FINAL and ANNUAL REPORT
EL 30027
PERIOD: 17/02/2014 TO 16/02/2016
MATARANKA REGION, NORTHERN TERRITORY

BLUEYS LIMESTONE PTY LTD
PO BOX 3770
DARWIN NT 0800

MATARANKA LIMESTONE PROJECT
1:100 000 MAPSHEET: 5568 Mataranka
1:250 000 MAPSHEET: SD5309 Katherine
COMMODITY: Limestone

WA Jettner B.Sc.
Minesite Services Australia
June 2015
Abstract:
EL 30027 is located 2 km northeast of the Mataranka township in the Elsey (Never Never) region of the Northern Territory. The licence covers an exposed portion of the Tindal Limestone which hosts deposits of pure limestone suitable for the manufacture of limestone products such as quicklime and agricultural lime.
Office work conducted in the first year consisted of research and a literature survey and field work consisted of a preliminary geological reconnaissance over a large part of the licence area seeking favourable sites for the location of outcropping limestone. There was no work done in the second year due to the death of one the key management parties. Subsequently the licence was surrendered at the end of the second year.

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1. LOCATION

EL 30027 is located some 540km to the southeast of Darwin in the Northern Territory. The licence has a regular shape having a north-south length of 18km with an east-west width of 26km and lies between 14° 14’S to 14° 55’S and 133° E to 133° 15’E. The licence is located upon the Cave Creek pastoral lease to the south of Katherine.
2. TITLE HISTORY

Mineral Tenure
EL 30027 was granted on 17/02/2014 and this report is the Final and Second Annual Technical Report which covers activities in the period 17/02/2014 to 16/02/2016, being the first and second years of tenure. The licence has an area of 131 graticular blocks (360 km²). The licence was surrendered at the end of the second year of tenure.
Real Property

EL 30027 is located on the following real property parcel:

CLP 1822 (NTP 3960) “Cave Creek Station” which is owned by the Cave Creek Station Pty Ltd (PO Box 4009 Mataranka NT 0852).
3. PHYSIOGRAPHY

i. Geomorphology
The geomorphology of the licence area consists of flat lying terrain that is desiccated by drainage systems heading south and east. The area to the south and east of the licence consists of topographical lows reflecting the more mature topography in this area. These areas also contain the Mataranka thermal pools which are a massive spring system draining the central Sturt Plateau to the west.

ii. Biogeography
In the licence a single vegetation type occurs in the licence area, this is: low open woodlands consisting of Bloodwood and Box Eucalypts with an open-grassland understorey consisting of White Grass and Golden Beard Grass understorey.

iii. Hydrology
Seasonal rains fall during the wet season, (depending on the year), and quickly runoff. The regional area is held under real property tenure as cattle stations whose main pursuit is open range cattle grazing. The area that the licence occupies is used by Cave Creek Station for grazing. Elsewhere cattle are supplied by natural accumulations of water in creeks and billabongs that are replenished during the wet season. The Waterhouse River and the Roper Creek (both of which join and become the Roper River) traverse the licence area and provide billabongs used for stock watering purposes. The groundwater of the area consists of locally fractured rocks based around shear zones. Bores drilled in this area generally give good flows. Bore flow rates are greater than 5 l/s.
4. ACCESS

Access to the exploration licence from Darwin is southwards along the Stuart Highway for 400km to Mataranka then northeast for 1km to the licence. The licence area is located along the north-eastern side of the Stuart Highway to the north of Mataranka and has well maintained station roads which offer excellent access throughout. Access is considered to be good to excellent throughout the licence.
5. GEOLOGICAL SETTING

i. Regional Geology

Exploration Licence 30027 is located to the southeast of Katherine in the Daly Basin, a Cambro- Ordovician sedimentary basin resting unconformable on Lower Proterozoic basement and consisting of the stratigraphy listed below.

CAINozoIC
Quaternary
Alluvium  Sands, silts and clays that occur in drainage channels
Unconsolidated Sands  Sands and silts occurring in major river channels
Colluvium  Sheet wash deposits in the head waters of drainage systems

TERTIARY-QUATERNARY
Regolith  Skeletal soils developed in non active erosion and drainage areas
Laterite  Remnant laterised cretaceous sediments

MESOZOIC
Cretaceous
Mullamen Beds  Sandy claystone, siltstone, sandstone covers large areas of EL 26995, forms an upland with incised windows caused by the King River in this area.

REGIONAL UNCONFORMITY

CAMBRIAN - ORDIVICIAN
Daly River Group
Ooloo Dolostone  Ooid and stromatolitic dolostone, dolomitic sandstone
Jinduckin Formation  Dolomitic-siliciclastic siltstone, dolostone, dolomitic quartz sandstone
Tindal Limestone  Bioclastic, onkoid and stromatolitic limestone, minor mudstone, basal maroon siltstone
Antrim Plateau Volcs.  Massive basalt valley fill flows which pinch out against basement highs

REGIONAL UNCONFORMITY

MIDDLE PROTERozoIC
Katherine River Group
Kombolgie Formation  Medium to coarse grained arenites containing rare interbeds of siltstone and the two Volcanic Members below
McAddens Creek  Chloritised andesite and basalt, minor tuff
Volcanic Member  Amblygoidal andesite and basalt.
As can be seen from the map below the licence covers some of the easternmost outcrops of Tindal Limestone in the Daly Basin. The overlying Cretaceous Mullaman Beds form an upland plateau that is covered by skeletal soils and large areas of laterised Tertiary soils. These soils are moderately to heavily wooded and so can pose some problems to gain access where there is no development. This cover can make the exploration of the underlying Tindal Limestone difficult due to the necessity to drill through the Cretaceous to gain access to the Cambrian.
ii. Licence Geology

EL 30027 covers the southernmost extents of the Daly Basin in the area southeast of Katherine. The soils of the licence are underlain by remnants of the Cretaceous sediments which consist of siltstone, sandstone and conglomerate and represent shallow marine fluviatile and terrestrial conditions in the Mesozoic. Evidence of these beds is visible within the incised river beds that propagate through the region.

