

NORMINCO LIMITED

(formerly Mount Carrington Mines Limited)
ACN 004 801398

**REPORT ON RELINQUISHED
AREA**

Exploration Licence

EL 7775

March 1995

by

JIM FLAHERTY

CR 95 / 261 OPEN FILE

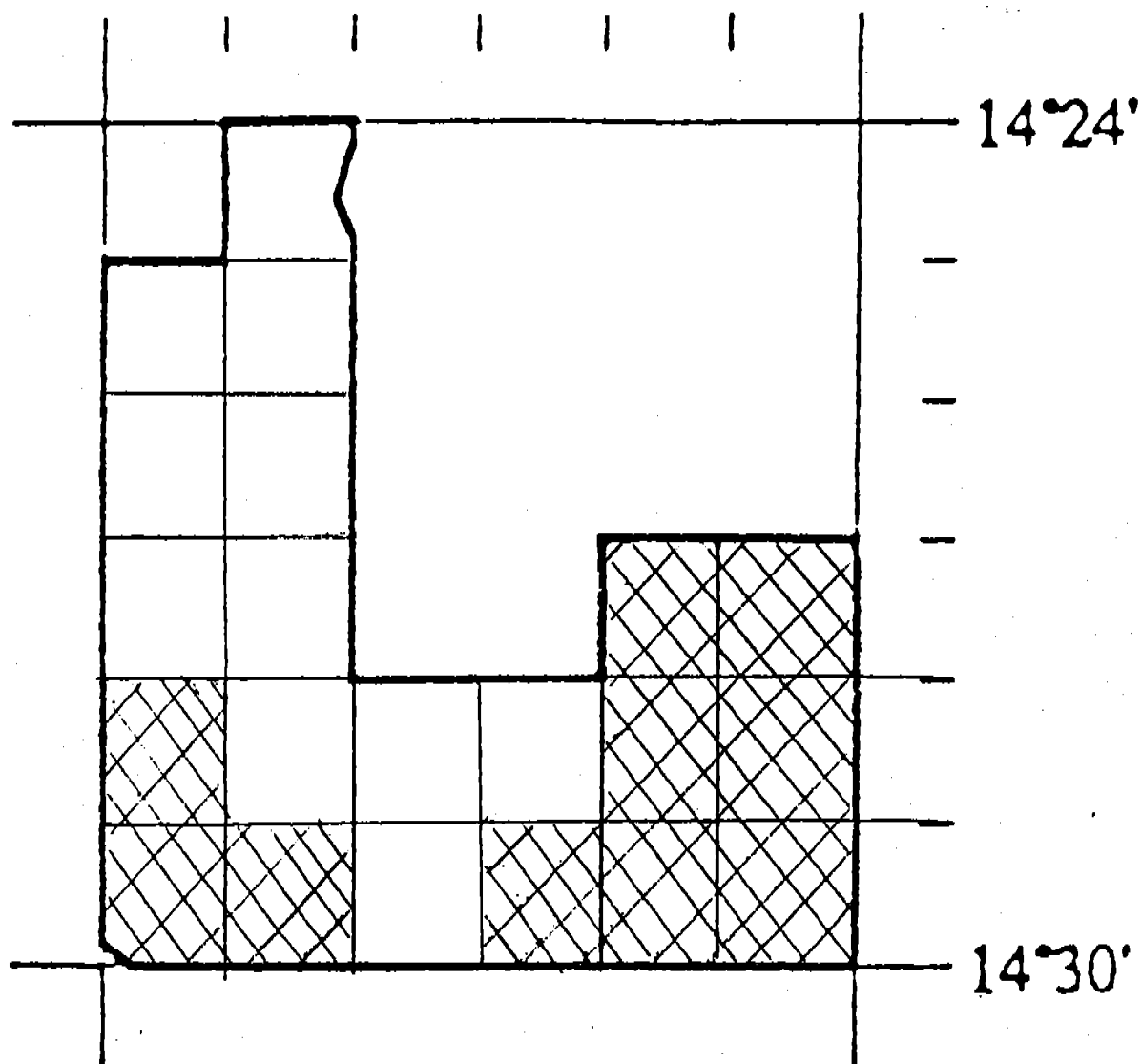
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132°24'

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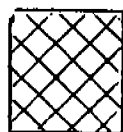


