



NICRON RESOURCES LIMITED

ACN 000 828 535

WOODCUTTERS MINE

80km Stuart Highway, via Darwin, Northern Territory 0800
PMB 60, Winnellie, NT 0821

Phone (089) 760 088
Fax (089) 760 108

Title: **FINAL REPORT FOR EXPLORATION LICENCE 8658**
DAM PADDOCK AREA
NORTHERN TERRITORY
12.07.94 to 18.05.96

Project Name: DAM PADDOCK

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

Commodities: COPPER, LEAD, ZINC, GOLD

Author: C. Fawcett

Date: 9 August, 1996

Volume: VOLUME I OF 1

Drawn by:

J. K. Butler

Reviewed by:

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

OPEN FILE

Contents of this report remain the property of Nicron Resources Limited and may not be published in whole or in part nor used in a prospectus without the written consent of the Company.

Report No. 20710

CR 96/639
Vol. 1 of 1

TABLE OF CONTENTS

SUMMARY

1. INTRODUCTION
2. CONCLUSIONS
3. PREVIOUS EXPLORATION
4. GEOLOGY AND MINERALISATION
5. WORK CARRIED OUT
6. REFERENCES

LIST OF FIGURES

- | | | |
|----|-------------------------------------|-------------|
| 1. | Location Plan | 1:1,000,000 |
| 2. | Geological Interpretation | 1:100,000 |
| 3. | Geological Fact Map | 1:25,000 |

Report Number: 20710

Title: **Final Report FOR EXPLORATION LICENCE 8658
DAM PADDOCK AREA
NORTHERN TERRITORY
12.07.94 to 18.05.96**

Author: C. Fawcett

Date: 9 August, 1996



SUMMARY

Exploration Licence 8658 is located approximately 180km SE of Darwin. It is situated in the Pine Creek Inlier and the geology of the area comprises Early Proterozoic metasediments that have been intruded by Carpentarian granite. The metasediments are concordant with the granite contact on the eastern tenement boundaries but are discordant on the southern tenement boundaries. The stratigraphy exposed within the tenement is conjectural. In ascending order it is interpreted by Nicron Resources Ltd to be equivalents of Coomalie Dolomite, Whites (Masson) Formation, Acacia Gap (Mundogie) Sandstone and Koolpin Formation. The Wildman Siltstone division is replaced by Upper Whites Formation and Lower Koolpin Formation. The conformable Cullen Granite intrusives are interpreted to be recrystallised basement.

The area becomes complexly deformed further away from the conformable granite contacts. There are at least two regional scale thrust repetitions. Locally, the sediments are folded and faulted about NW-SE trending axes.

Previous mining in the Frances Creek area was in 1926 when alluvial gold was first discovered. The hard rock source, 5km to the NW, was not worked until 1936-37. Reported production from this deposit was 4,776g Au from 457 tonnes of ore prior to 1965. Since then, the deposit has been mined intermittently by the Casey Family (Casey's Prospect). In 1961, massive haematite lodes were discovered. These deposits were mined between 1966 and 1974. They trend generally N-S and are situated north of EL8138.

Since 1974, limited exploration has been undertaken for gold. Minatone and Total Mining explored for uranium near the granite contact to the east between 1985 and 1987. Anomalies were drill tested but results were not encouraging enough to warrant further exploration. Since 1987, little systematic geological and geochemical evaluation were conducted.

Work conducted by Nicron Resources Ltd within EL 8658 included literature research, purchase of airborne geophysical data, geological mapping and stream sediment sampling.

1. INTRODUCTION

Exploration Licence 8658 is located 180km southeast of Darwin and approximately 30km NE of the township of Pine Creek (Figure 1). It is situated on the Pine Creek 1:250,000 (Sheet SD52-8), Pine Creek 1:100,000 (Sheet 5270) and the Union Reef 1:50,000 (Sheet 5270-1) topographical and geological sheets.

Access is via the Stuart Highway to Pine Creek, thence via the Kakadu Highway to the Mary River Station turn off and then via station tracks.

The exploration licence comprises four graticular blocks which were granted to Aztec Mining Company Ltd (100%) on the 12 July 1994 for a period of four years. The licence was subsequently transferred to Normandy Metals after a successful takeover of Aztec Mining by the Normandy Group of Companies early in 1994.

The licence was surrendered in early 1996. This report outlines all work carried out over the tenement during the period of tenure to 1996.

2. CONCLUSIONS

Exploration failed to locate significant gold or base metal mineralisation within EL 8658 and the licence was surrendered in early 1996.

