



Northern Gold NL

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EL 8228 1996/97 ANNUAL REPORT

31/12/96 to 30/12/97

Mount Masson (14/3-II) and Union Reef (14/6-I) 1:50 000
Scale Map Sheets

Title Holder:- Territory Goldfields N.L.
Managed by:- Northern Gold N.L.

January 1998

Author:- N. Socic

NTDME

Northern Gold N.L., Adelaide River

Northern Gold N.L., Perth Office

CR 98 / 105

SUMMARY

EL 8228 is located approximately 36 kilometres north - west of Pine Creek on the Mount Masson (14/3-II) 1:50,000 scale map sheet and the Union Reef (14/6-I) 1:50,000 scale map sheet.

The licence area contains low-grade metasediments and metavolcanics of Lower Proterozoic age which have been folded strongly and intruded by pre-orogenic dolerite.

While no specific, hard rock gold occurrences or old workings are known to occur within the licence area, small iron and lead vein type deposits are present in its near vicinity and appear to be fault or shear controlled.

The exploration licence was granted to Northern Territory Gold Mines N.L. on the 31st of December 1993 for a period of six years. Territory Goldfields N.L., which is now managed by Northern Gold N.L., acquired the tenement in 1994. A waiver of reduction was granted on the 20th of January 1997, enabling 24 blocks to be retained until the 31st of December 1997.

During the 1996/97 exploration season Northern Gold N.L. completed a work program involving magnetic data acquisition and manipulation, and digital terrain modelling. The data was obtained and used in conjunction with aerial mapping, site visits, previous digital data interpretations and a review of all results obtained, to determine the best method of exploration to be used on the licence.

Further work, including infill soil sampling and geological mapping over the base metal anomalies, and regional soil sampling to the north and east, targeting both gold and base metals, is required to fully assess the mineralisation potential within the licence.

The covenant for the 1996/97 year of tenure was \$16,500 and the expenditure totaled \$7,115.

