

TNG LIMITED

ENIGMA MINING LTD

MOUNT PEAKE PROJECT

ANNUAL REPORT

21/11/18 to 19/11/19

ML 30686

Tenement/s	ML 30686	1:250 000 Sheet Name	Barrow Creek (SF5306)
Holder	Enigma Mining Ltd	1:100 000 Sheet Name	Home of Bullion (5754)
Manager	N/A	Datum	GDA94-52
Operator	Enigma Mining Ltd		
Commodity	NA		
Elements Analysed	NA		
Keywords	Mount Peake, Vanadium, Titanium, Iron, Mining Lease, Haul Road, Rail Facility, Adnera		
Compiled by	C. Wetherley (Administrative Geologist) cath.wetherley@tngltd.com.au		
Report Date	December 2019		
Distribution	TNG Limited		(1)
	Department of Primary Industry and Resources		(1)

Executive Summary

This report focusses on ancillary licence ML30686, located at the termination of the planned haul road and rail siding facility for the future Mount Peake minesite.

The licence was granted on 21 November 2018 for a period of 24 years, expiring on 19 November 2042.

The Mount Peake Project is operated by Enigma Mining Ltd (Enigma), a wholly owned subsidiary of TNG Ltd. The project currently comprises seven granted exploration licences (EL27069, EL27070, EL27941, EL29578, EL30483, EL31389, EL31850), four granted mineral leases (ML28341, ML29855, ML29856, ML30686) and two access authorities (AA31105, AA32037) in the north-central portion of the Paleoproterozoic Arunta Province.

Work at Mount Peake is still currently being undertaken under the Exploration Activities Mining Management Plan and as such any work completed is being attributed to the underlying exploration licence (EL30483).

This document and its content are the copyright of TNG Ltd. The document has been written by TNG Ltd for submission to the Northern Territory Department of Primary Industry and Resources as part of the tenement reporting requirements as per Regulation 78 of the Minerals Titles Regulations. Any information included in the report that originates from historical reports or other sources is listed in the References section at the end of the document. I authorize the department to copy and distribute the report and associated data.

TABLE OF CONTENTS

1. INTRODUCTION	4
2. LOCATION AND ACCESS	4
3. TENURE.....	4
4. REGIONAL GEOLOGY	6
5. PREVIOUS EXPLORATION	8
6. COMPLETED AND PROPOSED ACTIVITIES	10
REFERENCES.....	11

FIGURES

Figure 1: Location of Mount Peake project area and ML30686.	5
Figure 2: Regional geological setting of the Mount Peake project area. Location of EL 30483 indicated by the red square (Figure from Scrimgeour, 2013)	7
Figure 3: ML30686 on 250K BARROW CREEK (SF5306) Geology.....	8
Figure 4: Previous exploration within EL 30483	10

TABLES

Table 1: EL 30686 tenement details.....	4
---	---

1. INTRODUCTION

The Mount Peake Project is operated by Enigma Mining Ltd (Enigma), a wholly owned subsidiary of TNG Ltd. The project currently comprises seven granted exploration licences (EL27069, EL27070, EL27941, EL29578, EL30483, EL31389, EL31850), four granted mineral leases (ML28341, ML29855, ML29856, ML30686) and two access authorities (AA31105, AA32037) in the north-central portion of the Paleoproterozoic Arunta Province (Figure 1).

This report focusses on ancillary licence ML30686, located at the termination of the planned haul road and rail siding facility for the future Mount Peake minesite.

The licence was granted on 21 November 2018 for a period of 24 years, expiring on 19 November 2042.

Work at Mount Peake is still currently being undertaken under the Exploration Activities Mining Management Plan and as such any work completed is being attributed to the underlying exploration licence (EL30483).

2. LOCATION AND ACCESS

ML30686, part of the Mount Peake project, lies within EL30483 and is located approximately 200km north of Alice Springs. It falls within the south-western portion of the Barrow Creek (SF53-06), 1:250,000 mapsheet and the Stirling Perpetual Pastoral Lease. The lease is accessed from the Stuart Highway and then well maintained station tracks from the turnoff at Camel Soak Bore and past Tinfish Well. The Darwin to Adelaide railway runs through the licence area.