EL7775

21 BLOCKS

67 sq kms

Plan of Current Area



Areas to be dropped
(10 blocks)

I N D E X

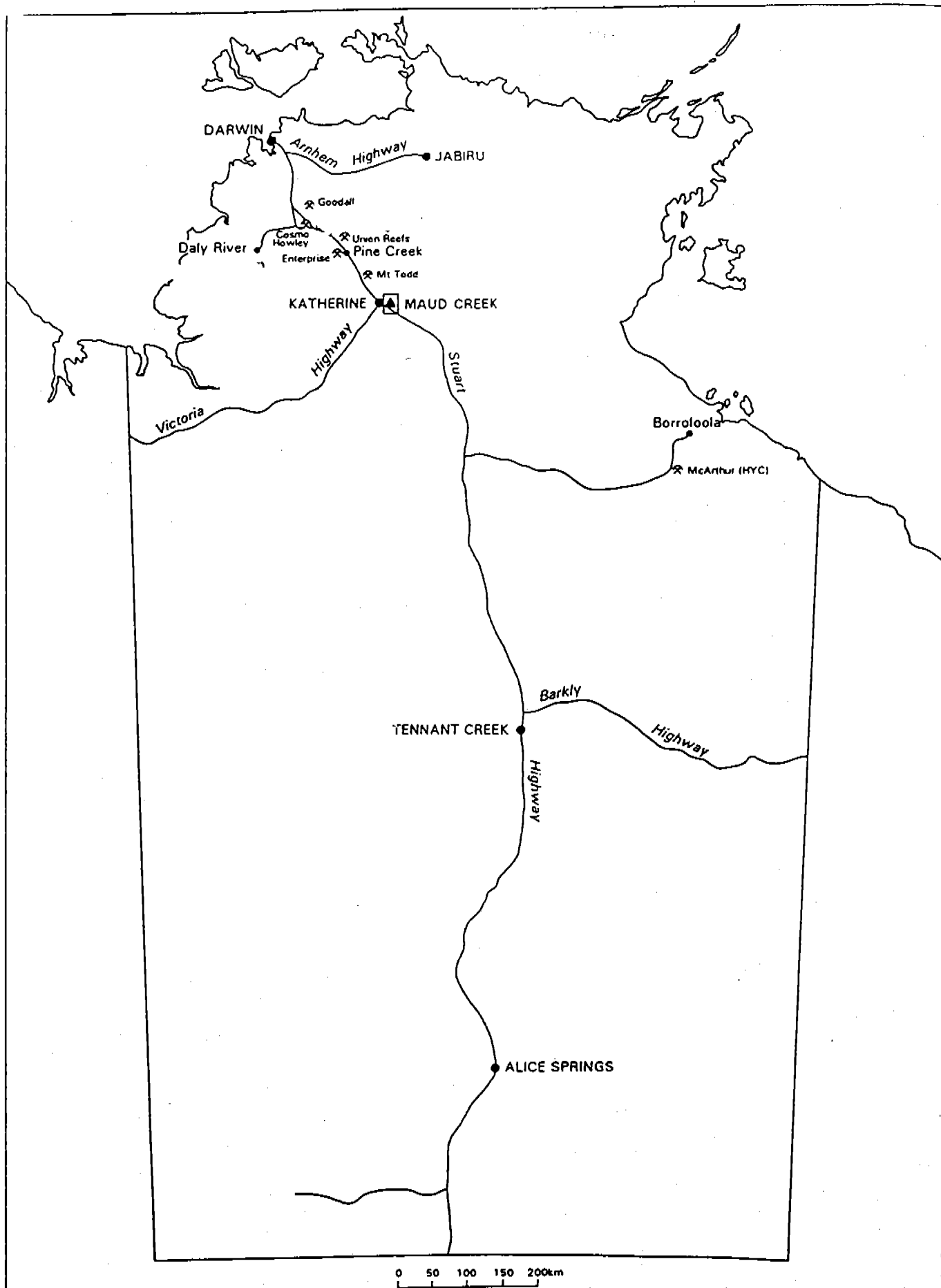
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1.0 PURPOSE OF REPORT

EL7775 originally comprised twenty-one graticular blocks, ten of which were relinquished in January 1995 according to the provisions of the Mining Act (see enclosed plan).

This report covers the relinquished areas of EL7704.

