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GEOPEKO

A DIVISION OF PEKO EXPLORATION

EL 43/89 HOLDER RIVULET

REPORT ON

EXPLORATION ACTIVITY

JANUARY 1990 TO NOVEMBER 1990

Katrina Virgoe
Ian Mathison
December, 1990

T247

Distribution: Geopeko Parkes
Geopeko Rosebery
DMMR Hobart

AMG REFERENCE POINTS ADDED

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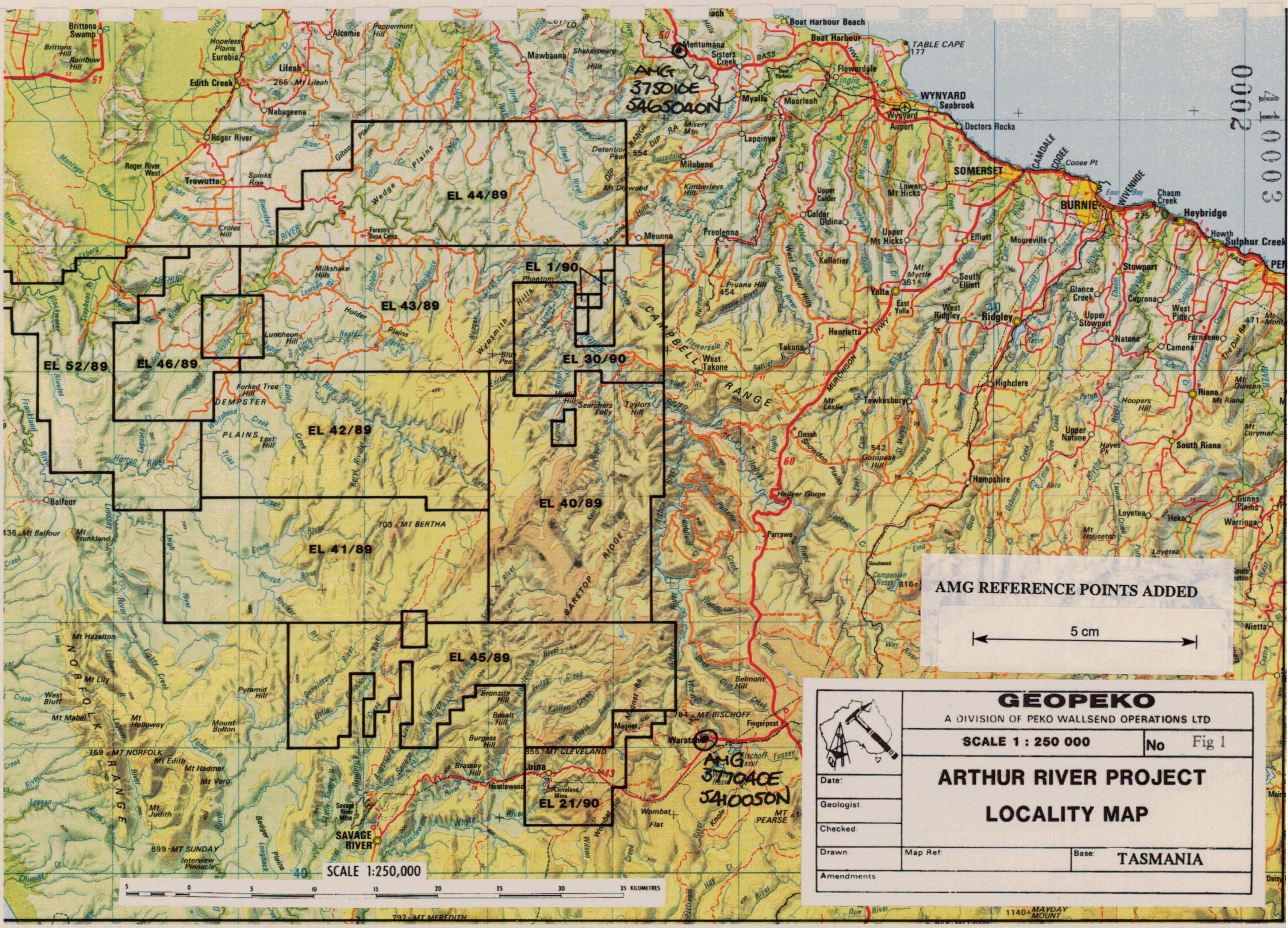

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AMG
377040E
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EL 43/89
EL 1/90
EL 30/90
EL 52/89
EL 46/89
EL 42/89
EL 40/89
EL 41/89
EL 45/89
EL 21/90
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AMG REFERENCE POINTS ADDED
5 cm
GEOPEKO
A DIVISION OF PEKO WALLSEND OPERATIONS LTD
SCALE 1 : 250 000
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ARTHUR RIVER PROJECT
LOCALITY MAP
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Geologist:
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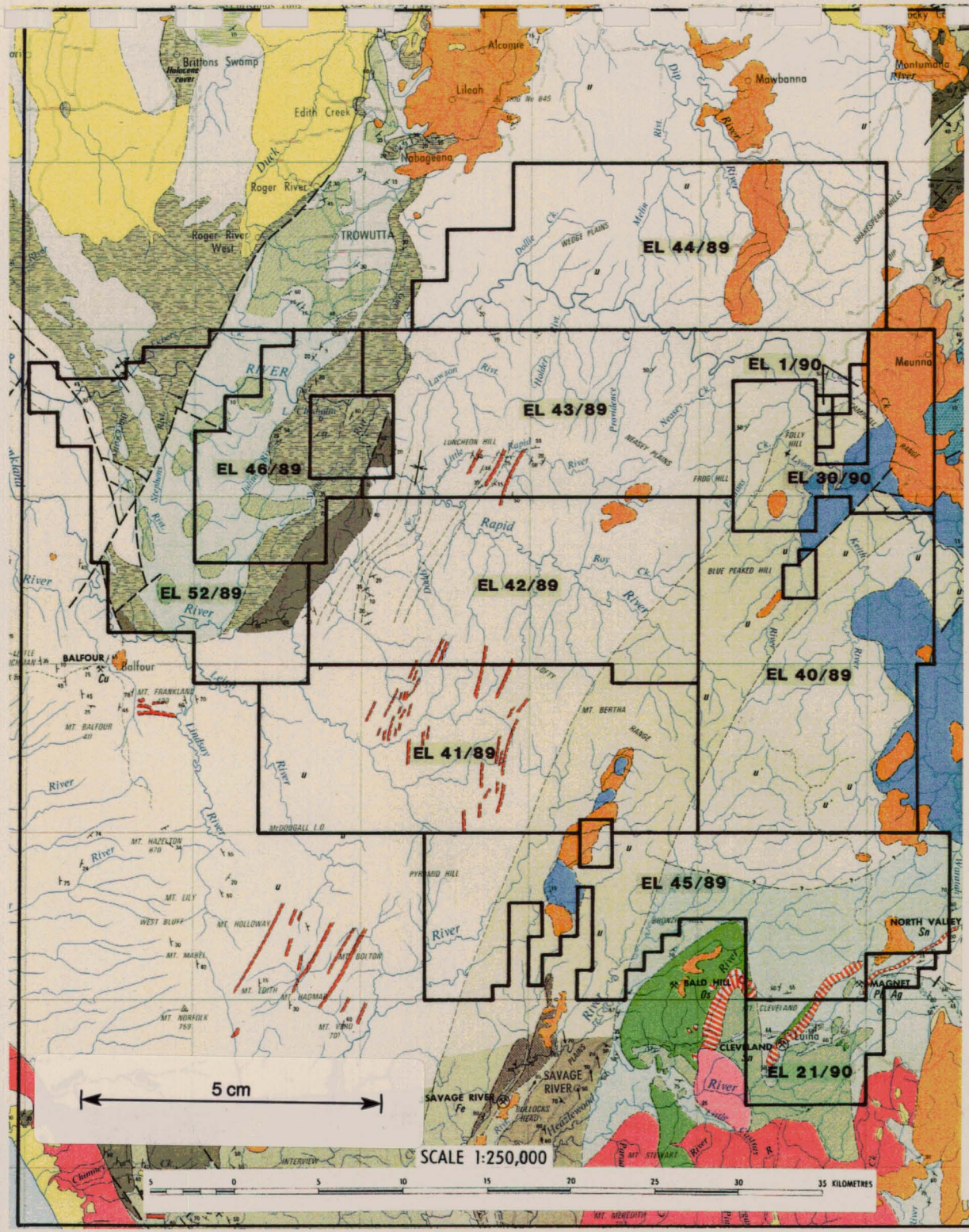
Map Ref:
Base: TASMANIA
Amendments



HOLOCENE
PLEISTOCENE

Alluvium, sand, gravel and talus.

Till, fluvioglacial, periglacial and associated deposits.

Errosional surface.

TERTIARY

Non–marine sequences (light); marine limestone (dark); basalt and related igneous rock types (orange).

Low angle unconformity.

TRIASSIC
PERMIAN
UPPER CARBONIFEROUS

Fluvio–lacustrine sequences of sandstone, siltstone, mudstone (light) with carbonaceous sequences indicated (dark)
Fresh water sequence with some coal measures.
Upper glacio–marine sequence of pebbly mudstone, pebbly sandstone and limestone.
Fresh water sequence with some coal measures.
Lower glacio–marine sequence of pebbly mudstone, pebbly sandstone, minor limestone, Tasmanite oil shale and basal tillite.

CAMBRIAN

Middle–Upper Cambrian fossiliferous usually greywacke turbidite sequences (horizontally lined overprint); acid with intermediate volcanic and associated rocks dominant (dark), and horizon with fossiliferous Upper Cambrian shallow water deposits (vertically lined overprint); basic–intermediate volcanic and associated rocks dominant (diagonally lined overprint); probably Cambrian unfossiliferous usually greywacke turbidite sequences (light); probably Cambrian unfossiliferous orthoquartzite sequence (dotted).

Usually unconformity attributed to Penguin Orogeny but apparent conformity at Smithton and Pieman River.

PRECAMBRIAN

Comparatively unmetamorphosed sequences. Mudstone–sandstone sequences (u') – dominantly mudstone (light), dominantly orthoquartzite (dark), quartzwacke turbidite successions (small dot over–print), conglomerate (large dot over–print); dolomite (horizontally lined over–print); basalt lava (vertically lined over–print).

Metamorphic rocks. Pelitic sequences (dark); metaquartzite sequences (light) with some platy quartzite units indicated (vertically lined over–print); amphibolite (diagonally lined over–print). Garnet bearing rocks are indicated (g).

IGNEOUS ROCKS

CAMBRIAN

Dominantly adamellite–granite.

LOWER CARBONIFEROUS –UPPER DEVONIAN

Coarser grained basic rocks.

Serpentinite, peridotite and associated rocks.

PRECAMBRIAN

Dolerite.

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SCALE 1 : 250 000 | No Fig 2

ARTHUR RIVER PROJECT
REGIONAL GEOLOGY

Date:
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Map Ref:
Base: TASMANIA
Amendments:

1.0 INTRODUCTION

1.1 Location and Access (Fig. 1)

EL 43/89 Holder Rivulet is located in NW Tasmania approximately 25 km to the south of the coastal town of Smithton.

Access within the EL is very good and is provided by a network of unsealed logging roads and the Savage River Pipe Line Road. Secondary access is provided by 4WD and walking tracks. The Arthur River cuts across the north west and north east corners of the EL and is navigable by raft during the summer months.

1.2 Land Usage and Tenure

EL 43/89 of 233 km^2 was granted to Peko Exploration Ltd in January 1990. The EL schedule is detailed in Appendix 1.

The EL consists predominantly of State Forest with approximately 1 km^2 of Private Property and 6 km^2 of Uncommitted Crown Land. The EL encloses Milkshake Hills Forest Reserve of 2.9 km^2 and also includes part of the Australian Heritage Commission Act Registered Entry, Savage River.

Large tracts of wet eucalypt forest within the State Forest have been intensively logged over the last 10 years. These areas cover most of the EL and now either lie devoid of vegetation or support thick regrowth.

Buttongrass-tea tree plains stretch across the middle section of the EL: the Pithouse, Holder and Neasy Plains.

1.3 Regional Geology (Fig. 2 and Table 1)

Geopeko's block of Arthur River ELs lie within the Rocky Cape Region of NW Tasmania. The oldest 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 and to the east lies the Oonah Formation, a deeper water turbidite sandstone sequence. The Rocky Cape Group contains Precambrian dolerite/gabbro dykes which have been emplaced into north-north west trending faults and fractures.

The north western area is underlain by the Eo-Cambrian to Cambrian Smithton Trough which lies with a faulted or unconformable contact on the Rocky Cape Group. The Smithon Trough sequence consists of the basal Forest Conglomerate and Black River Dolomite (Success Creek Group correlate), volcaniclastic sediments and basalt (Crimson Creek Formation correlate), the Smithton Dolomite and fossiliferous sediments (Dundas Group correlate). 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

TABLE 1 0005 410006

STRATIGRAPHIC CORRELATION ADOPTED FOR THIS REPORT

	ROCKY CAPE BLOCK	LYONS RIVER (Arthur Lineament)	CLEVELAND - WARATAH	CORINNA	ZEEHAN (Ord - Dev seds omitted)
TERTIARY	Tb - Tertiary Basalt Tc - Tertiary gravel	Tb - Tertiary Basalt Tc - Tertiary gravel	Tb - Tertiary Basalt Tc - Tertiary gravel	Tb - Tertiary Basalt Tc - Tertiary gravels	Tb - Tertiary Basalt Tc - Tertiary gravels
PERMO-CARB		P - Parmeneer Supergroup Fluviatile sandstone, coal measures, glacimarine & glacial deposits			
DEVONIAN			Intrusion of Cleveland Granite	Intrusion of Pieman Granite	Intrusion of Henson Bell & Heemskirk Granite
CAMBRIAN	Cs - Unnamed Quartzwacke, siltstone, mudstone, conglomarate				Dundas Group
			Intrusion/emplacement of ultramafic bodies		Intrusion/emplacement of ultramafic bodies
EO-CAMBRIAN	Ed - Smithton Dolomite			?? Ecd - Corinna Dolomite	Crimson Creek Formation
	Em - Smithton Basalt Mafic volcaniclastics and tholeiitic basalts		Ev - Unnamed mafic volcs, volcaniclastics and turbidites with some carbonates	Ebv - Bernafai Volcanics	
	Eb - Black River Dolomite Dolomite, silicified dolomite, chert			Esd - Savage Dolomite	Success Creek Group
	Ef - Forest Conglomarate and Quartzite				
PRE-CAMBRIAN			Pb - Burnie Formation Interbedded quartzose quartzwacke & siltstone with minor mafic volcs	Pd - Donaldson Formation Quartzose turbidites	Oonah Formation Interbedded quartzwacke and siltstone with some carbonates & mafic volcs
	Prj - Jacobs Quartzite Quartzarenite	??? Prn - Neasy Formation Quartzite+siltstone, minor dolomite and basic volcs		Pi - Interview Slate and Quartzite	
	Pri - Irby Siltstone Black mudstone, minor siltstone, sandstone, & dolomite				
	Prd - Detention Quartzite Quartzarenite & siltstone				
	Prc - Cowrie Siltstone Laminated siltstone, pyritic mudstone				
		Pa - Keith Metamorphics Pelitic & quartzose schist -some calcic & mafic schist (magnesite & amphibolite)		Timms Group Pelitic & quartzose schist -some calcic & mafic schist (magnesite & amphibolite) - magnetite	

with the Crimson Creek Formation and consist of basaltic, andesitic and tholeiitic lavas.

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).

These are listed in Table (2) and Figure (3) shows their locations.

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 (See also Appendix 2)

The northwest of Tasmania has seen regional company exploration activity since the mid 1960's. Techniques applied include stream sampling, gridding, soil and rock chip sampling, geological mapping, photogeology, diamond drilling and geophysical surveys. Generally this work has been concentrated in areas within a few kilometres walking distance of vehicular access. As much of the central northwest is remote and inaccessible, this has resulted in many areas having not yet seen intensive modern exploration.