3. TENURE

Mining Lease 30686 was granted to Enigma Mining Limited (Enigma), a wholly owned subsidiary of TNG Ltd on 20/11/2018. Licence details are shown in Table 1.

Table 1: EL 30686 tenement details.

TITLE	PROJECT	AREA (Ha)	GRANT DATE	EXPIRY DATE
ML30686	Mount Peake	104	21/11/2018	19/11/2042

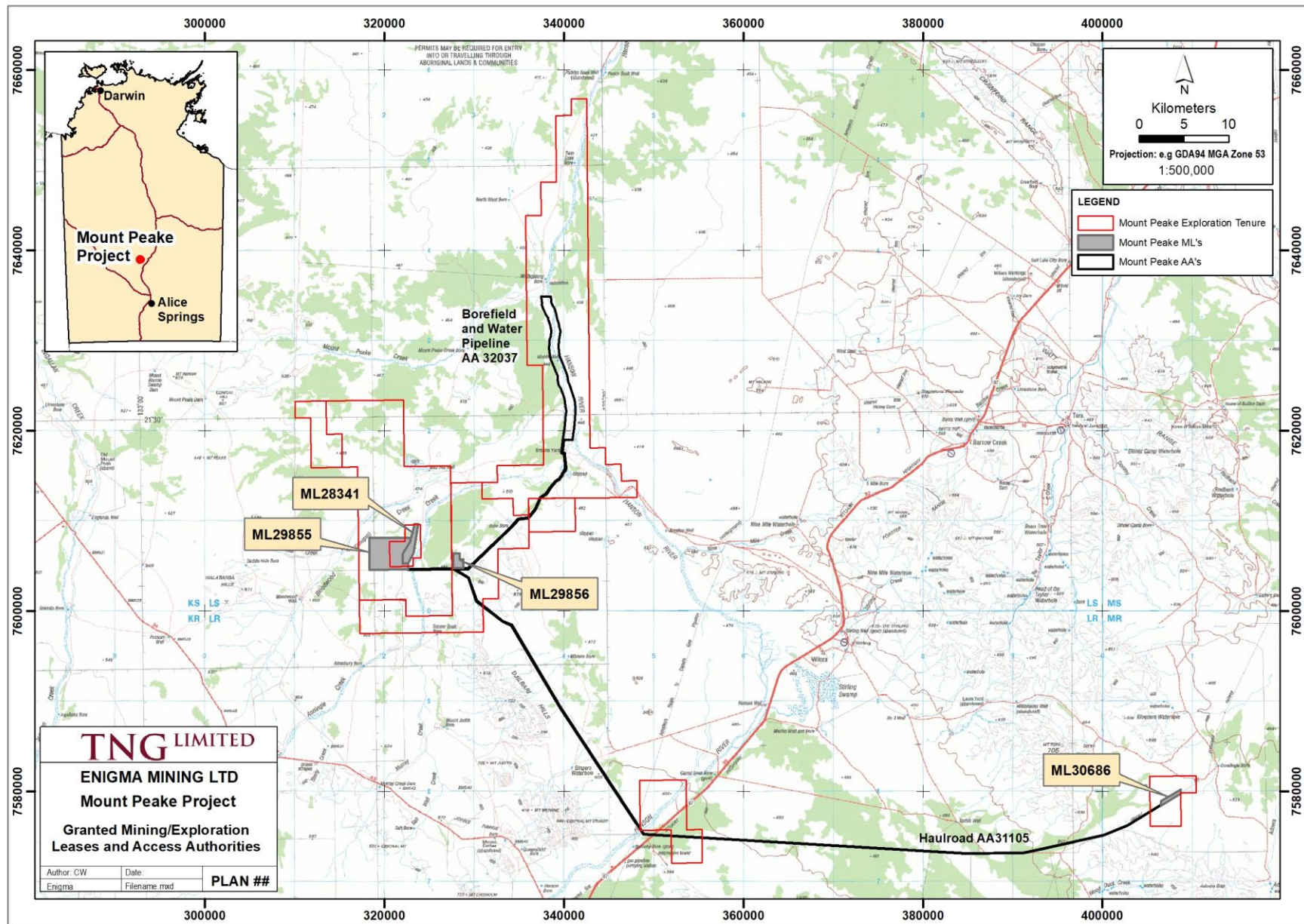


Figure 1: Location of Mount Peak project area and ML30686.

4. REGIONAL GEOLOGY

The Mount Peake project area lies within the Aileron Province (1860-1700Ma), which is defined as the Palaeoproterozoic crust in the Arunta Region that formed as part of the North Australian Craton (Scrimgeour, 2013). Neoproterozoic to Paleozoic rocks of the western edge of the Georgina Basin also occur in the area. The licence lies in the southern central portion of the BARROW CREEK (SF53-06) mapsheet (Figure 2 and 3).

The Aileron Province includes at least five depositional packages that were deposited in the interval 1860-1740Ma (Scrimgeour, 2003), and has been affected by multiple tectonic events (Scrimgeour, 2006). The outcropping Paleoproterozoic geology in the area includes a succession of metapsammitic and metapelitic rocks of the Lander Rock Formation (Plr), which have been variably metamorphosed from greenschist to granulite facies (Donnellan, 2008). Stratiform amphibolites and retrogressed amphibolites outcrop locally. The Lander Rock Formation is intruded by a series of early (ca 1820-1770Ma) and late (post-1770Ma) granites. The dominant tectonic and thermal event affecting the regions was the Stafford Event at 1805-1790Ma.

The Georgina Basin is a widespread Neoproterozoic to Paleozoic intracratonic basin that was initiated as part of the Centralian Superbasin (Donnellan, 2008). The dominant lithologies are dolostone, limestone, shales, sandstone and siltstone. These rocks unconformably overlie rocks of the Aileron Province in southeastern of the project area.

The lease area is almost fully covered by Quaternary alluvium, red earth soils and colluvium, with minimal outcrops of calcrete and probable Ledan Schist in the surrounding area. Major faults associated with the Stirling and Ooralingie faults trend west-northwest through the surrounding area.

