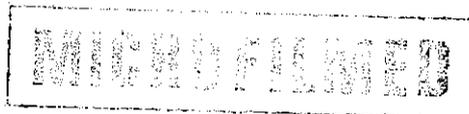


GEOPEKO

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

**EL 30/90 FOLLY HILL
RELINQUISHMENT REPORT**

INCLUDING REPORT ON EXPLORATION ACTIVITY
APRIL 1991 TO APRIL 1992



TCR 92-3370

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Date	- 8 JUL 1992
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LETTER	
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Ian Mathison
April, 1992

T275

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

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1.0 INTRODUCTION

1.1 Location and Access (Fig. 1)

EL 30/90 Folly Hill, is located in NW Tasmania approximately 20 km south-west of the coastal town of Wynyard.

Access within the area is moderate to good. A network of unsealed logging tracks provides 4WD or foot access to most parts of the EL.

1.2 Tenure and Land Usage

EL 30/90 of 91 km² was granted to Peko Exploration in April 1991. Appendix 1 is the EL schedule.

1.3 Regional Geology (Fig. 2 and Table 1)

EL 30/90 lies within the Rocky Cape Region of NW Tasmania. The most interesting rocks in the area are those of the Arthur Lineament. The Arthur Lineament is a north-east trending metamorphic belt consisting of highly deformed sediments, basic volcanics and dolomite. To the west of this belt lies the Rocky Cape Group, a thick shallow marine shelf sequence. The Rocky Cape Group contains Precambrian dolerite/gabbro dykes which have been emplaced into north-north west trending faults.

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

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

EL 30/90 contains the Folly Hill alluvial gold workings. These consist of a series of pits and sluiced areas within Tertiary gravels. Old terraces of the Arthur River are also reported to carry alluvial gold.

1.5 Previous Exploration

Most of EL 30/90 was recently explored for gold by Placer as EL 18/89. Ellis 1990 discusses previous exploration in some detail.

Placer's exploration included stream sediment sampling (20# and cyanide bulk leach), auger soil sampling, rock chip sampling and geological mapping. No indication of significant gold mineralization was detected.

1.6 Exploration Philosophy

Geopeko's current exploration in the Arthur River region commenced in early 1990. Exploration included aeromagnetic interpretation, gravity interpretations, reconnaissance geological mapping and regional water geochemistry. It was considered that the Huminex technique of water sampling and analysis would provide an effective method for exploring this logistically difficult area.

Initial results from adjacent ELs indicated significant gold anomalism in water from streams draining what is now EL 30/90. Application was lodged for these areas. Similar exploration techniques to those applied in adjacent areas were proposed. These included additional water sampling, detailed rock chip sampling and geological mapping.

1.7 Target Models

Geopeko consider the Pre Cambrian 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 lead-zinc mineralization at the Atlas Leases can be related 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 *Scope of this Report*

Results of the 1990 exploration program in adjacent ELs indicated anomalous gold values in streams draining both the eastern and western portions of EL 30/90. Before EL 30/90 was granted, these results were shown to be spurious. Consequently, a waiver of the 1991-92 expenditure commitment was requested and granted. The detailed rock chip sampling and geological mapping program to test these anomalies was not completed.

Results of water sampling, repeat water sampling, rock chip sampling and geological mapping conducted within and close to EL 30/90 are presented and discussed.

Additional water samples were collected in early 1992. These were analysed by the CSIRO in Sydney. (Department of Exploration Geoscience)

2.2 *Work Completed* *Water Geochemistry*

Five water samples, each of two litres, were collected from streams draining parts of EL 30/90. These samples were analysed for gold and organic carbon by the Huminex technique. Base metals were determined by ANALABS Melbourne by carbon furnace AAS and arsenic by hydride generation. All samples were acidified using ARISTAR nitric acid before base metals were determined.

Two repeat samples were collected in October to check elevated gold values. These were analysed by ANALABS Melbourne for gold and base metals. Gold was determined by NAA after extraction by activated carbon. Base metals were determined as for original samples.

Repeat analysis of all anomalous gold samples were performed by the Department of Mines in Hobart after initial results were proven unreliable. Samples were almost two years old when these were performed.

Six additional water samples were collected in 1992 as part of a sampling program along the Arthur River. These were analysed by the CSIRO in Sydney. The following sampling and analytical techniques were used:

Au

One litre of stream water was mixed with lime and sodium cyanide in the field. A sachet of activated charcoal was added immediately after the lime-cyanide mixture. After 24 hours, the activated charcoal was removed. Gold was determined by Neutron Activation Analysis. Waste cyanide was destroyed by oxidization.

Cu, Pb, Cd

One litre of stream water was mixed with MgSO₄ and NaOH in a polyethylene sample bottle. The entire sample was then sent to the CSIRO for determination of Cu, Pb and Cd in the precipitate by PDV(voltametry).