1.6 Exploration Philosophy

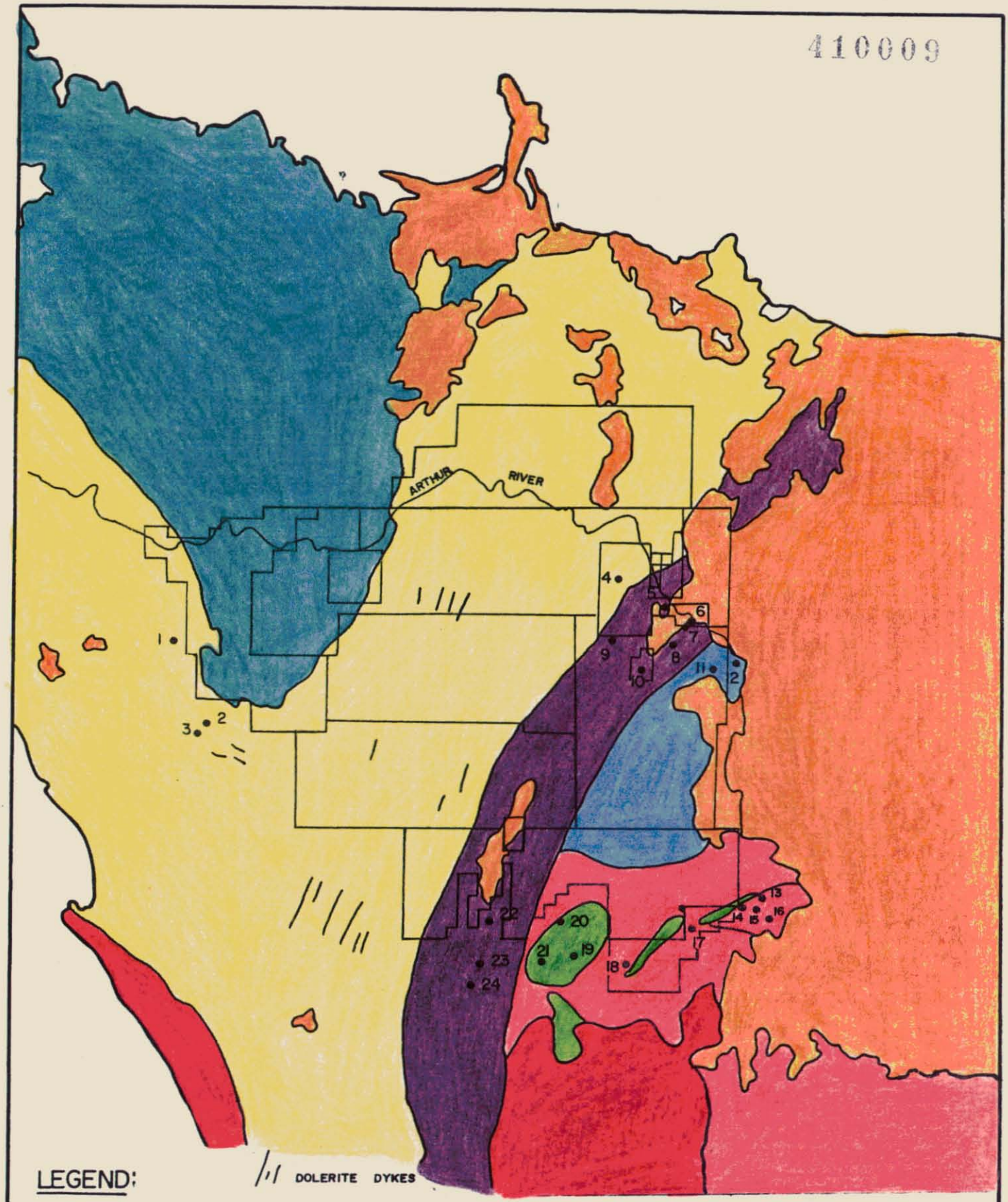
Geopeko consider this portion of Tasmania to have been inadequately explored for base metals and gold mineralization. Since the early prospecting stage, systematic exploration by several companies has relied on airborne geophysics (Aeromagnetics and INPUT) and conventional stream sediment geochemistry with limited ground follow up. These techniques will give readily detectable responses from, "ideal" orebodies under "ideal" conditions. However, the combination of rugged topography and intense leaching of soil profiles; the superimposed effects of Tertiary weathering and surficial deposits; the complications of pyritic black shales and manganiferous deposits; and the contamination of several river systems by tailings and slimes from old mining operations would have masked many good responses and obscured any subtle responses.

TABLE (2) METALLIC MINERAL OCCURRENCES/DEPOSITS

Map No.	Name	Commodity	Geology & Mineral Style	
1	The Clump	Cu	Rocky Cape Group	V
2	Murrays Reward	Cu	Rocky Cape Group	V
3	Specimen Hill	Sn Cu	Rocky Cape Group	V
4	Folly Hill	Au	Rocky Cape Group	A
5	Campbell Hydraulic	Au	Arthur Lineament	A
6	Victory	Cu	Arthur Lineament	V
7	Arthur River	Magnesite	Arthur Lineament	S
8	Keith River Gossan	Magnesite Py (Cu)	Arthur Lineament	MS
9	Pike's	Au	Arthur Lineament	A
10	Lyons River	Magnesite	Arthur Lineament	S
11	Atlas Leases	Ag Pb	Arthur Lineament	V?
12	Kay's	Au	Arthur Lineament	A
13	North Valley	Sn	Oonah Formation	A
14	Silver Cliffs	Pb Ag	Oonah Formation	V
15	Mt Bischoff	Sn	Oonah Formation	SCR
16	Fooks Load	Sn Pb Zn Ag Sb	Oonah Formation	V
17	Magnet	Pb Ag Zn	Crimson Ck Equiv.	V
18	Cleveland	Sn (Cu W Bi Mo)	Crimson Ck Equiv.	SCR
19	Lord Brassey	Ni	Cambrian Ultramafic	M
20	Bald Hill	Os Ir Au	Cambrian Ultramafic	A
21	Caudry's	Os Ir	Cambrian Ultramafic	?
22	Specimen Reef	Au	Arthur Lineament	V
23	Savage River Nth	Magnetite (Py)	Arthur Lineament	MS
24	Savage River Cent.	Magnetite (Py)	Arthur Lineament	MS

Mineralization Styles

A - Alluvial Deposit
V - Vein Deposit
M - Magmatic Deposit
S - Stratiform
MS - Massive Stratiform
SCR - Stratiform Carbonate Replacement



LEGEND:

- HOLOCENE - CARBONIFEROUS COVER
- DEVONIAN GRANITE
- SMITHTON BASIN
- DUNDAS TROUGH SEDIMENTS
- BASIC INTRUSIVES
- OONAH FORMATION
- ROCKY CAPE GROUP
- ARTHUR LINEAMENT
- DOLERITE DYKES

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1:500,000 | No Fig. 3

Date: SEPT. 1990.
Geologist: K.J.V.
Checked:
Drawn:
Map Ref: TAS. DEPT. MINES.
Base: PARKES NSW
Amendments:

MINERAL OCCURRENCES.

(See Table 2 also)

Geopeko consider that the geochemical prospecting method developed by Dr. Baker of the Tasmanian Mines Department whereby the humate content of stream water is analysed for its content of leached metals provides a rapid and inexpensive method of screening large areas of ground.

Selected areas with a combination of suitable geological environment and geochemical characteristics could subsequently be further explored using expensive and slow techniques such as detailed geological mapping, grid based geochemistry and modern geophysical techniques.

As the proposed technique is both rapid and relatively cheap, it should be possible to define prospective areas at an early stage. Consequently Geopeko anticipate that it will be possible to relinquish a large proportion of the area following the first year of tenure.

1.7 Target Models

Geopeko consider the Precambrian rocks of NW Tasmania to be prospective for stratiform Pb, Zn, Ag deposits of the Mt Isa-McArthur River type and for stratiform Cu-Zn (Au) deposits of the Besshi Type. The mineralization at the Atlas Leases can be assigned to the first group while the Keith River Gossan can be compared to the Besshi Type.

Several occurrences of alluvial gold along the Arthur River highlight the potential of the area for gold only mineralization. Applicable models for gold mineralization include shear related gold deposits and volcanogenic gold deposits associated with basic volcanics.

2.0 EXPLORATION ACTIVITY

2.1. Aims

Exploration during 1990 was aimed at delineating through grass root techniques, prospective and geochemically anomalous areas within the EL. Areas worthy of further investigation would be followed up with more detailed exploration in the 1991 field season.

Work included huminex water sampling, rock chip sampling, geological mapping, regional geochemical compilation and a geophysical review.

2.2 Geochemistry

Work Completed

One hundred and seventeen (117) two litre huminex water samples were collected from EL 43/89 at a drainage density of 1 sample per 2-3 km^2. Good access within the EL allowed sampling of the entire exploration area. A 10 km section of the Arthur River was rafted to sample tributaries draining the northeast of the area.

At each sample location water colour, water level, rate of flow, vegetation type and rock float were recorded for statistical purposes. The sample location was marked with an aluminium tag, a sample tag and orange flagging tape.

Any mineralized, altered or interesting rock outcrop or float encountered during creek and road traverses was sampled for assay or hand specimen purposes.

Regional stream sediment data obtained by previous exploration companies in the area were compiled. This allowed delineation of anomalous areas recognized by traditional stream sampling methods as well as providing a comparison for the Huminex technique.

Details of analytical techniques, comparative analyses and repeat analyses are given in a separate report. (Mathison, 1990).

Stream Sediment Compilation

A compilation of stream sediment sampling base metal data within EL 43/89 by previous companies in the area has been undertaken.

One sample was collected by ANZECO in EL 6/72, at least 49 by BHP in EL 18/80, 11 by CRA in EL 1/77 and 52 samples by Geopeko in EL 1/79.

All samples were assayed for base metals using AAS techniques. BHP's samples were sieved to -40#, CRA's to -80# and ANZECO's were panned down to a heavy mineral concentrate.

In general all base metal analyses were very low with the exception of a very high sample (4702) in Cann Creek of 220 ppm Cu, 1400 ppm Pb and 2200 pm Zn, taken by Geopeko in EL 1/79. Resampling of this creek did not repeat these anomalous values and Geopeko attributed the result to laboratory contamination.

The highest values received by BHP were 145 ppm Cu (sample 151), 16 ppm Pb (samples 211, 161, 163) and 42 ppm Zn (sample 217). No assay values could be found reported for CRA's 11 samples.

ANZECO's only sample (NRK/67) in this area reported values of 40 ppm Cu, 20 ppm Pb and 65 ppm Zn.

Gold in Water

Statistical analysis of 325 water samples taken regionally by Geopeko in the 1989-90 field season indicates that Au values >30 ng/l and Au:C >4 are possibly anomalous and that Au values >50 ng/l and Au:C >8 are probably anomalous. Any higher values are definitely anomalous. (Mathison, 1990)

Of the 119 water samples taken in EL 43/89, 11 samples have anomalous gold or Au:C ratios. Most of these samples are from creeks draining two areas in the eastern third of the EL.

Five samples draining ridges in the Wynsmith Hills area reported anomalous Au values and Au:C ratios. These samples are 20060 (47.2 ng/l Au, 8.91), 20087 (67.1 ng/l Au, 12.90), 20088 (21.8 ng/l Au, 4.11), 20089 (35.6 ng/l Au, 4.05) and 20091 (30.1 ng/l Au, 1.32).

Four out these five samples were checked by an alternative method. All reported Au <4 ng/l.

This area lies 2 km north of the Folly Hill workings which have been spasmodically worked for alluvial gold over the last 50 years. (McNeill, 1960)

Wynsmith Hills lies to the west of the Arthur Lineament and is underlain by the Neasy Quartzites and Slates. Recent geophysical interpretation (Leaman, 1990) indicates that the Arthur Lineament has been over-thrust from the west by the Rocky Cape Group in this area.

This extra wedge of magnetics is defined by structures 17 and 25. (See section 2.4)

The area a kilometre west of and parallelling structure 17 is represented by 5 samples with anomalous gold and Au:C ratios. These are samples 20051, (13.2 ng/l Au, 5.28), 20052 (47,2 ng/l, 4.45), 20076 (596.4 ng/l Au, 61.48), 20077 (47.0 ng/l, 2.27) and 20490 (21 ng/l Au, 4.52). This area is underlain by the Cowrie Siltstone.

Sample 20076 when analysed by the alternative method reported only 1.6 ng/l Au.

The other 108 samples taken in El 43/89 had low Au values ranging from 1.7-28.6 ng/l Au and Au:C ratios of 0.21-3.46.

Base Metals in Water

Statistical analysis of the 325 water samples taken regionally by Geopeko in the 1989-90 field season indicates that samples with values of Cu >3.8 µg/l, Pb >7 µg/l and Zn > 27 µg/l are possibly anomalous and samples with Pb >13 µg/l, Cu >7 µg/l and Zn >47 µg/l are probably anomalous. (Mathison, 1990)

Overall the base metal assay results were low with highs of 120 µg/l Pb (sample 20077), 12.5 µg/l Cu (sample 20091) and 185 µg/l Zn (sample 20043).

In total 11 of the 117 samples reported anomalous Pb assays, two had anomalous Zn assays and eight had anomalous Cu values.

These samples were taken from creeks draining scattered areas throughout the EL that are underlain by the Cowrie Siltstone and Neasy Quartzites and slates.

2.3 Geology

Field mapping indicates that EL 43/89 is predominantly underlain by rocks of the Precambrian Rocky Cape Group. The lowest known stratigraphic member, the Cowrie Siltstone underlies most of the area. The Cowrie Siltstone consists of interbedded black pyritic siltstones, laminated siltstone and mudstone, limey siltstone and fine grained sandstone. Turquoise coatings occur on siltstones in the Tayatea Spur Quarry. A number of dolerite dykes trending north to north-easterly outcrop in the central part of the EL.

The eastern quarter of the EL, 2-8 km west of the Arthur Lineament, is underlain by phyllites and meta-sandstones of the Neasy Quartzites and Slates. The dominant cleavage strikes north-east parallel to bedding with a variable dip direction.

Bedding west of Providence Creek generally strikes at 0-60^{0}M with south-easterly dips of 20-65^0. East of Providence Creek bedding is more variable. However, in the north-east corner of the EL there is a definite bedding trend of 10-45^{0}M strike, and 25-50^0 dip to the north-west.

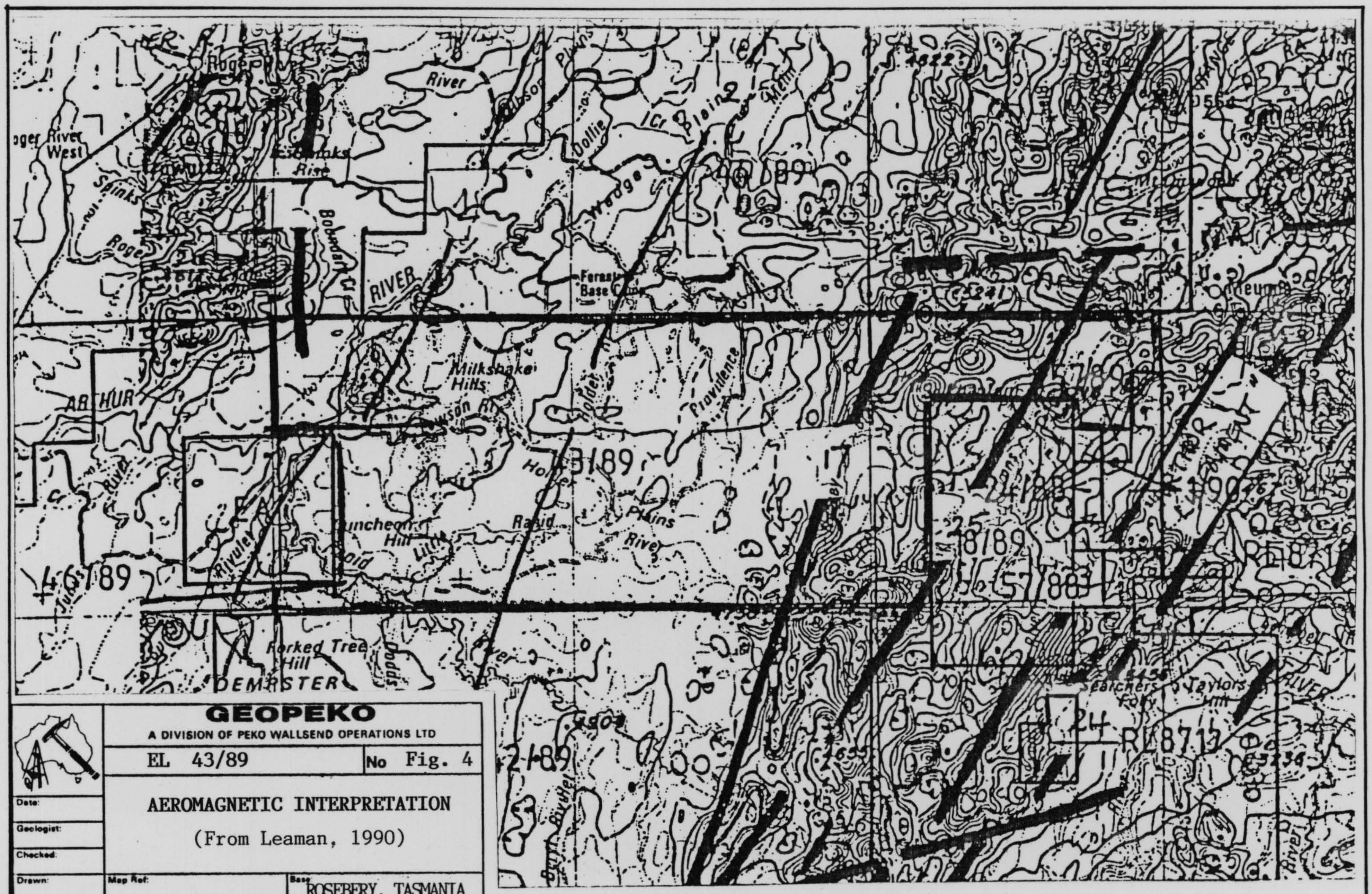
In the north-west corner of the EL the Rocky Cape Group is overlain by basal Cambrian rocks of the Smithton Basin. This transition is most obviously represented by outcrops of Black River Dolomite along the banks of the Arthur River.