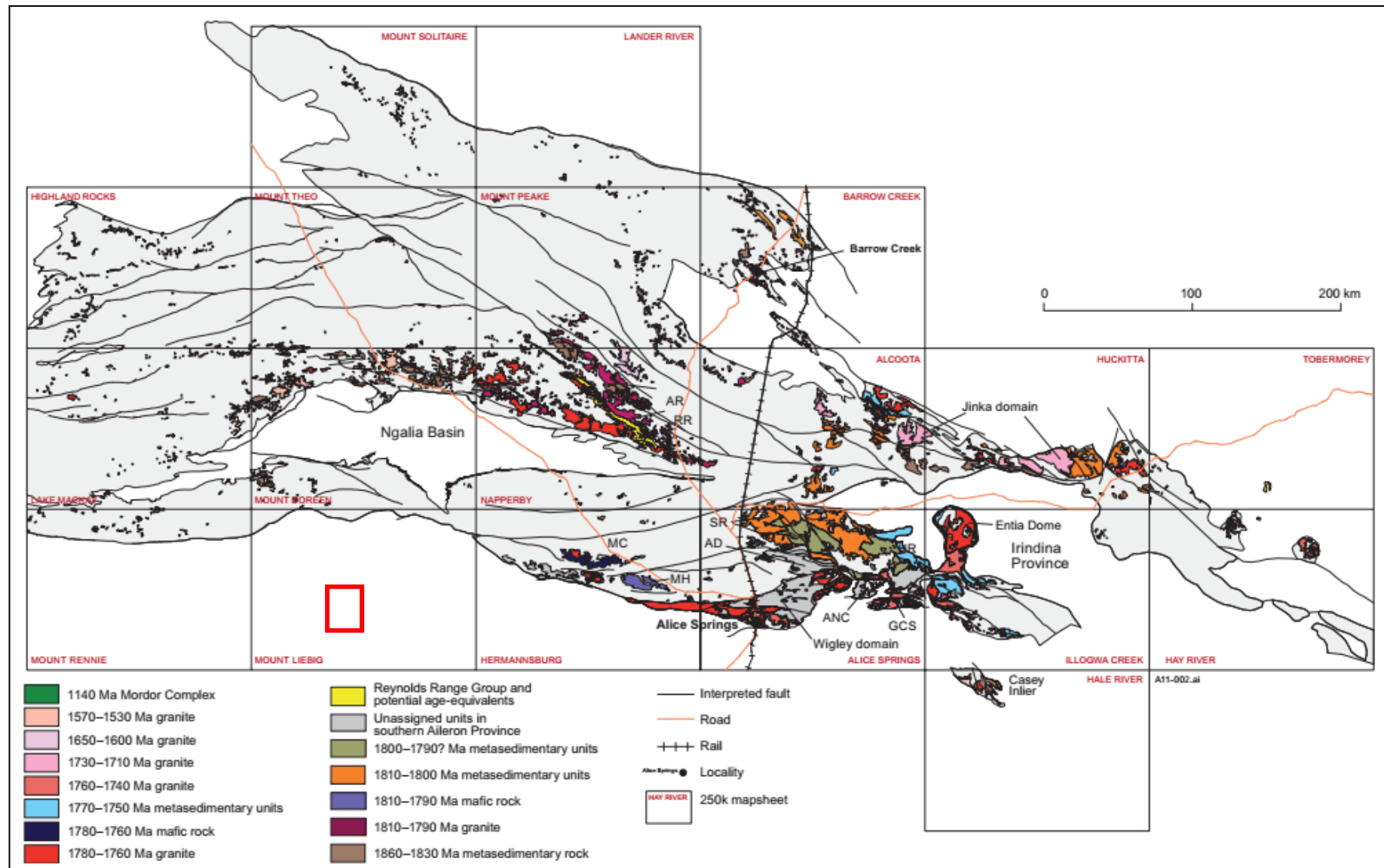


Figure 2: Regional geological setting of the Mount Peake project area. Location of EL 30483 indicated by the red square (Figure from Scrimgeour, 2013)

