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ANNUAL REPORT

YEAR ENDING 28 AUGUST, 1989

EXPLORATION LICENCE 6093

MOUNT PAQUALIN, N.T.

Compiled by Golden Plateau N.L.
September, 1989

CONTENTS

LIST OF PLANS

1. INTRODUCTION

Exploration Licence 6093 was granted on 29 September 1988 to Golden Plateau N.L. for a term of two years. Exploration was conducted by Golden Plateau N.L. during the first year of title.

The tenement consists of two blocks, each one minute square, and covers approximately 6.5 square kilometres commencing sixteen kilometres west of Ban Ban Springs Homestead and one kilometre east of Mount Paqualin. (Figure 1). The area is located on Burnside 1:50000, Batchelor 1:100000 and Pine Creek 1:250000 topographic maps. The area is also subject to Mount Ringwood Pastoral Lease.

Previous investigations include base metal exploration by Geopeko and gold exploration by W R Grace, Western Mining Corporation and Oceania Exploration and Mining N.L. Open file reports of this activity are available at the Department of Mines and Energy, Darwin.

Exploration during the first year of title was directed at gold and included detailed geological mapping and reconnaissance rock chip sampling along with low density drainage sampling using both bulk (5kg minus 10 mesh) and conventional (1kg minus 30 mesh) samples.

The tenement also falls within a regional airmagnetic and radiometric survey completed for Golden Plateau N.L.

2. CONCLUSIONS AND RECOMMENDATIONS

Geological mapping indicates at least two anticlinal closures in Gerowie Tuff and Mount Bonnie Formation prospective for epithermal vein type gold mineralisation.

Reconaissance drainage samples returned one anomalous value of 9.48ppb Au.

It is recommended that higher density drainage sampling is undertaken along with follow up of the anomaly. Rock chip sampling of prospective lithologies within the tenement should also be completed.

3. CURRENT EXPLORATION

3.1 Geology

EL 6093 is located in the central part of the lower Proterzoic Pine Creek Geosyncline. Dating indicates that deposition took place about 1900 Ma ago on an Archaean (c2500Ma) basement (Needham et.al, 1988). The Pine Creek geosyncline contains an almost entirely sedimentary depositional pile estimated to be about 10km thick (Needham et.al., 1985). Sediments pass from fluviatile at the base to shallow and deeper water marine (turbidite) environments at the top. The orogenic development of the Pine Creek geosyncline was punctuated by mafic and felsic magmatism, mainly evident from plutonic rocks. The orogenic stage spanned the interval from 1870 to 1780 Ma (Needham et.al, 1988). These features are widely interpreted to imply initiation of the Pine Creek Geosyncline as an intracratonic rift system which subsequently widened and deepened before undergoing a convergent stage which caused orogenesis (Stuart-Smith et.al., 1980; Etheridge et.al., 1985; Needham et.al., 1988).

The Pine Creek Geosyncline is major gold and uranium province which also contains many minor tin, lead-zinc and copper mineral occurrences. Most of these metalliferous deposits were probably formed by late-stage magmatic fluids associated with post orogenic granitoids (Palfreyman 1984; see also Needham and Roarty, 1980).

The tenement block is dominated by tuffs, cherts and shales with lesser amounts of sandstone, siltstone and chert. This sequence is the middle part of the South Alligator Group (Gerowie Tuff and Mount Bonnie Formations). The lowermost unit of this Group, the Koolpin Formation, occupies the core of the Howley anticline one kilometre west of the Licence. The Koolpin Formation is also marginal to the Burnside Granite located three kilometres east of the Licence.

The tenement lies outside of the main belt of known gold occurrences which are found to the south of the Burnside Granite (BMR 1:100000 Batchelor-Hayes Creek). However, the structural position on the eastern limb of the Howley anticline coincides with the structural location of Goodall goldmine and gives encouragement for future discoveries in this area.

Results of mapping EL 6093 provide general agreement with the Bureau of Mineral Resources (BMR) stratigraphy. A stratigraphic summary of units represented in EL 6093 is given below.