No significant alteration or mineralization (except for the pyritic siltstones) was encountered during the sampling programme.

2.4 Geophysical Review

A geophysical review of the Rocky Cape Block using regional gravity and magnetic data was undertaken by D.E. Leaman. This work is detailed in a separate report. (Leaman, 1990) Discussions specific to this EL are appended as Appendix 3 and summarized in figures 4 and 5.

Both sets of data indicate that Arthur Lineament rocks lie at depth under the eastern third of the EL where Rocky Cape Group rocks are exposed.



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EL 43/89	No Fig. 4

AEROMAGNETIC INTERPRETATION

(From Leaman, 1990)

Date:

Geologist:

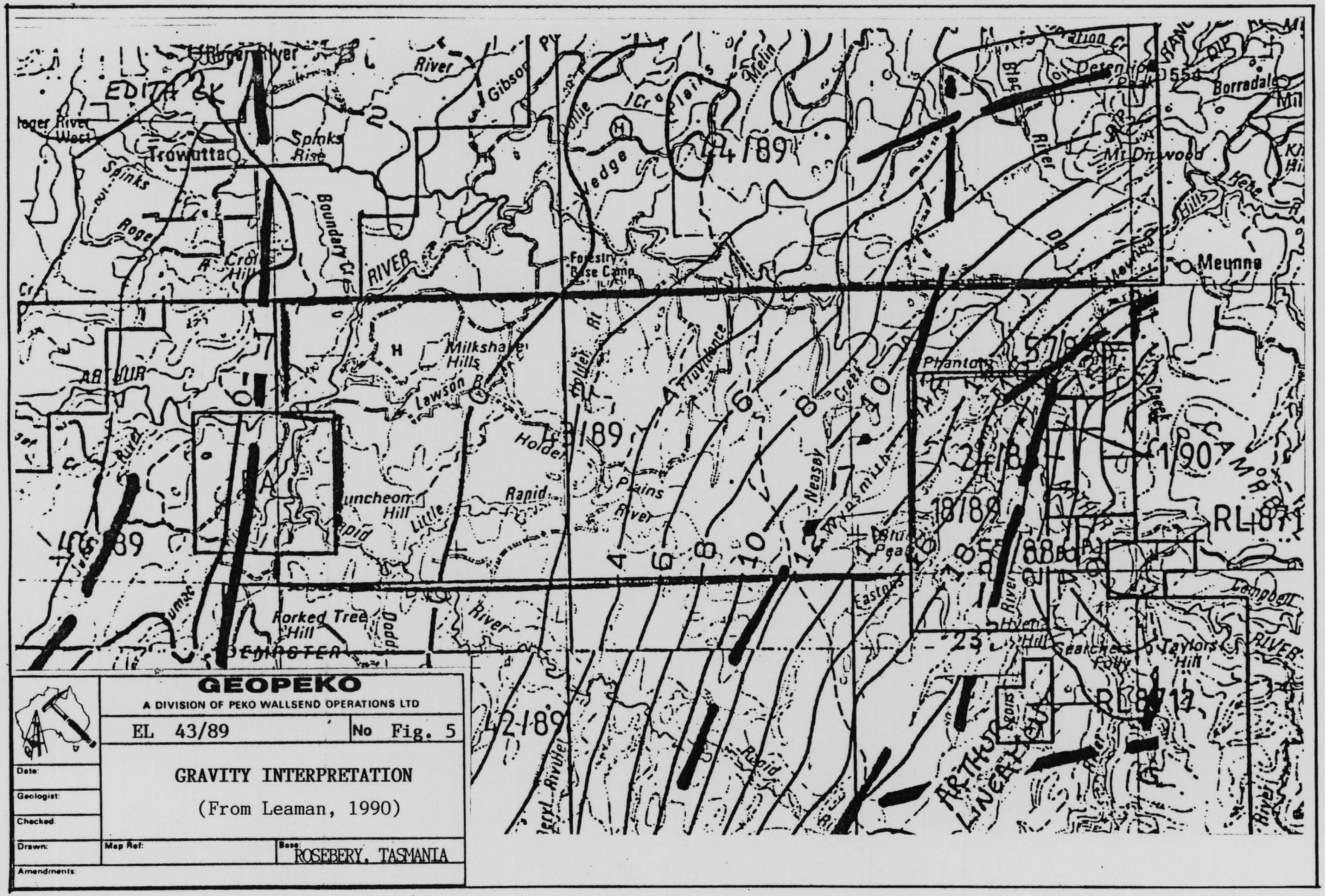
Checked:

Drawn:

Map Ref:

Base: ROSEBERY, TASMANIA

Amendments:



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EL 43/89	No Fig. 5

GRAVITY INTERPRETATION

(From Leaman, 1990)

Date:		
Geologist:		
Checked:		
Drawn:	Map Ref:	Base: ROSEBERY, TASMANIA
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This area is bounded by north-east trending features 17 and 25 which may have acted as conduits for mineralization.

Two other north-east trending linears, features 1 and 2, that cut through Rocky Cape Group rocks may also be associated with mineralization.

Leaman suggests that any trace geochemistry associated with these structures should be followed up with more detailed work.

3.0 CONCLUSIONS

* EL 43/89 has been adequately covered by the regional 1989-90 water sampling programme.

* The water sample gold results have highlighted 3 anomalous areas in the eastern half of the EL. These areas lie:

  - 1 km to the north-west of the Folly Hill alluvial gold workings, along the northern side of Wynsmith Hills. (Neasy Quartzite and slate).
  - as a north-south belt parallelling magnetic linear 17. (Cowrie Siltstone).
  - in the drainage area of Cann Creek (Cowrie Siltstone & Arthur Lineament)

* The water sample base metal results were very low.

* The compilation of base metal stream sediment data has not indicated any new areas worthy of more detailed work but has supported the anomalism of Cann Creek.

* No mineralization was encountered or anomalous rocks sampled.

* Magnetic and gravity data has indicated the Arthur Lineament has been overthrust from the west by the Rocky Cape Group. This area is defined by magnetic linears 17 and 25. (Leaman, 1990). This area corresponds with the Wynsmith Hills gold anomaly.

NB: In early December, after the bulk of this report was completed, it became obvious that the DMMR laboratory was having severe problems with the determination of gold in water. Some unknown element or compound was being concentrated by the activated charcoal extraction technique and was reporting on the gold channel. Repeat analyses using alternative techniques indicated that many, but not all, gold results were spurious. Re-analysis of water samples to identify genuinely anomalous samples is currently in progress.

4.0 RECOMMENDATIONS

The realization that not all gold in water results provided by the DMMR are valid necessitates either a pause in the program or a change in direction of the project. While alternative ways of selecting zones within this underexplored region are available, they do not offer the new approach , the near total coverage or the relatively low cost of the water technique.

Analysis of the water results shows that many samples reporting high gold came from streams draining either the Arthur Lineament or the Neasy Formation. Streams draining the Cowrie Siltstone reported uniformly low gold in water and base metal values. A group of five samples draining Cowrie Siltstone initially reported Au up to 596 mg/l. Repeat analysis indicated that these results were spurious.

It is recommended that the exploration program in this area should be delayed until resolution of the analytical problem by the DMMR. Anomalous samples with confirmed high gold values should be followed up by detailed geological mapping and rock chip sampling. Areas of the EL underlain by the Cowrie Siltstone should be relinquished.

5.0 ENVIRONMENTAL DISTURBANCE AND REHABILITATION

Exploration conducted by Geopeko during 1990 has caused no environmental disturbance. Semi permanent samples markers left at sample sites are considered to be valuable reference points for future exploration. No rehabilitation has been necessary.

REFERENCES

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BURRETT, C.F., Martin E.L. (1989) "Geology & Mineral Resources of Tasmania" Geological Society of Australia 15 (Burrett et al 1989)

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MATHISON, I.J. (1990) - Arthur River Project - 1990 Summer Field Season Water Sampling.

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APPENDIX 1

EL SCHEDULE

0019

410020

TASMANIA

No. EL 43/89 (Regulation 6A)

The Mining Act 1929

EXPLORATION LICENCE

Issued to PEKO EXPLORATION LTD of PO BOX 180 ROSEBERY TASMANIA 7470 in respect of 233 square kilometres of land in the Land Districts of WELLINGTON & RUSSELL vicinity of HOLDER RIVULET as described in the schedule hereto.

This licence shall remain in force until the Twelfth day of January 1991.

This licence is subject to the following conditions:-

1. That the licensee shall immediately on the issue of this licence take steps to commence preliminary works necessary for the investigation of the area.

2. That the licensee shall carry out investigations as may be necessary to determine the mineral potential of the area, and in particular will fulfil the proposals set out in the exploration programme and approved by the Director of Mines.

3. That the licensee shall employ such technical and other staff and equipment as may be necessary effectively to carry out such investigations.

4. This licence shall apply to all minerals.

5. The licensee shall notify the owner and occupier of private land, in writing, at least three days before entering such land.

6. That the security (Private Land Deposit) provided by Section 15E (1) (a) & (b) of the Mining Act, 1929, (see below) shall be lodged with the Director of Mines before entering private land.

7. The licensee shall observe, perform and fulfil the conditions as set forth in Schedule 'A' (Revised) attached hereto.

8. The licensee shall be liable to pay the cost of any work carried out to remedy any damage arising from any breach of the conditions of this licence.

9. The licensee shall deposit an amount of $5,000 (Performance Deposit) and $1,000 (Private Land Deposit) as security that the conditions contained herein shall be observed. Upon expiry or sooner determination of the licence, if the licensee satisfies the Director of Mines that such conditions have been complied with, the Director of Mines shall refund such deposit or such portion thereof, as he may determine.

10. If it is found, that the operations hereby authorised, are causing any undue damage to, or erosion of, the subject land or other land in the vicinity thereof or are unnecessarily disturbing the environment, the Minister may cancel the licence without compensation to the licensee by giving seven days' notice in writing of his intention so to do.

11. The licensee shall obtain the written permission of the Director of Mines before carrying out any work in a Forest Reserve.

12. The licensee shall arrange and keep in good standing public liability insurance to the minimum of $1,000,000. Evidence of currency shall be produced on demand.

SCHEDULE

Commencing at a south west corner of the area whose grid co-ordinates are 340 000 metres E. 5 440 000 metres N. thence grid north to 5 441 000 metres N. grid east to 342 000 metres E. again grid north to 5 446 000 metres N. grid west to 340 000 metres E. aforesaid again grid north to 5 450 000 metres N. again grid east to 370 000 metres E. grid south to 5 448 000 metres N. again grid west to 369 000 metres E. again grid south to 5 446 000 metres N. aforesaid again grid west to 367 000 metres E. again grid north to 5 447 000 metres N. again grid west to 362 000 metres E. again grid south to 5 440 000 metres N. aforesaid thence again grid west to the point of commencement.

The area excludes: 2.9 skm Milkshake Hills Forest Reserve

Land Tenure:

The area comprises: Crown Land
Private Property
State Forest

The area includes part of the Australian Heritage Commission Act Registered Entry, Savage River.

(Note: The land tenure table is a guide only)

APPENDIX 2

REVIEW OF PREVIOUS EXPLORATION

APPENDIX 2

REVIEW OF PREVIOUS EXPLORATION

A2.1 EL 12/65 Pieman Project

During the mid 1960s Pickands Mather & Co International held EL 12/65 over a large part of northwest Tasmania. An extensive regional stream geochemical survey was conducted and although a number of geochemical anomalies were detected, and some resampling occurred later, no further work was undertaken. (Anon. 1966 in Cromer, 1988a). Unfortunately records of this sampling program are no longer held by the Tasmanian DMMR.

A2.2 EL 48/70 and EL 49/70

Two exploration licences to the southwest of Geopeko's Arthur River Project were granted as a joint venture to Australian Consolidated Industries Ltd and Consolidated Goldfields Australia Ltd. Field investigations included an aeromagnetic survey, stream sediment sampling, geological mapping and soil and rock chip sampling. This was designed to detect any tin mineralization that may be associated with the three Devonian granites in the two licence areas. Detailed evaluation was carried out in areas of geochemical and geomagnetic anomalies and known mineralization.

Results were not encouraging enough to justify further exploration and the two ELs were dropped in 1972. (Bell, 1972)

A2.3 EL 6/72 North West Tasmania

Australian and New Zealand Exploration Company was granted EL 6/72 in January 1972. This EL covered an area of the Smithton Trough to the north of the Arthur River. It was considered by ANZECO to be prospective for tungsten due to the similarity of the dolomites to those hosting the King Island Scheelite ore body. A panned concentrate and stream sediment sampling programme was completed over the EL with 94 samples taken and analysed for W, Cu, Pb, Zn, Mo, Sn and Cr. ANZECO received a number of anomalous assays for all the elements tested but found it difficult to interpret the results. Though some follow up was recommended, no further exploration was attempted. (Kinnane, 1972).

A2.4 EL 2/73

Following a study of the mineral potential of Australia during 1971, ESSO took out EL 2/73 in the northwest of Tasmania and conducted an airborne geophysical survey (INPUT) over the licence area. Sixty two anomalies were detected, however, dense vegetation restricted examination to thirty six targets and only thirteen had outcrop. Most of the anomalies were attributed to black slates and lithological contacts. ESSO

considered that no further exploration was warranted and the EL was relinquished in 1974. (Neale, 1973)

A2.5 *EL 43/70 Keith River*

Magnesite was first discovered in the Lyons River-Keith River area in 1925 by P.B. Nye. Since Mineral Holdings Australia was granted EL 43/70 over the area, numerous companies have explored the licence under joint venture agreements. A joint venture between Mineral Holdings Australia and CRAE Pty Ltd in 1982 delineated two deposits of moderate-high grade magnesite. These are known as the Lyons River and the Keith-Arthur River Prospects. (Mackenzie, 1984). Retention Licences 8717 and 8718 cover these two magnesite reserves.

A2.6 *EL 1/77 Rocky Cape*

EL 1/77 was initially taken up by CRAE Pty Ltd to investigate the possible tin potential of the area. Following a joint venture with Geopeko in 1979 and recommendations by P. Legge in 1980 that the Rocky Cape rocks showed similarities to the Selwyn Basin, Canada, the target was extended to shale hosted lead zinc deposits.

Statistical evaluation of regional drainage data indicated that the Trowutta Dempster plains district showed elevated values of Cu, Pb, Zn and Co. (Weir, 1982). Follow up of this area included stream sediment sampling, geological mapping and rock chip sampling. A photogeological interpretation (by Carey, 1981) covered the whole EL. The stream sediment sampling revealed lead anomalies from the Julius River, the Meryanna area, Wents Creek and Stephens Rivulet and an arsenic anomaly from Sumac Rivulet.

Follow up in the Julius River and Meryanna area included detailed stream sampling, gridding, soil sampling and ground geophysics. It was concluded that the Julius River anomaly was derived from a disseminated source or shears within the dolomite and that the Meryanna anomaly was the results of erosional basaltic remnants on topographic highs.

Resampling of the other 3 anomalous areas failed to repeat the initial high values.

CRA Exploration relinquished the northern part of EL 1/77 in 1983 concluding that the black shale sequences exposed at the eastern margin of the trough were too thin to have produced economic mineralization from brines (Weir, 1983).

Exploration continued in the western coastal parts of the EL including diamond drilling at the Alpine and Red prospects for tin before total EL relinquishment in 1985.

A2.7 EL 1/79 Rapid River

A detailed program of exploration was carried out over the Rapid River EL by Geopeko and/or CRAE Pty Ltd from 1979 to 1987. Commodities searched for included gold, platinum, shale hosted base metals and Mittershill type tungsten as well as extensions to the Lyons River magnesite trend. The work included airborne magnetic and radiometric surveys, ground follow up of all major magnetic anomalies, geological mapping and stream sediment sampling in selected areas. No significant mineralization was located. (Dickson, 1987)

A2.8 EL 10/79

EL 10/79 was operated as a joint venture by CRAE and Mineral Holdings Australia Pty Ltd. The target was initially dolomite, but when some anomalous gold and platinum values were obtained, greater emphasis was given to the metals aspect of exploration. Grades of 3.09 g/t [410732] and 4.06 g/t Au with 0.46 g/t Pt [408726] were obtained from dolomite chip sampling and, although resampling returned results of only 0.04 g/t Pt, the partners concluded that there was a significant gold occurrence in the dolomites. However, EL 10/79 was relinquished in 1984 with no follow up work. (Anon 1985 in Cromer, 1988a)

A2.9 EL 12/80 Leigh River and EL 61/83

EL 12/80 was granted to CRAE Pty Ltd in order to investigate two tin stream sediment anomalies located during previous reconnaissance by CRAE in 1977. The EL was also considered for shale hosted lead zinc and gold mineralization and this was supported by the presence of a number of INPUT anomalies obtained by ESSO in 1973. Work carried out included a computer study of all previous stream sediment geochemistry, infill stream sediment sampling, regional scale mapping, follow up of nine aeromagnetic anomalies defined by the Mines Dept. West Coast survey and investigations into the gold potential of altered Cambrian basalts. No significant base or precious metals were detected and the EL was relinquished in 1985. (Dickson, 1985).