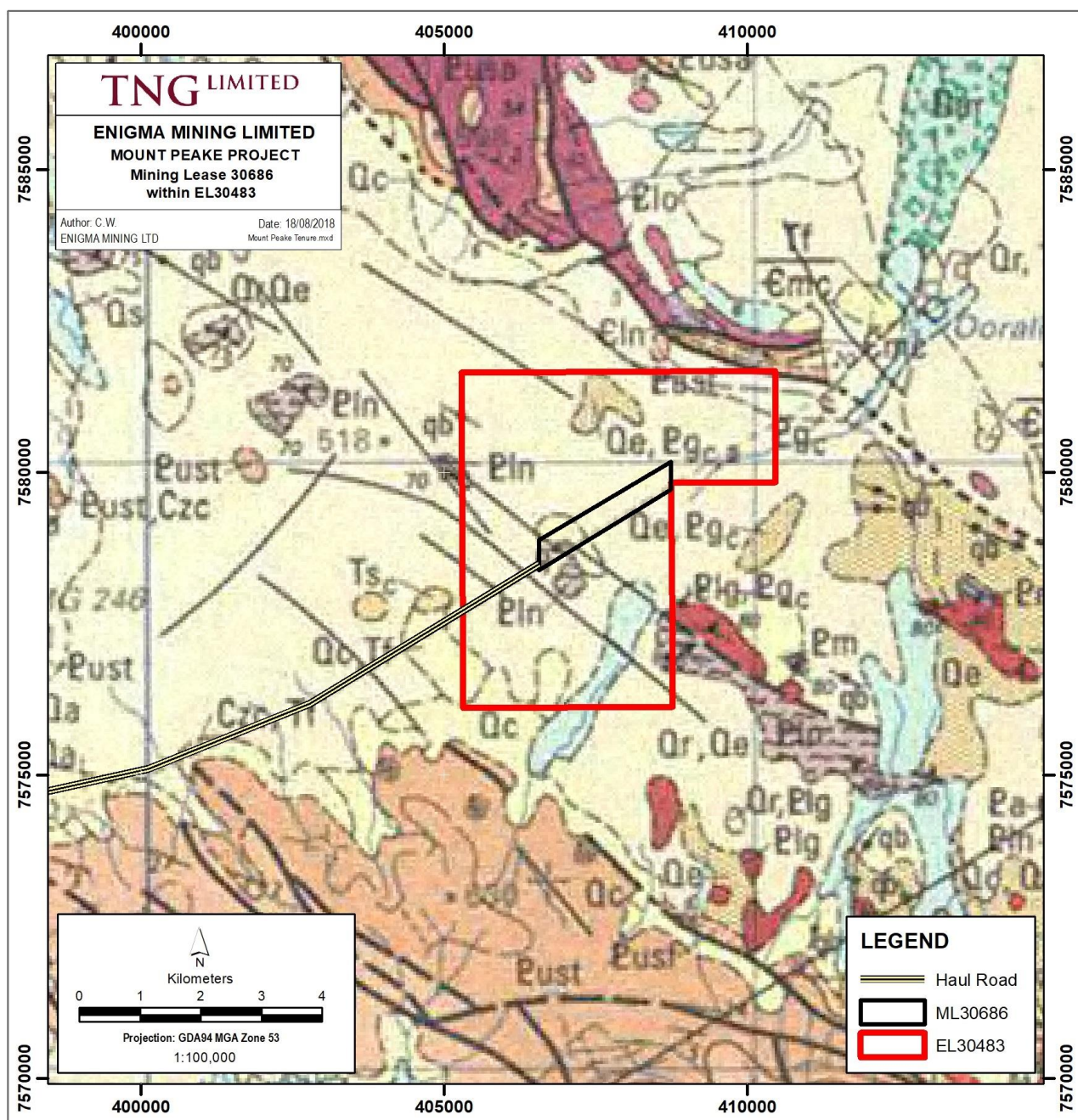


Figure 3: ML30686 on 250K BARROW CREEK (SF5306) Geology.

5. PREVIOUS EXPLORATION

Various companies have explored the area surrounding ML30686 back to the mid-1960's. Exploration has been conducted for base metals, uranium, tungsten, tin and diamonds (Figure 4). The majority of work has taken place to the northwest and southeast of the licence area. A detailed outline of exploration in the region is given in Menzies, 1994.

CRA Exploration undertook work across the area during the early 1980's (EL 1878 Millionaires Well; Fraser, 1980). An extensive helicopter assisted geochemical drainage programme was undertaken across the region. 83 samples were collected and each was analysed for Pb, Zn, Cu, Co, Cr, A, Au, U, Sn and W. Several isolated tungsten anomalies were reported but from the three samples within EL 30483 (Figure 4) no anomalous results were returned (Fraser, 1980).

CRA also conducted additional exploration across two large licence areas (EL 8016 Mount Gwynne and EL 8017 Mollie Bluff) from Mount Gwynne near the Stuart highway in the north through to Kunoth Knob, just near the Sandover Highway to the south (Menzies, 1994).

Additional analysis was undertaken on fractions of the gravel samples collected during the 1980 drainage sampling programme. Sample 212265 recorded a single chromite, but the two upstream samples 212262 and 212263 were negative and no further work was undertaken in the area (Menzies and Louwrens, 1995).

