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GEOPEKO

A DIVISION OF PEKO WALLSEND OPERATIONS LIMITED
A.C.N. 000 081 434

EL 42/89 RAPID RIVER

RELINQUISHMENT REPORT

INCLUDING REPORT ON EXPLORATION ACTIVITY

DECEMBER 1991 TO JUNE 1992

Ian Mathison
June, 1992

T269

Distribution: Geopeko, Parkes
Geopeko, Devonport
Department of Mines, Hobart

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1.0 INTRODUCTION

1.1 Location and Access (Fig. 1)

EL 42/89, Rapid River, is located in NW Tasmania approximately 35 km north of the township of Savage River.

Access within the EL is very poor and is restricted to the Savage River Pipe Line Road and unsealed logging roads which run near the eastern and western EL boundaries respectively. The central portion of the EL is relatively inaccessible and access requires the cutting of walking tracks and helicopter support.

1.2 Tenure and Land Usage

EL 42/89 of 230 km^2 was granted to Peko Exploration Ltd in January 1990. The EL was reduced to 54 km^2 in December 1990. The EL schedule is appended as Appendix 1.

1.3 Regional Geology

Geopeko's block of Arthur River ELs lies within the Rocky Cape Region of NW Tasmania. The most interesting rocks in the area are those of the Precambrian Arthur Lineament. The Arthur Lineament is a north-east trending metamorphic belt consisting of highly deformed sediments, basic volcanics and dolomite. To the west of this belt lies the Rocky Cape Group, a thick shallow marine shelf sequence. The Rocky Cape Group contains Precambrian dolerite/gabbro dykes which have been emplaced into north-north west trending faults.

Previous explorers have assigned a sequence of interbedded sandstone and siltstone with associated basic volcanics and carbonates lying just west of the intensely deformed rocks of the Arthur Lineament to the Neasy Formation. Some workers question the validity of this formation. However, aeromagnetic maps show that the rocks of the Neasy Formation have a distinctive magnetic character. This unit has been retained for the purposes of this report.

Rocks assigned to the Oonah Formation and the Cleveland Waratah Association lie to the east of the Arthur Lineament. The Precambrian Oonah Formation is predominantly comprised of turbiditic quartz wacke and siltstone. The south eastern corner of the area is underlain by rocks of the Cleveland-Waratah Association that lie within the Dundas Trough. These rocks have been correlated with the Crimson Creek Formation and consist of basaltic, andesitic and tholeiitic lavas and volcaniclastic sediments.

The Precambrian-Cambrian rocks along the eastern edge of the area are in places overlain by Permian fluvio-glacial sediments and/or Tertiary basalt.

1.4 Known Mineral Deposits/Occurrences

There are a number of metallic mineral occurrences adjacent to the western, eastern and southern EL boundaries of Geopeko's Arthur River Project. (Green et Al 1988).

The deposits range from small, relatively insignificant workings, e.g. Victory Mine, Atlas Leases to large world class ore bodies e.g. Mt Bischoff, Savage River. In most cases, extensions of the prospective host formations can be continued into Geopeko's Arthur River EL's.

1.5 Previous Exploration

Geopeko report T252 (Virgoe and Mathison, 1990) summarizes previous exploration and describes the results of Geopeko's 1990 exploration program. Report T262 (Mathison, 1991) details 1991 exploration activity.

1.6 Scope of this report

The aim of Geopeko's exploration of EL 42/89, was to use water sampling, rock chip sampling, geological mapping and the results of previous exploration to delineate prospective and geochemically anomalous areas within the EL. Areas worthy of further investigation were to be followed up with more detailed exploration.

Due to major problems with the DMHR's analytical techniques for stream water geochemistry, little work was carried out in EL 42/89 in 1991. It was felt necessary to suspend exploration until these problems were corrected and consequently a waiver of expenditure commitment was sought and granted. Reconnaissance water sampling recommenced in December 1991 and was completed in February 1992. A temporary extension of the licence was negotiated to allow the results of 1992 sampling to be evaluated. A large part of the Arthur River Project area was selected for relinquishment after this interpretation. This report summarizes Geopeko's exploration activity in EL 42/89 from January 1990 to June 1992.

2.0 EXPLORATION ACTIVITY UNDERTAKEN BY GEOPEKO

2.1 January 1990 - November 1990 (Virgoe & Mathison 1990)

Water geochemistry

Reconnaissance water samples were collected from streams across the accessible parts of the EL. Base metals and arsenic were determined using carbon rod AAS of acidified samples by ANALABS in Melbourne. Gold was determined by Dr Bill Baker of the Tasmanian Department of Mines using the Huminex technique. Both of these techniques are now known to have limitations or analytical problems. Nevertheless base metal values responded to major lithological variations and an anomalous gold value on Exploration Creek was supported by an alternative method used by ANALABS.