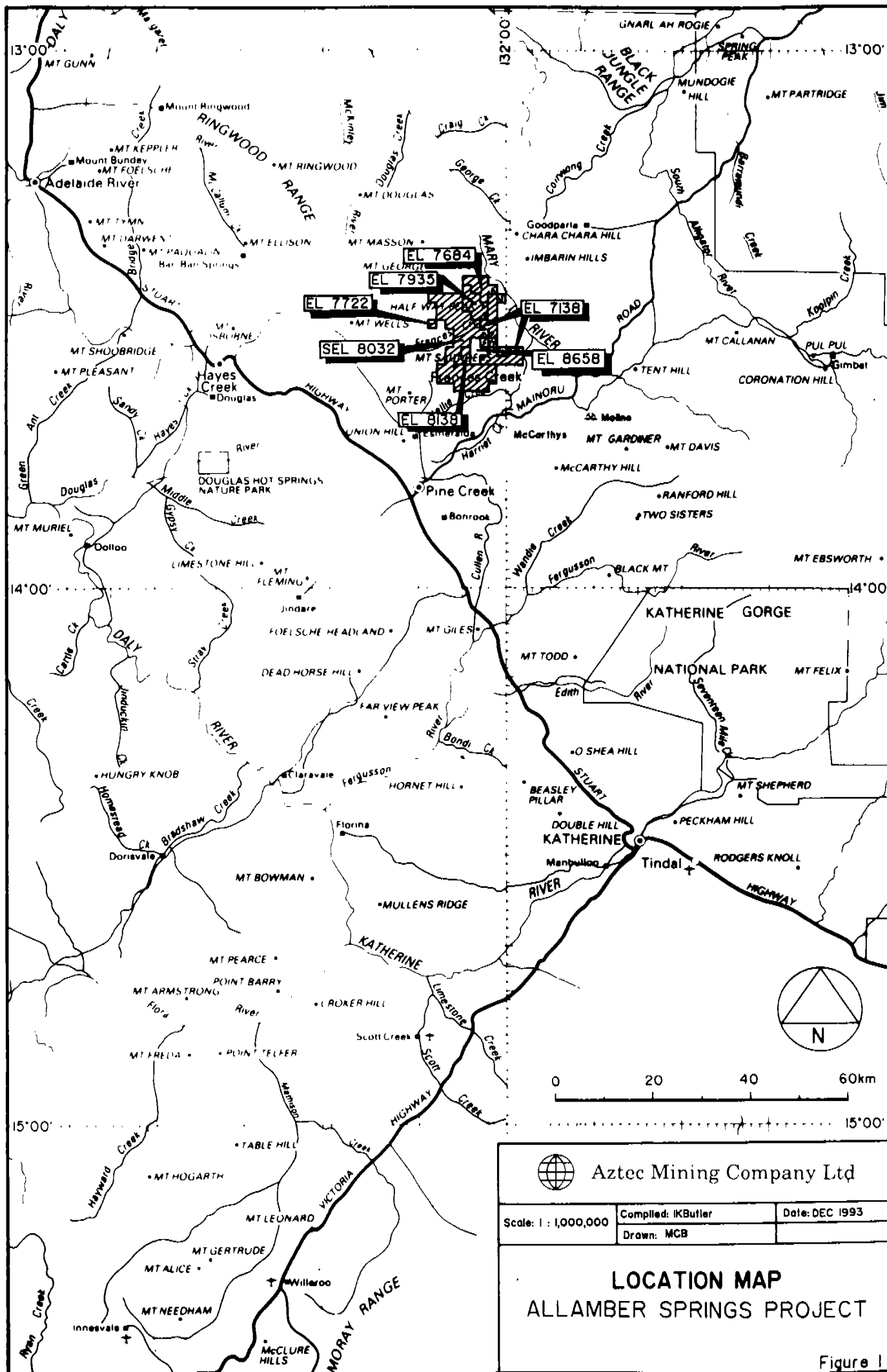
3. PREVIOUS EXPLORATION

Alluvial gold was first discovered in the Frances Creek area in 1926, but the main lode, about 5km northwest of the alluvial deposit was not worked until 1936-37 when two shafts were sunk. Reported gold production from the lode was 4,776 grams recovered from 457 tonnes of ore. The auriferous lode consists of haematitic quartz veins within a sub-vertical brecciated fault. Since the 1950's this main lode reef has been mined periodically by the Casey family and has been termed by Dominion, "Caseys Prospect".

