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WOODCUTTERS MINE

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Title: **FINAL REPORT FOR EXPLORATION LICENCE 7506**
MOUNT MINZA AREA
NORTHERN TERRITORY
29.10.91 to 18.05.96

Project Name: MOUNT MINZA

Map Sheets: PINE CREEK SD 52-08 1:250,000

Commodities: LEAD, ZINC, GOLD

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: VOLUME I OF 1

d by: J K Butler.

ion:
1. NT Department of Mines and Energy
2. Woodcutters Mine, NT
3. Normandy Exploration, Adelaide

Report No. 20706

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Report No. 20706

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Title: **Final Report FOR EXPLORATION LICENCE 7506**
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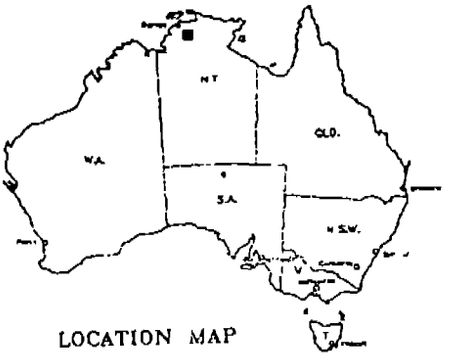
29.10.91 to 18.05.96

Author: C. Fawcett

Date: 9 August, 1996



LOCATION MAP

SUMMARY

Exploration Licence 7506 is part of a contiguous block of tenure in the Waterhouse-Mt Minza area south of Batchelor, Northern Territory. The licence was considered prospective for Woodcutters vein type and stratiform base metal mineralisation.

The geology of the licence mainly comprises sediments of the Lower Proterozoic, Pine Creek Geosyncline. They are carbonaceous mudstone, dolomite, chert, iron formation and greywacke of Whites Formation and South Alligator Group which have been intruded by Zamu Dolerite and later lamprophyre dykes. The sediments have been folded into a broad southerly plunging anticline.

Earlier exploration outlined a prominent co-incident lead-zinc 'C' horizon geochemical anomaly. Exploration during the first year comprised literature research and interpretation of geochemical data, aeromagnetic/radiometric survey, gridding and mapping. RAB drilling during year two encountered a Pb and Zn anomaly. Exploration during year three involved the drilling of two diamond drillholes to test the geochemical anomalies. The drilling revealed base metal sulphides are associated with strongly altered and sheared mafic igneous rocks that intruded a folded sequence of variably dolomitic carbonaceous mudstone. Exploration during year four was directed towards evaluating the gold potential and comprised stream sampling and analysis of pulps from earlier RAB programmes. The results were disappointing.

No further work was carried out and the licence was surrendered in early 1996.

1. INTRODUCTION

Exploration Licence 7506 is located approximately 5km southeast of Batchelor on the Batchelor 1:50,00 scale map sheet. The licence was granted to Aztec Mining Company Ltd on 29 October 1991, for a period of six years. Aztec Mining Company was taken over by Posgold in early 1994 and the Woodcutters operation is now owned by Normandy Metals, the metals arm of the Normandy Group. The licence has been subsequently transferred to Normandy Metals. A partial relinquishment at the end of year two reduced the EL to six blocks and further relinquishments at the end of years three and four reduced it to two blocks.

This report outlines all work conducted over EL 7506 during its period of tenure to surrender in 1996.

2. CONCLUSIONS

Exploration failed to locate significant gold or base metal mineralisation within EL 7506 and the licence was surrendered in early 1996.

3. PREVIOUS EXPLORATION

During 1952 the BMR conducted an airborne radiometric survey of the district and identified Waterhouse No. 1 radiometric anomaly, which is located on the western central part of EL 7506. Follow-up geophysical work was carried out in 1957 and 1960. In the mid 1960's TEP (a joint venture between the Commonwealth Government and Consolidated Zinc Pty Ltd) completed six diamond drill holes on the Waterhouse No.1 Prospect and located only traces of uranium and copper mineralisation.

In 1965 the BMR carried out a reconnaissance geological, geochemical and geophysical survey over the western part of the area now covered by EL 7506. Auger holes were spaced 122m (400 feet) apart along east-west traverses spaced at 732m (2400 feet) intervals. Bottom hole, 'C' horizon samples were collected and assayed for Cu, Pb, Ni, Co, U and P, and holes were radiometrically probed. Electromagnetic and radiometric surveys were also conducted along the regional traverses.

The most intense EM anomalies were initially followed up in 1965 by infill traverses at 122m (400 feet) intervals, with auger holes spaced 61m (200 feet) apart. Samples were assayed for Cu, Ni, and Co and holes probed for radioactivity. This work was completed over the southwestern portion of EL 7506 in 1966.

Further EM, ground radiometric, magnetic and I.P surveys were carried out by the BMR in the region in 1966.

CRA Exploration held exploration licence 610 in the early 1970's. This licence covered a large area which included EL 7506. Work carried out included regional

geological mapping and stream sediment sampling.

