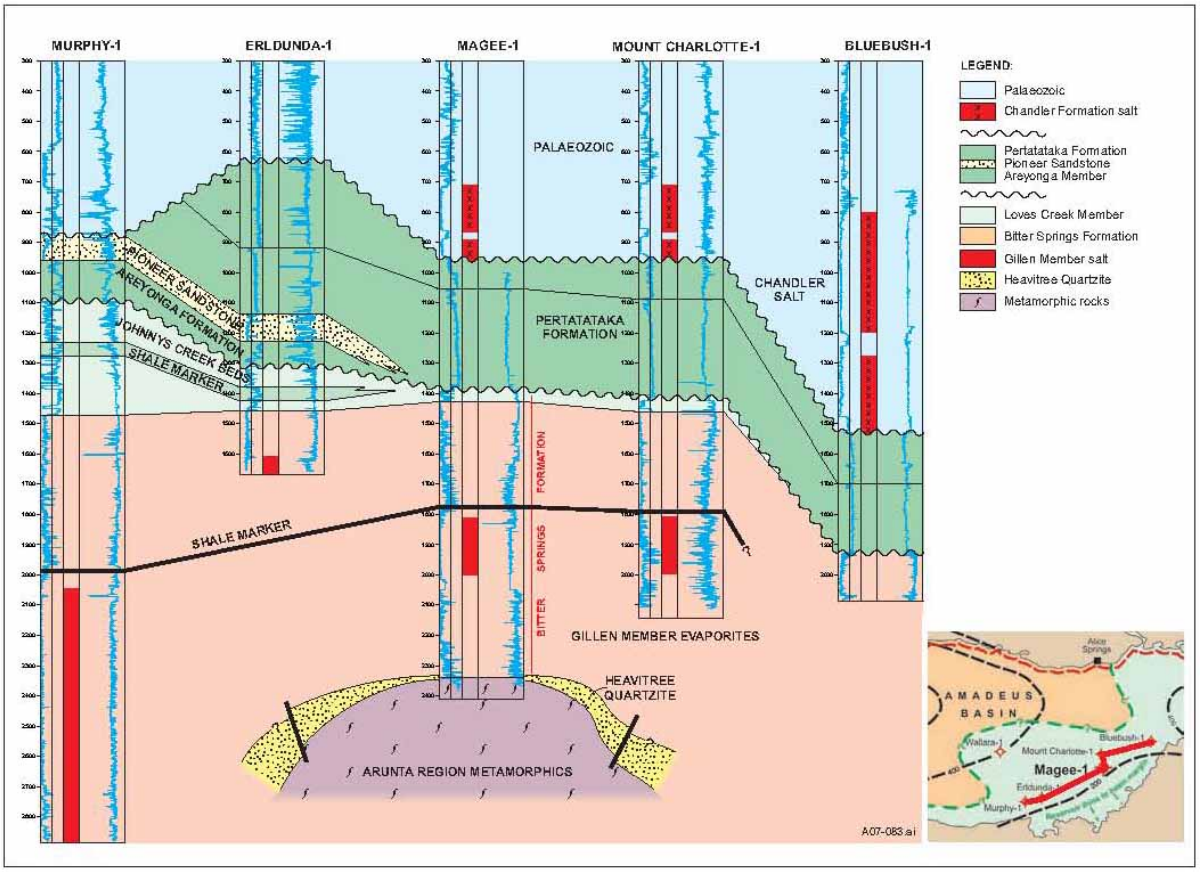


Table 2: Generalised stratigraphy for the Chandler Project area

AGE		STRATIGRAPHY		
Cainozoic	Quaternary		undifferentiated	
	Tertiary		undifferentiated	
Palaeozoic	Devonian		Santo Sandstone	
		Finke Group		
		Pertnjara Group	Pertnjara Formation	
	Ordovician	Larapinta Group	Stairway Sandstone	
	Cambrian	Pertaoorrta Group	Jay Creek Limestone	
			Chandler Formation	
			Arumbera Formation	
Precambrian	Upper Proterozoic		Winnall Beds	Pertatataka Formation
			Bitter Springs Formation	Loves Creek Member
				Gillen Member: Upper Gillen
				Gillen Salt
				Lower Gillen
			Heavitree Quartzite	
	Middle Proterozoic	Musgrave Block	Arunta Complex	

Figure 5: Correlation between wells (from Young and Ambrose, 2007)



7 EXPLORATION ACTIVITES CONDUCTED DURING 2010-2011

Exploration activities were carried out by Terra Search for Tellus. Initial activities included geophysical review of open file datasets, seismic interpretation and modelling, visit to NTGS core facility to collect samples from previously drilled petroleum wells. Drill samples were analysed by portable XRF, geochemical analysis and mineralogical investigation.

8 EXPLORATION ACTIVITES CONDUCTED DURING 2011-2012

During the second year of tenure, Tellus completed the requirements for the Mine Management Plan ("MMP") for exploration operations for the Chandler Project.

Tellus signed an exploration agreement with traditional owners, through the Central Land Council ("CLC") and obtained a CLC Sacred Site Clearance Certificate for proposed seismic and drilling activities.

Tellus commissioned URS to complete a Prefeasibility Study (PFS) on the Chandler salt mine project that was finalised in June 2012.

Tellus conducted a thorough review of all target sites, short listing the most prospective sites for a mine site and recommending the least prospective for relinquishment. It was been recommended that EL27972 be retained and EL27974 be partially relinquished.

9 EXPLORATION ACTIVITES CONDUCTED DURING 2012-2013

9.1 Onsite Geological and Geotechnical Assessment

A site visit was conducted on 25th to 26th February 2013 by Duncan van der Merwe and Joe Luxford from Tellus and John Braybrooke from Douglas Partners Pty Ltd. The aim of the visit was to assess the geology and ground conditions to assist with drill planning.

As part of the on-going studies for the project Douglas Partners completed a brief report describing the likely geotechnical properties of the rock formations in the area of the Charlotte Range and Maryvale Hills, Southeast Amadeus Basin, Northern Territory.

9.2 Chandler Seismic Review

Tellus commissioned RPS Group Canada to review available open file 2D seismic data to assess salt extent and thickness of the Chandler Formation, within the Tellus project area.

RPS concluded that;

- Average Chandler Isopach 200m – 250m thick.
- Calculated Chandler Isopach ranges from 0m - 380m thick.
- Chandler formation flat lying with an average dip of less than one degree regionally.

10 EXPLORATION ACTIVITES CONDUCTED 2013-2014

10.1 Drilling program on adjacent tenement EL29018

To confirm the depth and thickness of the Chandler salt Formation over the project area, two deep diamond drillholes (CH001A, CH003) were completed on adjoining tenement EL29018 (Figure 6). The locations were selected based on combination of factors included proximity to existing seismic lines, interpreted depth and thickness of Chandler Formation. The drilling program took place from November 2013 to January 2014. The Chandler Formation was intersected in both drillholes, with high recovery of core achieved. Samples have been sent for chemical and mineralogical analysis, results pending.

10.2 Wireline Survey

A downhole wireline survey was run on drillhole CH001A, with data collected from the depth interval 316m – 1089m. The following down hole acquisition took place;

- Multi Survey Tool
- Natural Gamma (g)
- Spontaneous Potential (SP)
- 16”N and 42’Resistivity
- Point Resistance
- Mag Deviation/Gyro
- Temperature
- Full Wave Sonic
- Magnetic Susceptibility/Conductivity
- Acoustic Televiewer

The formation tops were interpreted from wireline data and used to correlate formations with petroleum wells Mt Charlotte 1 and Magee 1.

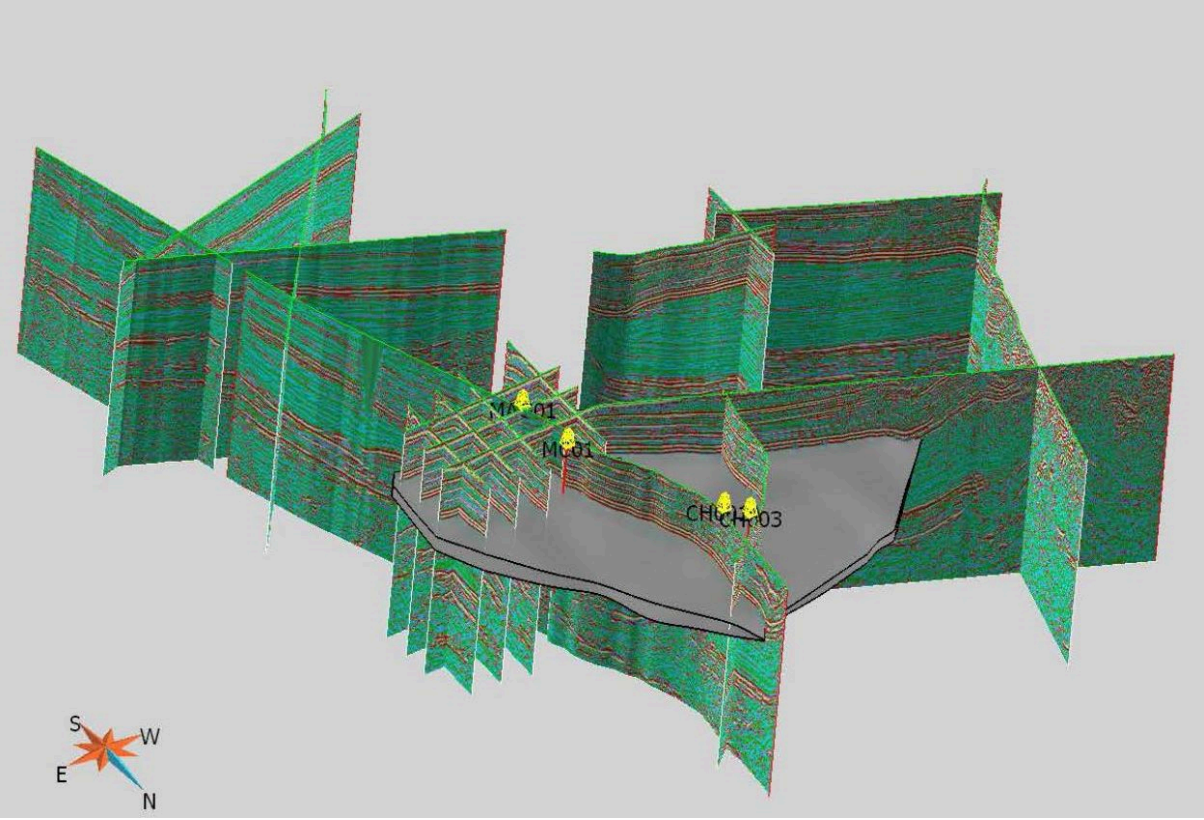
10.3 Seismic review and modelling

Six seismic lines fall with EL27972 and four within EL27974 (Figure 7) and are part of the Chandler Project seismic model.

RPS Canada reviewed the newly acquired drillhole and wireline data. The full wave sonic data was used to tie the drillhole to the seismic survey lines. The time - depth relationship was calculated for intersected marker beds and used to convert the seismic from time domain to depth domain.

The interpretive geological model over the project area has been updated and refined (Figure 6).

Figure 6: seismic modelling of Chandler Formation extent



11 EXPLORATION ACTIVITIES CONDUCTED DURING CURRENT REPORTING PERIOD

11.1 Groundwater Investigation

A survey reconnaissance of water and exploration bores located on Maryvale Pastoral Station was conducted on behalf of Ride Consulting for Tellus Holdings from 25th to 27th April 2015.