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1.0 INTRODUCTION

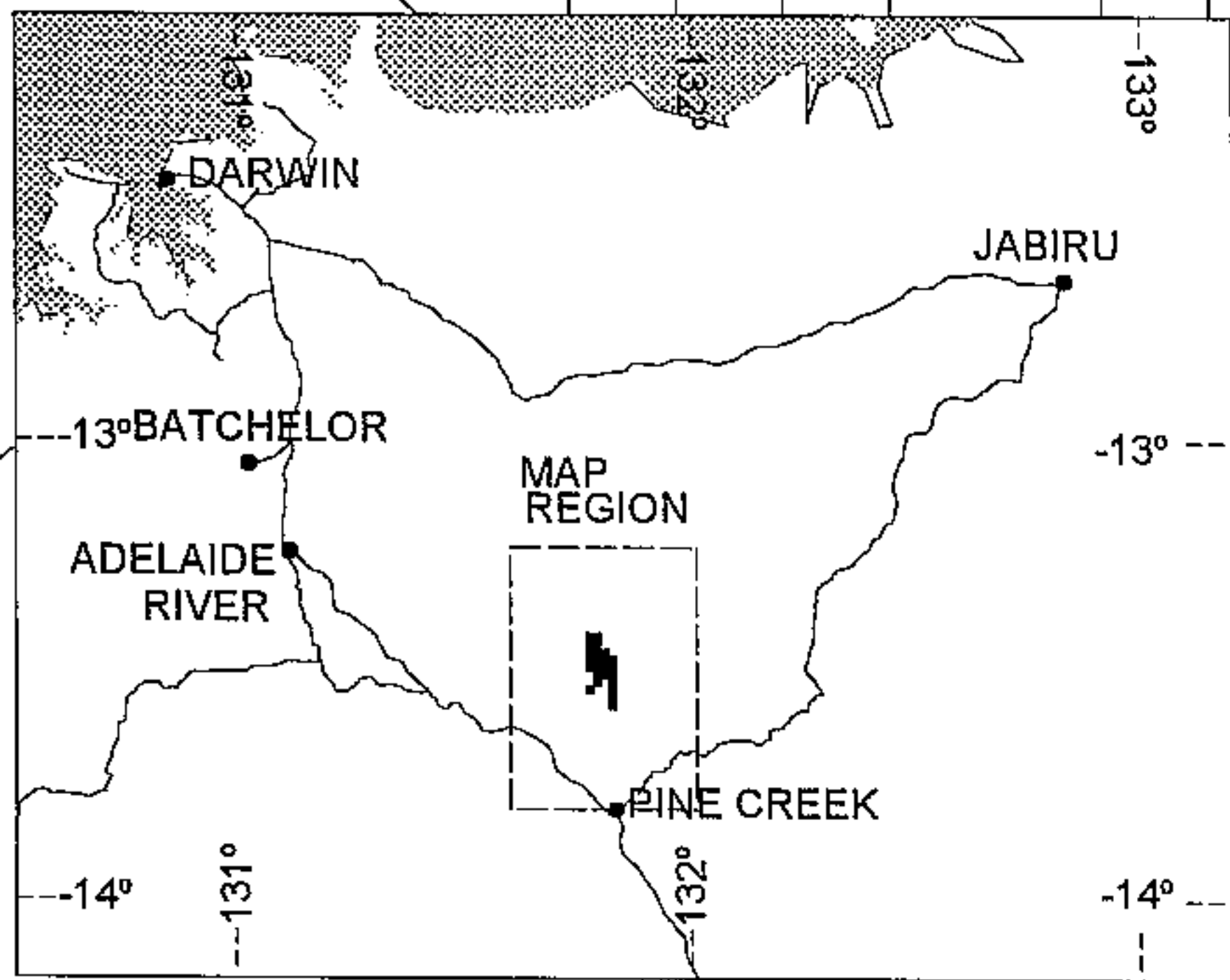
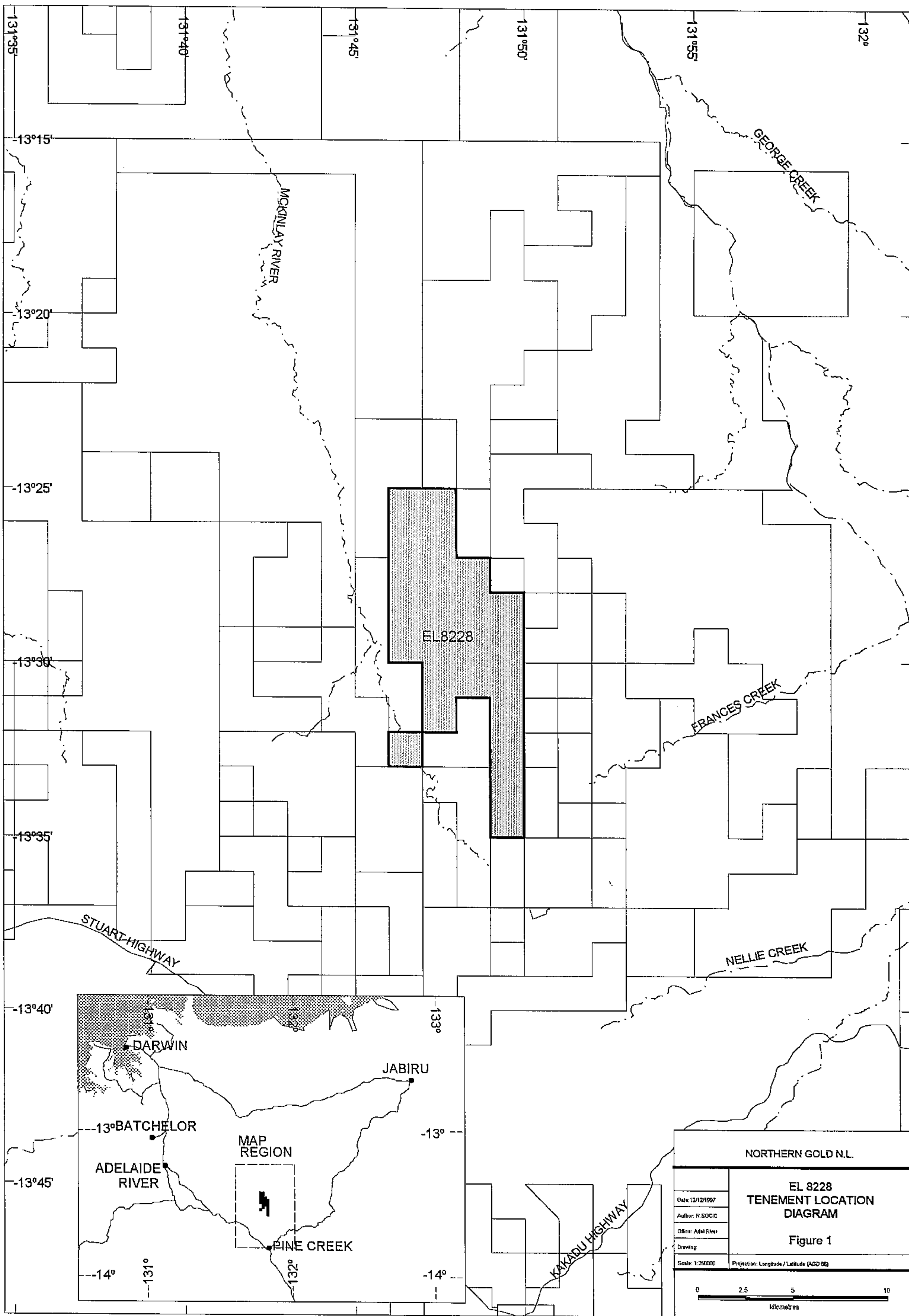
EL 8228 is located approximately 36 kilometres north - west of Pine Creek on the Mount Masson (14/3-II) 1:50,000 scale map sheet and the Union Reef (14/6-I) 1:50,000 scale map sheet. The licence consists of 24 graticular blocks, 77 square kilometres in area, lying between latitudes 13°25' south and 13°35' south and longitudes 131°46' east and 131°50' east (Figure 1). EL 8228 is situated within Perpetual Pastoral Lease No. 1111, Ban Ban Springs, held by Ban Ban Springs Station Pty. Ltd.

