GRM

EXPLORATION LICENCE 7737
GEOPEKO

SECOND ANNUAL REPORT

23 JUNE 1993 - 22 JUNE 1994

LICENSEE:

GIANTS REEF MINING N.L.
A.C.N. 058 436 794

TENNANT CREEK 1:250 000
SE53-14
TENNANT CREEK 1:100 000
5758

P. G. SIMPSON
DARWIN, N.T.
JULY, 1994

CR 94/515

SUMMARY

Exploration Licence 7737, *Geopeko,* is located 20 kilometres east of Tennant Creek. The Licence was granted to Peko Wallsend Operations Ltd on 23 June 1992 for a term of 4 years and was purchased by Giants Reef Mining N.L. (Giants Reef) in July 1993. It originally covered 5 blocks, and was reduced to 3 blocks at the end of the second year.

The target is gold orebodies in structurally controlled shear zones.

There is little outcrop in the Licence area, which is underlain by the Early Proterozoic Warramunga Group, including some areas of the prospective Black Eye Member of the Carraman Formation.

In the second year, a detailed low level airborne magnetic and radiometric survey was commissioned. A substantial line clearing, gridding and levelling programme was carried out over the western two blocks of the EL.

Total expenditure for the second year was $22,200.

CONTENTS

FIGURES

1. INTRODUCTION

EL 7737, *Geopeko,* is located in an area of poor exposure in the eastern part of the Tennant Creek goldfield. The area was selected by Geopeko on structural grounds to explore for shear-zone-hosted gold mineralisation. Giants Reef's work is aimed at continuing to search for this type of target. This report records the work done by Giants Reef in the second year of the Licence, from 23 June 1993 to 22 June 1994.

2. LOCATION AND ACCESS

EL 7737 is centred 20 kilometres east of Tennant Creek in the northeast quadrant of the Tennant Creek 1:100 000 scale map sheet.

Figure 1 shows the boundaries of the licence area and Figure 2 shows the location of the EL and the surrounding tenements.

The area is reached from the town by driving east to the Peko mine, then following dirt tracks further easterly. The terrain is flattish and mostly scrub-covered, with occasional quartz ridges and hills. Access by 4WD vehicles is difficult except in a few open grassy flats.

3. TENURE

EL 7737 was granted on 23 June 1992 to Peko Wallsend Operations Ltd for a term of 4 years. The Licence was purchased by Giants Reef Mining N.L. in July 1993.

The Licence area originally covered 5 blocks, which was reduced to 3 blocks at the end of the second licence year. Portions of the relinquished two easternmost blocks were applied for as claims, to retain magnetic features of interest.

The area lies within Pastoral Lease 897, Tennant Creek Station.

4. GEOLOGY

The area is underlain by weakly metamorphosed sediments of the Carraman Formation, part of the early Proterozoic Warramunga Group. For the most part it is devoid of outcrops, except in the western blocks where sediments are exposed at the base of a line of northwest-trending quartz ridges. Bedrock in the rest of the Licence area is concealed beneath a thin veneer of sand, soil and outwash.

The quartz ridges mark the southeast end of the Quartz Hill Fault system, in the general area of its intersection with the Mary Lane Shear, a regional west-northwest trending structure. Published maps indicate that the prospective Black Eye Member of the

Carraman Formation underlies the Licence area on the south side of the Mary Lane Shear at the western end of the EL, with undifferentiated Carraman Formation on the north side of the Shear.

Figure 3, reproduced from the first annual report on EL 7737 by Geopeko, shows the regional geology.

The area was originally acquired by Peko Wallsend because of the intersection of the major structural features, which were seen as possibly providing an appropriate environment for the development of structurally controlled gold orebodies in shear zones. Such mineralisation would not necessarily be associated with the ironstone masses that are characteristic of most Tennant Creek orebodies.