The field program aimed to locate and document 13 selected water and exploration bores at various locations on Maryvale station and Titjikala town site which had been selected prior to the program for the purpose of conducting a regional hydrological survey as part of the future proposed development of the Chandler Salt Mine project.

Field notes and photographs were documented during the survey to record important features which may impact on future monitoring activities including; track availability, distances and ease of site access, track condition, nature of landscape (flora, regolith, drainage and geology), location of station or town infrastructure and state of repair/condition, plus any other features or information considered relevant.

The reconnaissance report is included as Appendix 1.

11.2 Feasibility Studies

Tellus progressed definitive feasibility (FEL2) studies for the Chandler Project. This included site reconnaissance of ground adjacent to the Central Australian railway, within EL27974.

The site was assessed for potential suitability for proposed development of a rail siding location. Site visits were undertaken with representatives from the Department of Environment (Federal) and Department of Transport (NT) (Figure 7).

Figure 7: Site visit to EL27974 with representatives from Department of Environment

12 PROPOSED EXPLORATION

Tellus have progressed the definitive feasibility study to FEL2 standard for the Chandler Project, during 2016 a bankable feasibility study (FEL3) will commence. Onsite work will focus on geotechnical studies and engineering. EIS studies for Chandler Project are continuing, proposed site work includes further water investigation, monitoring and modelling, cultural heritage assessment and seasonal ecology surveys.

13 REFERENCES

Northern Territory Geological Survey, March 2006. Geological Regions of the Northern Territory map sheet.

Wakelin-King, G. and Austin L., 1992. EP 38, Well Completion Report Magee 1 Northern Territory. Pacific Oil & Gas. Limited, Report no. 304715. NTGS Open File Petroleum Report PR1992-0121

Young IF, Ambrose GJ, 2007. Petroleum geology of the southeastern Amadeus Basin: the search for sub-salt hydrocarbons. In Munson TJ and Ambrose GL (editors) 'Proceedings of the Central Australian Basin Symposium, Alice Springs, Northern Territory, 16/18 August 2005'. NTGS Special Publication 2, 183-204

A.1 **Appendix 1**

Field Reconnaissance Report – Water Investigation

SUMMARY REPORT

FIELD RECONNAISSANCE PROGRAM

FOR THE

TELLUS CHANDLER SALT PROJECT

APRIL 2015

Author: G. Price
Date: 11th May 2015
On behalf of: Ride Consulting.

Introduction

A survey reconnaissance of water and exploration bores located on Maryvale Pastoral Station was conducted on behalf of Ride Consulting from 25th to 27th April 2015. Supplies of diesel fuel and water were transported to the Tellus field camp as part of the field program with the visit also being completed to assist with the latter preparation of an on-site operations manual.

This field program aimed to locate and document 13 selected water and exploration bores at various locations on Maryvale station and Titjikala town site which had been selected prior to the program for the purpose of conducting a regional hydrological survey as part of the future proposed development of the Chandler Salt Mine project (Tellus Holdings Limited).

Field notes and photographs were documented during the survey to record important features which may impact on future monitoring activities including; track availability, distances and ease of site access, track condition, nature of landscape (flora, regolith, drainage and geology), location of station or town infrastructure and state of repair/condition, plus any other features or information considered relevant.

For each bore that was successfully located, observations were documented including; detailed notes and measurements, a series of photographs and water samples were collected where possible for latter analysis. Site location access maps were drafted and are included in the appendix section of this report.

Table 1: Details of 13 existing water or exploration bores selected for the first reconnaissance survey on Maryvale Pastoral Station

Registration Number	Name of bore or well	Location	Details
16632	Magee Water Bore	Maryvale Station	
15993	Magee # 1 Oil Exploration Bore	Maryvale Station	
10970	Mt Charlotte Oil Expl	Maryvale Station	
10969	Abd exoil water bore (Halfway Bore)	Maryvale Station	
4623	Erics dud Mt Charlotte	Maryvale Station	
14584	# 84 Bore	Maryvale Station	
2957	Black Hill Bore	Maryvale Station	
15443	Bokhara Bore	Maryvale Station	
4469	Redbank Bore	Maryvale Station	
14572	Wireyard Bore	Maryvale Station	
15432	New Homestead Bore	Maryvale Station (Titjikala town site)	
15902	WRB Observation Bore # 2	Maryvale Station (Titjikala town site)	adjacent PWC prod bore RN 10535
15901	WRB Observation Bore # 1	Maryvale Station (Titjikala town site)	adjacent PWC prod bore RN 10534

Summary of field program; Saturday, 25th April

The field program commenced around mid-morning on Saturday, 25th March with mobilisation of the field vehicle (4WD hired from Budget Rentals) and field trailer from Alice Springs to the Tellus field camp. The trip was completed by 1PM, without any tyre punctures or other problems being encountered.

On arrival at the Tellus camp at Halfway Dam, the first task involved the transfer of diesel and water. About 400litres of diesel fuel was transferred from two 44 gallon drums on the trailer to the generator storage tank by hand-pump. The storage pod had only been partially filled (full capacity of 1000litres) with approximately 300litres of fresh water being subsequently transferred from the pod to the water storage tanks within the generator container using a 12volt pump and hose.

The first bore reconnaissance then commenced around 3PM and as the traverse commenced late in the day, the decision was made to head south to locate Magee Bore (RN16632). This was the most southerly bore in the program and being located about 20km from the camp would allow access given the limited time available owing to such a late start.

The main station access track was followed southward from the camp at Halfway Dam and crossed a deeply incised, sand-filled creek (393800mE, 7255820mN) before reaching a junction with a station track about 1km south of the camp (393800mE, 7255710mN). The track headed west and appeared to be disused. From this point south the track passed through mulga scrub on sandy soils, with a series of shallow sand dunes being encountered further towards the south (394310mE, 7254705mN).

Further south, the track passed through an area of heavily eroded ridgelines that trended roughly east-west (outcropping Late Palaeozoic Santo Sandstone) and the track followed the edge of a shallower section of the outcrop (394635mE, 7254100mN). Several panorama photographs being recorded (Plates 1&2).

The station track continued south, through sandy soils and mulga scrub and passed through a 200m long section of boggy sands (between 394715mE, 7253430mN and 394890mE, 7253060mN) before continuing through similar sandy soils and mulga scrub to the start of shallow sand dunes and desert oaks (395470mE, 7252115mN). The track continued south through sandy country and mulga scrub, with intermittent shallow sand dunes and crossed a deeply incised creek (396860mE, 7249435mN).

Continuing south, the track diverted around a deeply eroded wash-out (397200mE, 7248575mN) and continued for several kilometres past an old dam (397820mE, 7246450mN) immediately east of the track where the Mt Charlotte exploration bore was located on the next day. The track passed an old stockman's camp and shower and tank (397785mE, 7246265mN) located a few

Plate 1: Santo Sandstone outcrop along track (394635mE, 7254100mN).

Plate 2: Panorama view south from outcrop along track (394635mE, 7254100mN).

hundred meters north of the station yards (398000mE, 7245866mN) at a distance of 11.9km from the Tellus Camp near Eric's dud bore. Larger sand dunes were observed over the last kilometre north of the yard and a number of lesser tracks were mapped around the yards. A disused track was mapped immediately west of the yards which headed SSW over a large sand dune (track junction at 397980mE, 7245720mN), which was followed to following day to locate the Magee No#1 exploration bore. A track junction was mapped further south of the yards (398355mE, 7245345mN) which was later followed to access the collapsed water tank and new poly tanks located just east and south of the yards.

Further south from the yards, the station track continued southward through sandy soils and intermittent dunes with a predominance of acacia scrub. Several large dunes were mapped and photographed further south (401225mE, 7243490mN). The track continued towards south-east into a more undulating landscape, comprising irregular calcrete exposures and a series of deeply incised creeks, filled with gravels on eroded calcrete (402075mE, 7242500mN) and surrounded by large sand dunes located just north of Magee Bore (Plate 3). Black poly pipe (water pipeline currently feeding the tanks at Eric's yard?) was observed in shallow exposures along the verge of the track and provided an indication that the bore was nearby. The track continued south for a few hundred meters through more densely vegetated country, comprising large eucalypts, tea tree and other acacia species down to the edge of the Finke River.

Magee Bore RN16632 (402462mE, 7242276mN) was found at the end of the track at a distance of 17.9km from the Tellus Camp on the northern bank of the Finke River which was the first bore successfully located during the reconnaissance program. The bore was confirmed to be operating and was currently feeding the same black poly-pipe (Eric's yard source?) via a Kubota diesel powered helica-rota (belt-driven) bore pump (Plate 4).

Detailed notes, measurements and photographs were recorded for Magee Bore (RN16632) before departure on the return journey northward to locate Eric's dud Mt Charlotte Bore (RN4623), located in the Eric's yard area.

Eric's yard was reached just after 5PM and a quick reconnaissance of the area around the yards in fading light failed to locate any evidence of the bore. A large collapsed water tank was examined and mapped (398180mE, 7245710mN) and a traverse conducted on-foot according to the collar location found no trace of the bore with the exception of several shallow surface costeans (398195mE, 7245630mN) and some sections of broken steel and black poly-pipe across the top of a shallow sandy rise in the area further south of the tank and yards.

This concluded the reconnaissance for Saturday, 25th April with the survey being planned to commence again in first-light in the Eric's yard area on the following day.

Plate 3: View west from calcrete creek towards large sand dune (401225mE, 7253490mN).

Plate 4: Magee Bore RN16632 (402262mE, 7242276mN). Finke River can be observed in the background, through thick tea tree scrub about 50metres south of the bore.

Summary of field program; Sunday, 26th April

The second bore reconnaissance commenced at 7AM from the Tellus Camp and traversed south to the Eric's yard area to continue on from where the survey finished on the previous day. The plan of attack for the day involved location and surveying of the 3 remaining bores in the Eric's yard area, before heading further north to locate bores in other parts of Maryvale station.

According to the records, two of the bores were located at close proximity to the station track, but a third bore (Magee#1 Oil Exploration bore RN15993) was located approximately 4 km further west of the track at Eric's yard. Reconnaissance conducted on the previous day identified high sand dunes towards the west with this bore being considered to be most difficult to access out of all 13 bores in the reconnaissance program.

Location of RN15993 was prioritised as a consequence, with timing of this traverse being favored for earlier in the day based on the author's previous experience with driving a heavier diesel-powered vehicle over sand dunes. Here, driving was considered easier early in the day when the sand was still cool and being more able to sustain the vehicle weight owing to the sand being more rigid.

The grid co-ordinates were uploaded on a hand-held GPS before access was attempted via a disused station track that was mapped the previous day to head over the sand dunes towards the south-west. This was initially thought to be the remainder of the original access track constructed to the site and considered to be the best/shortest path to the bore. The track was followed from the junction (397980mE, 7245720mN), over the first dune (397965mE, 7245280mN) and further towards the south for up to 1 km (397870mE, 7243330mN). At this point, the track was confirmed to be heading south, as opposed to west towards RN15993 where the traverse was halted and the vehicle driven back to Eric's yard. A search was then conducted to identify another potential route and after consideration, an alternative cross-country route was followed with the guidance of the GPS.

The traverse commenced near the stockman's camp (397785mE, 7246265mN) and headed west for a distance of about 4km to the theoretical location co-ordinates. A number of steep sand dunes trending along a general NNW-SSE strike trend and the traverse deviated significantly on occasions to locate the most easily traversed (lowest and thinnest) part of each dune. After successfully traversing to within 200metres of the theoretical co-ordinates in the field vehicle, a thorough search was conducted on-foot to locate the bore.