EL 61/83 was taken up by CRAE to cover a large aeromagnetic anomaly located on the eastern margin of EL 12/80. A grid was established over the anomaly and Genie EM traverses carried out. No base metal or gold anomalism was detected and the EM failed to locate any conductors. The aeromagnetic anomaly was attributed to unmineralized Precambrian basic volcanics and the EL was dropped in 1985. (Dickson, 1986)

A2.10 EL 18/80 Arthur River and EL 18/83 Lake Chisholm

EL 18/80 was taken up by BHP Co Ltd and thought to be prospective for a skarn or massive sulphide hosted tin tungsten deposit of the Renison/Cleveland style. Carlin style gold, diamonds, Mississippi Valley lead-zinc and sedimentary copper

deposits were secondary targets. Work completed includes stream sediment and pan concentrate sampling, rock chip sampling, petrology, a photogeological and Landsat Image study, geological mapping, and evaluation and follow up of existing INPUT and aeromagnetic data. In view of the disappointing results and difficult access, the EL was relinquished in 1983. (Anon, 1983).

EL 18/83 lies adjacent to EL 18/80 and was taken by BHP to cover a broadly coincident INPUT/Aeromagnetic anomaly. An extensive grid was cut over the main zone of interest at Lake Chisholm and soil sampling, geophysical surveys and geological mapping were carried out. Pan concentrate sampling was used to follow up anomalous tin geochemistry reported from earlier work. The INPUT/Aeromagnetic anomaly was attributed to a small amphibolite body and magnetically susceptible basalts. No indications of potentially economic mineralization were encountered. (Anon, 1984).

A2.11 EL 21/87 Balfour and EL 22/87 Trowutta

Aureole Resources took up ELs 21/87 and 22/87 to explore for platinum group metals, gold and base metals, hosted mainly by receptive rocks along the eastern and southern margins of the Smithton Trough. Work included a regional geophysical evaluation by D.E. Leaman and rock chip sampling for assay and petrological purposes. Despite upgrading the prospectivity of parts of the two ELs, 22/87 was relinquished and 21/87 reduced in 1989 as Aureole shifted their emphasis to other tenements. (Cromer, 1988a + b).

A2.12 EL 5/63

EL 5/63 was granted to Comstaff Proprietary Limited in 1963 and covered the area from Rosebery in the south to Wandle Creek in the north. Comstaff divided the EL in 6 areas, ie, Area 1 Arthur River, Area 2 Ramsay, Area 3 Mt Block, Area 4 Chester/Pinnacles, Area 5 Huskisson and Area 6 East Renison. Area 1 covers part of Geopeko's EL 45/89 and is the only area discussed in this summary.

Systematic and detailed exploration of Area 1 commenced in 1970-71 field season and little is reported of any exploration carried out before this time.

Exploration of Area 1 from 1970-75 was based around 2 stream sampling programmes and several widely spaced TURAM EM traverses. The stream sampling surveys produced anomalies in the Tinstone Creek area (Ag,Cu,Zn,Pb,Sn & Ba), Magnet Creek (Sn), Deep Gully (Sn), Rollins Creek (Sn), Dalcos Creek (Sn) and from the Happy Day Creek (Cu, Zn, Ni). Follow up included gridding and soil sampling of the Tinstone Creek area, Happy Day Creek and four other Cu-Zn anomalies. No anomalies indicative of the presence of mineralization were recorded.

The Turam EM survey reported 8 anomalies and 5 of them were gridded and subjected to EM and/or magnetic surveys. No significant results were obtained.

From 1975-78 work was centred on the Magnet-Bischoff grid which was subjected to geological mapping, soil sampling, ground magnetics and EM surveys. Three diamond holes were drilled in the grid area, one to test an EM anomaly and the other two to test the Magnet lode at depth. No mineralization was intersected and no further work on the grid was recommended. (Shaw & Everett, 1985).

In 1980 a programme to investigate the alluvial tin potential of the Arthur River commenced. Initial work was encouraging with a tin volume estimate of 6-8 million m^3 of variable grade outlined. Though follow up work was recommended, no further exploration on this project was reported. (Washausen & Wilding, 1980).

In 1983-85 a DIGHEM survey was carried out over Area 1 using flight lines with a NW-SE direction. Five anomalies were recommended for follow up. Comstaff attributed them to Tertiary basalt cover.

In 1985 Comstaff was required to reduce EL 5/63 and most of Area 1 was relinquished. (Shaw & Everett, 1985).

A2.13 EL 1/68 Heazlewood

In 1968 EL 5/63, held by Comstaff Pty Ltd, was subdivided to form EL 1/68. EL 1/68 covered an area north of Luina which is drained principally by the Savage and Heazlewood Rivers.

Initially exploration of this licence focussed on the ultramafics and their potential for nickel mineralization. Gridding, soil sampling, geological mapping, geophysical surveys and some trenching failed to identify any new mineralization.

Regional reconnaissance projects were then implemented in the Savage, Whyte and Heazlewood drainages. The upper Heazlewood drainage basin emerged as the most prospective with anomalous values of zinc and copper. Two grids (HAB, HAC) were cut and geologically mapped and soil sampled. No mineralization was found and geochemical responses were weak.

In 1980, a DIGHEM survey over the total licence area was commissioned and exploration for the next 3 years centred around the follow up of 13 resultant anomalies. All anomalies were gridded, geologically mapped, soil sampled and subjected to ground magnetic and EM surveys. In all cases no mineralization was observed. In late 1983 two EM targets were selected for drill testing. Both holes failed to intersect mineralization and the EM responses were attributed to black graphitic slate and phyllite.

In 1984 Comstaff considered that all avenues for locating mineralization had been exhausted and the EL was relinquished. (Shaw, 1984).

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APPENDIX 3

GEOPHYSICAL REVIEW

EL 43/89 HOLDER RIVULET

The location of this EL is shown in Figure 1.

Figure 27 presents relevant gravity and magnetic data.

Rocky Cape Group rocks are exposed across most of this EL; the only exceptions being near the Arthur River in the NW and Meunna in the far east. The basal rocks of the Smithton Trough are exposed in the west and part of the Lineament metamorphic belt is exposed in the east. Exposure of the lineament lies between magnetic features (23) and (25).

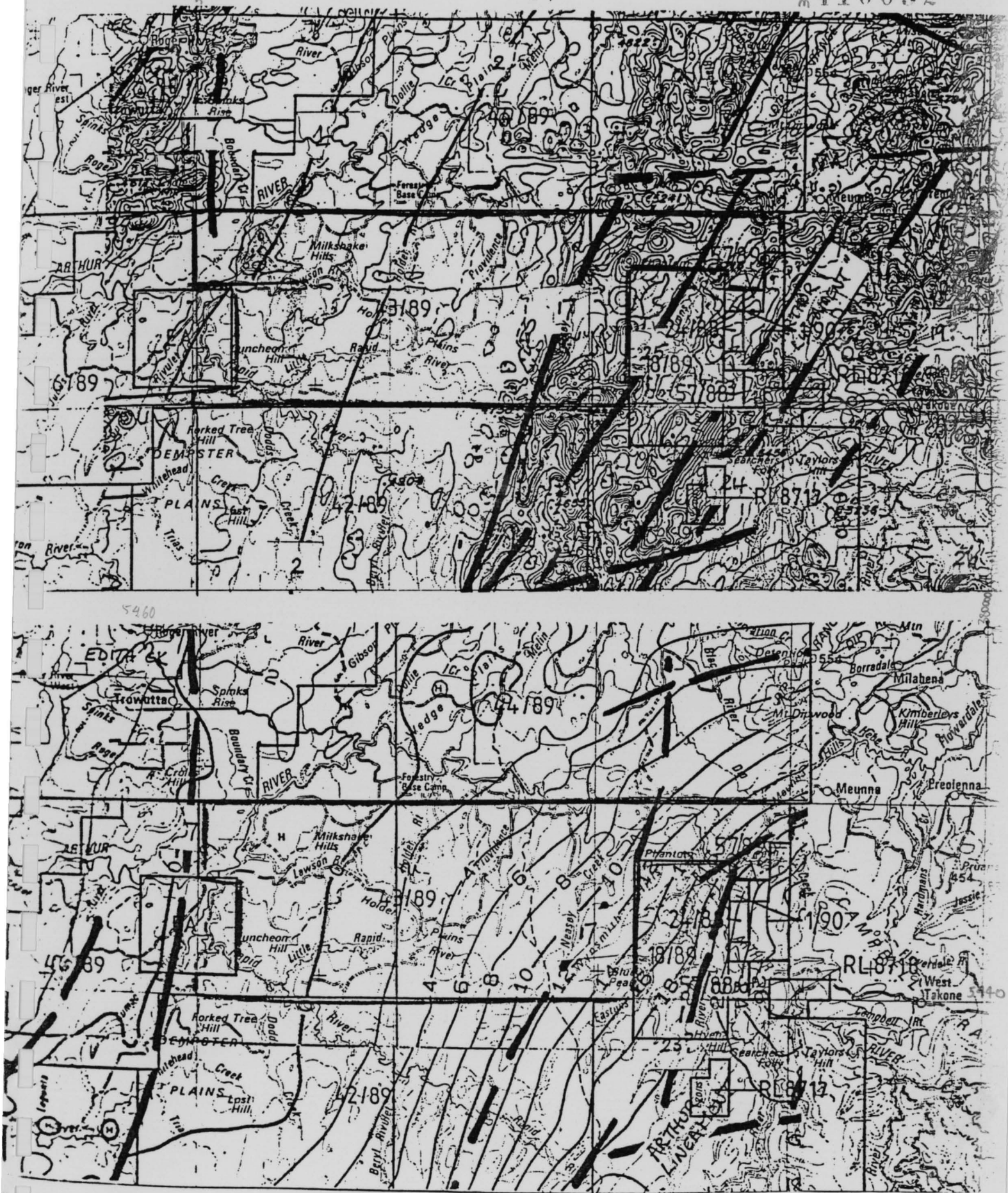
The EL includes subtle magnetic anomalies (1) and (2). These features are perhaps most accessible in this EL and their origin should be assessed. Some moderate responses occur in association with (1), including two of the dextral offsets, and this area between Boundary Creek and Milkshake Hills should be examined. Ground magnetic profiles and some property (susceptibility) determinations will probably be required to identify the source of these effects - if it is exposed. Some trace geochemistry in this area would establish if a useful mineralising or oxidised conduit is present.
A similar treatment should be applied to identify (2) which appears to produce a step anomaly effect and may represent a disguised fault within the siliceous rocks.

The projection of (17), the western limit of mafic origin slices beneath the Rocky Cape Group overthrust, to the surface should also be inspected. This may require survey of a strip perhaps 2 or 3 km wide due to current uncertainties in dips of the hidden slices and structures. If traces of mineralisation are associated with (17) then a similar ground coverage of (25) may prove productive.

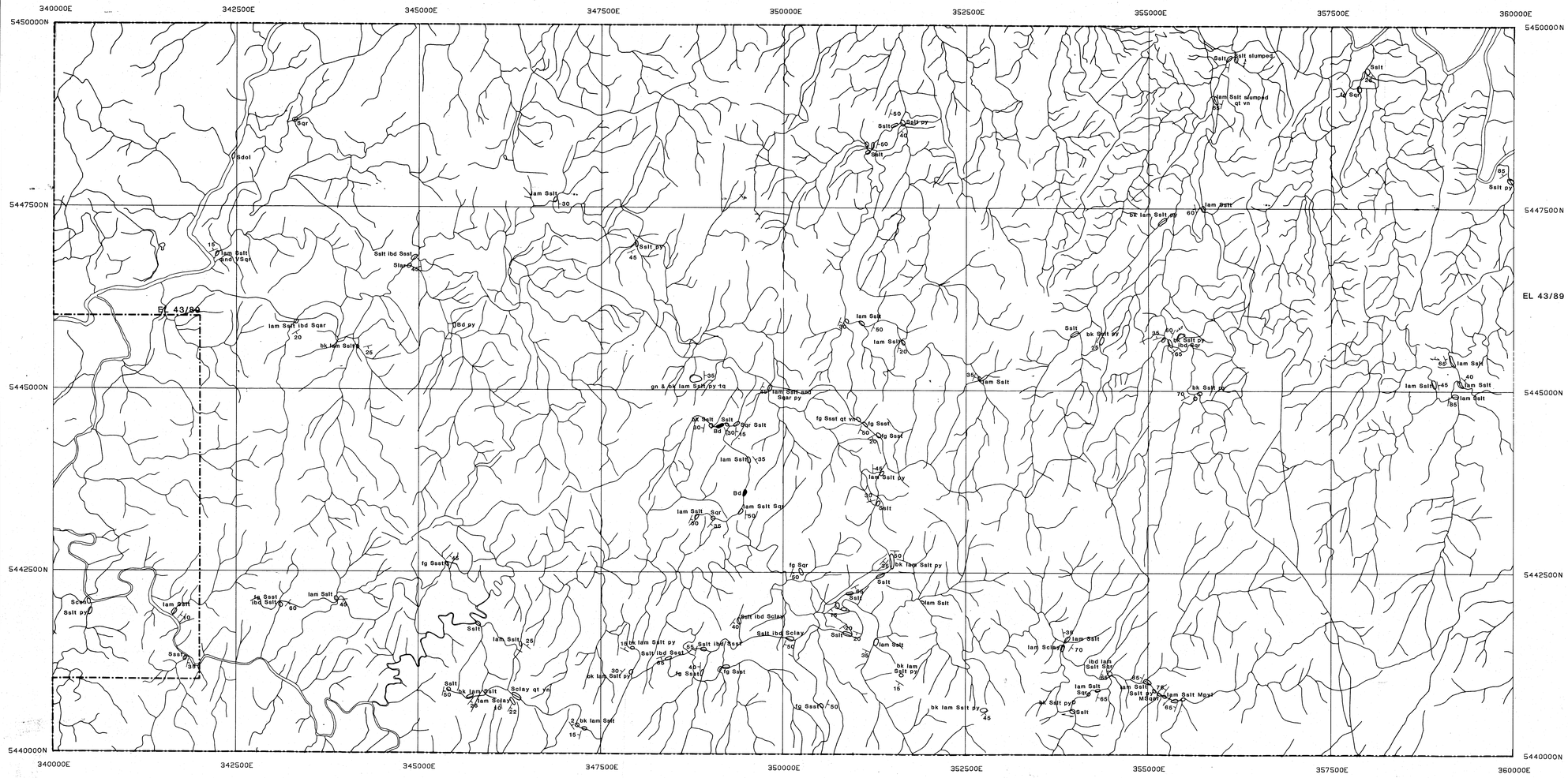
Surveys directed toward assessment of features (1), (2) and (17) are probably best undertaken in this EL although the results will be applicable to 41 and 42/89.

Gravity data confirm the general implications of the magnetic surveys within the resolution of available stations. The origin of the linear intersection near the Arthur River should also be reviewed. This intersection is associated with a second order magnetic gradient which may indicate a substantial alteration effect.

0031 61 410032



EL 43/89 HOLDER RIVULET MAGNETIC AND RESIDUAL GRAVITY DATA
FIGURE 27



ROCK TYPES

SEDIMENTS:

Ssst	sandstone
Sqar	quartz arenite
Swk	greywacke
Sslt	siltstone
Sdol	dolomite
Scon	conglomerate
Sbx	breccia

IGNEOUS ROCKS:

Tert Bb	tertiary basalt
€ Bb	cambrian basalt
Bd	dolerite

METAMORPHICS:

Mpyl	phyllite
MSqr	meta arenite

SEDIMENT GRAIN SIZE

vfg	very fine grained
fg	fine grained
mg	medium grained
cg	coarse grained

TEXTURES

vns	veins
lbd	interbedded
lam	laminated
clvd	cleaved
stn	staining
gd	graded
wthd	weathered

COLOURS

bk	black
wh	white
gn	green
gy	grey
pl	pale
dk	dark
or	orange
cm	cream

MINERALOGY

py	pyrite
qt	quartz
Fe	iron
Mn	manganese
cbd	carbonate
Tq	turquoise

STRUCTURAL SYMBOLS

- bedding
- facing
- overturned bedding
- cleavage
- fault
- rock outcrop
- float/subcrop
- definite contact
- approximate contact
- interpreted contact

PLATE 1a

410033

5cm

91-3215.