MOUNT CARRINGTON MINES LIMITED



- ▲ Prospects
- ✱ Mines

MOUNT CARRINGTON MINES LIMITED
PROJECT LOCATION MAP

Figure 1

2.0 GEOLOGICAL SETTING

The Licence is located at the south-east margin of the Pine Creek Geosyncline which is a 10-14km thick sequence of lower Proterozoic sediments, interbedded volcanics and mafic sills. This sequence has been subjected to regional metamorphism, folding and granitoid intrusion.

The oldest unit in the area (Fig 2) is the Tollis Formation which comprises greywacke, sandstone, siltstone, argillite, cherty tuff and ash flow tuff. It has been intruded by mafic sills of the Maud Dolerite which has been petrologically described as a dolerite and a microgabbro but it varies and locally is of dioritic composition. The dolerite has been subjected to extensive carbonate alteration. In the Maud Creek goldfield and at Mt Gates these alteration zones have been foci for quartz and sulphide mineralisation.

The Edith River Group unconformably overlies the Tollis Formation and the Maud Dolerite. This group consists of conglomerate, greywacke, phyllite and tuffaceous sediments in the lower part and an upper suite of felsic volcanics, minor mafic volcanics and clastic sediments.

The youngest rocks in the area are in the Middle Proterozoic Kombolgie Formation and the Cambrian Antrim Plateau Volcanics and Tindall Limestone which cover most of the area of EL 7775.

3.0 MINERALISATION STYLE/EXPLORATION MODEL

Gold mineralisation in the Maud Creek goldfield occurs in discrete quartz veins, aggregates of quartz leaders and in quartz haematite breccias. The deposit within the Kalmet ground, immediately to the north of MCNs 4218-4225 has been described as a hydrothermal breccia. In contrast to earlier concepts, this mineralisation does not occur on the Maud Dolerite contact but is situated 200 metres west of this contact on a contact between sediments and volcanics of the Tollis Formation.

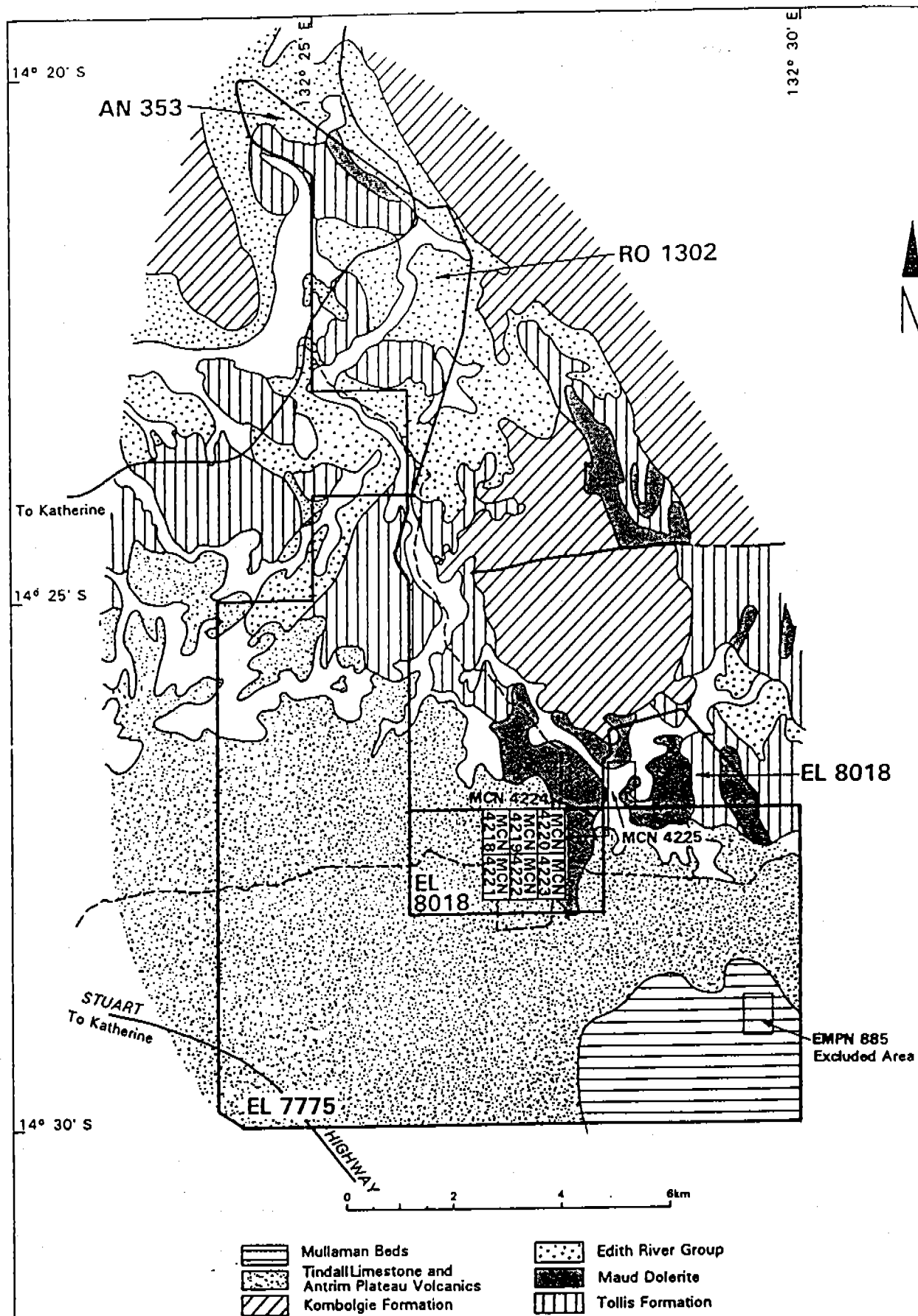
Lode orientation is quite variable throughout the field. The Mt Gate's veins strike both north-north-east and north-west, those at Maud Creek proper strike north-west and east while the Western Shear mineralisation (800 metres west of Maud Creek workings) strikes north.