The area was gridded for several hundred metres around the collar point with no success, with old drilling reports being reviewed to re-confirm the co-ordinates. The search was abandoned around 9AM after a thorough search of the area failed to locate the bore. The area was photographed (Plates 5&6) before the return journey commenced back to Eric's yard to locate the remaining two bores.

Plate 5: View south across the mapped location of Magee No1 Oil Exploration bore.

Plate 6: Mapped location for Magee No1 Oil Exploration bore (393800mE, 7245400mN). Area is surrounded by sand dunes up to 5m in height and trending NNW-SSE.

Plates 7-10: Shower at the stockman's camp (Top LH); Poly tanks fed by Magee Bore at Eric's yard (Top RH); Collapsed tank and costeans south of Eric's yard (Lower images).

Plate 11: Reconnaissance of historical co-ordinates, for alternative location for Eric's dud Bore (133°59'21"E, 24° 53'04"S).

Once back to the main station track at Eric's yard, it was noted that water was being pumped to the tanks via the poly-pipe from Magee Bore (Plate 7). A water sample was collected for analysis before the search commenced to locate Eric's dud bore RN4623. A further search of the immediate area on-foot (around the mapped co-ordinates; 398232mE, 7245503mN) failed to locate the bore with the surrounding area being subsequently gridded. This further search identified the old collapsed water tank (398180mE, 7245710mN) and an area containing several shallow costeans (398195mE, 7245630mN). Fragments of old pipe and offcuts of black poly-pipe were also identified around the immediate area however, the bore location could not be found (Plates 8-10).

A review of old well records for RN4623 identified an alternative location (133°59'21"E, 24° 53'04"S), with a new reconnaissance being conducted towards the east of the station track several kilometres to the north of Eric's yard which also failed to locate the bore (Plate 11). The search to find Eric's dud bore was abandoned at 10:30AM, with all efforts then being focused towards locating the only remaining bore; Mt Charlotte Oil Exploration Bore (RN10970) which was located about 5km further north according to the base map.

The station track was followed north to the recorded location for RN10970 (397730mE, 7246690mN) which was located at a distance of about 100metres west of the station track in an area of shallow sand dunes. A traverse was conducted on-foot in the immediate area which failed to find the bore however, a search of the surrounding area did locate some heavily rusted drilling casing components. A check of the old drilling records identified a different collar co-ordinate (397600mE, 7246519mN) and this area was subsequently traverses with no success. A broader traverse was conducted in the surrounding area which located a disused track (possible fire break?) which was followed for a short distance without the bore being successfully located.

Further south, the reconnaissance conducted on the previous day had mapped a large dam, just east of the track which may have indicated a potential drilling site. An inspection of the area on-foot successfully located Mt Charlotte Oil Exploration Bore (RN10970) about 5metres north of the dam (397844mE, 7246512mN). No head works were located at the bore, apart from the single steel casing which was capped by a loosely-fitting bucket (Plate 12).

Detailed notes, measurements and photographs were recorded and attempts were made to obtain a water sample. The depth of the water table was around 90m with most of the sample being lost by the time the dipper was retrieved back to the surface however. This work was completed by 11:15AM with departure back to the Tellus camp.

The reconnaissance resumed after lunch for the Halfway Bore (Abd Exoil exploration bore RN10969) which was located a few kilometres west of the Tellus camp according to the base map (392824mE, 7255594mN). To locate this bore,

Plate 12: Mt Charlotte Oil Exploration Bore RN10970 (397844mE, 7246512mN)

Plate 13: View south across the deflation plain, at recorded location for Halfway Bore (Abd Exoil exploration bore; RN10969). This bore was not located during the traverse.

the disused station track was followed from the junction (393800mE, 7255710mN) just south of the camp towards the west for just over a kilometre.

The track was heavily rutted in areas from just west of the turnoff with a change in the vegetation and soils from sandy soils to sand and clay loam soils and thicker mulga and acacia scrub being observed. The station track continued west along the northern tip of a shallow, upward grading and gravel-covered deflation plain in the area close to the mapped bore location. The deflation plain was distinctive owing to the coarse gravels and small bushy acacia species that continued in the southern direction up to the ridgeline outcrop located several hundred metres further south (Plate 13).

A traverse was conducted on-foot in the area around the recorded location for RN10969 which failed to locate the bore. The search was halted around 1:30PM with documentary photographs being recorded of the area before the traverse was continued along the disused station track towards the western direction to locate the #84 bore, which was located about 10km further west.

This station track was not currently being used by staff from Maryvale Station and was confirmed to be in poor condition and heavily overgrown in parts right up to #84 bore where the track condition improved considerably through to the main Titjikala to Chambers Pillar access road. The track contained heavily rutted as well as extensive boggy sand-filled areas that could only be negated with the 4WD engaged on the field vehicle. Regardless of the difficulty and slow travel rate possible, this track could be successfully followed and does represent a potential access to #84 as well as other bores in the south western part of the station from the Tellus camp.

From the Halfway Bore area, the station track continued west across a washout/ creek (391980mE, 7256000mN) and continued through thick mulga scrub on clay soils with intermittent areas of more open scrub and spinifex on sandy soils with a large sandy section of length 100metres being traversed before passing through a shallow creek (390315mE, 7257285mN). Several areas sandy soils were encountered for several kilometres (398800mE, 7256150mN) with 4WD being required owing to the boggy conditions. From this point, minor areas of sandy soils were encountered that were more easily traversed without becoming bogged and this continued to the edge of an area of a shallow deflation plain, containing discrete areas of silcrete and sedimentary outcrop (386735mE, 7254877mN).

The station track continued northwards from this point and was heavily rutted and washed out in parts. Denser mulga and acacia scrub on clay and sandy clay regolith and intermittent mulga thickets were mapped over a distance of several kilometres (386150mE, 7255275mN). Further north, a sandy section was traversed which required 4WD for most of the way up to the east-west fence line and gate (384470mE, 7257730mN). The track then continued north through thick

Plates 14&15: Abandoned windmill, located 1km east of #84 bore (384100mE, 7258750mN) and large decommissioned water tank, located on crest of ridgeline, Charlotte Range (384125mE, 7259060mN). Location of #84 bore was later identified to be about 1km further south-west from this vantage point.

Plate 16: #84 bore RN14584, located on southern edge of Charlotte Range (383802mE, 7258610mN).

mulga scrub and was noted to be in poor condition with frequent wash-outs and rough sections on hard clay soils. The gradient rose shallowly towards the north up to the edge of Charlotte Range where #84 bore was located.

The first station infrastructure identified in the area was a decommissioned windmill and tank (384100mE, 7258750mN) located immediately east of the station track at the base of a steep ridgeline (Plate 14). The location was mapped and several photographs were recorded before the search continued to locate #84 bore. According to the base map, this bore was located along a short track running along the ridge crest towards the west of the windmill however, the mapped co-ordinates identified a position several hundred metres further south.

A traverse was conducted following several tracks in the vehicle, followed by a search of the immediate area on on-foot which failed to locate any sign of a bore. The area was noted to be in thicker scrub further south which was not consistent with the base map and several panorama photos were recorded before the search resumed further north. The track was followed back up to the ridgeline, before diverting up a rough bulldozed track that headed straight up the side of the steep ridgeline to a large water tank (384125mE, 7259060mN) on the crest of the ridge (Plate 15). The tank was decommissioned and appeared to have been originally connected to the abandoned windmill located below and the location was mapped and the panorama scanned for any sign of #84 bore. A review of old bore reports was also completed which indicated a location several kilometres further west (382576mE, 7258331mN) however, no evidence of a track or the bore could be observed from the crest near the tank.

The vehicle was then traversed back down the steep ridgeline and another bore was finally identified amongst thick scrub towards the western direction. A quick search of the area revealed a recently dozed track which was followed west across a graded creek crossing to locate #84 bore RN14584 (383802mE, 7258610mN) at the southern edge of the ridgeline a distance of a few hundred meters further west of the decommissioned windmill (Plate 16) at a distance of 18km along the old station track from the Tellus camp site.

Detailed notes, measurements and photographs were recorded, but a water sample could not be collected however owing to a helica-rota (Kubota powered, belt-driven) being fitted to the bore. This work was completed just after 3PM and the program resumed to locate the Black Hill bore RN2957, located about 20km further east. The station track was followed north through Charlotte Range and comprised of recently graded gravels for most of the most of the way to the main Titjikala-Chambers Pillar Road.

A small creek was crossed (383600mE, 7259930mN) and the track then continued north for about 500metres up an open, gravel-covered deflation plain to the junction with the Titjikala-Chambers Pillar public access road (383445mE, 7260170mN) which was marked by a small white sign (No public access).

The main access road was then followed east towards Titjikala and consisted of gravel for several kilometres (near to the Charlotte Range ridgelines), passing into sandy soils and mulga scrub for about 10kilometres. This track was noted to be in good condition (close to all weather), with some corrugated sections being encountered in the sandier areas. An open gravel plain was then crossed (388000mE, 7264140mN) with good road conditions being encountered for most of the way to the intersection with the main station track (394967mE, 7266245mN) which lead down to the Tellus camp site (Plate 17).

This junction is located 10.9km from the Tellus camp site and was marked by several signs including; a green direction sign (showing directions to Chambers Pillar) and a large white station sign (unmarked) and a smaller white sign (No public access).

The main access road was followed further east to a junction with a small station access track heading towards the north (399820mE, 7267425mN). This turnoff was located just short of a creek crossing located 50metres further east at a distance of 16.3km from the Tellus camp site. The station track was followed for less than 500metres across a gravel plain to the southern edge of a densely vegetated creek (399720mE, 7267885mN) with numerous old-growth eucalypt and acacias. The track became sandy and veered west-ward across the creek to the northern edge of the creek (399550mE, 7267965mN), located on the edge of a rocky shallow ridgeline about 100metres further north.

The track continued around the edge of the ridgeline before continuing north, rising up through sandy country for about 3-4kilometres (398930mE, 7268305mN) and then headed towards the east for another 3-4kilometres across a series of shallow sand dunes (4WD was required) to the edge of a sharp ridgeline (Black Hill) which marked the western bank of the Hugh River (399365mE, 7269518mN). From this point, the track turned south and continued for several hundred metres along the edge of a thin sandy river bank between the river (east) and a sharp/steep sandstone ridgeline (west) to the windmill and tank at Black Hill bore RN2957 (399493mE, 7269618mN).

A windmill was located over the bore which was adjacent to the edge of the steep ridge. The windmill originally fed a small (10,000L) tank and trough but was now decommissioned (Plate 18). Detailed notes, measurements and photographs were recorded, before a water sample was collected from the open bore (not currently capped). This work was completed by 4:15PM and the program resumed to locate the next bore (Bokhara bore RN15443), which was located about 30km further north on the main Alice Springs-Titjikala Road, near the northern boundary of Maryvale station.

The turnoff to Bokhara Bore (403455mE, 7291645mN) was located towards the west off the Alice Springs-Titjikala Road just before 5PM and was located 20metres short of a wide gravel creek crossing. The track veered off to the north-

Plate 17: View towards west (approaching) of junction between Titjikala Chambers main access road and station access track to Tellus camp site (394967mE, 7266245mN).

Plate 18: Black Hills Bore RN2957, located on western bank of the Hugh River, adjacent to a sharp/steep sandstone ridgeline (399493mE, 7269618mN).

west and immediately crossed a wide, sand/gravel creek channel which was extremely boggy and required 4WD to access (403175mE, 7291780mN). A later reconnaissance of the yards identified another access to the site about 100metres further north of the creek along the main road, which would allow easier access to the bore.