	3445	3645
3244	3444	3644
3243	3443	

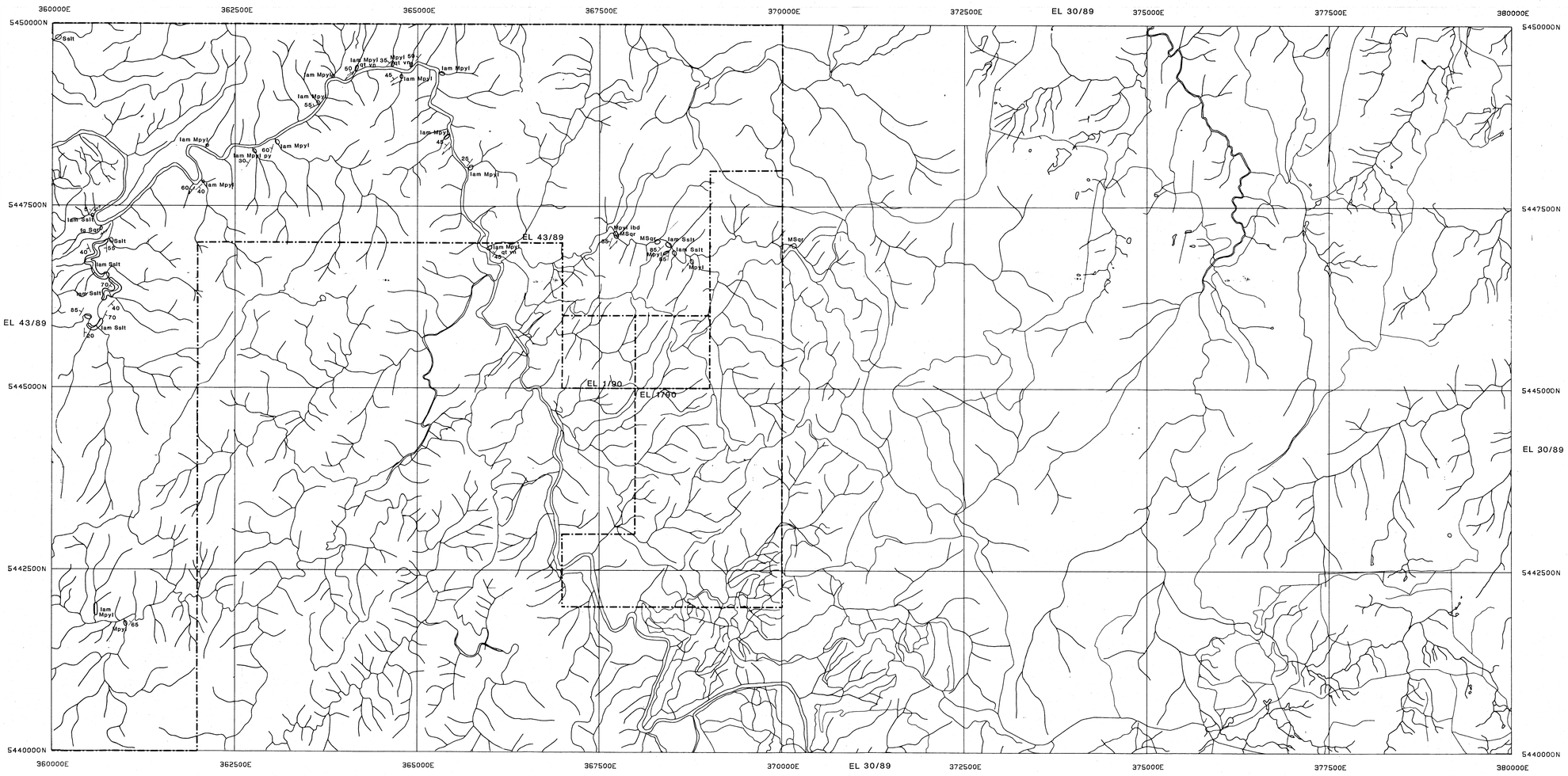
TASMANIA

GEOPEKO
A DIVISION OF PEKO EXPLORATION LIMITED

SCALE - 1:25000
AUSTRALIAN HEIGHT DATUM

3444 HOLDER

EL 43/89
GEOLOGICAL FACT MAPPING



ROCK TYPES

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gn	green
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pl	pale
dk	dark
or	orange
cm	cream

MINERALOGY

py	pyrite
qt	quartz
Fe	iron
Mn	manganese
cbd	carbonate
Tq	turquoise

STRUCTURAL SYMBOLS

- bedding
- facing
- overturned bedding
- cleavage
- fault
- rock outcrop
- float/subcrop
- definite contact
- approximate contact
- interpreted contact

PLATE 1b

410034

91-3215.

5 cm

3445	3645	
3444	3644	
3443		

TASMANIA

GEOPEKO

A DIVISION OF PEKO EXPLORATION LIMITED

SCALE - 1:25000

AUSTRALIAN HEIGHT DATUM

3644 FOLLY

EL 43/89

GEOLOGICAL FACT MAPPING

340000E 342500E 345000E 347500E 350000E 352500E 355000E 357500E 360000E

5450000N 5447500N 5445000N 5442500N 5440000N

EL 43/89

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20039,12.8,6.7,1.91
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20456,4.7,5.11.3,0.66
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20424,15.3,5.1,3
20439,8.11.1,3.0.75
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20452,14.6,9.6,1.52
20453,28.6,43.4,0.66
20463,15.4,14.1,1.09
20462,8.6,9.7,0.89
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20478B,5.3,23.7,8.22
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20461A,10.2,36.3,0.9
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20478,11.6,22,0.53
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20481,6.9,18.5,4.37
20460A,5.9,6.1,0.97
20460B,5.9,6.1,0.97
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20461B,10.2,36.3,0.9
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20462A,8.6,9.7,0.89
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20478B,5.3,23.7,8.22
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20465,11.9,14.8,0.8
20464,12.4,8.7,1.49
20468,27.9,12.9,2.09
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20469A,3.5,12.9,0.27
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20118,3.9,12.5,0.31
20484,16.2,5.2,0.64
20484A,16.2,5.2,0.64
20485,12.1,12.1,1.01
20485A,12.1,12.1,1.01
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20115,8.8,6.3,1.4
20117,4.5,10.0.45
20077,47,20.7,2.27
20075,28.8,13.7,2.1
20076,396.4,9.7,61.48
20078,13.4,12.1,1.11

EL 43/89

PLATE 2a

LEGEND

Sample Location
Sample Number
Au (ppt)
C (ppm)
Au/C Ratio
* 20662,11.8,13.9,0.85
BT - Below Detection

416035

5 cm

91-3215.1

	3445	3645
3244	3444	3644
3243	3443	

TASMANIA

GEOPEKO
A DIVISION OF PEKO EXPLORATION LIMITED

SCALE - 1:25000
AUSTRALIAN HEIGHT DATUM

3444 HOLDER

EL 43/89

WATER GEOCHEMISTRY
Sample Number, Au, C, Au/C

9975

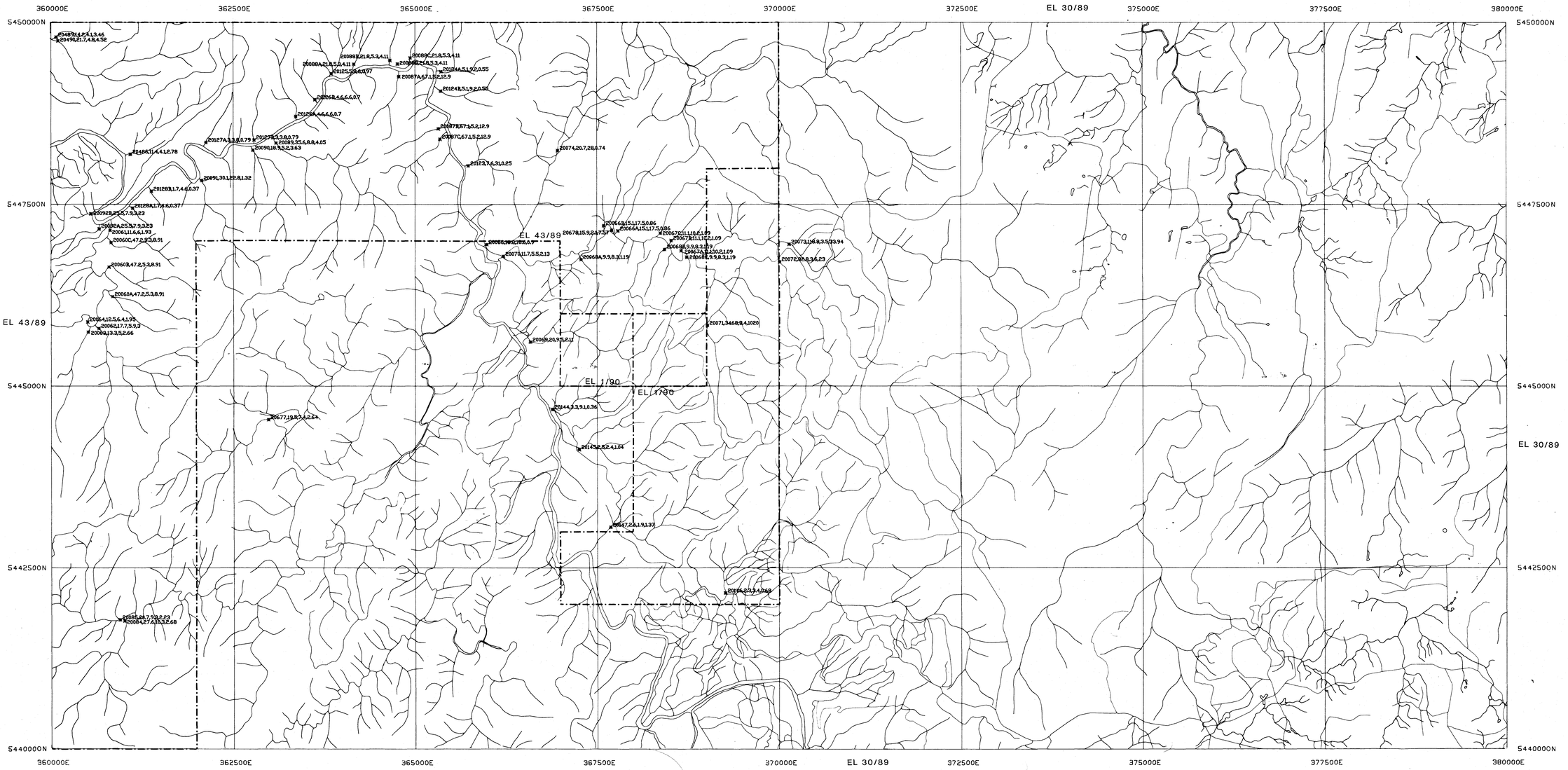


PLATE 2b

410036

LEGEND

Sample Location
Sample Number
Au (ppt)
C (ppm)
Au/C Ratio
* 20662,11.8,13.9,0.85
BT – Below Detection

5cm

91-3215.

3445	3645	
3444	3644	
3443		

TASMANIA

GEOPEKO
A DIVISION OF PEKO EXPLORATION LIMITED

SCALE - 1:25000
AUSTRALIAN HEIGHT DATUM

3644 FOLLY

EL 43/89

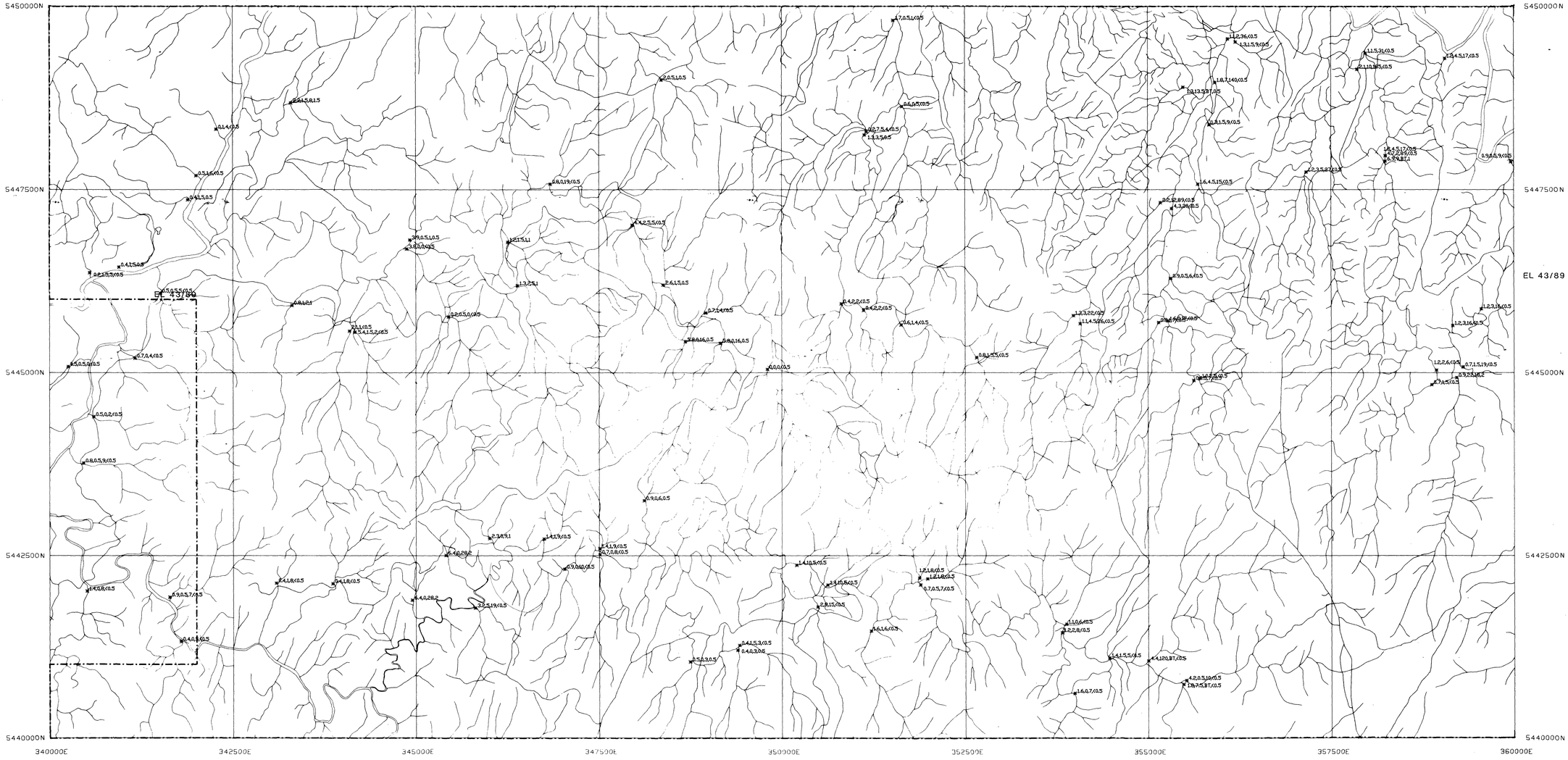
WATER GEOCHEMISTRY
Sample Number, Au, C, Au/C

9974

340000E 342500E 345000E 347500E 350000E 352500E 355000E 357500E 360000E

5450000N
5447500N
5445000N
5442500N
5440000N

EL 43/89



4100037

PLATE 3a

LEGEND

Sample Location
Copper (ppb)
Lead (ppb)
Zinc (ppb)
Arsenic (ppb)
3,8,6,5,23,<0.5
BT - Below Detection

5cm

91-3215.