Age	Unit	Description
Quaternary	Alluvian	
Tertiary	Laterite	
Lower Proterozoic Aouth Alligator Group	Mount Bonnie Formation	Shale/siltstone minor sandstone intercalated bif/chert & metamorphosed analogues.
	Gerowie Tuff	Felsic tuff/chert

Gerowie Tuff

This unit conformably overlies the Koolpin Formation (Needham et.al., 1980) cropping out around the Burnside Dome and occupies the northern and eastern areas of EL 6093. It is the dominant unit in the tenement.

The Gerowie Tuff comprises a tuffaceous grey-black chert with lesser tuffaceous (?) white shale. The unit is widely distributed on a regional scale and is interpreted as a sequence of water-lain felsic tuffs (See Crick et.al, 1978, Stuart-Smith et.al., 1980).

Mount Bonnie Formation

The Mount Bonnie Formation appears to be conformable with, and gradational into the underlying Gerowie Tuff. On a regional scale mudrock dominates this Formation but within EL 6093 the sequence is sandstone dominated which passes stratigraphically upwards into siltstones and cherts in the south western area of the Licence.

Alternating mudrock and arkosic sandstone layers can locally be recognised over stratigraphic intervals of tens of metres and are laterally continuous at outcrop scale. Centimetre-scale grading is developed between some of these layers and some structures may be found beneath sandy units although these were not observed in EL 6093.

Metamorphisim

The regional metaphorphic grade in this area is probably upper green schist to lower amphibolite facies. There is no evidence of thermal metamorphisim associated with the Burnside Granite located 3 km east of the Licence.

Folding

The contact between Mount Bonnie Formation and Gerowie Tuff and particularly chert horizons in each unit define a series of southerly trending and plunging anticlines and synclines.

The northern half of the Licence is occupied by two such anticlines in the west and east with a central, complimentary, syncline separating them. The southern half of the licence is occupied by a west facing sequence, probably the eastern limb of the synclinal structure which separates the Howley anticline to the west and the Burnside Done to the east. In this area the contact between siltstone dominant and sandstone dominant Mount Bonnie Formation defines a south plunging drag fold parallel to the regional set described above.

Faulting

Two dominant fault directions occur on a regional scale. These trend northeast and northwest and tend to show dextral and sinistral displacements of up to 2km respectively. This suggests a conjugate relationship as a fault set formed in an east-west compressional field.

Faults parallel to the northeast set occupy the central area of EL 6093. The northerly fault is defined by quartz veins and does not show obvious displacement. Bedding traces within Gerowie Tuff appear to terminate against this fault. The southerly fault shows displacement of both the Gerowie Tuff-Mount Bonnie Formation contact and the transition in lithologies within the Mount Bonnie Formation. The uncertain nature of the drag fold described above prevents an accurate determination of movement along the fault. A dominant component, south side up, is considered most likely.

3.2 Geochemistry

3.2.1 Drainage Survey

Drainage sampling within EL 6093 included collection of four samples for determination of low level acid digest gold and four samples for cyanide leach gold (BLEG) determination (Map 3). In most cases both samples were taken from active sediment at the same site. Sample sites are marked with numbered aluminium or foil tags and pink flagging or marker paint.

Low level gold samples consisted of 1kg minus 30 mesh material screened on site. This was further screened in the laboratory to minus 80 mesh and a 50g charge analysed for gold using graphite furnace AAS techniques to 1ppb Au detection limit.

Samples for cyanide leach (BLEG) consisted of 5kg nominal minus 10 mesh, screened on site The whole sample was statically leached using 0.05 CN solution for 48 hours after initial agitation for one hour and repeated one hour agitation at 24 hours. A 150ml aliquot was then extracted into DIBK and analysed using graphite furnace AAS techniques to 0.05ppb Au detection limit.

All gold determinations were conducted by Amdel/ Classic Comlabs Laboratories in Darwin. Results are given in Appendix 1.