Massive haematite lodes in the Frances Creek area were discovered in 1961. These lodes are located along the western tenements boundary and are associated with a N-S trending dextral wrench fault system. The largest bodies from the south to north are Helena, Thelma 2, Ochre Hill and Saddle. The Frances Creek Iron Mining Corporation mined these deposits between 1966 and 1974 using open cut methods.

Prior to 1985, Eupene conducted an exploration programme for gold over a four block area near Allamby Springs. Exploration involved mainly stream sediment sampling. Samples were sieved and a heavy metal fraction was assayed for gold and tin. No anomalous drainages were detected.

During that time, Minatome Australia conducted an exploration programme for uranium. This work involved helicopter and ground spectrometer traverses. Selected rock chip samples were collected and assayed for uranium and thorium. Results of this work were discouraging.




 Aztec Mining Company Ltd		
Scale: 1 : 1,000,000	Compiled: IKButler	Date: DEC 1993
	Drawn: MCB	
<h2 style="text-align: center;">LOCATION MAP</h2> <h3 style="text-align: center;">ALLAMBER SPRINGS PROJECT</h3>		

Figure 1

CSR Limited conducted an exploration programme for gold between 1985 and 1986. Much of this work was carried out on ground held by the Casey Family under a joint venture agreement. Exploration comprised stream sediment sampling, airborne and ground magnetics, rock chip and soil sampling and mapping. CSR's programme was designed to locate alteration zones within the Zamu Dolerite indicative of Kalgoorlie style gold deposits. CSR failed to locate any areas of anomalous gold and subsequently withdrew from the joint venture with Casey at the end of 1986.

From 1986 to 1987, Total Mining Australia conducted exploration for uranium along the granite/sediment contact to the east of the tenement area. Stream sediment, rock chip sampling and ground spectrometer traverses outlined several weak anomalies. These were subsequently drill tested and narrow, weakly enriched zones of uranium mineralisation were intersected. Total Mining concluded that no further exploration was warranted.

From 1987 to 1994 there was little systematic evaluation completed over the tenement area.

4. GEOLOGY AND MINERALISATION

4.1 Stratigraphy

EL 8658 lies within the Proterozoic Pine Creek Inlier.

The stratigraphy of the area is conjectural. In ascending order the Early Proterozoic stratigraphic succession within EL 8658 is interpreted by Nicron Resources Ltd to be Coomalie Dolomite, Masson Formation (Whites Formation) and Mundogie Sandstone (Acacia Gap Quartzite).

A sandstone unit which subcrops over interpreted dolomite/limestone of Coomalie Dolomite is interpreted to be karst fill and may be equivalent to the Middle Proterozoic Kombolgie sediments (see figures 2 and 3).