Zn, As

A 250 mL polyethylene sample bottle was rinsed several times on site with the stream water to be sampled before filling. Zn, Cu, Pb and Cd were determined on the raw water by ICP-MS and As by graphite furnace AAS. These repeats of Cu, Pb and Cd are secondary checks only. The PDV values are more precise, show more variability and are considered to be more reliable.

pH

pH was determined in the field using pocket pH meters (pHept by HANNA Instruments).

At each sample site, water colour, water level, stream size, vegetation type, contamination and geological information were recorded. All sample bottles were rinsed several times in the stream water to be sampled or treated.

Rock Geochemistry

Composite rock chip samples at 50 m intervals were collected along Cann Creek, along Folly Hill Road and along logging tracks in the Wynsmith Hills. Several samples were also collected from the Folly Hill gold workings.

Samples were analysed for Cu, Pb, Zn and Ni by AAS after perchloric acid digestion (ANALABS method 101). Gold was determined by fire assay with AAS finish on a 50g split of the sample (ANALABS method PM313).

Geological Mapping

Reconnaissance geological observations were recorded during water sampling. More detailed geological mapping was conducted along rock chip sample traverses.

Petrology

Ten rock samples from the Arthur River area were sent to Dr.J.Stolz at the University of Tasmania for petrology. Four of these came from EL 30/90. All descriptions are appended as all are relevant to this area:

2.3 Results Received

Water Geochemistry (See Table 2, Drawing 2122 & Appendix 2)

Initial water samples reported highly anomalous gold values. Repeat sampling and analyses showed these results to be spurious. Samples collected in 1992 were not anomalous in gold.

Values reported for Cu, Pb, Zn and As are not considered anomalous. The relatively high As values are similar to others collected along the Arthur River. Unfortunately, few rock chips from this area were assayed for As. Rock samples from Rachel Creek (EL 43/89) also reported elevated As. (9 - 35 ppm)

Rock Geochemistry (See Appendix 3 and Drawing 2123)

Gold and base metal values reported for most rock chip samples were very low. One sample, 21659, reported weakly elevated gold of 0.060 g/t. Sample 20247, a basic igneous rock reported weakly elevated copper of 200 ppm. Neither sample is sufficiently anomalous to warrant follow up. None of the samples collected from the old alluvial/eluvial workings reported gold above detection.

The marked difference in background values between the siltstone-sandstone sequence of Folly Hill Road to Wynsmith Hills and the meta sediments and amphibolites of the Arthur Lineament as exposed in Cann Creek is of geological interest only!

Geology (See Appendices 3, 4 and Drawing 2123)

Rocks around the Folly Hill gold workings and along the Wynsmith Hills logging track consist of interbedded siltstone and sandstone with occasional basic intrusives. Our mapping found nothing of economic interest in these rocks:

Rocks exposed along Cann Creek in the north-east of the EL include meta sediments and amphibolites of the Arthur Lineament. Four samples of these rocks from EL 30/90 were described in thin section. Some indications of pre metamorphic potassic hydrothermal alteration were interpreted by the petrologist:

3.0 CONCLUSIONS AND RECOMMENDATIONS

- * The anomalous gold in water samples reported by the Department of Mines laboratory were not supported by repeat sampling or repeat analysis. These original results were spurious.
- * Chip sampling across the Folly Hill gold workings, along Wynsmith Hills and along Cann Creek revealed no significant mineralization.
- * Additional water samples analysed by the CSIRO reported no anomalous gold or base metal values.
- * Results of Geopeko's and Placer's exploration do not warrant follow up.
- * No further work is recommended. The EL should not be renewed.