Between 1978 and 1979 most EL 7506 was covered by four separate exploration licences. Occidental Minerals Corp held EL's 1755 and 2201 which covered the northern and eastern sections of EL 7506. Occidental carried out -80 mesh soil sampling on the western side of EL 7506. Samples were assayed for Cu, Pb, Zn, Co, Ni, Mn and U. An approximately north-south trending line of Pb soil anomalies were located immediately to the west of EL 7506, whilst several isolated anomalies also occurred within the licence. Geological mapping was carried out in conjunction with the soil sampling. No new uranium anomalies were located by this programme and it was concluded that the anomalous Pb was probably related to quartz veins. The remainder of Occidentals work focussed on uranium exploration and included: track etch and ground radiometric surveys with RAB and two diamond drillholes for follow-up. No significant mineralisation was intersected and consequently EL's 1755 and 2201 were relinquished.

Uranerz held EL 1858 which was located in the southwestern corner of the current EL 7506. Gridding, aerial photograph interpretation, reconnaissance geology and ground radiometrics were carried out. The results were not encouraging and the licence was therefore relinquished.

At the same time, Marathon Petroleum Australia Ltd were conducting exploration on EL 1701, part of which was situated in the southeastern corner of EL 7506. An airborne radiometric survey, photo geological interpretation, ground radiometric and radon surveys were carried out. No significant results were obtained.

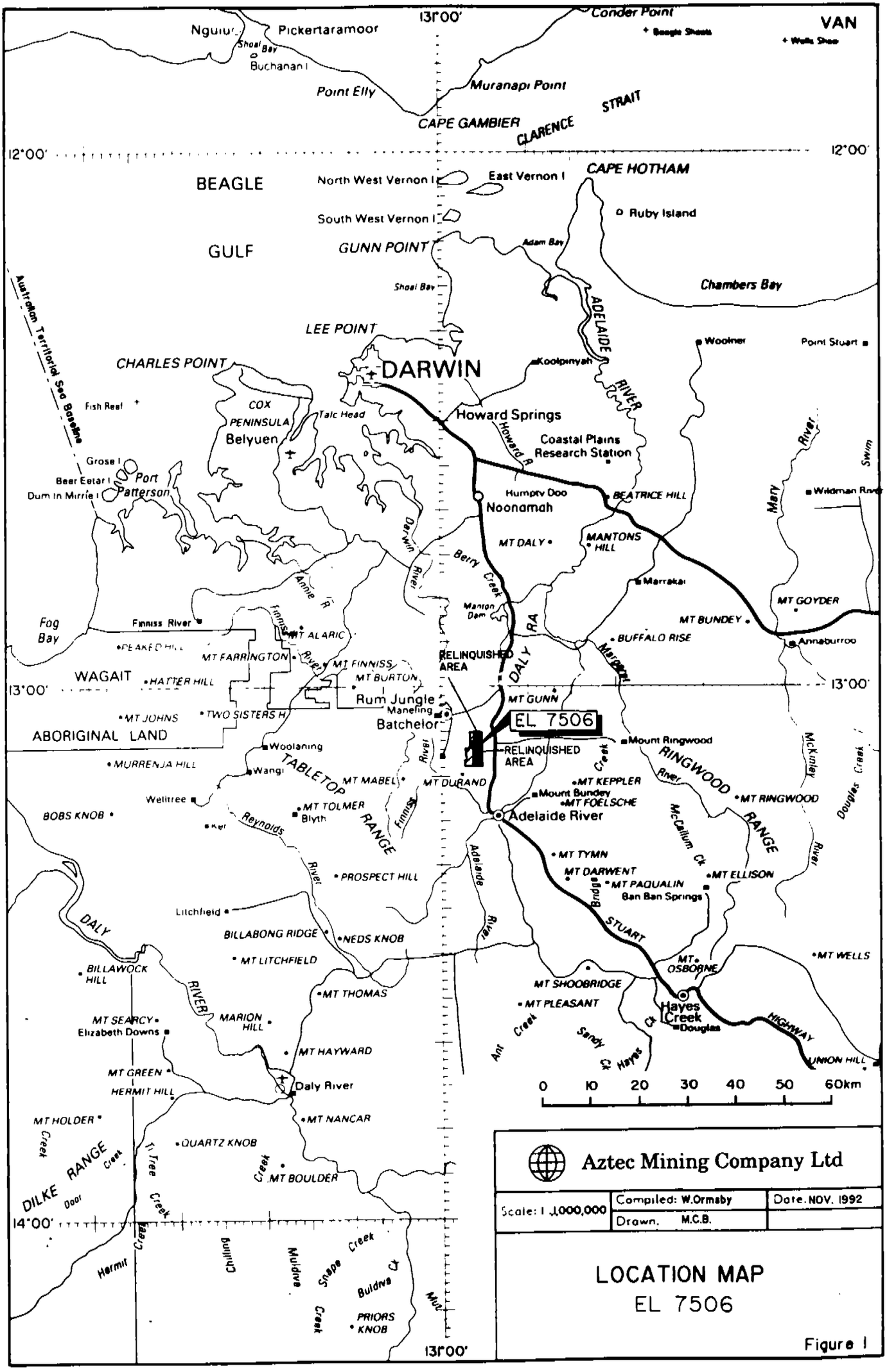
No further work appears to have been done on the area until the granting of EL 7506.