The width of quartz veins varies from a few centimetres to 4.3 metres. Gold occurs as coarse free gold, fine free gold and in association with sulphides.

It would seem that the timing of the mineralisation could be as late as the waning phases of the upper volcanic sequences of the Edith River Group thus making all units beneath these sequences prospective.

The above suggests the dominant control for mineralisation may be structural, for example, the contact between volcanics and less competent sediments at the Western Shear and the parallel vein systems at Maud Creek.

The exploration model would appear to require quartz veining or quartz haematite breccia lodes with the better prospects occurring on the contact of units which differ significantly in competency.



MT CARRINGTON MINES LIMITED
MAUD CREEK - Tenure and Geological Setting

Figure 2

4.0 PREVIOUS EXPLORATION AND MINING HISTORY

The Maud Creek Goldfield was discovered about 1890. In a visit to the field in 1891, Mines Inspector J V Parkes inspected the mines and reported that some 500 tonnes of ore at an average recovered grade of more than 25 g/t gold had been mined. Grades varied between 3 and 132 g/t gold. There appeared to be two types of ore, one coarse-grained and readily recoverable by battery treatment, the other fine-grained and, he suspected, very difficult to recover.

About 3km south of the Maud Creek workings he inspected a copper-silver occurrence and stated that "about two half tons of rich copper are on the surface". This lode had a strike of 320 degrees and he described the lode as a "bunchy one and will need a considerable amount of prospecting."

Minor prospecting was carried out without any significant success in the 1930s. In 1937 the field was investigated by the Aerial Geological and Geophysical Survey of Northern Australia. This work was confined to the Maud Creek gold workings and the reefs "appear to be continuous over several hundred feet (100 metres), but many are short in length. The widths range up to seven feet (2.1 metres)."

Exploration activity recommenced in 1966 and until 1973 several companies focussed their activities on the search for uranium and copper. Much of this work used remote sensing such as airborne geophysics. In 1985-1986 CSR Limited took up several exploration licences to search for Kalgoorlie-type gold orebodies hosted by dolerite. In 1988 CSR's mineral exploration arm was purchased by Placer Exploration Limited. Continued exploration resulted in the delineation of an inferred resource of one million tonnes grading 4 g/t gold in a hydrothermal breccia to the west of the Maud Creek workings.