The track continued for about 50metres to a junction at the eastern edge of the yards continued west, past a large tank to a large decommissioned windmill RN3288 (403000mE, 7291890mN). Bokhara Bore RN15443 was located about 30metres west of the windmill (402866mE, 7291885mN) at a distance of 48.5km from the Tellus camp site.

Detailed notes, measurements and photographs were recorded for both the windmill RN3288 and Bokhara Bore RN15443. The windmill bore (RN3288) was observed to have collapsed, but Bokhara bore (RN15443) was currently commissioned and operating via an electric pump powered by a Kubota diesel generator. A water sample could not be collected owing to the pump being fitted. This work was completed by 5:30PM which concluded the field work for the day with the return journey being completed straight back to camp.

Plate 19: Bokhara Bore RN15443 (foreground), located 30metres west of the decommissioned windmill (RN3288) and tanks. This was the most northern bore examined as part of the April 2015 reconnaissance program.

Summary of field program; Monday, 27th April

The third and final bore reconnaissance commenced at 7AM from the Tellus Camp and traversed north to locate bores in the Titjikala area. The prior plan for the day involved location and surveying of three bores in the Titjikala town site, before heading further south along the Hugh River to locate and sample two remaining station bores within the river corridor further towards the south.

From the Tellus camp site, the main station track was followed north through sandy country with a moderate cover of mulga and acacia, with minor ironbark on occasional shallow, gravel-capped rises to an east-west fence-line and gate at 5.3km from the camp. The gate marked the start of heavier sandy spinifex-covered soils with scattered desert oaks, acacia which continued for about 3 km to the southern flank of a steep sandstone ridgeline (393988mE, 7264120mN), comprising the most southern extension of the Charlotte Range in the immediate area.

The track veered east around the ridgeline and continued for about 1km across a gravel-covered deflation plain with ironbark and desert oak species before heading towards the northeast direction through sandy spinifex country, with occasional clay soils with other grass species and desert oak and acacia species being widespread. The station track reached the junction with the main Titjikala-Chambers Pillar access road (394950mE, 7266235mN) at a distance of 10.9km from the Tellus camp site.

The access road was then followed east, towards the Titjikala town ship which followed the Charlotte Ranges and comprised both gravel sections which were found to be in good condition and sandy sections which were moderately to heavily corrugated. The small track access to Black Hills bore was passed at 16.5km from the Tellus Camp and the track then continued for several kilometres to the Hugh River crossing (402430mE, 7269510mN). This was a significant river crossing, with a 50m wide gravel crossing that would be expected to be closed during/after heavy rains owing to substantial flood waters.

The road then continued along the north bank of the gravelly river bed past large eucalypt species (river gums) for several kilometres before it ascended a steep windy section at the edge of a large sandy ridge line (western edge of 30metre high, stabilised dune at 404500mE, 7271040mN). Caution is recommended when ascending/decending this section owing to the steep drop-off on both sides of the road. The road was then followed through a sandy section which contained several sharp right-angle bends, including through a fence line and gate for several kilometres to the western edge of the Titjikala town site.

Just short of the town boundary fence, an angled junction was reached with a well-used station track (406040mE, 7270800mN) which was followed towards the south to a bore (406060mE, 7269760mN) located on the northern bank of the Hugh River (Plates 20&21). This bore was currently commissioned and located

Plates 20&21: Unmarked bore (RN1385 or 3289?), located at the south-western corner of the boundary fence line for the Titjikala town site, on the north bank of the Hugh River.

Plate 22: View west of town water supply bore for Titjikala. Previously mapped (unmarked) bore is located beyond the creek-line, in the background of the photograph.

at the south-western corner of the boundary fence line for the Titjikala township.

According to the base map, this bore was either RN1385, or RN3289 however, there was some confusion at this point of the reconnaissance owing to the large number of documented bores included in the Titjikala town area. The bore was fitted with a helix-rota (belt-driven diesel Kubota) which did not allow a water sample to be collected however, a small bleed tap was noted that would allow for sampling when the bore was running.

Detailed notes, measurements and photographs were recorded, before the program resumed with the aim of locating the three nominated bores in the Titjikala town ship area (RN15901, RN15902 and RN15432). A large tower and water storage tank was noted towards the east, which appeared to be located within the town area on the other side of a creek and this was considered a possible location point for the other bores. The vehicle was traversed back to the main track which was followed into the Titjikala town site.

At the main intersection, a right-hand turn was made onto the sealed road which was followed east across the creek into Titjikala town centre. A right-hand turn was made into Ngintaka Road, which was followed through the town and towards the south onto an unsealed section which continued up to the large tower and water tank located on a shallow rise less than 1km from the settlement. Here, two fenced bore were identified near to the water tower and the vehicle was then traversed across to a third unfenced bore located 100metres further to the south. The base map indicated a cluster of three bores, with two additional bores within the vicinity however, the exact location of the three nominated bore was still unclear.

The first unfenced bore (406273mE, 7269671mN) was examined and found to be unmarked. This was commissioned and currently in-use with an electric pump being fitted and powered by mains power from the town grid. Detailed notes, measurements and photographs were recorded, before the other two fenced bores were examined. The first, located on the west (406268mE, 7269770mN) was examined and found to be unmarked (Plate 22). This bore was fitted with an electric pump which was also powered by mains power from the town grid. The third fenced bore was then examined (406290mE, 7269785mN), which was also unmarked. This bore had a helix-rota fitted, powered by an electric motor. A belt-driven Kubota diesel motor was also fitted in a back-up configuration. Photographs were taken of both bores and at this point, a site supervisor from the McDonnell Shire visited the site to confirm the nature of the visit.

A request was made for all current and future visits to be recorded, by signing-in and signing-out at the desk of the Shire Office in the Titjikala town centre. This was subsequently completed immediately after the site reconnaissance and before departure to locate the last two bores in the program.

Plate 23: Agriculture bore, panorama view north showing town bores (tripods) and large water storage tank.

Plate 23: Bore RN15901, panorama view towards east showing two fenced town bores.

The site supervisor was then questioned with regards to the bore locations and he confirmed that the two fenced bores were for the Titjikala town water supply with the third bore being the ‘agriculture bore’ which was currently supplying a horticulture project located on the south edge of the town.

Two capped bore were also identified in the immediate area, which were both marked and confirmed to be RN15902 (406323mE, 7269798mN) and RN15901 (406248mE, 7269851mN) which was located about 50m further to the south-east (Plate 23). These locations were incorrect according to the original base map but, both of the bores had NTG labels and were subsequently mapped according to the RN number detailed with detailed notes, measurements and photographs being recorded. Both bores had had smaller diameter inspection pipe being fitted within a welded plate over the bore casing. There was a screw cap at the top of each inspection pipe that did not appear to be welded and could probably be removed with the use of a large wrench or spanner on future visits which would allow for water sample collection and bore monitoring to be completed.

This work was completed by around 9:30AM, with a visit to the McDonnell Shire office then being completed to follow-up on the earlier request from the site supervisor. Following this formality, a search of the broader Titjikala town area was completed to locate the remaining bore (New Homestead bore RN15432).

This search failed to locate any additional bores within the town area and the search was abandoned, with a new reconnaissance to locate the two remaining nominated bores; Redbank bore (RN4469) and Wireyard bore (RN14572), which were both located further south along the Hugh River.

The base map identified a station track that ran along the Hugh River which appeared to access both of the bores however, the exact start point was difficult to determine owing to the large number of random tracks found in the south part of the Titjikala town ship. A reconnaissance of a number tracks eventually located the station access to the bore, which was mapped to start at a junction off Ngintaka Road, about 300metres further east of the town bores and large water tank (406530mE, 7269750mN) and just before the town power station was reached. From this junction, the track was followed south to the south boundary fence line and grid (406690mE, 7269270mN) and was then followed down a windy section which contained many side tracks (caution is recommended here to follow the main track), and down into the eastern bank of the Hugh River.

The track was followed for several kilometres along the base of the ridgeline and eastern edge of the river back, with gravelly and rocky track conditions being encountered down to the first river crossing (406150mE, 7267525mN). 4WD is recommended for boggy sands further south from this point. The track continued for several kilometres southward along the western bank of the Hugh River to the next river crossing (405730mE, 7265210mN). After crossing back to the eastern bank of the river, Redbank bore RN4469 (406097mE, 7264166mN) was then

Plate 24: Redbank bore RN4469, on the eastern edge of Hugh River plain.

Plate 25: Hayes bore (abandoned), located several kilometres further south of Redbank bore, on the western edge of Hugh River.

located at the base of a located at the edge of steep sand dunes on the eastern edge of the river plain about 1 km further towards the south (Plate 24) at a distance of 47.4km from the Tellus camp site. An old windmill, water tank, yards and trough were located at Redbank, which was still being used for stock purposes (stock were observed in the immediate area during the site visit).

The windmill was decommissioned, with the water tank and trough being fed by a black poly-pipe fed from the bore with a helix-rota (belt-driven diesel Kubota) which did not allow a water sample to be collected. Detailed notes, measurements and photographs were recorded, with the program resuming at 10:15AM to locate and map Wireyard bore, which was the last of the 13 nominated bores on this field program.

The track was followed further south for about 1 km along the eastern riverbank to the next river crossing (408780mE, 7263290mN). After crossing to the western river bank, the track was followed towards the southeast for several kilometres to an abandoned bore (408830mE, 7263000mN). A review of the base map identified this to be Hayes bore (Plate 25). The site was inspected, identified concrete footings for the old bore, tank stand and wooden trough footings before several photographs were recorded to document the site.

The track continued along the western riverbank for another 10 km, with shallow, rough calcrete sections being encountered for the last kilometre down to the final river crossing (411720mE, 7255480mN). Having crossed the Hugh River back to the eastern bank, the tripod located above Wireyard bore RN14572 (411781mE, 7255634mN) was located on a steep sandy bank about 100metres east of the river channel on the edge of an area of steep sand dunes (Plates 26&27) at a distance of 61km from the Tellus camp site.

A black poly-pipe connected to the bore with a helix-rota (belt-driven diesel Kubota) which was noted to run east along a station track and assumed to feed the nearby yards. The helix-rota did not allow a water sample to be collected however, a small bleed tap was observed which may allow for future water samples to be collected whilst the bore was being operated.

Detailed notes, measurements and photographs were recorded, and with the completion of the field program, the return journey commenced back to the Tellus field camp by 11AM.

A final visit was made to the McDonnell Shire Office, at the Titjikala town ship to sign-off and indicate that the work program had been concluded.

Plate 26: Wireyard bore RN14572 (411781mE, 7255634mN), located on the eastern edge of the Hugh River.

Plate 27: Wireyard bore RN14572, showing start of sand dunes towards east.