In the late 1990's Normandy/North Flinders Mines conducted exploration over an area (EL 9219) extending NW-SE covering EL 30483. An extensive vacuum drilling programme of 341 holes for 1908m was completed in Year Two of tenure (West, 1997). Composite samples from the bottom three metres of each hole were sampled for Au. Eighteen holes fall within the EL 30483 boundaries however all results returned 0ppb Au.

A 36 hole RAB/Aircore drilling programme was completed in 1998 in order to develop an understanding of the regolith, bedrock geology and baseline geochemistry in the area (Smith and Adrichem, 1998). The programme was conducted over three regions in the northern, central and southern parts of the licence. Holes WPRB0016-0026 fall within EL 9219 (Figure 4). No significant results were returned (Smith, 1999).

A comprehensive rock chip sampling programme (76 samples) was completed in conjunction with the above mentioned RAB drilling. Sampling was generally confined to the Ledan Schist, orthogneiss, amphibolite and associated veins (Smith and Adrichem, 1998).

After comprehensive surface sampling and shallow drilling programmes returned little in the way of significant results Normandy NFM surrendered the licence in October 2000 (Harrison and Walter, 2000).

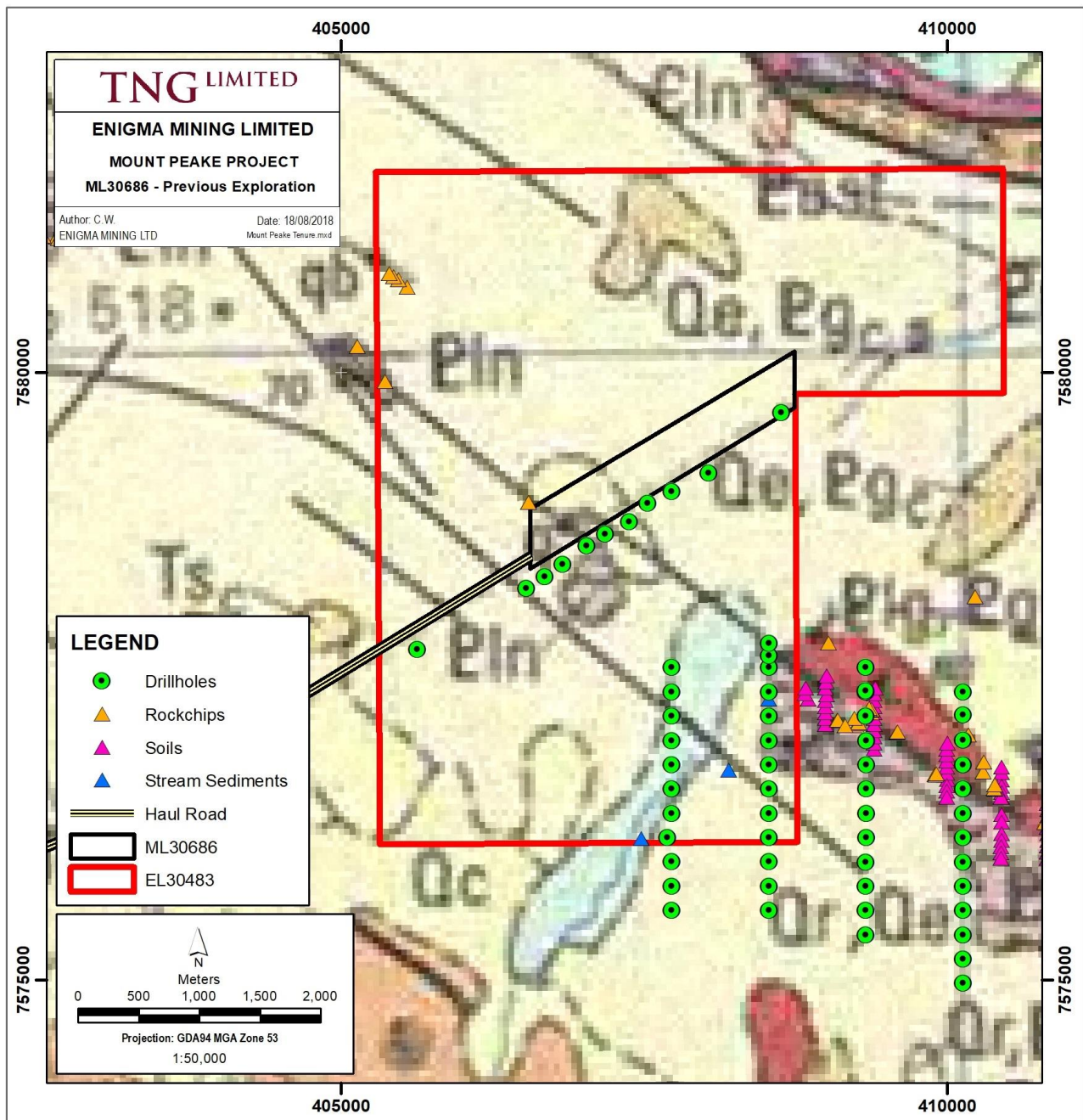


Figure 4: Previous exploration within EL 30483

6. COMPLETED AND PROPOSED ACTIVITIES

Currently work completed across the areas covered by the Mineral Lease is being attributed to the underlying exploration licence (EL30483).

Work will be attributed to the Mining Lease once the Mining Management Plan (for Mining Operations) has been accepted.

REFERENCES

- Donnellan, N., 2008. Mount Peake and Lander River, Northern Territory. 1:250,000 geological map series explanatory notes, SF 53-05, SF 53-01. Northern Territory Geological Survey, Darwin.