Access to the southern part of the area is gained by the Stuart Highway and Pine Creek, then via the good unsealed road to Frances Creek, and along tracks into the headwaters area of Watts Creek. Access to the central part of the licence area can be gained via Mount Wells then along a track leading to the east, which crosses Watts Creek.

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NORTHERN GOLD N.L.	
EL 8228 TENEMENT LOCATION DIAGRAM	
Figure 1	
Date: 12/12/1997	Author: N.SOCIC
Office: Adal River	Drawing:
Scale: 1:250000	Projection: Longitude / Latitude (AGD 66)
0 2.5 5 10 Kilometres	

2.0 GEOLOGY

2.1 Regional Geology

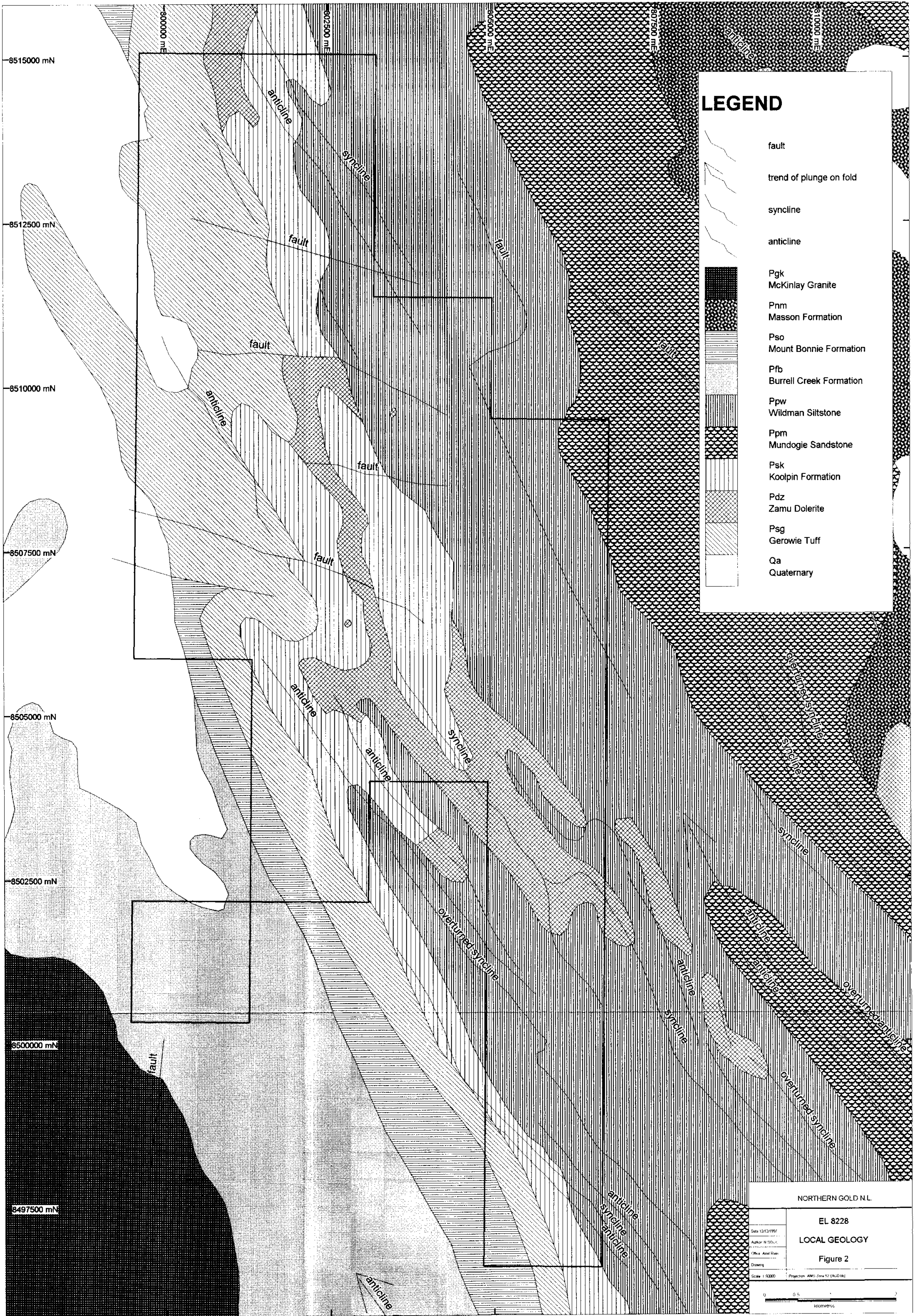
EL 8228 is situated within the Pine Creek Geosyncline, a tightly to isoclinally folded sequence of mainly pelitic and psammitic (continental to shallow water) Lower Proterozoic sediments with interlayered tuff units. All the lithologies in the area have been metamorphosed mostly to low and in places medium grade metamorphic assemblages. For the purposes of this report the prefix "meta" is implied, but omitted, from rock names and descriptions. The sequence has been intruded by pre-orogenic dolerite sills and a number of late syn-orogenic to post-orogenic Proterozoic granitoids. Largely undeformed Middle and Late Proterozoic, Palaeozoic and Mesozoic strata, as well as Cainozoic sediments and laterite overlie the Pine Creek Geosyncline lithologies.