APPENDIX

Table 2: Mapping points and observations from April 2015 field program

Point	Easting	Northing	Date	Details
1	393800	7255820	25/04/2015	Creek, deeply incised
2	393800	7255710	25/04/2015	Junction with old station track heading west, currently unused
3	394310	7254705	25/04/2015	Northern edge of sand dune country
4	394635	7254100	25/04/2015	Edge of shallow ridgeline, larger ridges towards east and south
5	394715	7253430	25/04/2015	North edge sandy section on track
6	394890	7253060	25/04/2015	South edge sandy section on track
7	395470	7252115	25/04/2015	Start widespread sand dunes
8	396740	7249515	25/04/2015	South of the sand dune corridor
9	396860	7249435	25/04/2015	Deeply incised creek, sand dunes towards south
10	397200	7248575	25/04/2015	Track south diverts around deep washout
11	397820	7246450	25/04/2015	Large dam/sump for oil exploration bore?
12	398000	7245865	25/04/2015	Yards (active), near Erics Dud bore
13	397980	7245720	25/04/2015	Junction with old station track heading south-west over dunes
14	398355	7245345	25/04/2015	Junction, track splits in north direction at south end of yards at Eric's dud bore
15	401225	7243490	25/04/2015	Large dunes surrounding area
16	402075	7242500	25/04/2015	Deeply incised creek, pipeline (poly-pipe) visible, large dunes surrounding area
17	402462	7242276	25/04/2015	Magee Bore RN16632, located on north bank of the Finke River
18	397965	7245280	26/04/2015	Crest of first large dune on old track towards SW from Eric's yard
19	397870	7243330	26/04/2015	End traverse along old track towards SW from Eric's yard
20	393800	7245400	26/04/2015	Documented location of old oil exploration bore (RN15993; Magee No1 oil expl bore)
21	397785	7246265	26/04/2015	Old shower/tank/donkey at stockman's camp
22	398180	7245710	26/04/2015	Collapsed tank, 100,000L+ capacity located about 200m south of Eric's yard
23	398195	7245630	26/04/2015	Series of shallow costeans near to location of Eric's dud bore
24	397844	7246512	26/04/2015	Mount Charlotte oil exploration bore RN10970, located north edge of old dam
25	392700	7255550	26/04/2015	Heavily rutted track from turnoff to near bore location
26	392696	7255423	26/04/2015	Documented location of old exploration bore (RN10969; Abd Exoil Halfway bore)
27	391980	7256000	26/04/2015	Washout on track, start of thicker mulga scrub towards west
28	390315	7257285	26/04/2015	Western end of long sandy section on track
29	388800	7256150	26/04/2015	West end of boggy sands, 4WD required
30	386735	7254877	26/04/2015	Shallow rise, gravel plain
31	386150	7255275	26/04/2015	Washout on track, thick scrub, sandy track next 1km towards north-west
32	384470	7257730	26/04/2015	E-W fence line connects with gate on access track further east, track washed out towards north for next 2-3 km
33	384100	7258750	26/04/2015	Decommissioned windmill/bore, no RN number, edge of Charlotte Range ridgeline
34	384125	7259060	26/04/2015	Large tank (100,000L+) on crest of steep ridgeline, 100m east of access track

35	383802	7258610	26/04/2015	#84 Bore (RN14584)
36	383600	7259930	26/04/2015	Shallowly incised creek
37	383445	7260170	26/04/2015	Junction with main E-W access road (Titjikala to Chambers Pillar), sandy country 2-3km to east
38	388000	7264140	26/04/2015	South edge of ridgeline (Charlotte Range)
39	394967	7266245	26/04/2015	Junction with main E-W access road (Titjikala to Chambers Pillar), start sandy country to east
40	399493	7269618	26/04/2015	Black Hill bore (RN2957), located on north bank of Hugh River, edge sharp ridge
41	399365	7269520	26/04/2015	Ridgeline continues from bore along west bank of Hugh River, track turns west into dune country
42	398930	7268305	26/04/2015	End of dunes, track heads south-west into more sandy country down to creek
43	399550	7267965	26/04/2015	North bank of shallow heavily vegetated creek line (100m wide)
44	399720	7267885	26/04/2015	South bank of shallow heavily vegetated creek line (100m wide)
45	399820	7267425	26/04/2015	Junction with main E-W access road (Titjikala to Chambers Pillar), 16.5km from camp. Rocky country to east, creek crossing 100m east from junction
46	402866	7291885	26/04/2015	Bokhara bore (RN15443) and yards, just west of main road to Alice Springs
47	403000	7291890	26/04/2015	Track junction near yards
48	403175	7291780	26/04/2015	Sandy creek crossing (boggy)
49	403455	7291645	26/04/2015	Junction with main road to Alice Springs, creek crossing 30m towards north
50	393720	7261096	27/04/2015	Gate is 5.3km north of camp. Continues west to gate on track near #84 bore
51	393990	7264120	27/04/2015	Track heads east around south side of shallow sandstone ridgeline
52	394950	7266235	27/04/2015	Junction with main E-W access road (Titjikala to Chambers Pillar), 10.9km from camp. Sandy corrugated track next 1km to east
53	406040	7270800	27/04/2015	Junction with small station track 200m from Titjikala town boundary fence
54	406060	7269760	27/04/2015	North bank of river, bore located just west of Titjikala township
55	406273	7269671	27/04/2015	Horticulture bore, Titjikala township
56	406265	7269770	27/04/2015	Fenced bore (town water), Titjikala township
57	406290	7269785	27/04/2015	Fenced bore (town water), Titjikala township
58	406323	7269798	27/04/2015	Titjikala Bore (RN15902)
59	406248	7269851	27/04/2015	Titjikala Bore (RN15901)
60	406690	7269270	27/04/2015	Grid on western edge of Titjikala township
61	406150	7267525	27/04/2015	Track crosses river to west back
62	405730	7265210	27/04/2015	Track crosses river to east back
63	406097	7264166	27/04/2015	Redbank Bore/yards (RN4469), on eastern edge of river
64	408780	7263290	27/04/2015	Track crosses river to west back
65	408830	7263000	27/04/2015	Hayes Bore (abandoned), 200m from west edge of river
66	411720	7255480	27/04/2015	Track crosses river to east back
67	411781	7255634	27/04/2015	Wireyard Bore (RN14572), on eastern edge of river
68	406530	7269750	27/04/2015	Turnoff from Ngintaka Road, Titjikala township to station track for Redbank/Wireyard bores
69	404500	7271040	27/04/2015	Small track along river bank (dead end?)
70	402430	7269510	27/04/2015	Wide river crossing (Hugh River) on main E-W access road (Titjikala to Chambers Pillar)

Table 3: Water samples collected during April 2015 field program.

Sample	Easting	Northing	Date	Details
Sample#1	398000	7245866	26/4/2015	Good quality water sample collected from infill pipe feeding tanks at Eric's yard, probably sourced from Magee bore (RN16632) which is located 5km further south.
Sample#2	397844	7246512	26/4/2015	Poor quality water sample collected from the Mt Charlotte oil exploration bore (RN10970). Very small sample owing to water table being >80metres, with most water lost from dipper tube by the time the instrument was finally removed from the bore (4 attempts made).
Sample#3	399493	7269618	26/4/2015	Good quality water sample collected from the Black Hills bore (RN2957). Water table reached and successfully sampled by dipper tube about 10metres depth down hole.

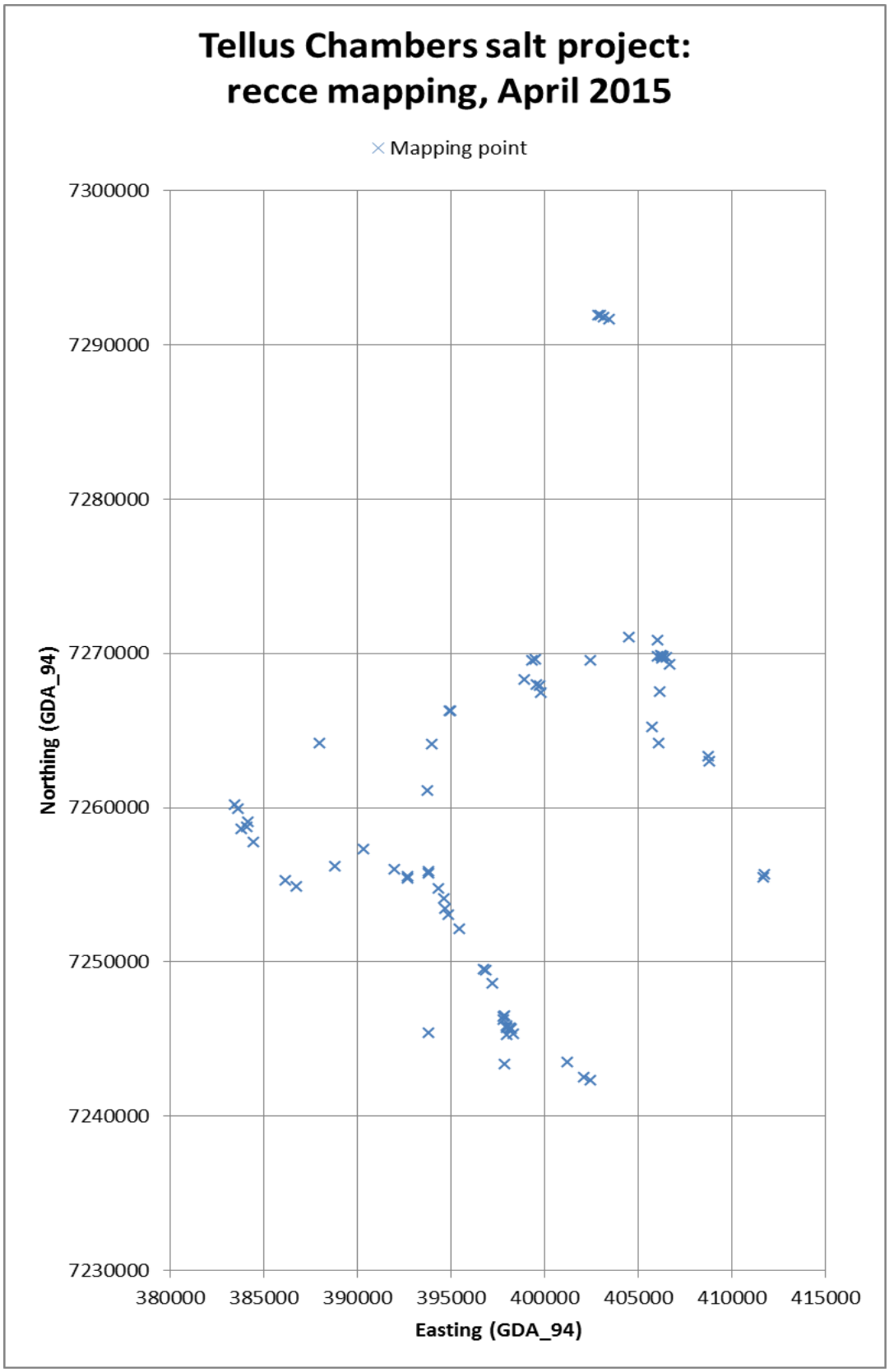


Figure 1: Mapping points recorded during the April 2015 reconnaissance program.