	3445	3645
3244	3444	3644
3243	3443	

TASMANIA

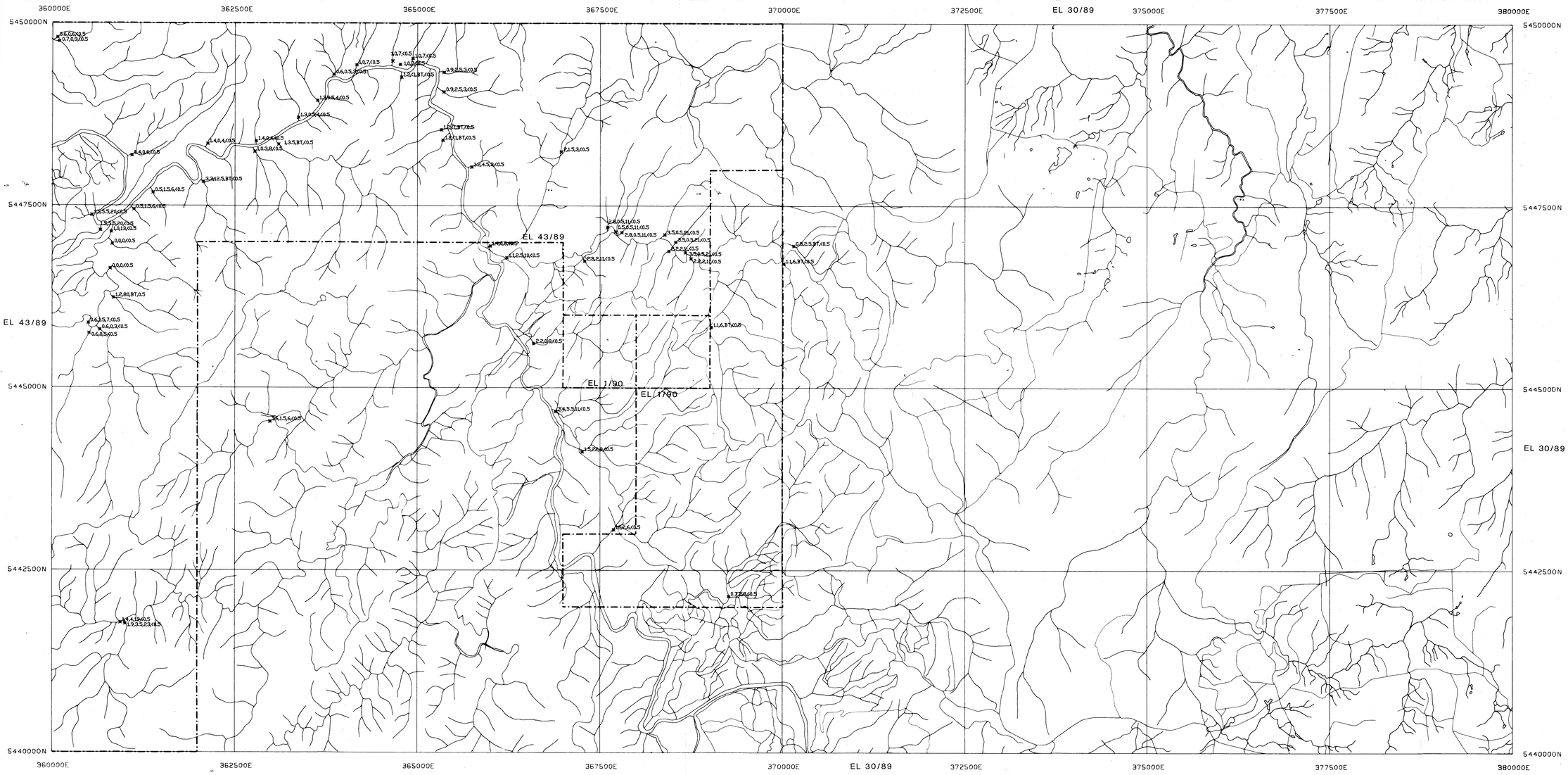
GEOPEKO
A DIVISION OF PEKO EXPLORATION LIMITED

SCALE - 1:25000
AUSTRALIAN HEIGHT DATUM

3444 HOLDER

EL 43/89 WATER GEOCHEMISTRY Cu, Pb, Zn, As

9973



LEGEND

Sample Location
Copper (ppb)
Lead (ppb)
Zinc (ppb)
Arsenic (ppb)
3.8,6.5,23,0.5
BT - Below Detection

PLATE 3b

410038

5 cm

91-3215.

3445	3645	
3444	3644	
3443		

TASMANIA

GEOPEKO
A DIVISION OF PEKO EXPLORATION LIMITED

SCALE - 1:25000
AUSTRALIAN HEIGHT DATUM

3644 FOLLY

EL 43/89 WATER GEOCHEMISTRY
Cu, Pb, Zn, As

DATA ENTRY

Project Arthur River Project DB Number _____ Date 20/12/90
Prospect _____ X Ref T247
Company Seapeko
Title EL43/89 Holder Rurulet Report on Exploration Activity January 1990 to November 1990
Author Katrina Virgoe & Ian Matheson
Key Words Water Heminex Arthur Lineament Neary Formation Gravity Aeromagnetics
Near Town Trowutta Country Aus State TAS Volumes 2
Commodities Cu Pb Zn Au Pages 9
Tenements EL43/89 Plans 6
Comments_1 Geochemistry Water Cu Pb Zn Au As
Comments_2 V1 Text Appendixes Plans
V2 Water Sampling Data

MAP SHEET 1:250 000 SERIES
Map Names _____ Map No _____
Map1 BURNIE SK55-3
Map2 _____ _____
Map3 _____ _____
MAP SHEET 1:50 000 SERIES
MAPS _____

Latitude Deg 41 Min 10
Longitude Deg 145 Min 15

Stored At _____

Shelved At _____
Classification _____

Name: MAPNO3 Kind: Nonkey Type: Text Size: 8
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0032

410040

GEOPEKO

A DIVISION OF PEKO EXPLORATION

EL 43/89 HOLDER RIVULET

1990 SUMMER
WATER SAMPLING DATA
SAMPLE DESCRIPTIONS,
UNITS AND RESULTS

Katrina Virgoe
Ian Mathison
December, 1990

To accompany report
T247

Distribution: DMMR, Hobart

410041

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 21-01-1990 NUMBER 20036 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5449140 EAST 357840 SAMPLER KV

		UNIT	Prc
WIDTH	2.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 4.5

DATE 21-01-1990 NUMBER 20037 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5449320 EAST 357970 SAMPLER KV

		UNIT	Prc
WIDTH	1.5	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 3.5

DATE 21-01-1990 NUMBER 20038 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5449300 EAST 359060 SAMPLER KV

		UNIT	Prc
WIDTH	7.0	FLOAT_1	qz
DIRECTION	0	FLOAT_2	Sslt
COLOUR	clear	FLOAT_3	Ssst
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 1.0

DATE 21-01-1990 NUMBER 20039 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447960 EAST 358240 SAMPLER KV

		UNIT	Prc
WIDTH	2.0	FLOAT_1	wh Ssst
DIRECTION	0	FLOAT_2	qz
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 2.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 21-01-1990 NUMBER 20040 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447740 EAST 357140 SAMPLER KV

		UNIT	Prc
WIDTH	5.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	clear	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 3.0

DATE 22-01-1990 NUMBER 20041 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448400 EAST 356200 SAMPLER KV

		UNIT	Prc
WIDTH	1.0	FLOAT_1	gy Ssst
DIRECTION	0	FLOAT_2	qz
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 1.0

DATE 22-01-1990 NUMBER 20042 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5439360 EAST 356080 SAMPLER KV

		UNIT	Prc
WIDTH	15.0	FLOAT_1	gy Sslt
DIRECTION	0	FLOAT_2	gn igneous rock
COLOUR	weak brown	FLOAT_3	qz
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 16.0

DATE 22-01-1990 NUMBER 20043 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448950 EAST 355900 SAMPLER KV

		UNIT	Prc
WIDTH	5.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	gy Ssst
COLOUR	weak brown	FLOAT_3	qz
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 13.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 22-01-1990 NUMBER 20044 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447580 EAST 355700 SAMPLER KV

		UNIT	Prc
WIDTH	1.5	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 1.0

DATE 22-01-1990 NUMBER 20045 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447230 EAST 355340 SAMPLER KV

		UNIT	Prc
WIDTH	10.0	FLOAT_1	gy meta Ssst
DIRECTION	0	FLOAT_2	qz
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 7.0

DATE 22-01-1990 NUMBER 20046 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447320 EAST 355200 SAMPLER KV

		UNIT	Prc
WIDTH	5.0	FLOAT_1	gy Sslt
DIRECTION	0	FLOAT_2	gy Ssst
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 4.5

DATE 22-01-1990 NUMBER 20047 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445820 EAST 354000 SAMPLER KV

		UNIT	Prc
WIDTH	2.0	FLOAT_1	pl gy Ssst
DIRECTION	0	FLOAT_2	Sslt
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 3.0

[redacted]

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 22-01-1990 NUMBER 20048 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445700 EAST 354080 SAMPLER KV

		UNIT	Prc
WIDTH	2.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 2.0

DATE 22-01-1990 NUMBER 20049 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446300 EAST 355300 SAMPLER KV

		UNIT	Prc
WIDTH	10.0	FLOAT_1	Sslt py
DIRECTION	0	FLOAT_2	wh Ssst
COLOUR	very weak	FLOAT_3	qz
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 1.0

DATE 22-01-1990 NUMBER 20050 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445680 EAST 355140 SAMPLER KV

		UNIT	Prc
WIDTH	2.0	FLOAT_1	gy Sslt
DIRECTION	0	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 2.5

DATE 22-01-1990 NUMBER 20051 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445700 EAST 355290 SAMPLER KV

		UNIT	Prc
WIDTH	5.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 4.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 22-01-1990 NUMBER 20052 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448400 EAST 355500 SAMPLER KV

		UNIT	Prc
WIDTH	2.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	brown	FLOAT_3	
FLOW	still		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 3.0

DATE 23-01-1990 NUMBER 20053 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5450080 EAST 354090 SAMPLER KV

		UNIT	Prc
WIDTH	5.0	FLOAT_1	gn Ssst
DIRECTION	0	FLOAT_2	bk Sslt py
COLOUR	weak brown	FLOAT_3	qz
FLOW	still		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 1.0

DATE 23-01-1990 NUMBER 20054 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5450080 EAST 353940 SAMPLER KV

		UNIT	Prc
WIDTH	3.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	gn serp'd iBd
COLOUR	very weak	FLOAT_3	qz
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 3.0

DATE 23-01-1990 NUMBER 20055 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445080 EAST 354300 SAMPLER KV

		UNIT	Prc
WIDTH	1.0	FLOAT_1	gy Sslt
DIRECTION	0	FLOAT_2	carb Sbs
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 23-01-1990 NUMBER 20056 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445650 EAST 359160 SAMPLER KV

		UNIT	Prc
WIDTH	1.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	fast		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

DATE 23-01-1990 NUMBER 20057 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5444940 EAST 359200 SAMPLER KV

		UNIT	Prc
WIDTH	7.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	qz
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 4.0

DATE 23-01-1990 NUMBER 20058 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5444800 EAST 358890 SAMPLER KV

		UNIT	Prc
WIDTH	7.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	qz
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 4.5

DATE 23-01-1990 NUMBER 20059 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5444990 EAST 358940 SAMPLER KV

		UNIT	Prc
WIDTH	5.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 3.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 31-01-1990 NUMBER 20060 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5446760 EAST 360800 SAMPLER KJV

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	Sslt
DIRECTION	0	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	
FLOW	medium		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.5

DATE 31-01-1990 NUMBER 20061 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447140 EAST 360800 SAMPLER KJV

		UNIT	Prnf
WIDTH	7.0	FLOAT_1	Sslt py
DIRECTION	0	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	Ssst
FLOW	medium		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 20.0

DATE 31-01-1990 NUMBER 20062 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5445810 EAST 360620 SAMPLER KJV

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	Sslt
DIRECTION	0	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	
FLOW	medium		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 3.0

DATE 31-01-1990 NUMBER 20063 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5445740 EAST 360520 SAMPLER KJV

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	medium		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 31-01-1990 NUMBER 20064 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5445880 EAST 360500 SAMPLER KJV

		UNIT	Prnf
WIDTH	5.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	Sar
COLOUR	weak brown	FLOAT_3	qt
FLOW	medium		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 13.0

DATE 31-01-1990 NUMBER 20065 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447920 EAST 359980 SAMPLER KJV

		UNIT	Prc
WIDTH	1.5	FLOAT_1	Sslt py
DIRECTION	0	FLOAT_2	Sar
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL mod
CONTAM			
VEGETATION	logged		DRAINAGE AREA 1.5

DATE 06-02-1990 NUMBER 20066 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447200 EAST 367600 SAMPLER KJV

		UNIT	Prnf
WIDTH	0.5	FLOAT_1	Mpyl
DIRECTION	0	FLOAT_2	
COLOUR	med brown	FLOAT_3	Sslt
FLOW	fast		
			LEVEL high
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

DATE 06-02-1990 NUMBER 20066 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447080 EAST 367740 SAMPLER KJV

		UNIT	Prnf
WIDTH	0.5	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	slow		
			LEVEL high
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 06-02-1990 NUMBER 20067 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447920 EAST 368300 SAMPLER KJV

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	Mpyl
DIRECTION	0	FLOAT_2	MSqar
COLOUR	very weak	FLOAT_3	qz
FLOW	moderate		

LEVEL high

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

DATE 06-02-1990 NUMBER 20067 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5446940 EAST 368500 SAMPLER KJV

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	qt
DIRECTION	0	FLOAT_2	Mpyl
COLOUR	very weak	FLOAT_3	MSsst
FLOW	moderate		

LEVEL high

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

DATE 06-02-1990 NUMBER 20067 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5446890 EAST 368680 SAMPLER KJV

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	qt
DIRECTION	0	FLOAT_2	Mpyl
COLOUR	weak brown	FLOAT_3	MSsst
FLOW	moderate		

LEVEL high

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

DATE 06-02-1990 NUMBER 20068 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5446760 EAST 367260 SAMPLER KJV

		UNIT	Prnf
WIDTH	0.5	FLOAT_1	Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	
FLOW	moderate		

LEVEL high

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 06-02-1990 NUMBER 20068 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5446920 EAST 368400 SAMPLER KJV

		UNIT	Prnf
WIDTH	0.5	FLOAT_1	Mpyl
DIRECTION	0	FLOAT_2	MSqar
COLOUR	med brown	FLOAT_3	
FLOW	moderate		

LEVEL high

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

DATE 06-02-1990 NUMBER 20074 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448180 EAST 366940 SAMPLER KJV

		UNIT	Prnf
WIDTH	5.0	FLOAT_1	qz
DIRECTION	0	FLOAT_2	MSqar
COLOUR	med brown	FLOAT_3	
FLOW	moderate		

LEVEL high

CONTAM
VEGETATION rain forest DRAINAGE AREA 2.0

DATE 06-02-1990 NUMBER 20075 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441760 EAST 355520 SAMPLER KJV

		UNIT	Prnf
WIDTH	5.0	FLOAT_1	Tertiary Bb
DIRECTION	0	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	Sslt
FLOW	moderate		

LEVEL high

CONTAM
VEGETATION rain forest DRAINAGE AREA 2.5

DATE 06-02-1990 NUMBER 20076 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441700 EAST 355480 SAMPLER KJV

		UNIT	Prnf
WIDTH	10.0	FLOAT_1	phyllite
DIRECTION	0	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	Bd
FLOW	moderate		

LEVEL high

CONTAM
VEGETATION rain forest DRAINAGE AREA 6.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 06-02-1990 NUMBER 20077 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441020 EAST 354990 SAMPLER KJV

		UNIT	Prnf
WIDTH	5.0	FLOAT_1	qt
DIRECTION	0	FLOAT_2	Sqar
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL high
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 3.0

DATE 06-02-1990 NUMBER 20078 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5440600 EAST 353960 SAMPLER KJV

		UNIT	Prnf
WIDTH	3.0	FLOAT_1	Sar
DIRECTION	0	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 4.0

DATE 20-02-1990 NUMBER 20084 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5441995 EAST 360760 SAMPLER KJV

		UNIT	Prnf
WIDTH	5.0	FLOAT_1	qt
DIRECTION	0	FLOAT_2	lam Sslt
COLOUR	weak brown	FLOAT_3	Sar
FLOW	fast		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 3.0

DATE 20-02-1990 NUMBER 20085 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5441900 EAST 360760 SAMPLER KJV

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	Sslt
FLOW	fast		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 3.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 20-02-1990 NUMBER 20086 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447995 EAST 365950 SAMPLER KJV

		UNIT	Prnf
WIDTH	5.0	FLOAT_1	Sar
DIRECTION	0	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	Bb
FLOW	moderate		

LEVEL mod

CONTAM
VEGETATION rain forest DRAINAGE AREA 3.5

DATE 20-02-1990 NUMBER 20087 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448490 EAST 365350 SAMPLER KJV

		UNIT	Prnf
WIDTH	5.0	FLOAT_1	lam Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	Sar
FLOW	moderate		

LEVEL mod

CONTAM
VEGETATION rain forest DRAINAGE AREA 2.0

DATE 20-02-1990 NUMBER 20087 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448550 EAST 365350 SAMPLER KJV

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	lam Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	
FLOW	mod		

LEVEL mod

CONTAM
VEGETATION rain forest DRAINAGE AREA 2.0

DATE 20-02-1990 NUMBER 20088 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449490 EAST 364900 SAMPLER KJV

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	moderate		

LEVEL mod

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 20-02-1990 NUMBER 20088 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448385 EAST 363080 SAMPLER KJV

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	lam Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 3.0

DATE 20-02-1990 NUMBER 20088 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449410 EAST 364750 SAMPLER KJV

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	lam Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	
FLOW	slow		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.5

DATE 20-02-1990 NUMBER 20088 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449400 EAST 364150 SAMPLER KJV

		UNIT	Prnf
WIDTH	3.0	FLOAT_1	Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	
FLOW	mod		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.5