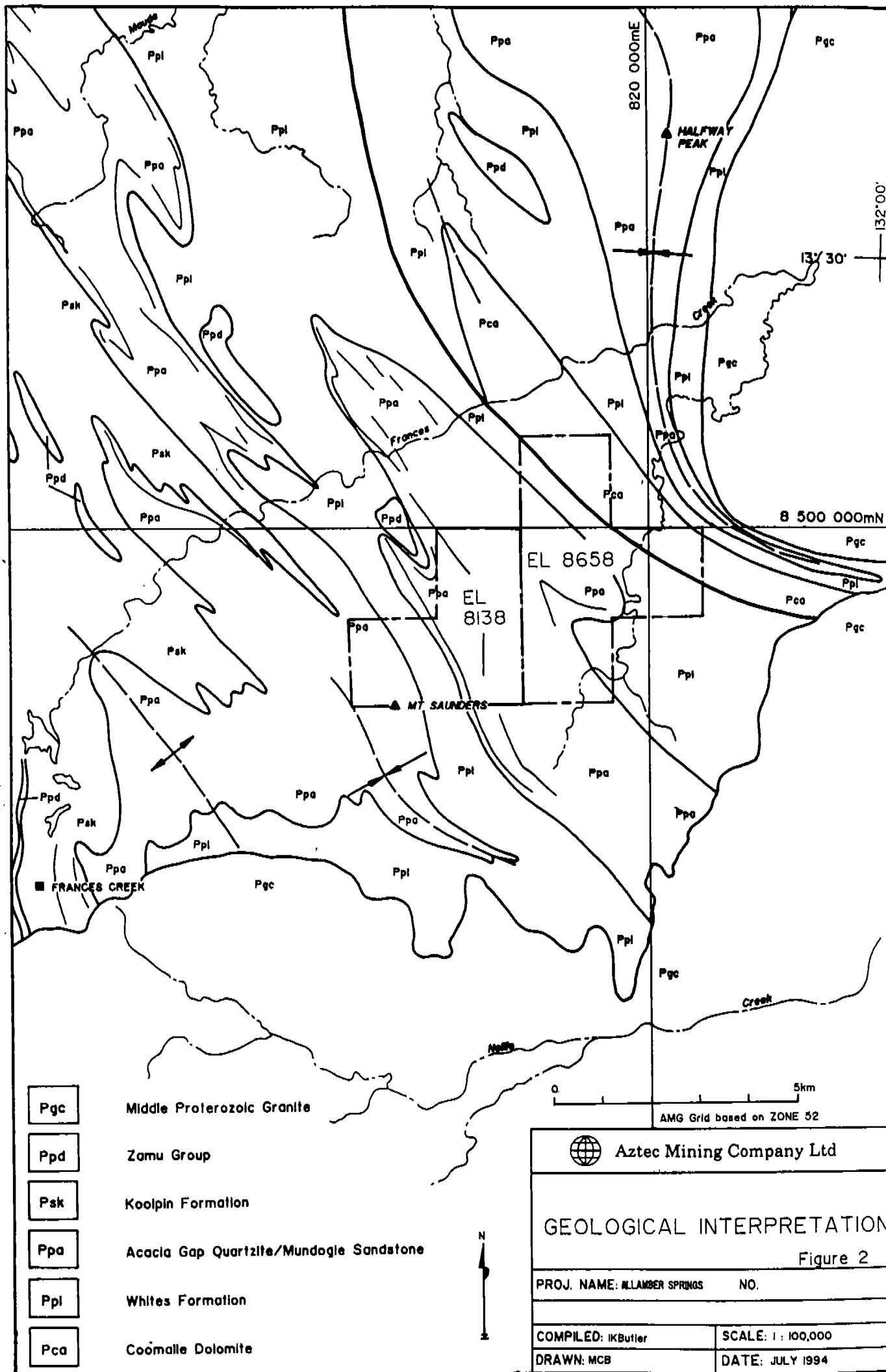
The Early Proterozoic metasedimentary sequence is bounded on the southern and eastern sides of the project area by Proterozoic granite intrusives which include the Allamby Springs Granite, the Frances Creek Leucogranite and Minglo Granites.