5. EXPLORATION DURING THE YEAR

5.1 Airborne magnetic and radiometric survey

A close-spaced low level airborne magnetic and radiometric survey of approximately 357 flight kilometres was commissioned by Giants Reef Mining N.L. to cover EL 7737 in more detail than previous surveys, as a preliminary step to interpreting the sub-surface structural features of the area.

The survey was flown by Austirex International Limited, in late April 1994. Key specifications of the survey were north-south flight lines 80 metres apart, east-west tie-lines every 800 metres, and nominal ground clearance height of 60 metres. Instruments used were a Scintrex V2321 split beam cesium magnetometer, and a Geometrics GR800 256-channel spectrometer.

To date only preliminary presentations of the data collected from the survey have been received, none of which is in a form suitable for inclusion with this report. It can be seen that the initial magnetic data show a much higher resolution than that of previous regional airborne surveys. Interpretation of the full dataset in detail is planned for the future.

5.2 Line clearing, gridding and levelling

Line clearing and gridding was carried out over the western two blocks of EL 7377 in May 1994, in preparation for an extended vacuum drilling and gravity survey over the whole Licence. The work was conducted by contractor P W Youngs.

North-south lines 200 metres apart were cleared with a front end loader. The technique was to lightly scrape tussocks and small scrub off the surface while leaving the subsoil and rootstock as little disturbed as possible. This method of line clearing has been used by the company elsewhere in the Tennant Creek field, and it has been found that the vegetation starts regenerating very quickly after the next period of rains.

A total of 37.4 line kilometres were gridded using an EDM instrument and topofil. Stations at 100 metre intervals were marked with white-topped wooden dumpy pegs with their AMG co-ordinates inscribed on stapled aluminium tags. The intermediate stations at 25 metre intervals were marked with wire pin-markers.

Optical levelling was completed over 4 kilometres in the western half of the cleared and gridded area.

6. CONCLUSIONS

Work by Giants Reef Mining N.L. in the second year of the Licence has been of a data-gathering and preparatory nature.

The initial airborne magnetics information is of a high quality and is expected to prove valuable in the interpretation of structural features which may host shear-zone-related gold mineralisation.

7. EXPENDITURE

The minimum expenditure covenant for the second year of tenure of EL 7737 was $12,000.

Total expenditure during the second year was as follows:

		$
• Geological reconnaissance		380
• Aeromagnetic survey		9,850
• Gridding and levelling		9,010
• Overheads		1,920
• Administration		1,040
	TOTAL	$22,200

8. PROGRAMME FOR THIRD YEAR

During the third year of tenure it is proposed to carry out the following exploration:

(i) Interpretation of the newly-acquired magnetic and radiometric information by the company's consulting geophysicist

(ii) Completion of the line clearing, gridding and levelling over the remainder of the Licence area

(iii) Vacuum drill bedrock geochemical sampling (200 metres x 50 metres) over all of the grid system

(iv) Detailed gravity survey (station spacing 200 metres x 25 metres) over all of the grid system

(v) Correlation and evaluation of the magnetic, geochemical and gravity data to select target areas for RAB drilling.