DATE 20-02-1990 NUMBER 20089 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449490 EAST 364640 SAMPLER KJV

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	lam Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 20-02-1990 NUMBER 20090 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448260 EAST 362780 SAMPLER KJV

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		

LEVEL low

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

DATE 20-02-1990 NUMBER 20091 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447820 EAST 362070 SAMPLER KJV

		UNIT	Prnf
WIDTH	7.0	FLOAT_1	lam Mpyl
DIRECTION	0	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	moderate		

LEVEL low

CONTAM
VEGETATION rain forest DRAINAGE AREA 2.0

DATE 20-02-1990 NUMBER 20092 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447180 EAST 360680 SAMPLER KJV

		UNIT	Prnf
WIDTH	3.0	FLOAT_1	qt
DIRECTION	0	FLOAT_2	lam Sslt
COLOUR	weak brown	FLOAT_3	Ssst
FLOW	moderate		

LEVEL low

CONTAM
VEGETATION logged DRAINAGE AREA 0.8

DATE 20-02-1990 NUMBER 20092 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447380 EAST 360520 SAMPLER KJV

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	mod		

LEVEL mod

CONTAM
VEGETATION logged DRAINAGE AREA 0.8

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 24-01-1990 NUMBER 20115 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441450 EAST 353800 SAMPLER KV

		UNIT	Prc
WIDTH	7.0	FLOAT_1	lam Sslt
DIRECTION	20	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 4.5

DATE 24-01-1990 NUMBER 20116 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441600 EAST 353860 SAMPLER KV

		UNIT	Prc
WIDTH	2.0	FLOAT_1	lam Sslt py
DIRECTION	0	FLOAT_2	qz
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 2.0

DATE 24-01-1990 NUMBER 20117 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441100 EAST 354460 SAMPLER KV

		UNIT	Prc
WIDTH	1.5	FLOAT_1	wh/gn clayey Sest
DIRECTION	0	FLOAT_2	lam Sslt
COLOUR	weak brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 1.0

DATE 24-01-1990 NUMBER 20118 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441480 EAST 351220 SAMPLER KV

		UNIT	Prc
WIDTH	1.0	FLOAT_1	Sslt
DIRECTION	0	FLOAT_2	qz
COLOUR	brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 4.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 24-01-1990 NUMBER 20119 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441700 EAST 350500 SAMPLER KV

		UNIT	Prc
WIDTH	3.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	qz
COLOUR	brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 2.0

DATE 24-01-1990 NUMBER 20120 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442100 EAST 350400 SAMPLER KV

		UNIT	Prc
WIDTH	1.0	FLOAT_1	i/b Sslt & Ssst
DIRECTION	0	FLOAT_2	qz
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.5

DATE 20-02-1990 NUMBER 20121 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441780 EAST 345820 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	gy Sslt
DIRECTION	250	FLOAT_2	cm fg Ssst
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 3.5

DATE 20-02-1990 NUMBER 20123 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448040 EAST 365740 SAMPLER JHF

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	Mpyl
DIRECTION	190	FLOAT_2	Mqzt
COLOUR	brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 20-02-1990 NUMBER 20124 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449080 EAST 365360 SAMPLER JHF

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	gy Mpyl
DIRECTION	265	FLOAT_2	Mqzt
COLOUR	med brown	FLOAT_3	
FLOW	moderate		

LEVEL low

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

DATE 20-02-1990 NUMBER 20124 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449340 EAST 365360 SAMPLER JHF

		UNIT	Prnf
WIDTH	3.0	FLOAT_1	gy Mpyl
DIRECTION	310	FLOAT_2	Mqzt
COLOUR	med brown	FLOAT_3	cm Ssst
FLOW	moderate		

LEVEL low

CONTAM
VEGETATION rain forest DRAINAGE AREA 2.0

DATE 20-02-1990 NUMBER 20125 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449300 EAST 363960 SAMPLER JHF

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	Mpyl
DIRECTION	180	FLOAT_2	Mqzt
COLOUR	med brown	FLOAT_3	
FLOW	moderate		

LEVEL med

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

DATE 20-02-1990 NUMBER 20126 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448960 EAST 363640 SAMPLER JHF

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	Mpyl
DIRECTION	120	FLOAT_2	Mqzt
COLOUR	very weak	FLOAT_3	
FLOW	moderate		

LEVEL med

CONTAM
VEGETATION rain forest DRAINAGE AREA 0.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 20-02-1990 NUMBER 20126 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448720 EAST 363360 SAMPLER JHF

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	Mpyl
DIRECTION	90	FLOAT_2	Mqzt
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 0.5

DATE 20-02-1990 NUMBER 20127 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448380 EAST 362800 SAMPLER JHF

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	Mpyl
DIRECTION	200	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

DATE 20-02-1990 NUMBER 20127 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448360 EAST 362140 SAMPLER JHF

		UNIT	Prnf
WIDTH	1.0	FLOAT_1	Mpyl
DIRECTION	190	FLOAT_2	Mqz
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

DATE 20-02-1990 NUMBER 20128 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447440 EAST 361120 SAMPLER JHF

		UNIT	Prnf
WIDTH	0.5	FLOAT_1	Mpyl
DIRECTION	330	FLOAT_2	Mqz
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 20-02-1990 NUMBER 20128 c MAP FOLLY TYPE WATER

EL 43/89 NORTH 5447680 EAST 361380 SAMPLER JHF

		UNIT	Prnf
WIDTH	0.5	FLOAT_1	
DIRECTION	290	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	slow		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.5

DATE 24-01-1990 NUMBER 20422 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5449820 EAST 351540 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	cm Sslt
DIRECTION	15	FLOAT_2	iBd
COLOUR	very weak	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 13.0

DATE 24-01-1990 NUMBER 20423 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448640 EAST 351660 SAMPLER JHF

		UNIT	Prc
WIDTH	10.0	FLOAT_1	lam Sslt
DIRECTION	310	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 5.5

DATE 24-01-1990 NUMBER 20424 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448300 EAST 351160 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	gy Sslt
DIRECTION	105	FLOAT_2	iBd
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 4.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 24-01-1990 NUMBER 20425 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448240 EAST 351140 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	fg Ssst
DIRECTION	42	FLOAT_2	iBd
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 8.5

DATE 24-01-1990 NUMBER 20426 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445660 EAST 351640 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	gy Sslt
DIRECTION	338	FLOAT_2	iBd
COLOUR	med brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 4.0

DATE 24-01-1990 NUMBER 20427 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445840 EAST 351120 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	Sslt
DIRECTION	326	FLOAT_2	qt
COLOUR	med brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 2.0

DATE 24-01-1990 NUMBER 20428 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5449000 EAST 348340 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	lam Sslt
DIRECTION	280	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	stagnant		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 1.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 24-01-1990 NUMBER 20429 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447020 EAST 347960 SAMPLER JHF

		UNIT	Prc
WIDTH	3.0	FLOAT_1	lam Sslt py
DIRECTION	348	FLOAT_2	
COLOUR	brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 10.0

DATE 24-01-1990 NUMBER 20430 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445760 EAST 345460 SAMPLER JHF

		UNIT	Prc
WIDTH	3.0	FLOAT_1	iBd
DIRECTION	240	FLOAT_2	Sslt
COLOUR	weak brown	FLOAT_3	Sgwk
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 3.5

DATE 24-01-1990 NUMBER 20431 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445560 EAST 344180 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	gy Sslt
DIRECTION	10	FLOAT_2	iBd
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 2.0

DATE 24-01-1990 NUMBER 20432 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445560 EAST 344100 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	qt
DIRECTION	354	FLOAT_2	lam Sslt
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 3.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 24-01-1990 NUMBER 20433 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445920 EAST 343320 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	cm Sslt py
DIRECTION	308	FLOAT_2	
COLOUR	clear	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 3.0

DATE 24-01-1990 NUMBER 20440 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448700 EAST 343300 SAMPLER JHF

		UNIT	Prc
WIDTH	3.0	FLOAT_1	ib Ssst & Sslt
DIRECTION	272	FLOAT_2	qt
COLOUR	brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20446 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446800 EAST 346280 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	
DIRECTION	250	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	stagnant		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20447 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446200 EAST 346400 SAMPLER JHF

		UNIT	Prc
WIDTH	7.0	FLOAT_1	cm Ssst
DIRECTION	320	FLOAT_2	lam Sslt
COLOUR	med brown	FLOAT_3	qt
FLOW	fast		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 24-01-1990 NUMBER 20448 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446820 EAST 344920 SAMPLER JHF

		UNIT	Prc
WIDTH	10.0	FLOAT_1	Ssst
DIRECTION	260	FLOAT_2	iBd
COLOUR	weak brown	FLOAT_3	
FLOW	fast		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20449 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446800 EAST 344880 SAMPLER JHF

		UNIT	Prc
WIDTH	5.0	FLOAT_1	
DIRECTION	230	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	fast		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20450 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446080 EAST 341520 SAMPLER JHF

		UNIT	Prc
WIDTH	5.0	FLOAT_1	fg Ssst
DIRECTION	294	FLOAT_2	lam Sslt
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20451 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445200 EAST 341160 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	
DIRECTION	286	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 0.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 24-01-1990 NUMBER 20452 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5444400 EAST 340620 SAMPLER JHF

		UNIT	Prc
WIDTH	4.0	FLOAT_1	
DIRECTION	230	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20453 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5443400 EAST 340600 SAMPLER JHF

		UNIT	Prc
WIDTH	0.0	FLOAT_1	
DIRECTION	0	FLOAT_2	
COLOUR	brown	FLOAT_3	
FLOW	stagnant		
			LEVEL low
CONTAM	road works		
VEGETATION	rain forest		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20454 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442020 EAST 340500 SAMPLER JHF

		UNIT	Prc
WIDTH	5.0	FLOAT_1	cm Sslt
DIRECTION	355	FLOAT_2	
COLOUR	very weak	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20455 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445820 EAST 348960 SAMPLER JHF

		UNIT	Prc
WIDTH	3.0	FLOAT_1	
DIRECTION	164	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

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ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 24-01-1990 NUMBER 20456 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445400 EAST 349180 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	
DIRECTION	350	FLOAT_2	
COLOUR	brown	FLOAT_3	
FLOW	stagnant		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20457 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445040 EAST 349820 SAMPLER JHF

		UNIT	Prc
WIDTH	5.0	FLOAT_1	gy Ssst py
DIRECTION	26	FLOAT_2	lam Sslt
COLOUR	weak brown	FLOAT_3	qt
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 24-01-1990 NUMBER 20458 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446200 EAST 348380 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	
DIRECTION	150	FLOAT_2	
COLOUR	brown	FLOAT_3	
FLOW	dry		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 01-02-1990 NUMBER 20459 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445080 EAST 340230 SAMPLER JHF

		UNIT	Prc
WIDTH	3.0	FLOAT_1	Slst
DIRECTION	70	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 01-02-1990 NUMBER 20460 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442140 EAST 343100 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	bn fg Ssst
DIRECTION	110	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 01-02-1990 NUMBER 20460 c MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442120 EAST 343880 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	gy Sslt
DIRECTION	135	FLOAT_2	qt
COLOUR	weak brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 01-02-1990 NUMBER 20461 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441900 EAST 344960 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	
DIRECTION	190	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 01-02-1990 NUMBER 20461 c MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442480 EAST 345420 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	
DIRECTION	125	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 01-02-1990 NUMBER 20462 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442720 EAST 346020 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	gy Sslt
DIRECTION	160	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 01-02-1990 NUMBER 20463 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5443220 EAST 348120 SAMPLER JHF

		UNIT	Prc
WIDTH	3.0	FLOAT_1	
DIRECTION	150	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 01-02-1990 NUMBER 20464 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441000 EAST 348760 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	cm Ssst
DIRECTION	10	FLOAT_2	gy Sgwk
COLOUR	med brown	FLOAT_3	qt
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 0.0

DATE 01-02-1990 NUMBER 20465 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441200 EAST 349400 SAMPLER JHF

		UNIT	Prc
WIDTH	4.0	FLOAT_1	
DIRECTION	10	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 0.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 01-02-1990 NUMBER 20466 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441280 EAST 349460 SAMPLER JHF

		UNIT	Prc
WIDTH	1.0	FLOAT_1	cm fg Ssst
DIRECTION	210	FLOAT_2	dk gy Sslt
COLOUR	med brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	button grass		DRAINAGE AREA 0.0

DATE 20-02-1990 NUMBER 20478 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442590 EAST 347500 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	fg Ssst
DIRECTION	210	FLOAT_2	Sgwk
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 0.0

DATE 20-02-1990 NUMBER 20478 c MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442740 EAST 346740 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	fg Ssst
DIRECTION	10	FLOAT_2	lam Sslt
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM			
VEGETATION	button grass		DRAINAGE AREA 0.0

DATE 20-02-1990 NUMBER 20479 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442320 EAST 347040 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	gy fg Ssst
DIRECTION	345	FLOAT_2	qt
COLOUR		FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 20-02-1990 NUMBER 20480 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442520 EAST 347520 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	
DIRECTION	350	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 20-02-1990 NUMBER 20481 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441920 EAST 341640 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	lam Sslt
DIRECTION	200	FLOAT_2	fg Ssst
COLOUR	med brown	FLOAT_3	qt
FLOW	moderate		
			LEVEL med
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 0.0

DATE 20-02-1990 NUMBER 20482 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5441300 EAST 341800 SAMPLER JHF

		UNIT	Prc
WIDTH	1.5	FLOAT_1	lam Sslt
DIRECTION	350	FLOAT_2	pp Ssst
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 0.0

DATE 20-02-1990 NUMBER 20483 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447580 EAST 346840 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	dk gy lam Sslt
DIRECTION	260	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 18-02-1990 NUMBER 20484 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442160 EAST 351980 SAMPLER JHF

		UNIT	Prc
WIDTH	0.5	FLOAT_1	
DIRECTION	225	FLOAT_2	
COLOUR	brown	FLOAT_3	
FLOW	still		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 18-02-1990 NUMBER 20484 c MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442220 EAST 351860 SAMPLER JHF

		UNIT	Prc
WIDTH	3.0	FLOAT_1	cm Sslt
DIRECTION	190	FLOAT_2	qt
COLOUR	brown	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 18-02-1990 NUMBER 20485 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5442080 EAST 351920 SAMPLER JHF

		UNIT	Prc
WIDTH	10.0	FLOAT_1	gy Sslt
DIRECTION	310	FLOAT_2	cm Ssst
COLOUR	med brown	FLOAT_3	
FLOW	fast		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 18-02-1990 NUMBER 20486 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5448180 EAST 361100 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	lam Sslt
DIRECTION	280	FLOAT_2	qt
COLOUR	clear	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 0.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 20-02-1990 NUMBER 20489 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449820 EAST 360100 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	
DIRECTION	255	FLOAT_2	
COLOUR	clear	FLOAT_3	
FLOW	fast		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 20-02-1990 NUMBER 20490 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5449760 EAST 360100 SAMPLER JHF

		UNIT	Prc
WIDTH	2.0	FLOAT_1	gy fg Ssst si'd
DIRECTION	310	FLOAT_2	qt
COLOUR	clear	FLOAT_3	
FLOW	moderate		
			LEVEL med
CONTAM	logging		
VEGETATION	logged		DRAINAGE AREA 0.0

DATE 21-02-1990 NUMBER 20605 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448250 EAST 342320 SAMPLER KJV

		UNIT	Smithton Trough
WIDTH	1.0	FLOAT_1	Sdol
DIRECTION	0	FLOAT_2	Sar py
COLOUR	med brown	FLOAT_3	qt
FLOW	slow		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 0.8

DATE 21-02-1990 NUMBER 20606 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447700 EAST 342000 SAMPLER KJV

		UNIT	Smithton Trough
WIDTH	6.0	FLOAT_1	Sdol
DIRECTION	0	FLOAT_2	Sar
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 2.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 21-02-1990 NUMBER 20607 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447360 EAST 341900 SAMPLER KJV

		UNIT	Smithton Trough
WIDTH	3.0	FLOAT_1	Sdol
DIRECTION	0	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 2.0

DATE 21-02-1990 NUMBER 20607 c MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446420 EAST 340940 SAMPLER KJV

		UNIT	Smithton Trough
WIDTH	1.0	FLOAT_1	Sdol
DIRECTION	0	FLOAT_2	
COLOUR	weak brown	FLOAT_3	
FLOW	mod		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 2.0

DATE 21-02-1990 NUMBER 20608 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5446380 EAST 340560 SAMPLER KJV

		UNIT	Smithton Trough
WIDTH	4.0	FLOAT_1	Sdol
DIRECTION	0	FLOAT_2	
COLOUR	med brown	FLOAT_3	
FLOW	moderate		
			LEVEL mod
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 2.0

DATE 30-04-1990 NUMBER 20653 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5445200 EAST 352640 SAMPLER KJV