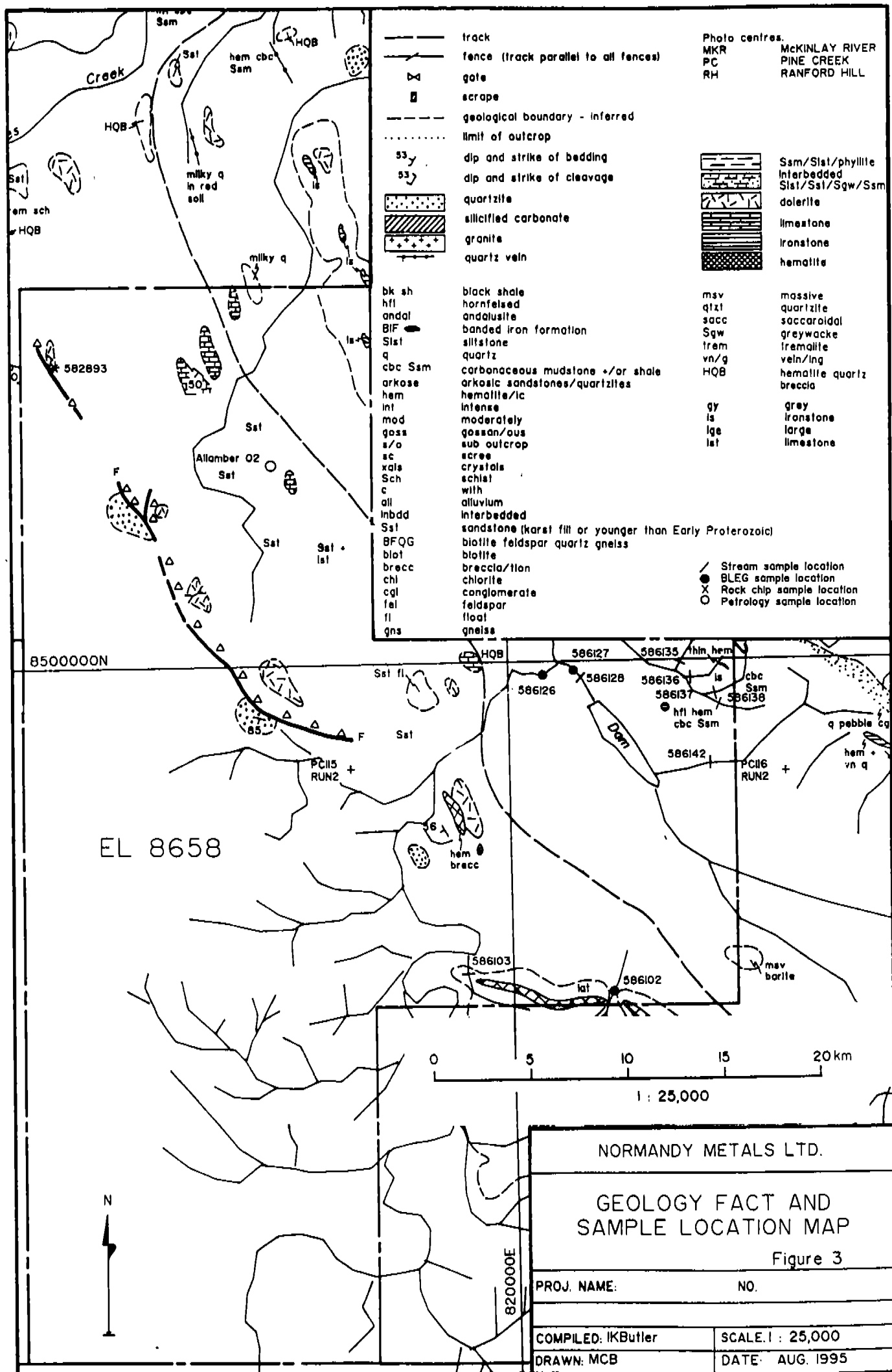
4.2 Structure

The structure of the Frances Creek and Dam Paddock area is complex owing to extensive small scale folding coupled with thrust-stacking which has led to two major repetitions of the sequence in the area (Pooley, 1993).

The fold/thrust structure was distorted by flexing, stretching and buckling during granite intrusion. Except in the vicinity of the Frances Creek Pits, where late wrench faulting is superimposed, the post-intrusive deformational overprint was minor and is largely due to faulting.

Large elliptical growth faults have been interpreted by Nicron within the metasedimentary sequence and are located around prominent gravity lows within the Cullen Batholith. The folding intensity is noticeably less inside the circular faults. The sense of movement is outside down. One of these faults passes through EL 8658 (see figure 2).





4.3 Mineralisation

Several known Au occurrences are present in the vicinity of EL 8658 (McKeddies, Casey's, Missus and Murphys). Caseys Prospect is the most notable. The remaining prospects contain small shallow shafts and pits excavated over narrow, discontinuous quartz veins.

Haematite mineralisation has been mined at Frances Creek and is discussed in the preceding section - 'Previous Work'.

Primary and secondary uranium mineralisation has been outlined by Total at the Cleos prospect 5km to the east of EL 8658.

A small outcrop of high commercial grade barite was mapped just outside the EL boundary. Mapping indicates it could trend into the EL.

5. *WORK CARRIED OUT*

5.1 Year One of Tenure

Exploration conducted over EL 8658 during the first year of tenure consisted of mapping, stream sediment and rock chip sampling.

The area was mapped at 1:25,000 scale. The geology of the region has been reinterpreted using geophysical (magnetics, radiometrics, gravity data), remote sensing imagery and geological data.

Six stream sediment samples (-425 micron) were collected from drainages within EL 8658. Only background geochemical levels were recorded for Cu, Pb, Zn, Ni, Mn and As.

Three BLEG samples were also collected within EL 8658. The samples were taken from drainages at a density of approximately one per 5 km². One sample recorded a weakly anomalous value (2.4ppb Au) the remainder being background.

Details of the exploration conducted during year one of tenure are presented in the first Final Report (Butler, 1995).

5.2 Year Two of Tenure

No field work was conducted within EL 8658 during the second year of tenure. Data collected to date was compiled and interpreted.

6. REFERENCES

Butler, I.K., 1995. Annual Report for Year One Exploration Licence 8658 Dam Paddock Area, Northern Territory. 12/7/94 to 11/7/95. *Nicron Resources unpublished report to the NT Department of Mines and Energy.*

Pooley, S.J., 1993. Frances Creek Project. Final Report to 31 January 1993 SEL 8032 and EL 7722. *Unpublished Report for the NT Department of Mines and Energy.*