9. PROPOSED EXPENDITURE

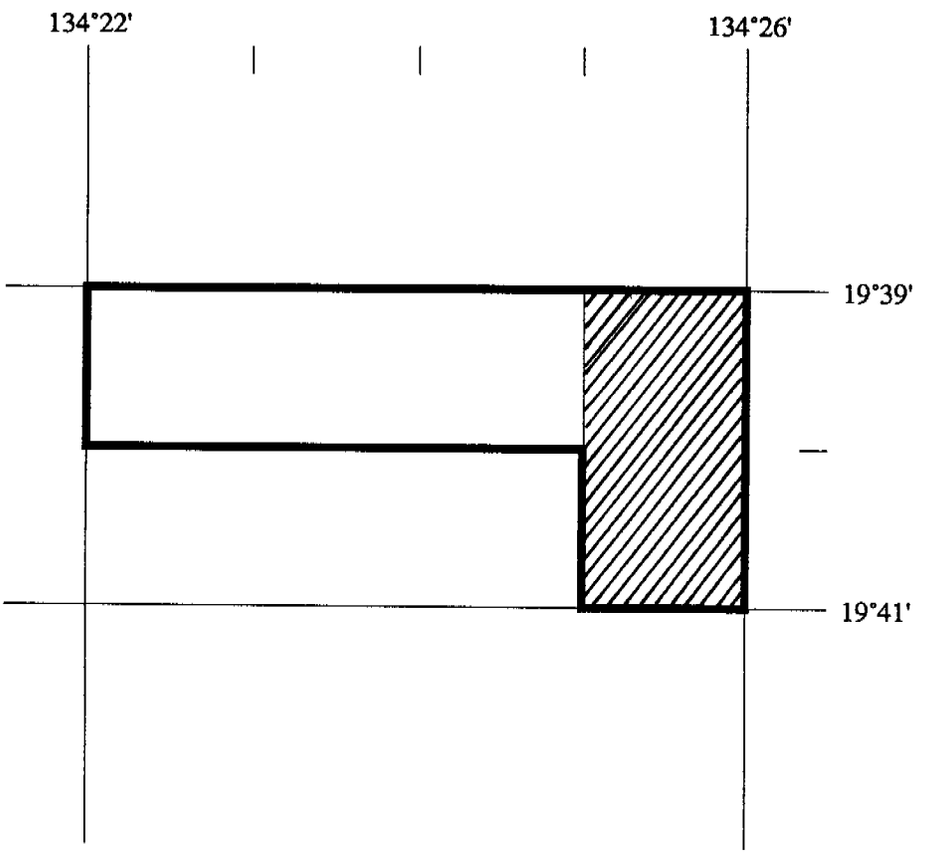
The estimated minimum proposed exploration expenditure for the third year of tenure is as follows:

		$
• Geophysical interpretation		1,000
• Completion of gridding and levelling		4,000
• Vacuum drilling, including assays		9,500
• Gravity survey		7,500
• Correlation and evaluation to select RAB targets		1,000
	TOTAL	$23,000

Exploration programmes can be affected by results, and while $23,000 is the proposed minimum expenditure, specific activities may vary according to the results achieved.

P. G. SIMPSON
EXPLORATION MANAGER

GIANTS REEF MINING N.L.