- Fraser, W.J., 1980. EL 1878 Millionaires Well, N.T. Annual Report Period ending 19th October, 1980. CRA Exploration Pty Limited. CR1981-0023.
- Harrison, S., and Walter, M., 2000. Annual and Final Report for EL9219 (Wapiti) for the period 21.11.95 to 20/10/00. Barrow Creek District, Northern Territory. Normandy NFM Limited. CR2001-0003.
- Menzies, D.C., 1994. EL 8016 Mount Gwynne and EL 8017 Mollie Bluff (N.T.) First Annual Report for Year Ending 11 May 1994. CRA Exploration Pty Limited. CR1994-0356.
- Menzies, D.C., and Louwrens, D.J., 1995. EL 8016 Mount Gwynne and EL 8017 Mollie Bluff (N.T.) Final Report and Annual Report for Period Ending 27 April 1995. CRA Exploration Pty Limited. CR1995-0562.
- Scrimgeour, I. R., 2003. Developing a revised framework for the Arunta Region: in 'Annual Geoscience Exploration Seminar (AGES) 2003. Record of Abstracts.' Northern Territory Geological Survey, Record 2003-001.
- Scrimgeour, I.R., 2006. The Arunta Region: Links between tectonics and mineralisation: in: 'Annual Geoscience Exploration Seminar (AGES) 2006. Record of Abstracts.' Northern Territory Geological Survey, Record 2006-002.
- Scrimgeour, I.R., 2013. Chapter 12: Aileron Province. In: Ahmad, M., and Munson, T.J. (compilers). 'Geology and mineral resources of the Northern Territory'. Northern Territory Geological Survey, Special Publication 5.
- Smith, M.E.H., and Adrichem, S.M., 1998. Third Annual Report for EL9219 (Wapiti) for the period 21/11/97 to 20/11/98. Barrow Creek District, Northern Territory. Normandy NFM Limited. CR1998-0843.
- Smith, M.E.H., 1999. Fourth Annual Report for EL9219 (Wapiti) for the period 21/11/98 to 20/11/99. Barrow Creek District, Northern Territory. Normandy NFM Limited. CR1999-0507.
- West, J., 1997. Second Annual Report for Exploration Licence 9219 for the period 21/11/96 to 20/11/97. Barrow Creek District, Northern Territory. Wapiti Prospect. Normandy Gold Pty Limited. CR1998-0014.