Compilation of Previous Exploration

Results of previous exploration activity were reviewed. No indications of base metal or gold mineralization were detected by previous exploration.

Geophysical Review

A review of public domain aeromagnetic and gravity data was conducted by Dr.D.Leaman. Both sets of data indicate that the Arthur Lineament rocks lie at depth under the eastern third of the EL.

2.2 December 1990 to November 1991 (Mathison 1991)

The EL was reduced to 54 km^2 in December 1990. No exploration was undertaken during this period.

2.3 December 1991 to June 1992

Regional water sampling of the Arthur River Project Area recommenced in December 1991. Only one water sample, sample number 22321, was collected from EL 42/89. Attempts to reach other streams east of the pipeline road were unsuccessful. S/N 22321 reported the following geochemistry:

	(PDV - Preconc			) ICP-MS	AAS-GF	MAA
No	Cu ug/l	Pb ug/l	Cd ug/l	Zn ug/l	As ug/l	Au ng/l
22321	1.30	0.40	<0.1	<0.5	<0.05	<1

This sample is not anomalous in any element.

SN 22321 was collected from AMG 358100 mE 5429425 mN in the north-east corner of the Bertha 1:25,000 sheet. A copy of the relevant part of this map is attached. The relationship of this sample to other samples collected at the same time can be assessed by referring to the relinquishment report on EL 41/89.

3.0 CONCLUSIONS

* The sections of EL 42/89 tested by Geopeko revealed no indications of significant mineralization. However, the wide spacing of the water samples collected was chosen to detect very large, near surface bodies of mineralization. A much closer spaced survey would be necessary to adequately test for smaller or deeper bodies.

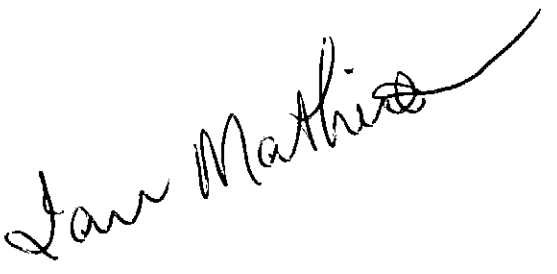
* Geopeko's sampling has not tested the Arthur Lineament rocks east of the Savage River Pipeline. Several walking tracks would be needed to provide access to this area.

4.0 RECOMMENDATIONS

Due to current budgetary constraints, EL 42/89 should be relinquished. Further exploration in this area would be expensive and funds should be conserved for more advanced prospects.

5.0 ENVIRONMENTAL DISTURBANCE AND REHABILITATION

Exploration conducted by Geopeko between 1990 and 1992 has caused minimal environmental disturbance. Semi permanent samples markers left at sample sites are considered to be valuable reference points for future exploration. Walking tracks were cut to DMMR guidelines and should regenerate naturally. No rehabilitation has been necessary.