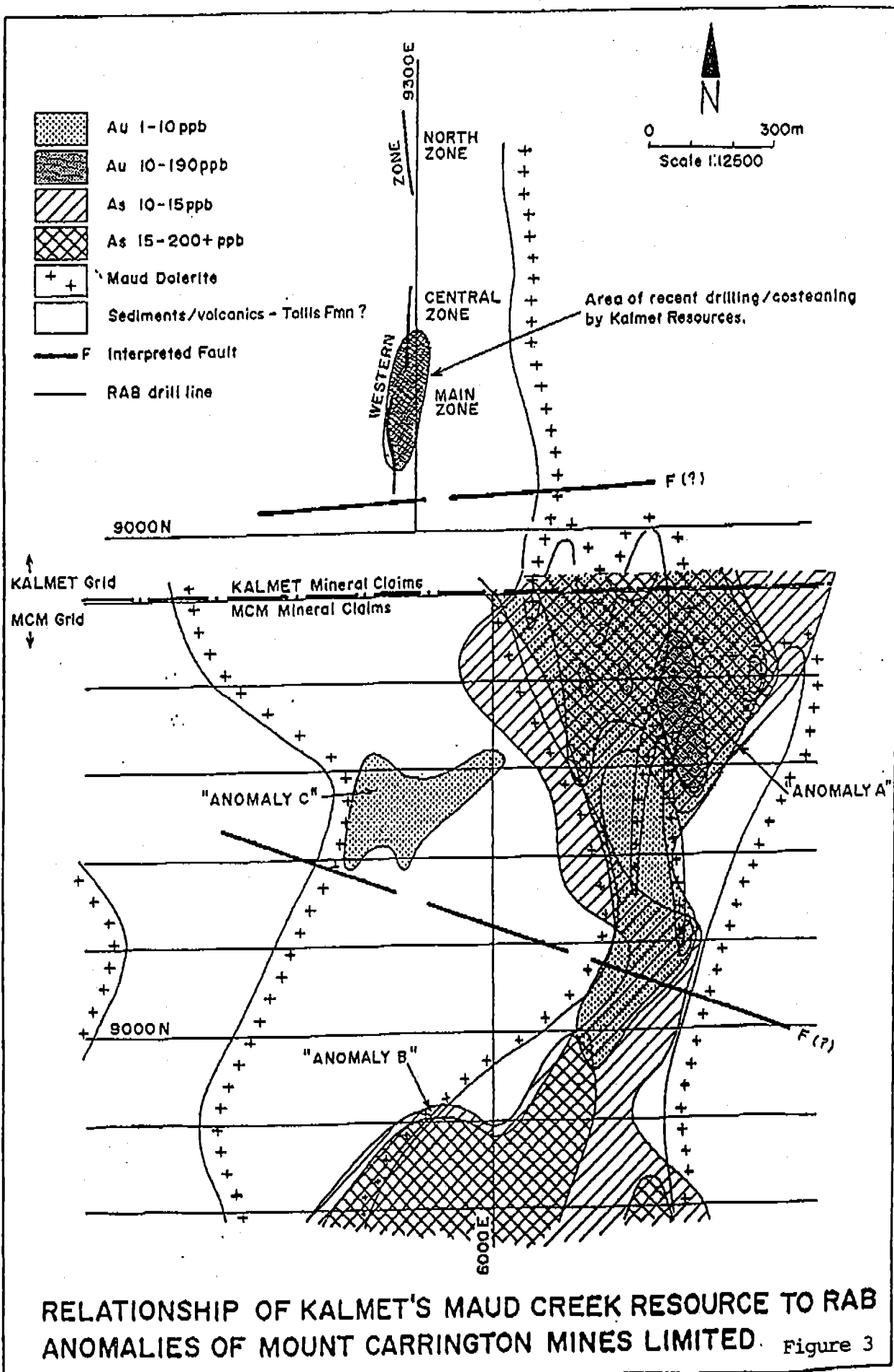
In 1988 Trescabe Pty Ltd secured the areas to the south and west of the CSR ground at Maud Creek. Most of the work done was aimed at delineating "hydrobreccias" using bulk cyanide leach stream and soil geochemistry. They located two breccia zones in the Edith River Group which were anomalous zones in gold where west trending shears cut these breccias.

Because of the depth of the cover in the tenement area and the lack of outcrop, little specific exploration has been undertaken in the immediate tenement area.

Norminco Limited has explored the Maud Creek tenements since it acquired them from Mr R M Biddlecombe in mid 1993. Two drilling programs were conducted over the tenements MCN 4218-4225 adjacent to EL 7775.

Because of the extensive cover of Tindall Limestone and Atrium Plateau Volcanics over EL 7775 area, Norminco Limited used the results from the drilling on the MCNs as a guide to exploration on EL 7775.