		UNIT	Prc
WIDTH	2.0	FLOAT_1	Ssst
DIRECTION	0	FLOAT_2	Sslt
COLOUR	weak brown	FLOAT_3	qt
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	wet eucalypt		DRAINAGE AREA 1.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 30-04-1990 NUMBER 20654 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5444900 EAST 355600 SAMPLER KJV

		UNIT	Prc
WIDTH	10.0	FLOAT_1	bk Sslt py
DIRECTION	0	FLOAT_2	Sslt
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 3.0

DATE 30-04-1990 NUMBER 20655 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5444960 EAST 355700 SAMPLER KJV

		UNIT	Prc
WIDTH	5.0	FLOAT_1	bk Shl
DIRECTION	0	FLOAT_2	Ssst
COLOUR	weak brown	FLOAT_3	gn Sslt
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.5

DATE 30-04-1990 NUMBER 20656 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5447960 EAST 358220 SAMPLER KJV

		UNIT	Prc
WIDTH	3.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	Ssst
COLOUR	weak brown	FLOAT_3	qt
FLOW	moderate		
			LEVEL low
CONTAM			
VEGETATION	logged		DRAINAGE AREA 2.0

DATE 30-04-1990 NUMBER 20657 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5439380 EAST 346460 SAMPLER KJV

		UNIT	Prc
WIDTH	5.0	FLOAT_1	Sslt
DIRECTION	0	FLOAT_2	Ssst
COLOUR	med brown	FLOAT_3	
FLOW	slow		
			LEVEL low
CONTAM			
VEGETATION	rain forest		DRAINAGE AREA 1.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 02-05-1990 NUMBER 20677 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5444520 EAST 363000 SAMPLER KJV

		UNIT	Pa
WIDTH	5.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	mic Mpyl
COLOUR	very weak	FLOAT_3	qt
FLOW	moderate		

LEVEL low

CONTAM
VEGETATION rain forest DRAINAGE AREA 2.0

DATE 02-05-1990 NUMBER 20678 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5445140 EAST 367600 SAMPLER KJV

		UNIT	Pa
WIDTH	15.0	FLOAT_1	Mpyl
DIRECTION	0	FLOAT_2	qt
COLOUR	clear	FLOAT_3	
FLOW	moderate		

LEVEL low

CONTAM
VEGETATION rain forest DRAINAGE AREA 16.0

DATE 03-10-1990 NUMBER 21050 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5449300 EAST 355600 SAMPLER MAT

		UNIT	Prc
WIDTH	1.0	FLOAT_1	Sslt
DIRECTION	170	FLOAT_2	Ssst q
COLOUR	weak brown	FLOAT_3	qz
FLOW	moderate		

LEVEL 0.10

CONTAM logging
VEGETATION logged DRAINAGE AREA 14.0

DATE 03-10-1990 NUMBER 21051 MAP HOLDER TYPE WATER

EL 43/89 NORTH 5448880 EAST 355540 SAMPLER MAT

		UNIT	Prc
WIDTH	3.0	FLOAT_1	Sslt
DIRECTION	90	FLOAT_2	qz
COLOUR	weak brown	FLOAT_3	
FLOW			

LEVEL 0.10

CONTAM logging
VEGETATION logged DRAINAGE AREA 2.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 03-10-1990	NUMBER 21052		MAP HOLDER		TYPE WATER
EL 43/89	NORTH 5445680		EAST 355280		SAMPLER MAT
			UNIT	Prc	
WIDTH	5.0		FLOAT_1		
DIRECTION	320		FLOAT_2		
COLOUR	weak brown		FLOAT_3		
FLOW					
					LEVEL
CONTAM					
VEGETATION				DRAINAGE AREA	5.0
DATE 03-10-1990	NUMBER 21053		MAP HOLDER		TYPE WATER
EL 43/89	NORTH 5440700		EAST 355480		SAMPLER MAT
			UNIT	Prc	
WIDTH	10.0		FLOAT_1	gy Sslt	
DIRECTION	0		FLOAT_2	Tb	
COLOUR	weak brown		FLOAT_3		
FLOW	moderate				
					LEVEL
CONTAM					
VEGETATION	rainforest			DRAINAGE AREA	5.0
DATE 03-10-1990	NUMBER 21054		MAP HOLDER		TYPE WATER
EL 43/89	NORTH 5441080		EAST 355040		SAMPLER MAT
			UNIT	Prc	
WIDTH	5.0		FLOAT_1	Tertiary gravel	
DIRECTION	0		FLOAT_2	fg wh Ssst	
COLOUR	brown		FLOAT_3	Tb	
FLOW	moderate				
					LEVEL
CONTAM					
VEGETATION	rain forest			DRAINAGE AREA	3.5
DATE 04-10-1990	NUMBER 21059		MAP FOLLY		TYPE WATER
EL 43/89	NORTH 5447040		EAST 360800		SAMPLER MAT
			UNIT	Prnf	
WIDTH	1.0		FLOAT_1	Sslt	
DIRECTION	300		FLOAT_2	qz	
COLOUR	weak brown		FLOAT_3		
FLOW	moderate				
					LEVEL
CONTAM					
VEGETATION	rain forest			DRAINAGE AREA	1.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

DATE 04-10-1990 NUMBER 21060 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5446580 EAST 360740 SAMPLER MAT

		UNIT	Prnf
WIDTH	0.5	FLOAT_1	Sslt
DIRECTION	220	FLOAT_2	qz
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		

LEVEL 0.05

CONTAM
VEGETATION rainforest DRAINAGE AREA 0.5

DATE 04-10-1990 NUMBER 21061 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5446280 EAST 360800 SAMPLER MAT

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	lam Sslt
DIRECTION	0	FLOAT_2	qz
COLOUR	very weak	FLOAT_3	
FLOW	moderate		

LEVEL

CONTAM
VEGETATION rain forest DRAINAGE AREA 1.0

DATE 04-10-1990 NUMBER 21062 MAP FOLLY TYPE WATER

EL 43/89 NORTH 5445800 EAST 360610 SAMPLER MAT

		UNIT	Prnf
WIDTH	2.0	FLOAT_1	lam Sslt
DIRECTION	325	FLOAT_2	qz
COLOUR	weak brown	FLOAT_3	
FLOW	moderate		

LEVEL

CONTAM
VEGETATION wet eucalypt DRAINAGE AREA 3.0

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

NUMBER	AU	C	AU_C	CU	PB	ZN	A
20036	9.2	6.5	1.42	2.10	10.00	185	-0.
20037	9.4	6.7	1.40	1.00	1.50	31	-0.
20038	12.3	5.5	2.24	1.20	4.50	17	-0.
20039	7.6	5.4	1.41	4.70	2.00	89	-0.
20040	8.0	5.0	1.60	1.20	3.50	27	-0.
20041	8.4	6.2	1.35	1.30	1.50	9	-0.
20042	9.0	6.6	1.36	1.10	2.00	36	-0.
20043	11.6	6.1	1.90	1.80	7.00	140	-0.
20044	7.3	5.7	1.28	1.60	4.50	15	-0.
20045	17.9	5.2	3.44	4.00	3.00	20	-0.
20046	11.7	6.5	1.80	2.20	12.00	89	-0.
20047	7.5	7.0	1.07	1.30	3.00	22	-0.
20048	13.3	6.8	1.96	1.10	4.50	26	-0.
20049	9.8	4.0	2.45	0.90	0.50	6	-0.
20050	6.8	5.1	1.33	0.80	1.00	7	-0.
20051	13.2	2.5	5.28	1.60	0.00	17	-0.
20052	47.2	10.6	4.45	1.30	13.50	-1000	0.
20053	9.3	4.7	1.98	1.00	0.50	4	0.
20054	13.4	5.0	2.68	0.60	0.00	6	-0.
20055	12.7	4.8	2.65	0.70	1.50	19	-0.
20056	11.9	3.6	3.31	1.20	3.00	16	-0.
20057	14.8	5.1	2.90	0.90	22.00	18	2.
20058	18.1	6.9	2.62	0.70	1.00	5	-0.
20059	12.8	6.7	1.91	1.20	2.00	6	-0.
20060	47.2	5.3	8.91	1.20	80.00	-1000	0.
20060	47.2	5.3	8.91	0.00	0.00	0	-0.
20061	11.6	6.0	1.93	1.00	0.00	13	-0.

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

NUMBER	AU	C	AU_C	CU	PB	ZN	AS
20062	17.7	5.9	3.00	0.60	0.00	3	-0.5
20063	13.3	5.0	2.66	0.60	0.00	5	-0.5
20064	12.5	6.4	1.95	0.60	1.50	7	-0.5
20065	11.6	45.7	0.25	0.90	0.50	9	-0.5
20066	15.1	17.5	0.86	2.80	0.50	11	-0.5
20067	11.1	10.2	1.09	3.50	0.50	21	-0.5
20068	9.9	8.3	1.19	2.20	2.00	11	-0.5
20074	20.7	28.0	0.74	2.00	1.50	3	-0.5
20075	28.8	13.7	2.10	4.20	0.50	10	-0.5
20076	596.4	9.7	61.48	1.80	7.50	-1000	-0.5
20077	47.0	20.7	2.27	4.40	120.00	-1000	-0.5
20078	13.4	12.1	1.11	1.60	0.00	7	-0.5
20084	27.6	10.3	2.68	1.90	3.50	23	-0.5
20085	20.7	9.3	2.23	1.40	4.00	19	-0.5
20086	16.8	18.6	0.90	1.40	0.00	8	-0.5
20087	67.1	5.2	12.90	1.20	-1.00	-1000	-0.5
20088	21.8	5.3	4.11	1.00	0.00	7	-0.5
20089	35.6	8.8	4.05	1.00	3.50	-1000	-0.5
20090	18.9	5.2	3.63	1.00	0.30	8	-0.5
20091	30.1	22.8	1.32	3.30	12.50	-1000	-0.5
20092	25.5	7.9	3.23	1.50	5.50	20	-0.5
20115	8.8	6.3	1.40	1.20	2.00	8	-0.5
20116	6.8	7.7	0.88	1.10	0.00	6	-0.5
20117	4.5	10.0	0.45	1.40	1.50	5	-0.5
20118	3.9	12.5	0.31	1.60	1.00	6	-0.5
20119	4.4	12.6	0.35	2.00	9.00	15	-0.5
20120	3.5	12.9	0.27	1.40	10.00	5	-0.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

NUMBER	AU	C	AU_C	CU	PB	ZN	AS
20121	4.6	9.4	0.49	3.20	5.00	19	-0.5
20123	7.6	31.0	0.25	1.20	4.50	3	-0.5
20124	5.1	9.2	0.55	0.90	2.50	3	-0.5
20125	5.8	6.0	0.97	0.60	0.50	3	-0.5
20126	4.6	6.6	0.70	1.30	0.50	4	-0.5
20127	3.0	3.8	0.79	1.40	0.00	4	-0.5
20128	1.7	4.6	0.37	0.50	1.50	6	-0.5
20422	9.1	4.1	2.22	1.70	0.50	1	-0.5
20423	10.0	7.5	1.33	0.60	0.00	5	-0.5
20424	4.2	5.3	0.79	0.20	7.50	4	-0.5
20425	5.4	9.8	0.55	1.30	3.00	5	0.5
20426	4.3	7.6	0.57	0.60	1.00	4	-0.5
20427	4.7	12.3	0.38	0.40	2.00	2	-0.5
20428	6.3	9.4	0.67	2.00	0.50	1	0.5
20429	4.2	16.2	0.26	4.40	2.50	5	-0.5
20430	13.8	9.9	1.39	0.20	0.50	0	-0.5
20431	5.0	9.7	0.52	5.40	1.50	2	-0.5
20432	11.4	7.1	1.61	2.00	1.00	1	-0.5
20433	10.8	5.4	2.00	0.80	1.00	2	1.0
20440	5.4	16.7	0.32	2.20	1.50	8	1.5
20446	3.6	12.4	0.29	1.20	1.50	1	1.0
20447	2.9	13.7	0.21	1.30	2.00	5	1.0
20448	8.6	14.1	0.61	3.90	0.50	1	0.5
20449	2.8	8.8	0.32	3.80	0.00	0	-0.5
20450	8.6	5.0	1.72	0.50	0.50	5	-0.5
20451	6.2	4.7	1.32	0.70	0.00	4	-0.5
20452	14.6	9.6	1.52	0.50	0.00	2	-0.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

NUMBER	AU	C	AU_C	CU	PB	ZN	AS
20453	28.6	43.4	0.66	0.80	0.50	9	-0.5
20454	10.3	10.1	1.02	1.40	0.00	8	-0.5
20455	5.0	9.4	0.53	0.70	1.00	4	-0.5
20456	7.5	11.3	0.66	5.80	0.00	16	0.5
20457	5.2	8.0	0.65	0.00	0.00	0	-0.5
20458	8.3	14.5	0.57	2.60	1.00	5	0.5
20459	8.1	11.3	0.72	0.50	0.50	0	-0.5
20460	5.9	6.1	0.97	0.40	1.00	8	-0.5
20461	10.2	3.3	3.09	6.40	0.00	28	2.0
20462	8.6	9.7	0.89	2.30	0.00	9	1.0
20463	15.4	14.1	1.09	0.90	0.00	6	0.5
20464	12.4	8.7	1.43	0.50	0.00	3	0.5
20465	11.9	14.8	0.80	0.40	0.00	3	0.5
20466	7.8	8.9	0.88	0.40	1.50	3	-0.5
20478	5.3	23.7	0.22	1.40	1.00	9	-0.5
20479	11.6	22.0	0.53	0.90	0.00	10	-0.5
20480	24.7	10.8	2.29	0.70	0.00	8	-0.5
20481	6.9	18.5	0.37	0.90	0.50	7	-0.5
20482	9.3	18.1	0.51	0.40	0.00	5	-0.5
20483	7.1	9.2	0.77	0.80	0.00	19	-0.5
20484	16.0	25.1	0.64	1.20	1.00	8	-0.5
20485	12.1	12.0	1.01	0.70	0.50	7	-0.5
20486	11.4	4.1	2.78	0.40	0.00	6	-0.5
20489	14.2	4.1	3.46	0.60	0.00	6	-0.5
20490	21.7	4.8	4.52	0.70	0.00	9	-0.5
20605	20.8	16.7	1.25	0.00	1.00	4	-0.5
20606	12.6	20.5	0.61	0.50	1.00	6	-0.5

ARTHUR RIVER PROJECT WATER SAMPLES - EL 43/89

NUMBER	AU	C	AU_C	CU	PB	ZN	AS
20607	13.8	12.9	1.07	0.40	1.00	5	0.5
20608	14.9	38.3	0.39	0.20	1.50	5	-0.5
20653	10.8	11.6	0.93	0.50	0.50	5	-0.5
20654	15.3	5.1	3.00	0.80	1.50	5	-0.5
20655	15.5	6.8	2.28	0.00	0.50	7	-0.5
20656	15.3	6.2	2.47	1.00	0.50	5	-0.5
20657	30.7	26.0	1.18	6.90	9.00	-1000	1.0
20677	19.5	7.4	2.64	1.60	1.50	6	-0.5
20678	15.9	2.1	7.57	0.50	0.50	11	-0.5

ARTHUR RIVER PROJECT 1990 SUMMER - WATER SAMPLES
DMMR REPEAT ANALYSIS

EL	NUMBER	AU	AURPT
1/90	20071	3468.0	1.8
1/90	20072	82.8	18.0
1/90	20073	118.8	1.3
43/89	20052	47.2	6.5
43/89	20060	47.2	2.6
43/89	20076	596.4	1.6
43/89	20077	47.0	2.6
43/89	20087	67.1	3.6
43/89	20087	67.1	3.6
43/89	20089	35.6	2.6
43/89	20091	30.1	3.6
43/89	20657	30.7	2.3
44/89	20001	66.0	36.6
44/89	20012	36.8	5.1
44/89	20021	33.2	9.1
44/89	20079	36.9	4.4
44/89	20079	36.9	4.4
44/89	20079	36.9	4.4
44/89	20080	56.7	0.4
44/89	20080	56.7	0.4

AU :-by activated carbon extraction
AURPT :-by new organic extraction technique

ARTHUR RIVER PROJECT 1990 SUMMER – WATER SAMPLES ANALYTICAL METHODS,UNITS AND LABORATORIES

Element	Units	Laboratory	Method
Au	ng/l (ppt)	DMMR Hobart	Activated carbon extraction from water. Aqua regia digestion – AAS
AuRPT	ng/l (ppt)	DMMR Hobart	Organic solvent extraction from water. AAS determination
C	mg/l (ppm)	DMMR Hobart	Total Organic Carbon – carbon analyser
Au/C	–	DMMR Hobart	Au result in ppt divided by C result in ppm
Cu	ug/l (ppb)	ANALABS Mbne	Carbon rod AAS on raw water
Pb	ug/l (ppb)	ANALABS Mbne	Carbon rod AAS on raw water
Zn	ug/l (ppb)	ANALABS Mbne	Carbon rod AAS on raw water
As	ug/l (ppb)	ANALABS Mbne	Hydride generation AAS on raw water