Gold values are uniformly low in the low level gold set with a maximum of 5ppb Au. Three of the BLEG values are below 1ppb Au and are unlikely to represent significant gold mineralisation The remaining BLEG value of 9.48ppb Au could represent significant gold mineralisation.

Drainage sample density in EL 6093 is not adequate to confidently discount the presence of significant gold mineralisation within the licence. Infill sampling should be completed along with follow up of the 9.48ppb Au anomaly.

3.2.2. Rock Chip Sampling

A programme of rock chip sampling was undertaken simultaneously with mapping and the drainage survey. Sampling was directed towards prospective rock types including vein quartz and gossanous horizons. All samples were analysed for gold to 1ppb Au detection using acid digest, solvent extraction and graphite furnace AAS techniques by Amdel/Classic Comlabs Laboratories in Darwin.

Five rock chip samples were submitted for gold determination. Sample sites are marked with numbered aluminium or foil tags and pink flagging or marker paint.

Assay results are given in Appendix 2 and localities are shown on map 3.

No values greater than 0.01 ppm Au were returned from rock chip samples taken adjacent to EL 6093 and assumed to represent prospective lithologies within the tenement. The maximum value recorded was 0.005 ppm Au.

Further sampling from within the tenement area is required.

3.3 Geophysics

A regional airborne magnetic/radiometric survey was flown by Aerodata between November 1987 and January 1988. Data were processed into contour plans, Map 4, which also shows survey specifications. Data were also processed into a variety of black-and-white and colour-enhanced images with which to supplement available geology.

3.3.1 Magnetics

Contoured magnetic data (Map 4) do not reveal a readily obvious relationship with geological mapping (Map 2).

The mapped fold closure in Gerowie Tuff in the central western part of the licence is supported by higher susceptibly than the adjacent Mount Bonnie Formation which shows uniformly low values.

The magnetic pattern within the tenement is dominated by noisy data with higher values associated with Zamu Dolerite both east and west of EL 6093.

3.3.2 Radiometrics

Potassium data show elevated values associated with alluvium covered areas of EL 6093. Features related to igneous intrusions are absent.

There are no anomalies associated with thorium or uranium data. In view of the absence of encouraging features in the radiometric data they were not processed into 1:25000 contour map form.

4. EXPENDITURE

Geological consulting	4,500
Geophysical surveys and data processing	4,000
Drafting and reporting	2,500
Administration	1,500
	$12,500