4. GEOLOGY AND MINERALISATION

Exploration Licence 7506 overlies Lower Proterozoic sediments of the Mt Partridge, South Alligator and Finniss River Groups. The Mt Partridge Group sediments include carbonaceous and dolomitic shales of the Whites Formation and siltstone of the Wildman Siltstone, with interbedded quartzite of the Acacia Gap Quartzite Member. The overlying carbonaceous shale and chert (possibly altered carbonates) of the Koolpin Formation, light grey mudstone and albitic chert of the Gerowie Tuff and siltstone and haematitic chert (banded iron formation) of the Mount Bonnie Formation comprise the South Alligator Group. The conformably overlying Burrell Creek Formation of the Finniss River Group consists mainly of siltstone with interbedded greywacke. Sediments of the Mt Partridge Group have been intruded by largely conformably dolerite of the Zamu Dolerite. Cainozoic laterite and recent alluvial sediments obscure bedrock in places.

The structure of the area is dominated by a south plunging anticline centred on the western side of the exploration licence. A number of major NE-SW trending faults are interpreted to cut across the stratigraphy.

The only recorded mineralisation in the licence area is located at the Waterhouse 1 Prospect, where minor uranium and copper have been encountered.



Aztec Mining Company Ltd

Scale: 1:1,000,000	Compiled: W.Ormsby	Date. NOV. 1992
	Drawn. M.C.B.	

LOCATION MAP
EL 7506

Figure 1

5. WORK CARRIED OUT

5.1 Year One of Tenure

During the first year of tenure, Aztec Mining Company Ltd carried out literature research, compilation and interpretation of BMR and Occidental geochemical data, an aeromagnetic/radiometric survey, gridding and mapping.

Regional data collected suggested that an approximately north-south oriented base metal-gold mineralised trend may pass through this area. The detailed BMR soil sampling programme did not assay for Pb and Zn therefore the area was gridded in preparation for a RAB drilling programme.

Details of the first years exploration can be seen in Ormsby (1992).

5.2 Year Two of Tenure

Work carried out in year two of tenure comprised mainly RAB drilling and geochemical sampling in the western portion of EL 7506, adjacent to Mt Minza.

Highly anomalous Pb and Zn values were obtained from line 7800N (max 4000ppm Pb, 1800ppm Zn). Anomalous Cu was returned on every line as anticipated from previous BMR sampling. Follow-up RAB drilling resulted in anomalous Pb and Zn from lines 7700N, 7900N and 8000N, with a maximum of 3340ppm Pb and 2100ppm Zn. Copper was also commonly anomalous, reaching 840ppm.

A Pb-Zn anomaly measuring 600m x 400m was defined. The shape of the anomaly reflects that of the nose of the south plunging anticline, and suggests a strong stratigraphic and structural control.

Exploration results for year two can be seen in detail in Ormsby (1993).

5.3 Year Three Tenure

Two diamond drillholes were drilled during year three of tenure to test the significant lead and zinc C horizon anomaly outlined from work carried out in previous years.

Drillhole MMD1 was designed to test the stratigraphy and structure associated with the Mount Minza geochemical anomaly. The anomalous base metal geochemistry is associated with a wide (80m) dolomite unit with rare galena/sphalerite stringers in fault structures. The dolomite unit is on the east limb of a broad anticline.

Diamond drillhole MMD2 was designed to test stratigraphy and structure on the west limb of the Mt Minza anticline at the north end of the Mt Minza geochemical anomaly.

Selected samples of core were submitted for petrographic description. The base metal sulphide mineralisation is associated with mafic igneous rocks that have been strongly altered and deformed, however there is evidence that the mineralisation occurred before the peak of deformation. The mineralisation was initially interpreted to occur in primary carbonate lithologies.

Results and details of the exploration programme for year three of tenure can be seen in Butler (1994).

5.4 Year Four Tenure

Exploration conducted during year four of tenure consisted of BLEG and -40# stream sediment sampling and analysis of RAB drilling pulps for gold .

Stream samples were collected from streams draining EL 7506. The samples were high in organic material and consequently they were split into two 2kg samples in order to carry out orientation work on the effects of pre-leaching the material to remove the organics. A comparison of results from pre-leached and high organics shows little difference.

Gold values were low and downgraded the potential for gold mineralisation.

Pulps from RAB drilling in year two were analysed for gold with disappointing results.

The exploration results can be seen in detail in Butler (1995). No further exploration has been carried out and the licence was surrendered in early 1996.

6. REFERENCES

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