2.2 Local Geology

The licence areas cover units of the Mount Bonnie, Burrell Creek and Koolpin Formations, Gerowie Tuff, Wildman Siltstone and Zamu Dolerite, with minor Mundogie Sandstone (Figure 2). These sediments are tightly folded in north north - west to south south - east trending structures.

Both strike-slip and cross-faulting have affected the units in the northern half of the licence area.

To the south - west of the tenement, the McKinlay Granite has intruded the area.



3.0 PREVIOUS WORK

Detailed mineral exploration has been undertaken by many previous title holders in the area now held as EL 8228. Previous exploration activities are summarised below (Fawcett, 1996, Hosking, 1995, and Socic, 1996).

EL 4759 - Kable Resources and Dominion Mining

- Extensive costeaning with follow up mapping, sampling and RC drilling for low grade, stockwork type gold mineralisation.

EL 6143 - Trescabe and Geopeko

- Soil sampling south and east of Rosemary Tin Mine.
- Exploration led to the mining of Tooheys and Tooheys North gold deposits in ironstones developed above fine-grained sulphidic metasediments.

EL 6222 and EL 6335 - Billiton Australia

- Discouraging results were obtained from stream sediment, soil and rock chip sampling. Geological mapping, ground magnetic surveying and interpretation of aeromagnetic data were also completed.

EL 6444 - Billiton Australia

- BLEG stream sediment geochemistry returned values less than 5 ppb Au.

EL 6653 - Robert Johnston

- Discouraging results were obtained from geochemical sampling and geological mapping.

EL 6702 - Rosequartz Mining

- Geological reconnaissance and rock chip sampling was completed. Only a small area was located with slightly anomalous gold values.

EL 7316 - Northern Gold

- Stream sediment sampling, soil sampling and geological mapping failed to identify any anomalous areas.

EL 8228 - Northern Territory Gold Mines N.L.

- Detailed research and acquisition of data was completed.

EL 8228 - Northern Gold N.L. (1995/96)

- Landsat Imagery, SPOT Imagery and AGSO mapping were obtained and used in conjunction with aerial mapping and site visits to determine the best method of gold exploration to be used on the licence.

- Regional soil sampling consisted of the collection of 227 samples along fourteen 400 metre spaced lines. A small north north - west trending gold anomaly was identified in the north central area sampled, and had coincident peak values of 14.2 ppb Au and 28 ppm As (Sample No. 144502, 8507819.62N : 801658.65E). A second, weaker, north north - west trending gold anomaly was outlined in the south - west of the area sampled with coincident values of 8 ppb Au and 42 ppm As (Sample No. 144433, 8506117.31N : 801239.04E). Soil sampling completed along the southern lines, identified a bullseye base metal anomaly with coincident peak values of 3140 ppm Zn and 900 ppm Pb (Sample No. 144385, 8506056.54N ; 802585.58E).
- A total of 28 rock chip samples were collected. All samples were taken from gossanous quartz veins within shale and siltstone from the Koolpin Formation. The samples collected within the areas of gold anomalism (Sample Nos. WN02, WN03 and WN04) failed to identify the source of these gold anomalies returning values of 1 ppb Au, 0.005 ppb Au and 0.005 ppb Au respectively.
- The follow - up rock chip sampling over the base metal anomalies (Sample Nos. WN08 and WN09) gave maximum values of 172 ppm Pb and 1790 ppm Zn, and 71 ppm Pb and 830 ppm Zn respectively. These values suggest that the rock chipping failed to identify the source of the base metal anomaly.
- A total of four stream sediment samples were collected. The highest result returned was 14.4 ppb Au (Sample No. 144438, 8505920N : 800850E).

4.0 1996/97 EXPLORATION COMPLETED

During the 1996/97 exploration season Northern Gold N.L. completed a work program involving magnetic data acquisition and manipulation, and digital terrain modelling. The data was obtained and used in conjunction with aerial mapping, site visits, previous digital data interpretations and a review of all results obtained, to determine the best method of exploration to be used on the licence.