5. REFERENCES

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APPENDIX ONE

EL 6093 - ASSAY RESULTS

1. ROCK CHIPS

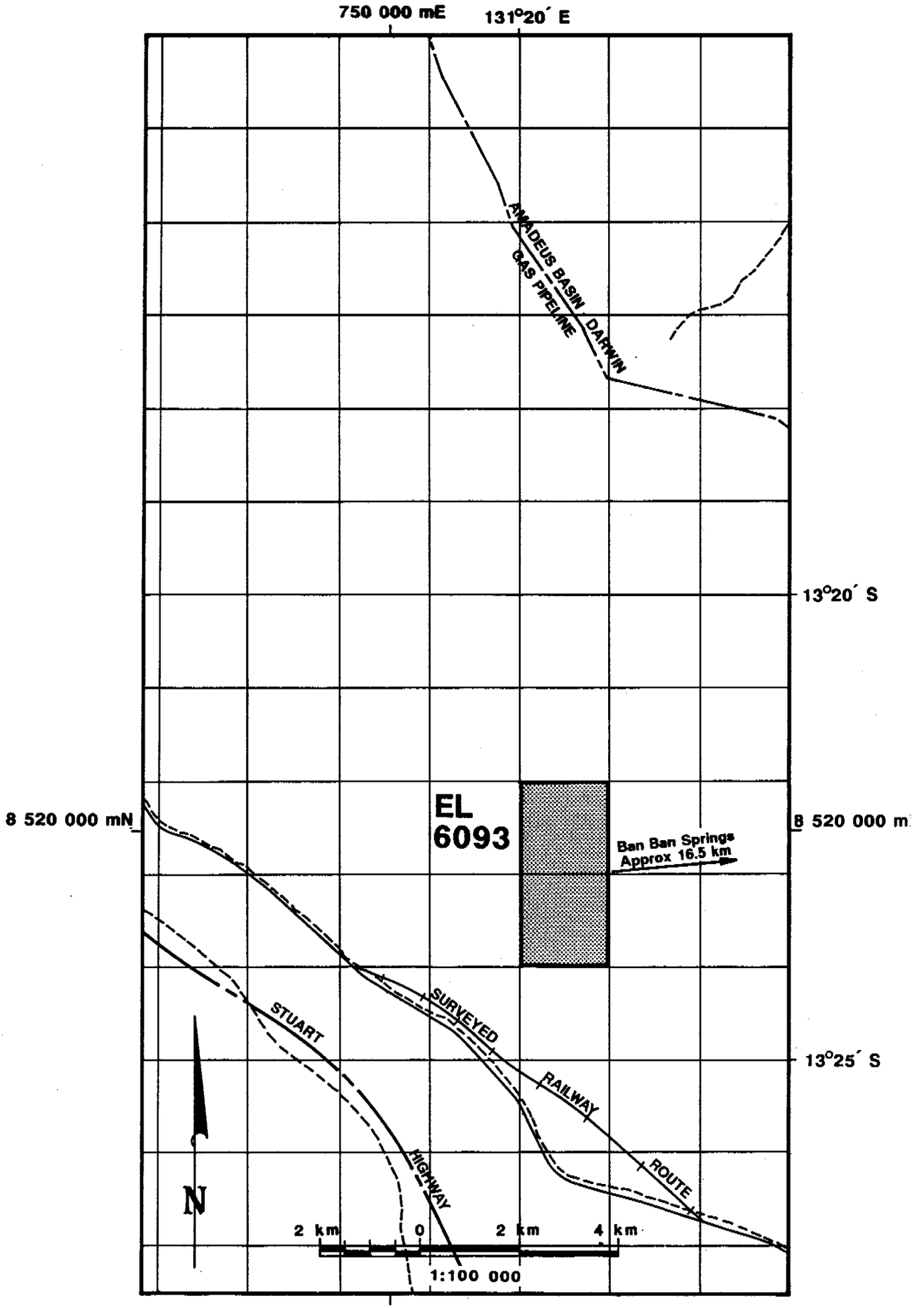
Sample Number	Gold (ppm Au)
31388	0.005
31389	0.003
31390	0.002
31391	0.001
31392	0.002

2. 1 kg STREAM SEDIMENT (LOW LEVEL GOLD)

Sample Number	Gold (ppb Au)
29882	5
29883	1
29884	2
29885	2

3. 5 kg STREAM SEDIMENT (BLEG)