These unconformably overlie the Cambrian Daly River Group. This sequence forms the majority of the Cambrian sediments in the Daly River Basin. The Daly River Group consists of the Cambro-Ordovician Jinduckin Formation which conformably overlies the Cambrian Tindal Limestones which in turn unconformably overlie the Early Cambrian Antrim Plateau Volcanics. These unconformably overlie the Middle Proterozoic Katherine River Group.

The Jinduckin Formation outcrops in the banks of the King River which flows through the eastern end of the exploration licence and incises the overlying Cretaceous sediments. Other major outcrops exist on the western side of the EL along the catchment area for Scott Creek. The Jinduckin Formation consists of maroon-green dolomitic-siliciclastic siltstone containing dolomitic sandstone-siltstone interbeds, dolostone and dolomitic quartz sandstone, probably representing a peritidal depositional environment.

The main target formation in this area is the Tindal Limestone which is a massive grey crystalline limestone, containing minor flaggy chert and banded limonitic fine limestone containing fossiliferous intervals.
6. EXPLORATION AND MINING HISTORY

Exploration
Exploration activities have been conducted on and around the licence area for a number of years by a large number of exploration companies, a list of the licences and reports is tabulated below:

Table 1. Historical Exploration Licences and Open File Reports

<table>
<thead>
<tr>
<th>Licence No</th>
<th>Licence Holder</th>
<th>Tenure Period</th>
<th>Open File Company Reports</th>
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<tr>
<td>EL3333</td>
<td>Blake Investments</td>
<td>18/06/1982 - 17/06/1989</td>
<td>CR1983-0305</td>
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<td>CR1984-0147</td>
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<td>CR1989-0229</td>
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<td>EL4484</td>
<td>Stockdale Prospecting</td>
<td>01/06/1984 - 31/05/1990</td>
<td>CR1985-0149</td>
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<td>EL5058</td>
<td>D Mitchell</td>
<td>08/01/1987 - 18/01/1991</td>
<td>CR1987-0316</td>
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<td>Stockdale Prospecting</td>
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<td>CR1991-0329</td>
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<td>CR1996-0819</td>
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</table>

Mining
There have been no mining activities conducted within the licence area.

Table 2. Historical Mines and Prospects

<table>
<thead>
<tr>
<th>Mine/Prospect Name</th>
<th>Modat Site Id</th>
<th>Mineral Field</th>
<th>Commodity</th>
<th>Orebody Type</th>
</tr>
</thead>
</table>

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7. EXPLORATION RATIONALE

EL 30027 is located 2km north of the Mataranka along the Stuart Highway. The area is mapped as containing Tindal Limestone and the target is pure limestone located near to transport and service infrastructure. The rationale is to explore the area to locate suitable limestone outcrops and then to ascertain their quantity and quality.

8. EXPLORATION INDEX MAP

There has been no exploration index map constructed for EL 30027.

9. GEOLOGICAL ACTIVITIES

First Year

Office Studies
During the year a literature survey was completed on the licence area which consisted of examining previous explorers data as submitted to the DME.

Field Studies
Field work on the licence during the year consisted of a field trip to the licence area in August 2014. During this field trip a number of aerial geological reconnaissance traverses were conducted throughout the licence to locate outcrops of limestone for further investigation.

Second Year
There was no work undertaken in the second year.
10. REMOTE SENSING

There were no remote sensing surveys done during the period.

Included below is an image taken from the DME Geoscience Data Package (DIP 008), LANDSAT 7.

The tile is: Landsat 7 Run W2, Path 105, Row 72, Acquisition date 1999.

After DME Geoscience Data Package (DIP 008)
11. GEOPHYSICAL ACTIVITIES

Radiometrics

There have been no radiometric surveys conducted during the period. As can be seen from the following image obtained from the DME Geoscience Data Package (DIP 008), the radiometrics are relatively unobtrusive in the licence area due to the extensive covering of Tindal Limestone in the area.
Magnetics
As can be seen from the image below (taken from the DME Geoscience Data Package (DIP 008)) the area encompassed by EL 30027 contains several northwest-southeast trending linear magnetic features which probably represent underlying structural features.

After DME Geoscience Data Package (DIP 008)
12. **SURFACE SAMPLING**
There were no surface samples taken during the period.
The aerial survey conducted during the first year was targeted towards locating suitable outcrops of Tindal Limestone within the licence area for sampling during the second licence year. There were no samples taken during the second year.

13. **DRILLING**
There were no drilling activities conducted during the period.
There are no drill holes recorded on either the drill hole location database or the core library catalogue database.

14. **GEOTECHNICAL STUDIES**
There were no geotechnical studies conducted during the period.

15. **RESOURCES AND RESERVE ESTIMATION**
There were no resource or reserve estimations done during the period.

16. **CONCLUSIONS AND RECOMMENDATIONS**
From the field exploration conducted during the first licence year the author feels that further exploration is definitely warranted with limestone being targeted.
A number of targets were located for investigation in the second year and subsequently the author feels that further exploration in the second year is definitely warranted.
Due to the death of one of the key management personnel there was no work done in the second year and a decision was made to surrender the licence.
17. REFERENCES