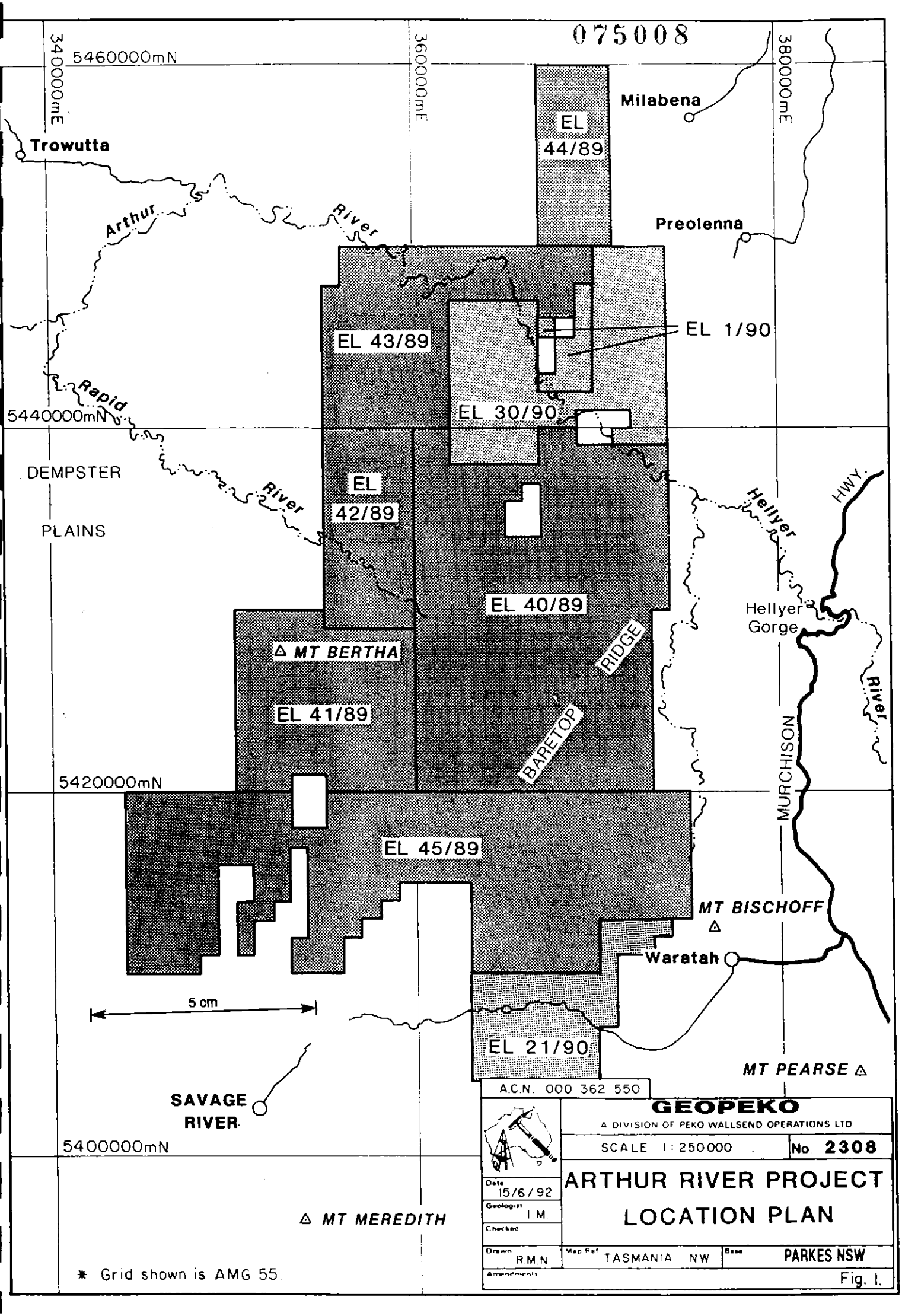


REFERENCES:

GREEN, G.R., BOTTRILL, R.S., BACON, C.A., TURNER, N.J. (1988) - Mineral Deposits and Metallogenic Map of Tasmania 1:50 000, Tas. DMMR

MATHISON, I.J., VIRGOE, K. (1990) - Rapid River EL 42/89 - Report on Exploration Activity - January 1990 to November 1990. Unpublished Geopeko report T252.

MATHISON, Ian (1991) - EL 42/89 Rapid River - Report on Exploration Activity December 1990 to November 1991. Unpublished Geopeko report T262.


075008
340000mE
360000mE
380000mE
5460000mN
5440000mN
5420000mN
5400000mN
Milabena
Trowutta
Preolenna
EL 44/89
Arthur River
Rapid River
EL 43/89
EL 1/90
EL 30/90
EL 42/89
DEMPSTER PLAINS
EL 40/89
MT BERTHA
EL 41/89
RIDGE
BARETOP
Hellyer HWY.
Hellyer Gorge
MURCHISON River
EL 45/89
MT BISCHOFF
Waratah
5 cm
EL 21/90
MT PEARSE
SAVAGE RIVER
MT MEREDITH
A.C.N. 000 362 550
GEOPEKO
A DIVISION OF PEKO WALLSEND OPERATIONS LTD
SCALE 1:250000
No 2308
ARTHUR RIVER PROJECT
LOCATION PLAN
Date 15/6/92
Geologist I.M
Checked
Drawn R.M.N
Map Ref TASMANIA NW
Base PARKES NSW
Amendments
Fig. 1.
* Grid shown is AMG 55