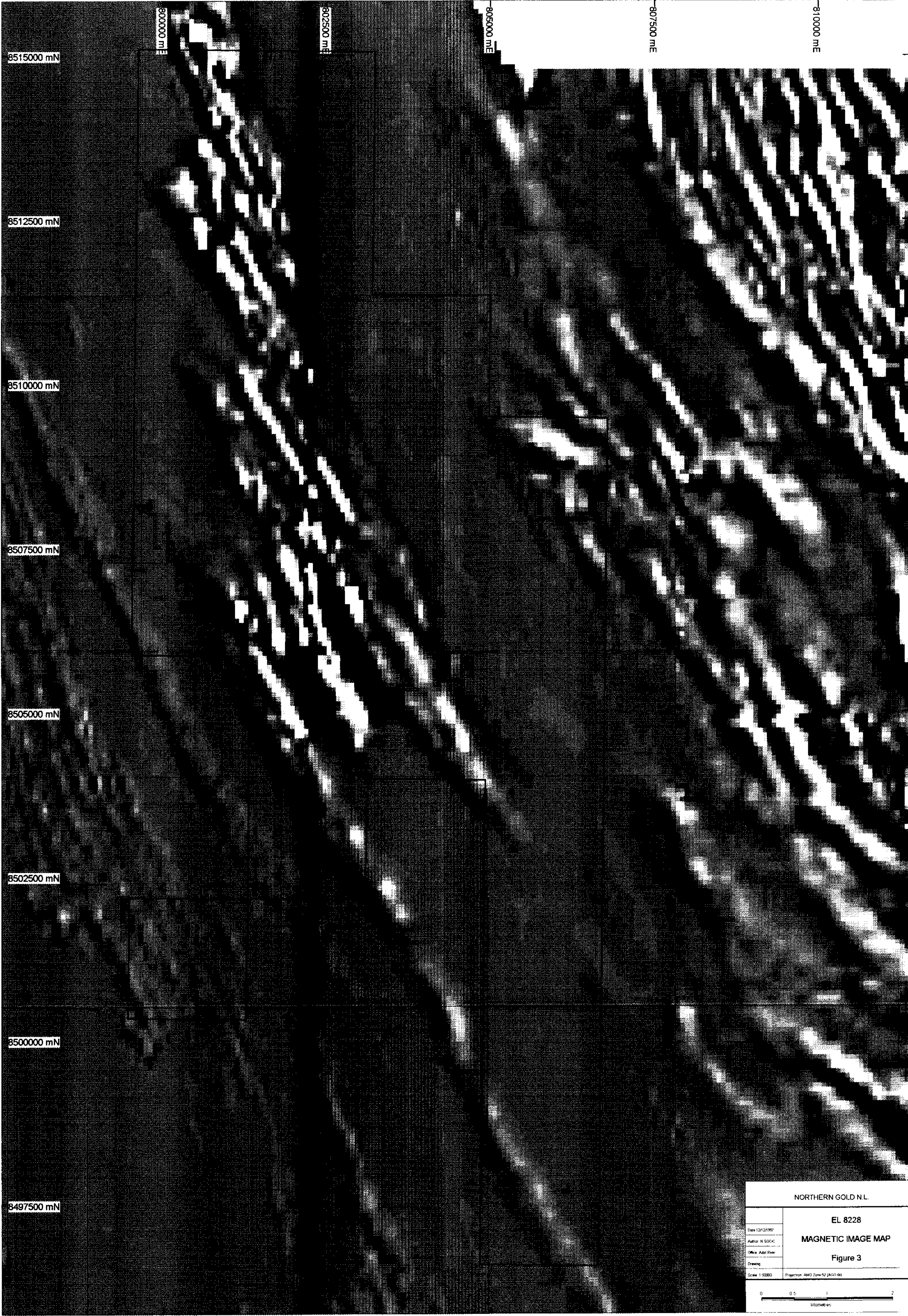
4.1 Geophysics

Northern Gold N.L. purchased multiclient aerial geophysics from World Geoscience. The data covers areas not previously held by Northern Gold N.L. It is presented as a south - west, sun shaded residual plot in Figure 3.