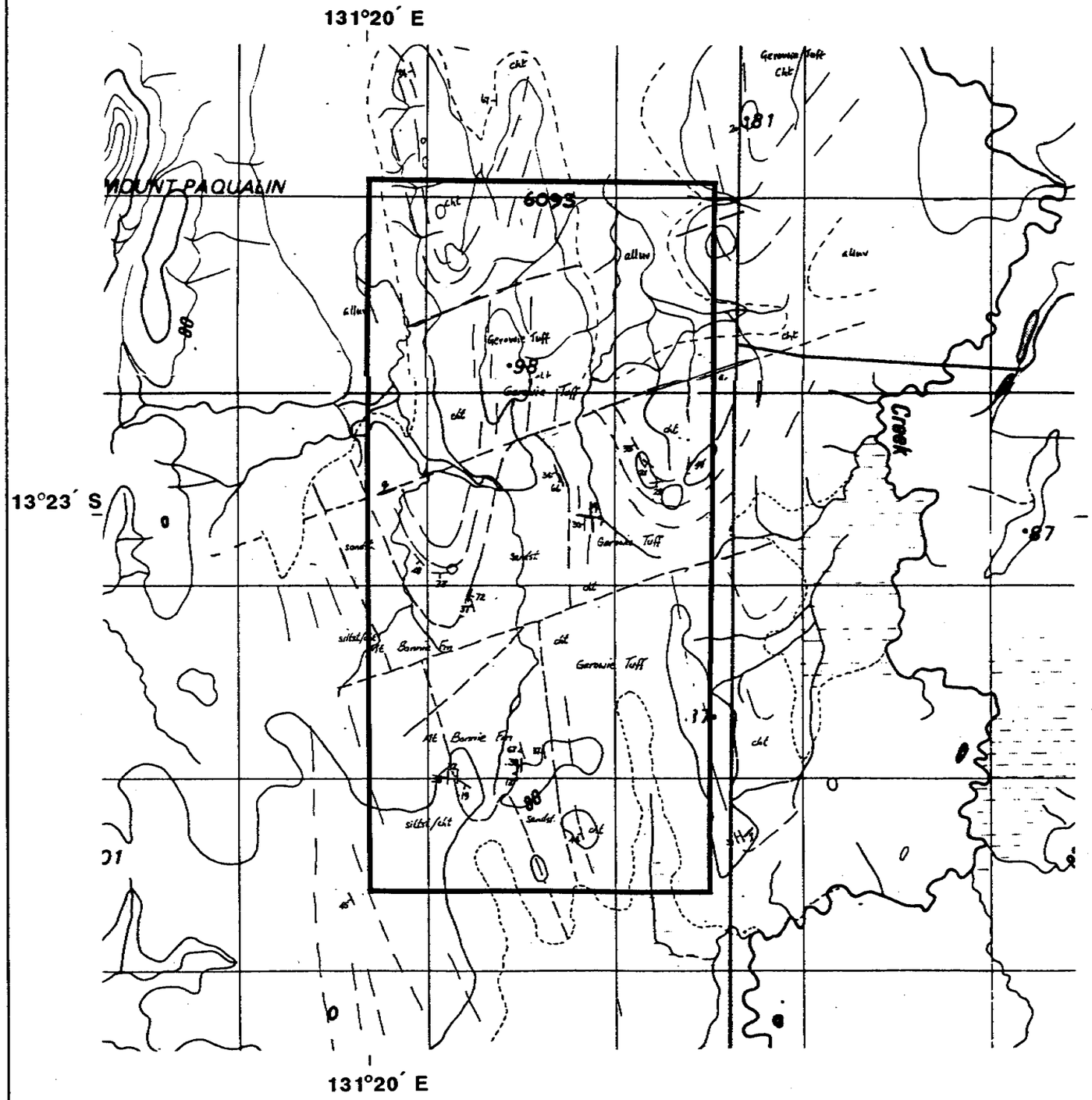
Sample Number	Gold (ppb Au)
29978	9.48
29981	0.17
29982	0.06
29983	0.93



Locality Map

PINE CREEK EL 6093

Part of Batchelor Tenement Map 14



131°20´ E

GEOLOGY EL 6093

LEGEND

Alluv	Alluvium
Mount Bonnie Fm	Siltstones and Cherts Sandstones
Gerowie Tuff	Tuffs and Cherts
q Cht	Vein Quartz Chert
72	Dip and Strike of Bedding
67	Dip and Strike Cleavage
	Anticlinal Axis Showing Plunge
	Synclinal Axis Showing Plunge