075009

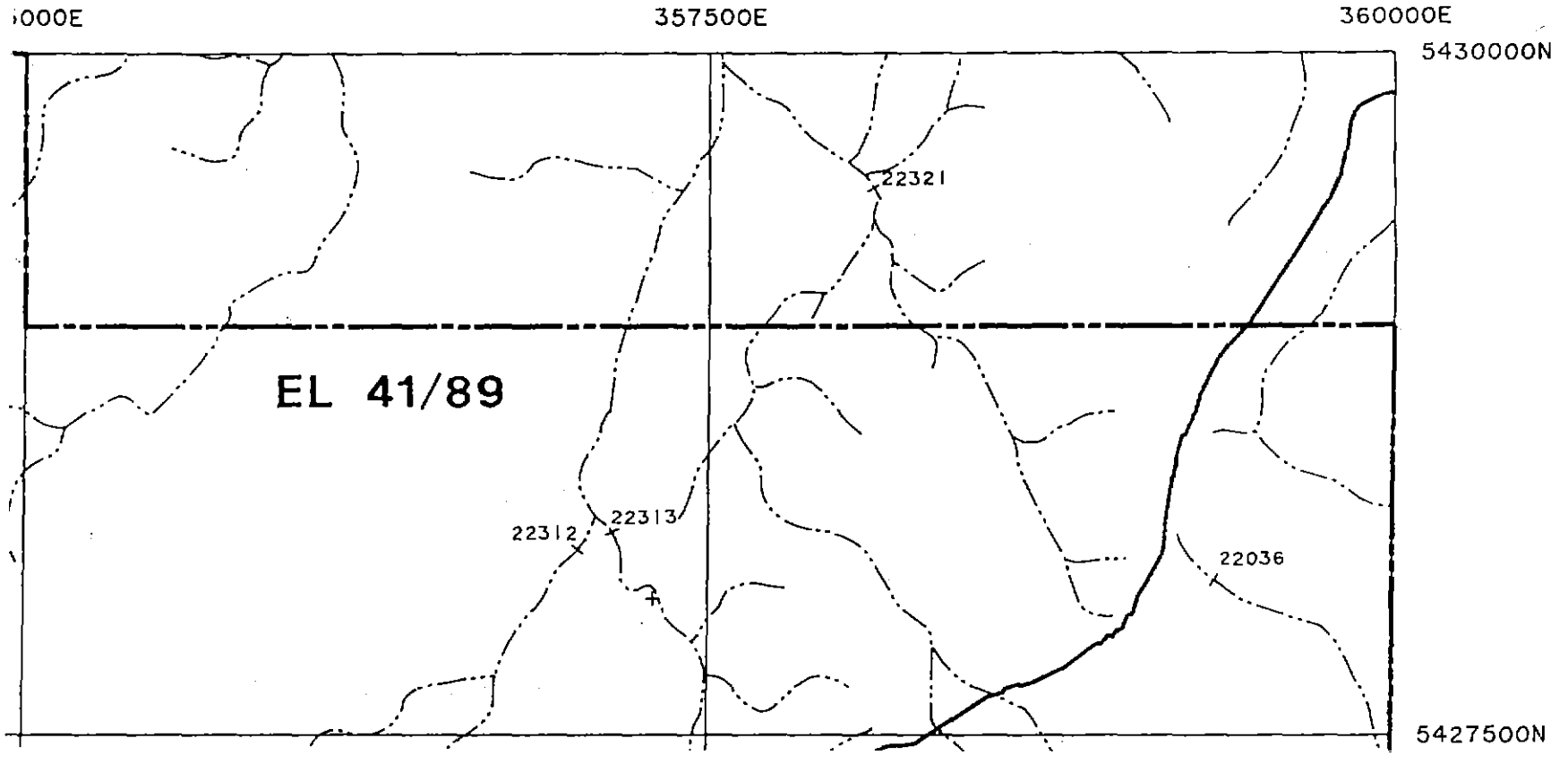


Figure 2: Part of Bertha 1:25000 Sheet.

5 cm

PARKES

GEOPEKO

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Scale 1:25000

500 0 500 1000 1500 2000 2500m

Project / Tenure

Geo. Client.	D.G.
Cartg.	R.M.N.
Checked	
Date	12/3/92
Appended	
Job No.	82_92

BERTHA 3442

SAMPLE LOCATIONS & NUMBER

100k. Sheet 7915

DWG No. 2056A

Appendix 1: Water Geochemistry – Sample Description.

ARTHUR RIVER PROJECT - 1991-92 WATER SAMPLES

EL 42/89 - BERTHA SHEET

SAMPLE NUMBER **22321** DATE 13/01/1992 EL42/89 MAP BERTHA

AMG COORDS. 358100 mE 5429425 mN

VEGETATION RAIN FOREST

STREAM FLOW	MODERATE	CONTAMINATION FROM	ROADS
LEVEL	AVERAGE	WATER COLOUR	OTHER
WIDTH	2.0m	PH	0.00
DIRECTION	10'	DRAINAGE AREA	2.2 km^2

GEOLOGY

OUTCROP

FLOAT 95 % Tb
5 % Qtz gravel
0 %