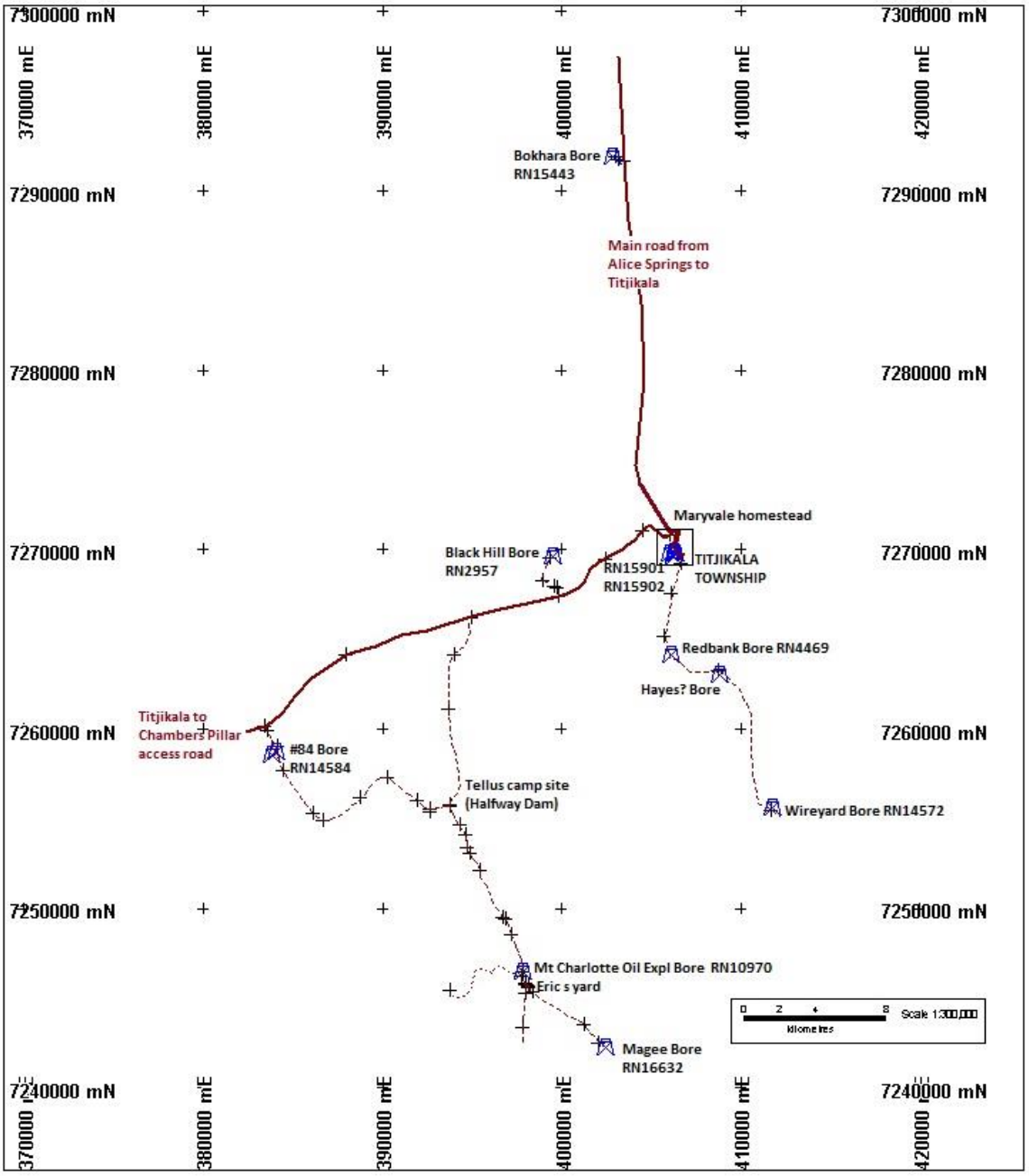


Figure 2: Access tracks and bore locations visited during the April 2015 reconnaissance program, Maryvale pastoral station.

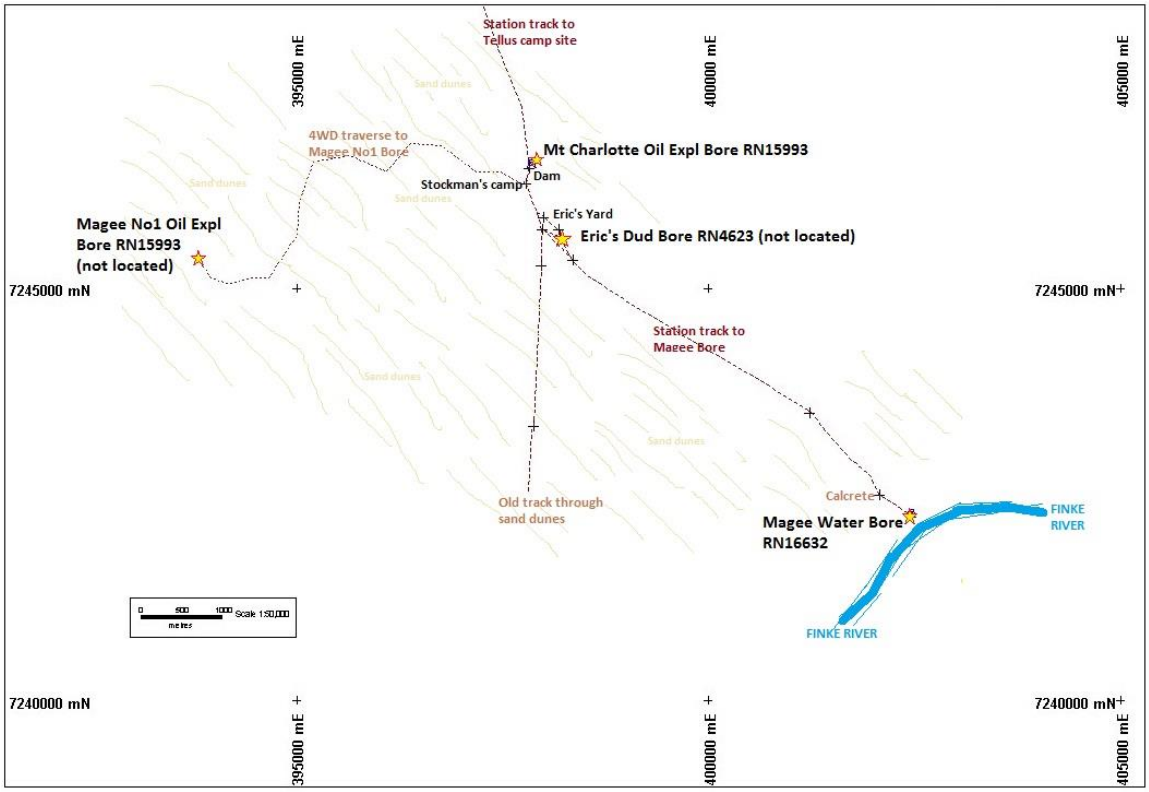


Figure 3: Access tracks and bore locations for area south of Tellus camp site.

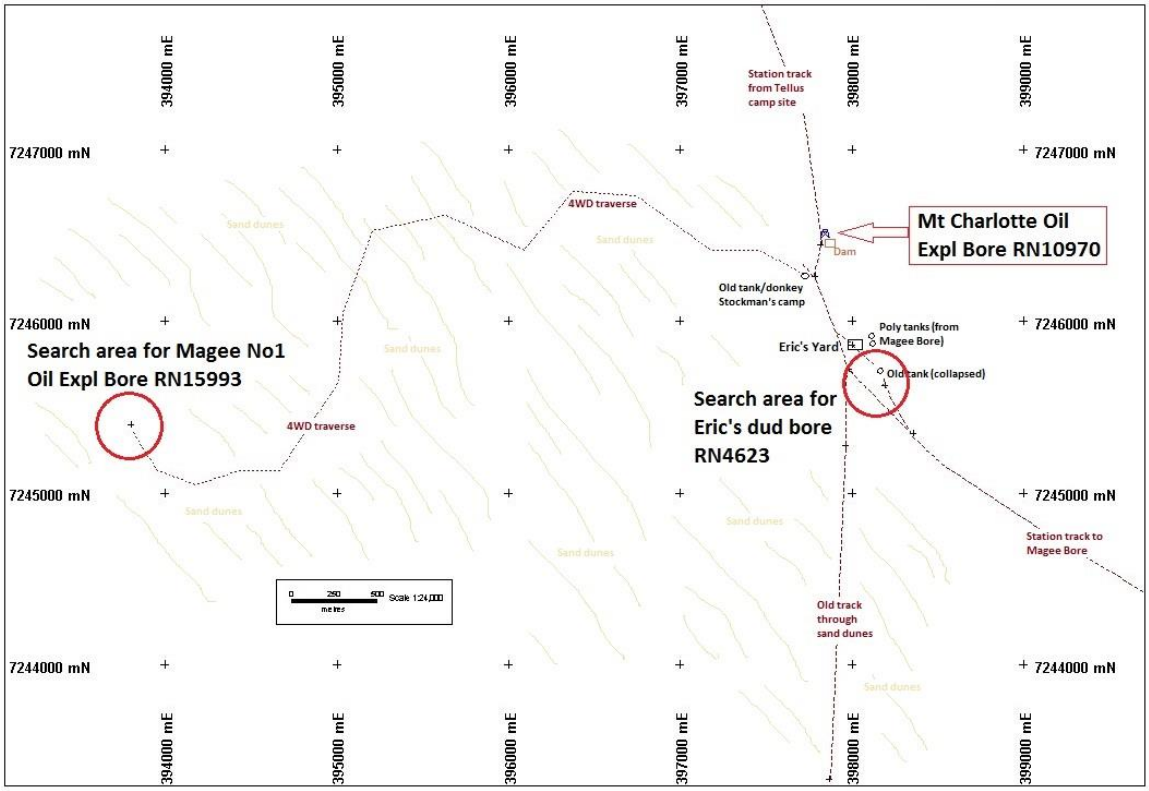


Figure 4: Access tracks and bore locations in the Eric's yard area.

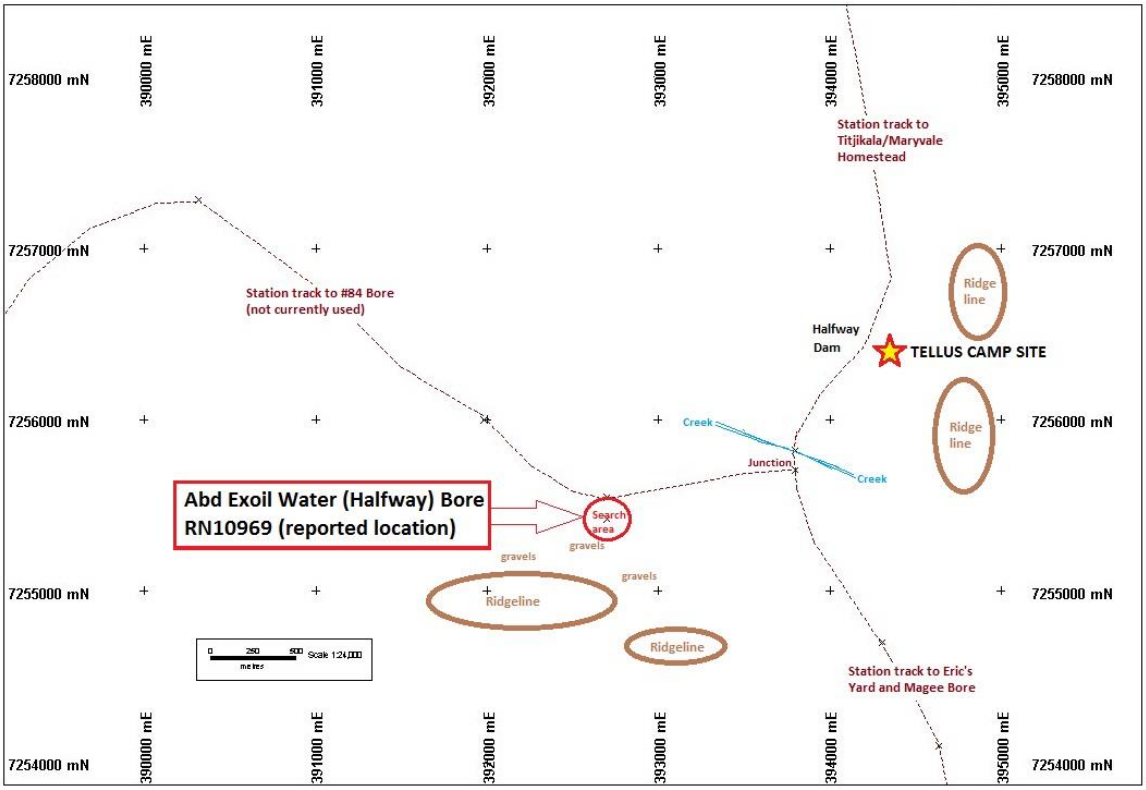


Figure 5: Access tracks and bore locations in the Halfway Dam (Tellus camp) area.