EL 8228 lies within the area covered by the survey.

The survey specifications are listed in Table 1.

The results of the geophysics were used primarily as imaged processed data for regional interpretation of exploration concepts.



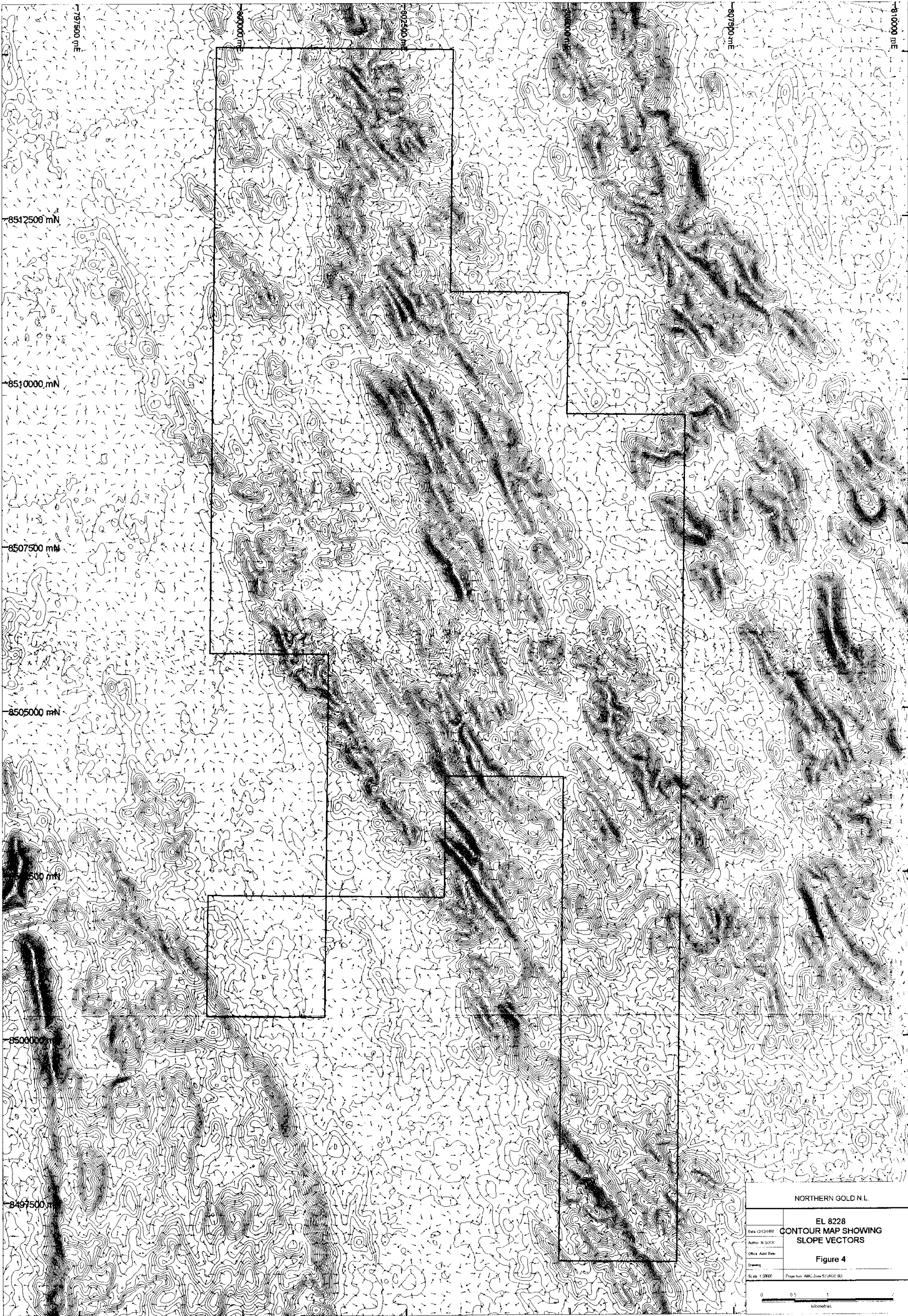
NORTHERN GOLD N.L.	
EL 8228	
MAGNETIC IMAGE MAP	
Figure 3	
Date 12/21/99	
Author N 500C	
Office Adet River	
Drawing	
Scale 1:5000	Projection AMG Zone 52 (ACR 98)
0 0.5 1 2 kilometres	