The drilling (Fig 3) has shown a north-south trend of anomalous gold and arsenic mineralisation in the MCNs which appeared to continue into EL 7775. The drilling finished approximately 300m north of EL 7775. This anomalous trend was explored further in the current year.



5.0 EXPLORATION CARRIED OUT AND EXPENDITURE

During 22-30 November 1994 an open hole RAB drilling program was carried out at Maud Creek (South) Station approximately 20 kilometres south of Katherine. The drilling was designed to intersect possible extensions to mineralised structures located further north of the Mount Carrington tenements by drilling through shallow alluvium and thicker limestone units in order to sample the basement rock. The structures being tested were defined by aeromagnetics and a ground magnetometer survey.

Prior to the commencement of drilling, 11 kilometres of grid line was cleared using a front end loader in order to make access easier for the drilling rig. The cleared lines were kept as close as possible to the grid with allowances being made for larger trees, fences and the more rugged areas of outcropping limestone.

The RAB program was carried out by Gaden's Drilling resulting in 73 vertical holes totalling 991 metres being drilled. The total metres drilled consisted of 618 metres hammer and 373 metres blade. It was found that using a blade bit worked best in the softer clay rich basement, while the hammer bit worked best in weathered limestone. Some delays were experienced due to problems with the hammer, difficult drilling in cavernous limestone as well as some of the deeper holes hitting the water table, which slowed the rate of drilling. Following the advice of the property owner the program was ended prematurely following heavy rain.

A series of "priority" holes were drilled to a maximum depth of 18 metres along the 5800E baseline, 5400E and 5050E from 8400 and 6800 at 200 metre intervals. This was done in order to gain a general idea of the geology which would be encountered and the possible depth of basement rock. The priority holes drilled in limestone did not reach basement rock. Following the completion of the priority holes, east-west traverses along 8000N, 7800N and 8200N were carried out. The holes were spaced 50 metres apart and varied in depth from 5-16 metres where basement rock was close to the surface and 21-35 metres where limestone was overlying basement.

Weathered basement rock generally formed 2-3 centimetre flat to saucer shaped chips and could be recognised by its colour and fine to coarse igneous texture. The colour of the weathered material varied from grey/dark-brown/orange/purple to pale-brown/white where it appeared more weathered. The rocks were usually called basalts or dolerites depending on their texture with some of the chips being weakly porphyritic. Where limestone was drilled basement was contacted between 21-32m. It was found that basement rock intersected below limestone was usually fresh although there appeared to be a semi-weathered crust at the contact between limestone and basement. The fresh basement rock varied from green/grey/black in colour and varied from fine grained to porphyritic in texture. Where the basement was porphyritic it was distinguished by dark-green coloured, sub-angular soft clasts and finer pale green matrix, and were described as basalts or porphyritic basalts. Varying amount of quartz and calcite vein material was noted as was some minor disseminated pyrite. The basement rock, both weathered and fresh, also reacted with hydrochloric acid. The limestone overlying the basement varied in colour from red, pale-brown to orange and had a silty to gritty appearance. The more weathered material closer to the surface was quite clay rich. "Sugary" textured quartzite was also seen in RAB chips and in surface outcrop appeared to occur as lenses within the limestone.

2-3 kilogram samples were taken as 3 metre composites beginning where basement was first recognised. Where basement was not intersected, samples were taken from material derived from the bottom of the hole or where colour changes were recognised. Samples were taken with a trowel using the cone and quarter method.

Where the water table was reached (11-23 metres) there tended to be poor sample return and a high amount of contamination from limestone higher in the hole. The 73 samples were sent to Assaycorp of Pine Creek for BLEG and Fire Assay analysis.

6.0 WORK UNDERTAKEN

The relinquished area was examined by consulting geologists as part of a review of all previous work done on EL7775 by earlier explorers. Following this review and after RAB and RC drilling programs conducted over MCMs 4218-4224 and EL 8018 to the north of EL7775, it was decided that the most likely area for gold exploration was in the extension of the anomalous zones of the gold and arsenic outlined by the RAB drilling. This zone was followed up in late 1994 by a further RAB program. This was reported on in the Annual Report for EL7775. The portion of EL7775 that was covered by this drilling has been retained.

Thus, no formal exploration was conducted by Norminco Limited (formerly Mount Carrington Mines Limited) on the relinquished areas save the geological review mentioned above.