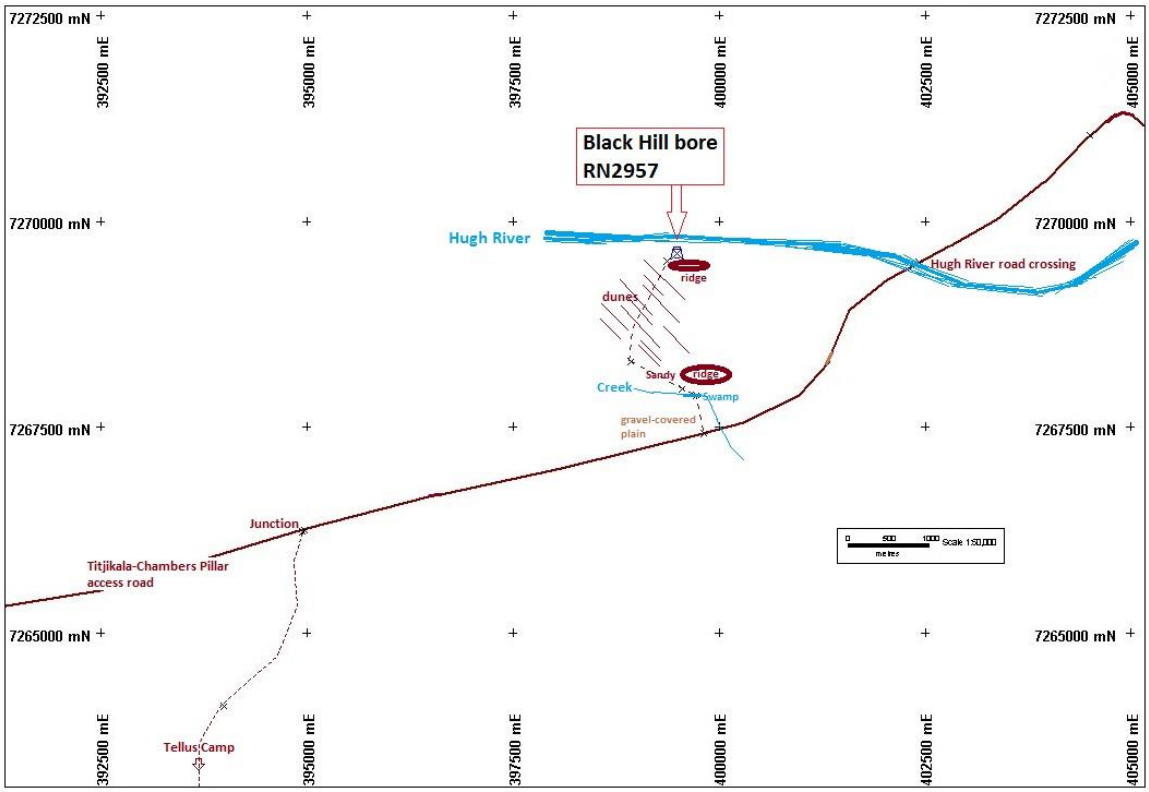


Figure 6: Access tracks and bore locations in the Black Hill bore area.

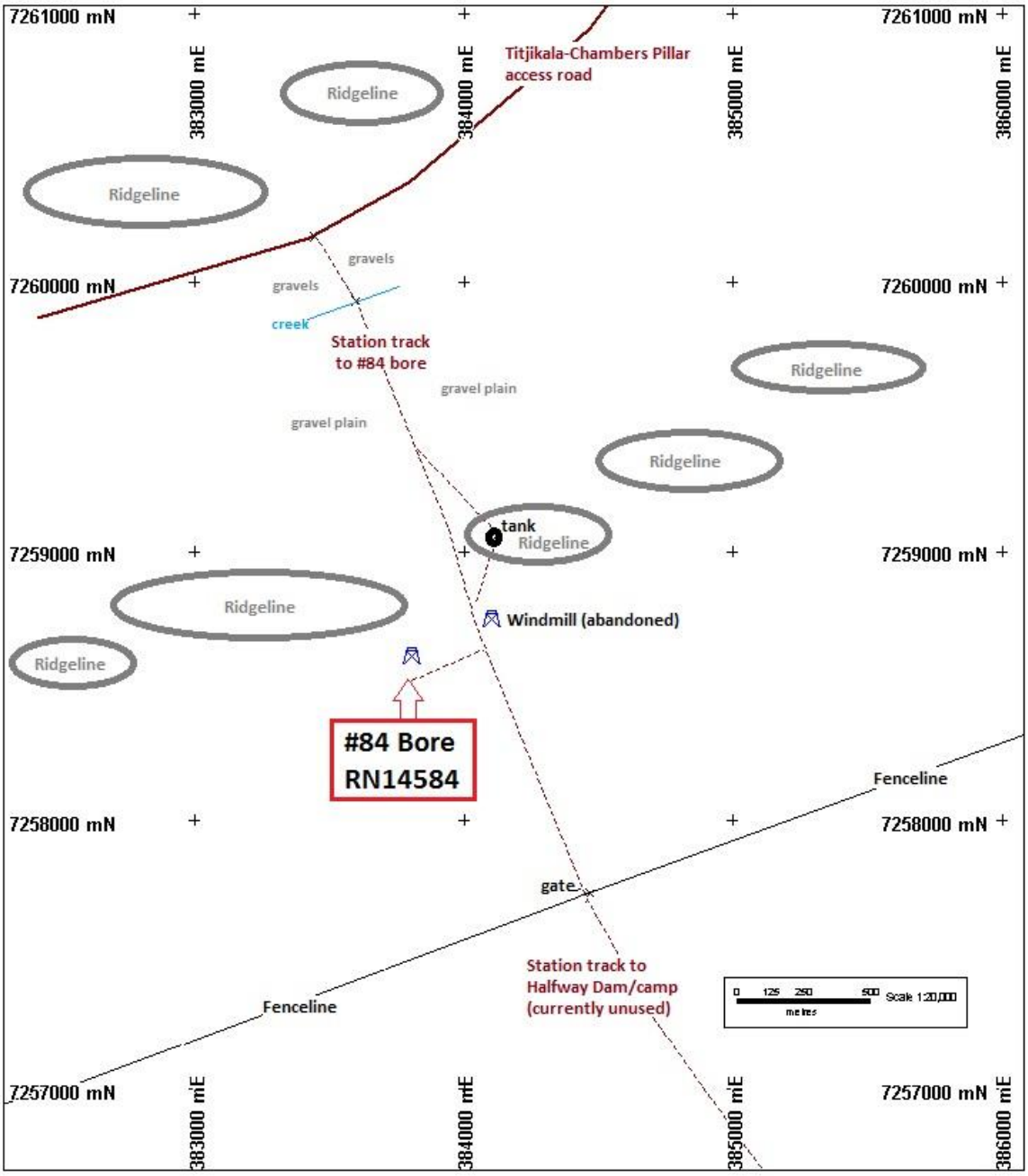


Figure 7: Access tracks and bore locations in the #84 bore area.

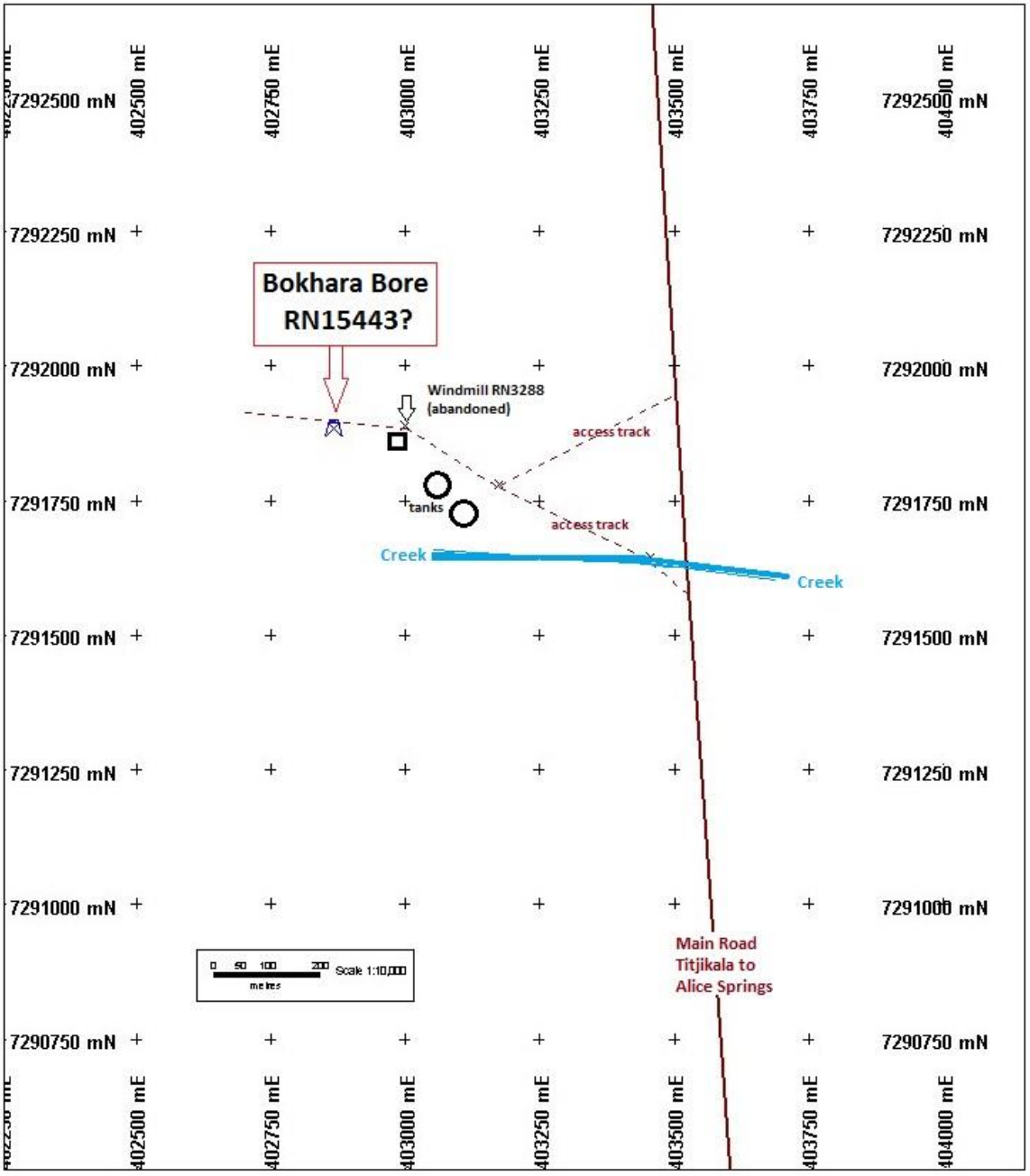


Figure 8: Access tracks and bore locations in the Bokhara bore area.