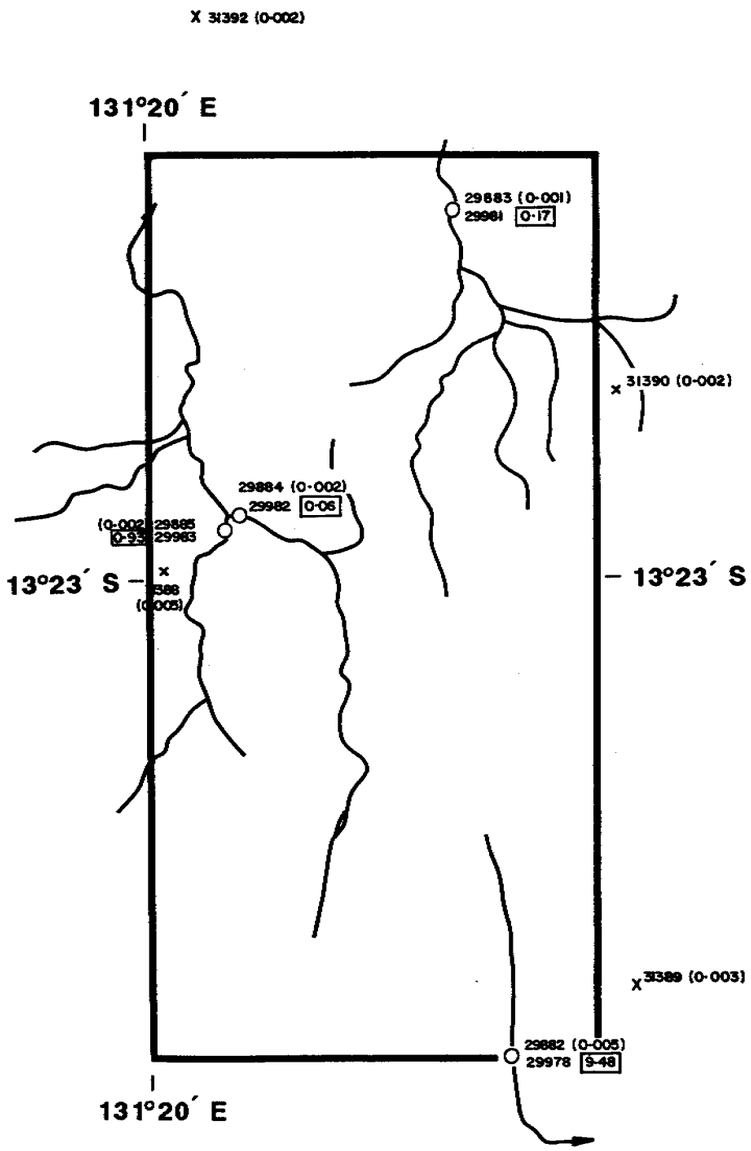
N

Scale 1 : 25000

0 1 km 2 km

GOLDEN PLATEAU

PINE CREEK EL 6093



LEGEND

x 31388 (0-005) — Rock Chip Sample Location and Number. (Gold Volume in ppm)