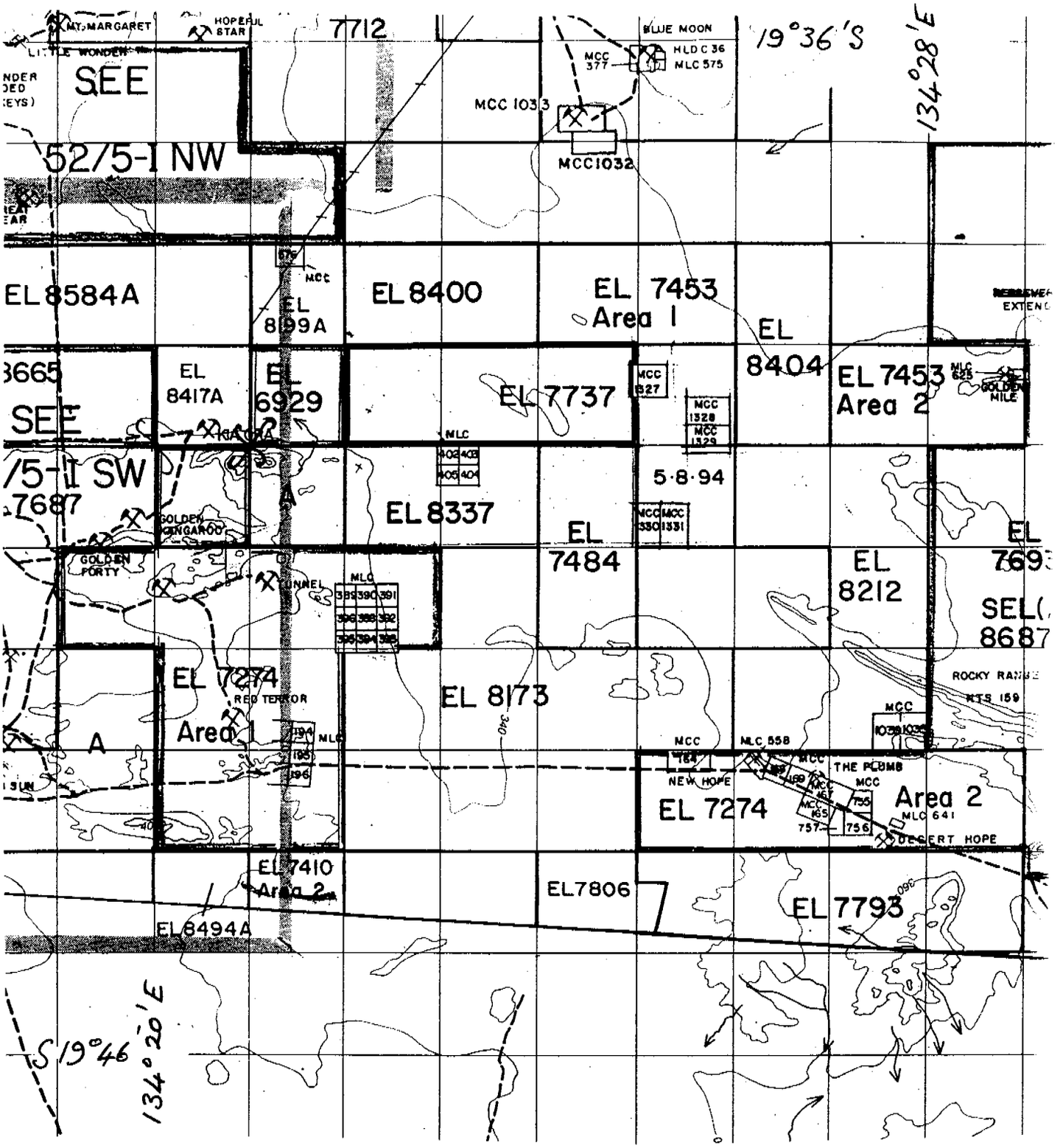
EL7737
5 BLOCKS
16 sq kms

2 blocks relinquished at second anniversary

BOUNDARIES OF EL7737

(FROM NTDME LICENCE DOCUMENT)