Table 1 Aerial Geophysical Survey Specifications

Aircraft	Rockwell Strike Commander 500S
Magnetometer	Scintrex V201 Split Beam Caesium Vapour
	Resolution: 0.04 nanoTesla
	Cycle Rate: 0.2 second
	Sample Interval: 14 metres
Spectrometer	256 Channel Geometrics Exploranium GR800B
Processed Channels	Total Count 0.4 - 3.01 MeV
	K40 1.37 - 1.56 MeV
	Bi214 1.67 - 1.86 MeV
	Tl208 3.02 - 6.00
	Cosmic 3.02 - 6.00
	Volume: 33.56 litres
	Cycle Rate: 1.0 second
	Sample Interval: 70 metres
Data Acquisition	Hewlett Packard 9000 Series Computer:
	Aerodata Digital Data Acquisition System
Flight Line Spacing	Traverse Lines: 200 metres
	Tie Lines: 5000 metres
Flight Line Direction	Traverse Lines: 090 - 270 degrees
	Tie Lines: 180 - 360 degrees
Survey Height	70 metres - mean terrain clearance
Navigation	Syledis UHF Positioning System

4.2 DTM Studies

A contour map of the region was compiled, showing the slope vectors of the terrain, indicating possible dispersion directions of mobile elements (Figure 4).



5.0 1996/97 EXPENDITURE

Expenditure on EL 8228 during the 1996/97 year of tenure totaled \$7,115. Details of this expenditure are listed below as Table 2.

Table 2 EL 8228 1996/97 Expenditure

<u>COSTS</u>	<u>AMOUNT</u>
Report Compilation	365
Tenement Management	535
Data Review	405
Photocopying	150
Stationary and Office Expenses	55
Computing	60
Motor Vehicle Expenses and Fuel	275
Geophysics	1,020
GIS Manipulation	725
DTM Manipulation	1,255
Salaries and Wages	1,340
Subtotal	6,185
Administration @ 15%	930
TOTAL	<u>\$7,115</u>

6.0 1997/98 PROPOSED WORK PROGRAM

The proposed work program for the 1997/98 year of tenure will include extended regional soil sampling, infill soil sampling, assaying and geological mapping.

An estimation of the cost of these programs is listed in Table 3.

Table 3 EL 8228 1997/98 Proposed Work Program

<u>COSTS</u>	<u>AMOUNT</u>
Regional Soil Sampling	2,500
Infill Soil Sampling	1,500
Assaying	4,000
Geological Mapping	1,000
TOTAL	<u>\$9,000</u>

7.0 REFERENCES

- FAWCETT, C., (1996). EL 8228 - Watts Creek East, Annual Report, Year Two of Tenure, 31.12.94 to 30.12.95. Unpublished report by Territory Goldfields N.L. for the NTDME.
- HOSKING, A. J., (1995). Exploration Licence 8228, Watts Creek East, First Annual report for year ending 30/12/94. Unpublished report by A J. Hosking and Associates Pty. Ltd., on behalf of Northern Territory Gold Mines N.L., for the NTDME.
- SOCIC, N., (1996). EL 8228, 1995/96 Annual Report, 31/12/95 to 30/12/96. Unpublished report by Northern Gold N.L. for the NTDME.