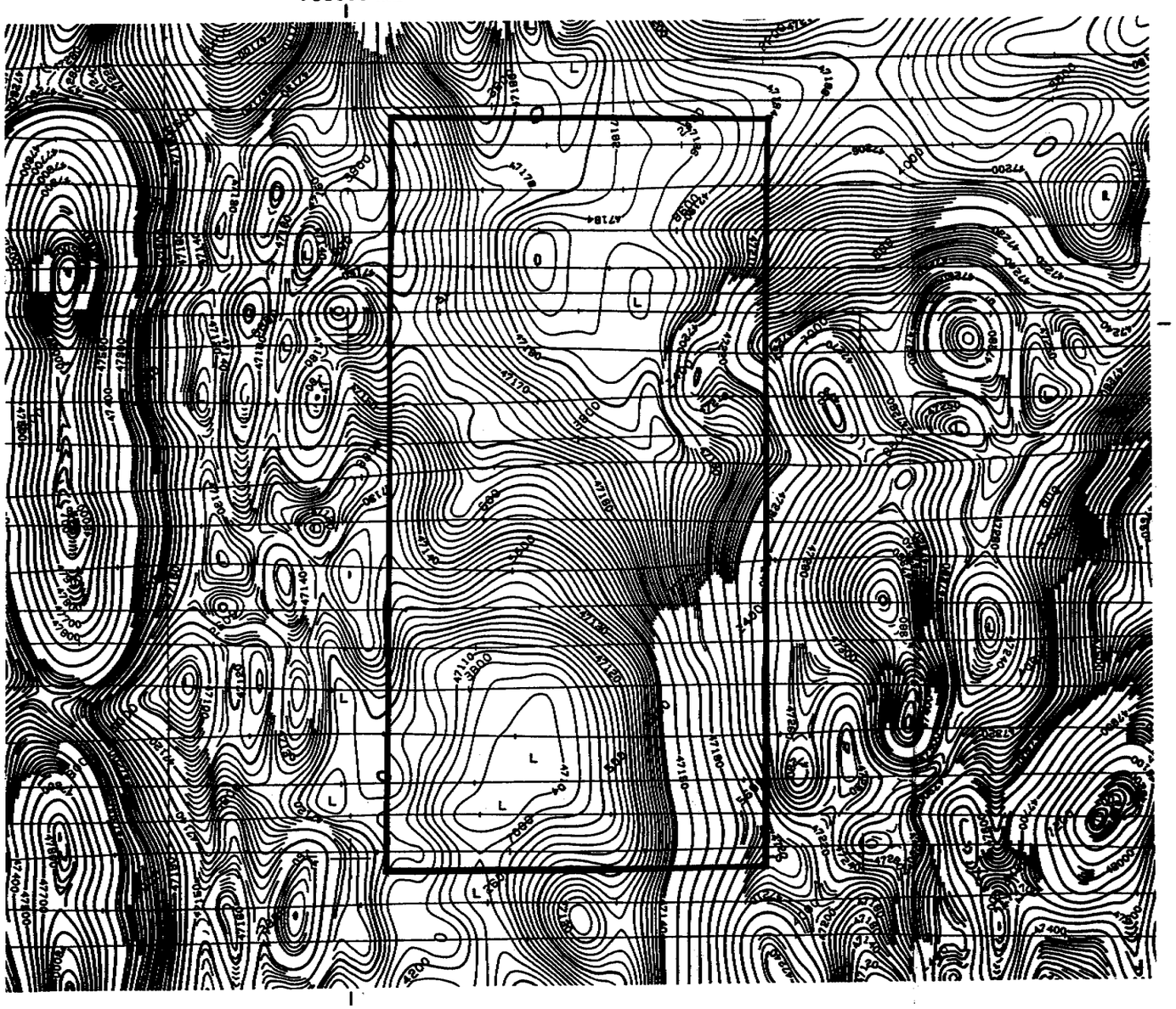
29882 (0-005) — Minus 80 Mesh Stream Sediment Sample Location and Number. (Gold Values in ppm)

29978 9-48 — Bleg Sample Location and Number. Gold Values in ppb

N

EL 6093

ROCK CHIP + STREAM SEDIMENT SAMPLE LOCATIONS.



MAGNETICS EL 6093

AIRCRAFT

VH-EXH ROCKWELL SHRIKE COMMANDER 500S

MAGNETOMETER

SPLIT BEAM CESIUM SCINTREX V201

RESOLUTION	0.01 nanoTesla
CYCLE RATE	0.2 seconds
SAMPLE INTERVAL	14 metres

SPECTROMETER

256 CHANNEL EXPLORANIUM GR800B

VOLUME	33.56 litres
CYCLE RATE	1.0 seconds
SAMPLE INTERVAL	70 metres

DATA ACQUISITION

8 CHANNEL WATANABE MC 6700 CHART RECORDER
HEWLETT PACKARD 9000 SERIES COMPUTER
AERODATA DIGITAL 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

MEAN TERRAIN CLEARANCE - 70 metres

NAVIGATION AND RECOVERY

Using SYLEDIS UHF positioning system

DATA PROCESSING

REGIONAL FIELD	IGRF MODEL 1985 REMOVED
BASE VALUE ADDED	46900 nanoTeslas
GRID CELL SIZE	70 metres
CONTOUR INTERVAL	2 nanoTeslas
PARALLAX CORRECTION	0.7 fiducials

50 fiducial interval

N

Scale 1 : 25000

1 km 0 1 km

GOLDEN PLATEAU NL

PINE CREEK EL 6093