FIGURE 1



From NTDME tenement map 52/5 Tennant Creek July 1994

Scale 1:100 000

EL7737 AND SURROUNDING TENEMENTS

FIGURE 2

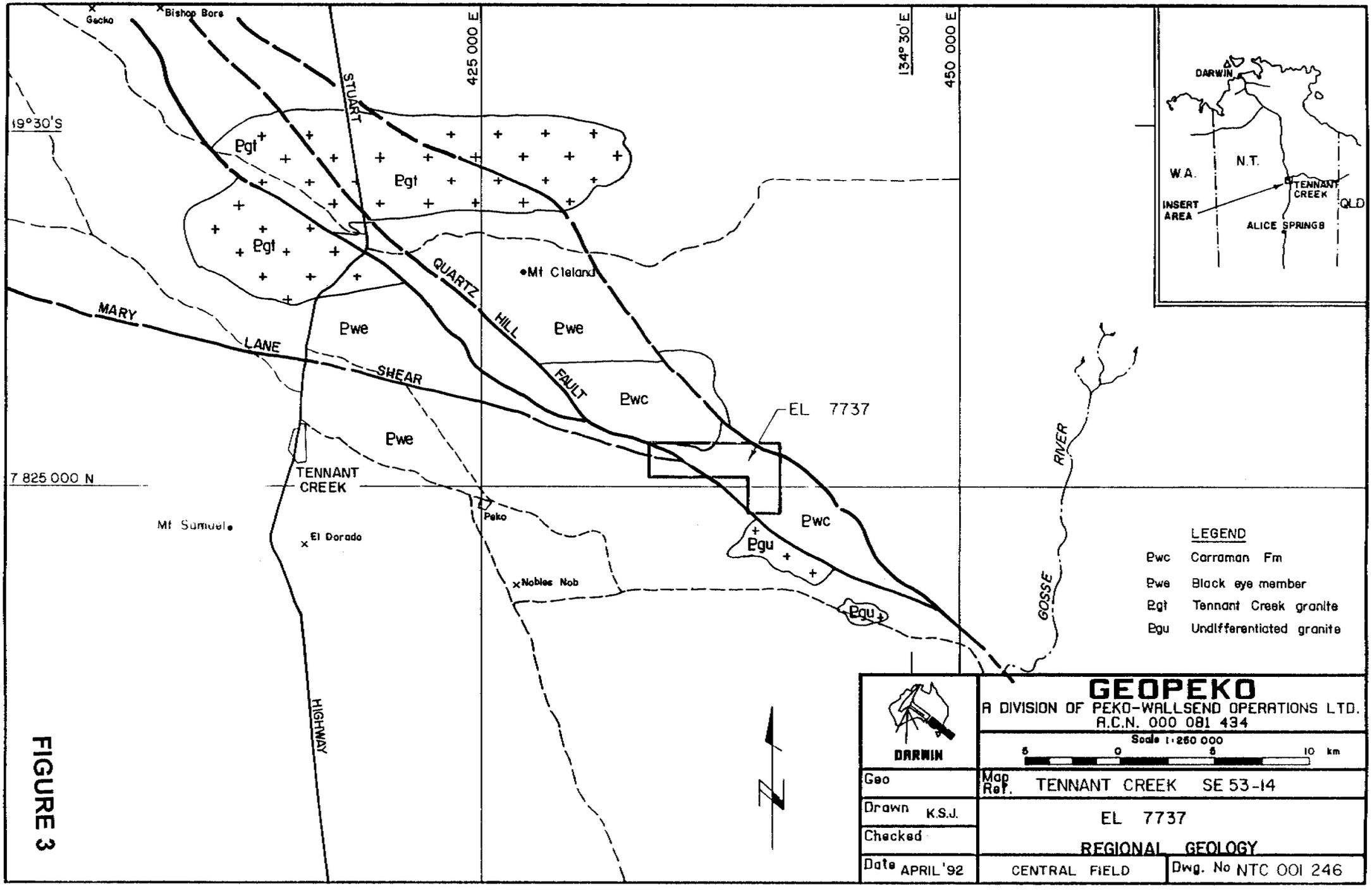

Gecko
Bishop Bore
425 000 E
134° 30' E
450 000 E
19°30'S
STUART
HIGHWAY
Pgt
Pgt
Pgt
QUARTZ HILL FAULT
MARY LANE SHEAR
Mt Cleland
Pwe
Pwe
Pwe
Pwc
Pwc
Pgu
Pgu
EL 7737
TENNANT CREEK
7 825 000 N
Mt Samuel
El Dorado
Peko
Nobles Nob
GOSSE RIVER
DARWIN
N.T.
W.A.
TENNANT CREEK
QLD
INSERT AREA
ALICE SPRINGS
LEGEND
Pwc Carraman Fm
Pwe Black eye member
Pgt Tennant Creek granite
Pgu Undifferentiated granite
DARWIN
GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.
A.C.N. 000 081 434
Scale 1:250 000
5 0 5 10 km
Geo
Drawn K.S.J.
Checked
Date APRIL '92
Map Ref. TENNANT CREEK SE 53-14
EL 7737
REGIONAL GEOLOGY
CENTRAL FIELD
Dwg. No NTC 001 246

FIGURE 3