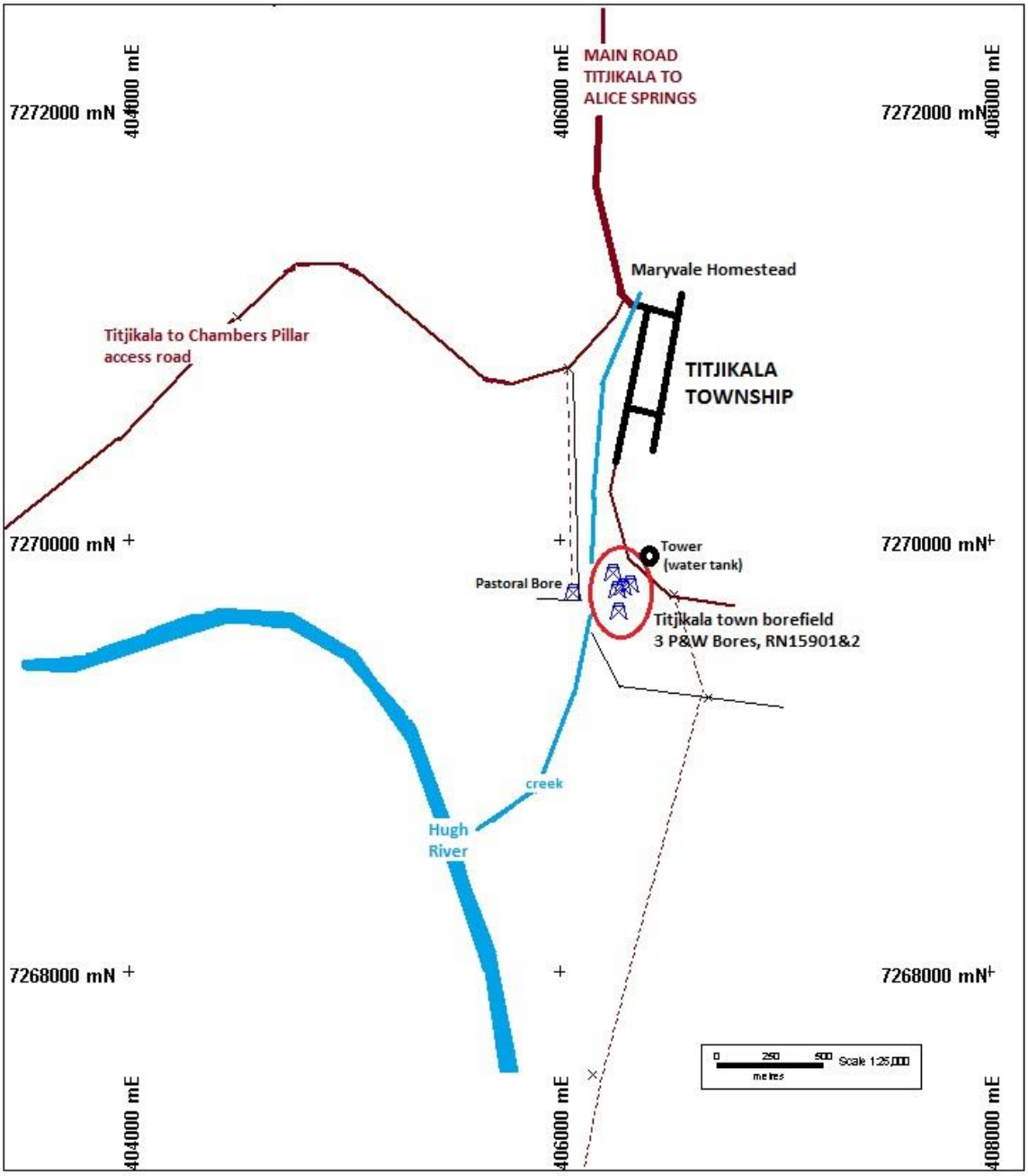


Figure 9: Access tracks and bore locations in the Titjikala township area.

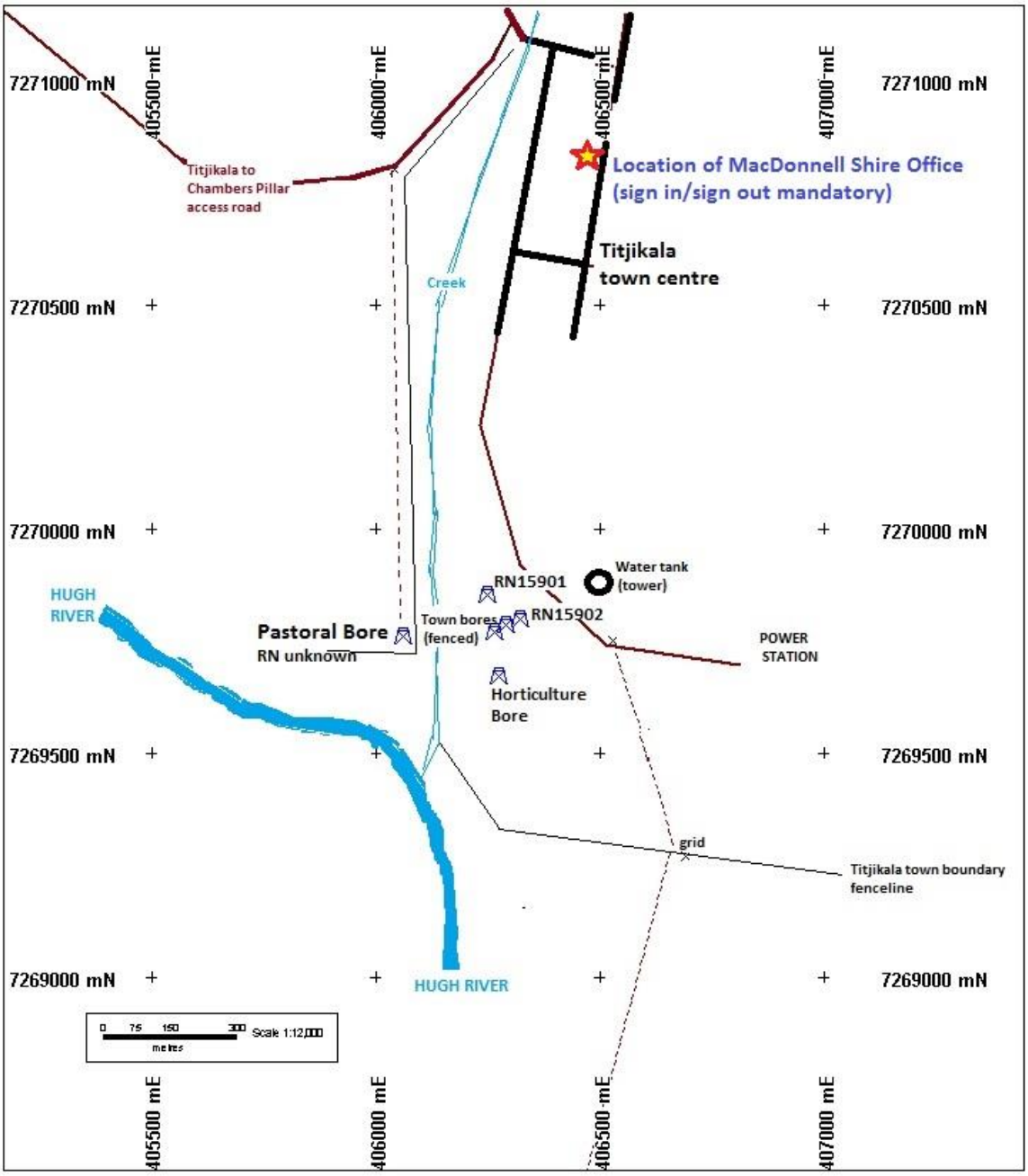


Figure 10: Access roads and bore locations in the Titjikala township area.

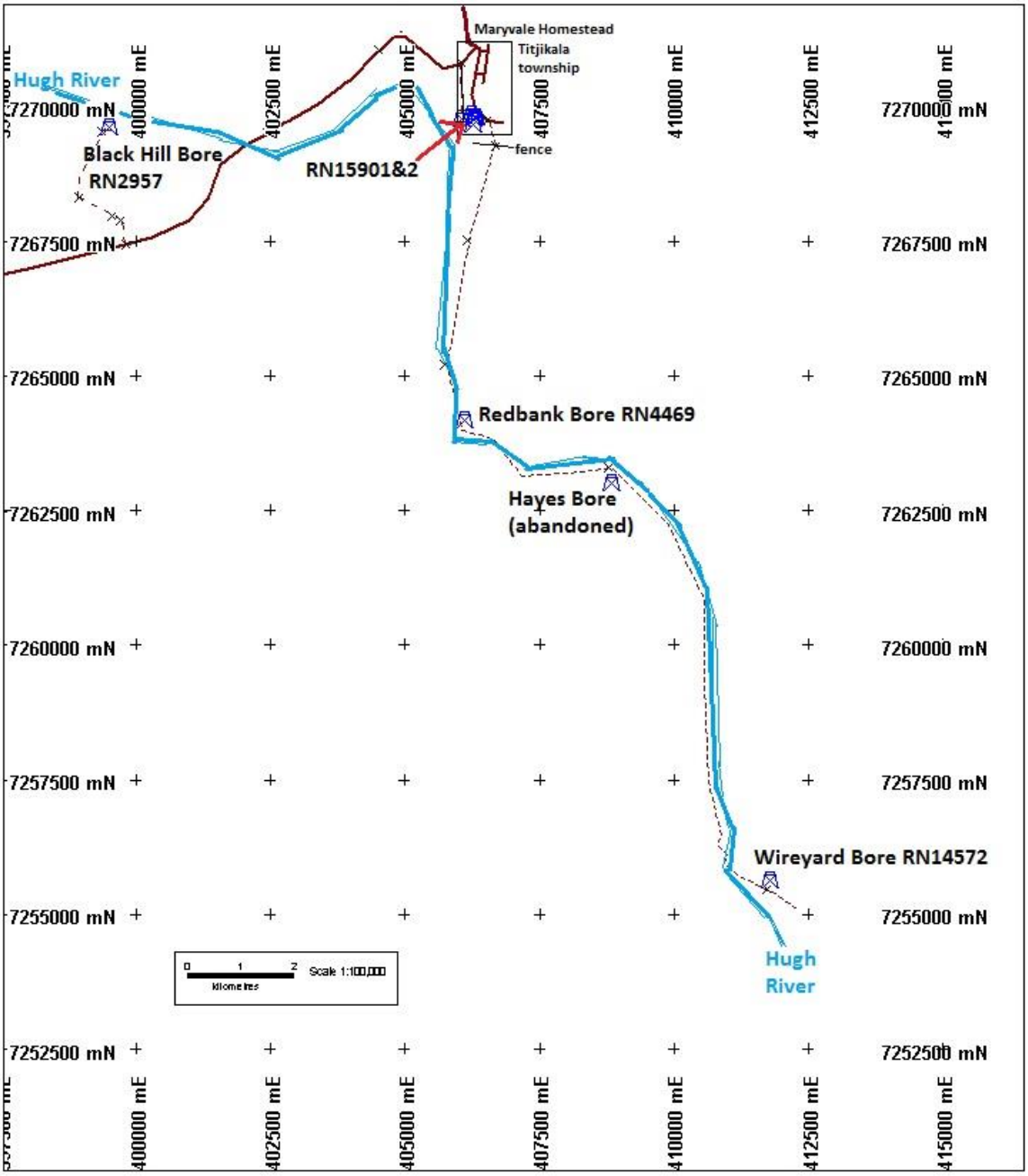


Figure 11: Access tracks and bore locations south of the Titjikala township.