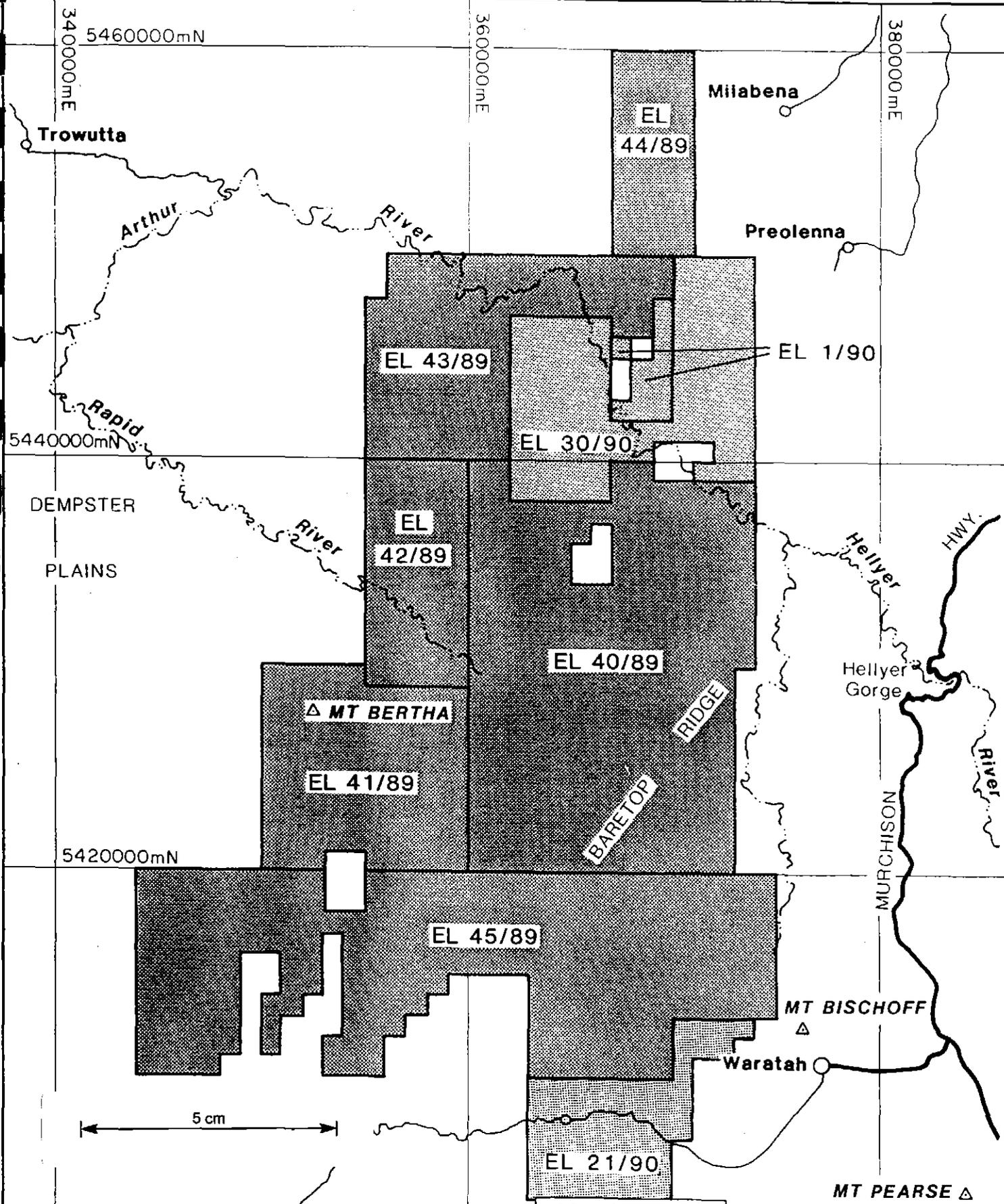
4.0 ENVIRONMENTAL DISTURBANCE AND REHABILITATION

All of Geopeko's exploration conducted within EL 30/90 was minimal impact exploration. Semi permanent sample markers were left at water sample sites. These are considered important reference points for further exploration and have not been removed. No rehabilitation of environmental disturbance caused by Geopeko's exploration activities has been necessary.

Jan Matheson

REFERENCES

Ellis, P.O. 1990 Relinquishment Report for 12 months to June 1990, EL 18/89 Frog Hill, Tasmania. Unpublished Placer Exploration Report Tas 5/90. (TCR 90-3146)



5 cm

SAVAGE RIVER

Δ MT MEREDITH

* Grid shown is AMG 55

A.C.N. 000 362 550

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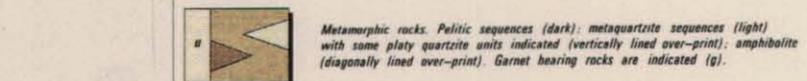
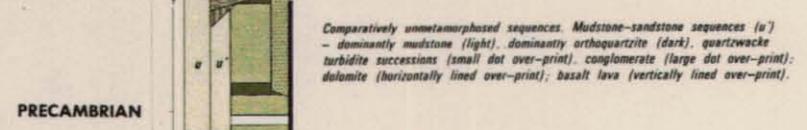
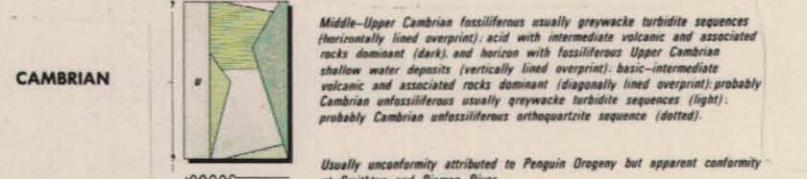
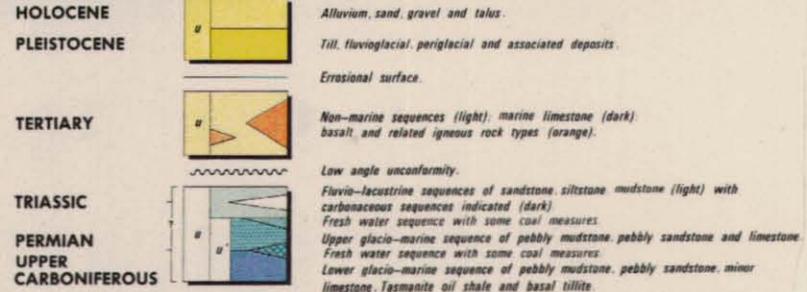
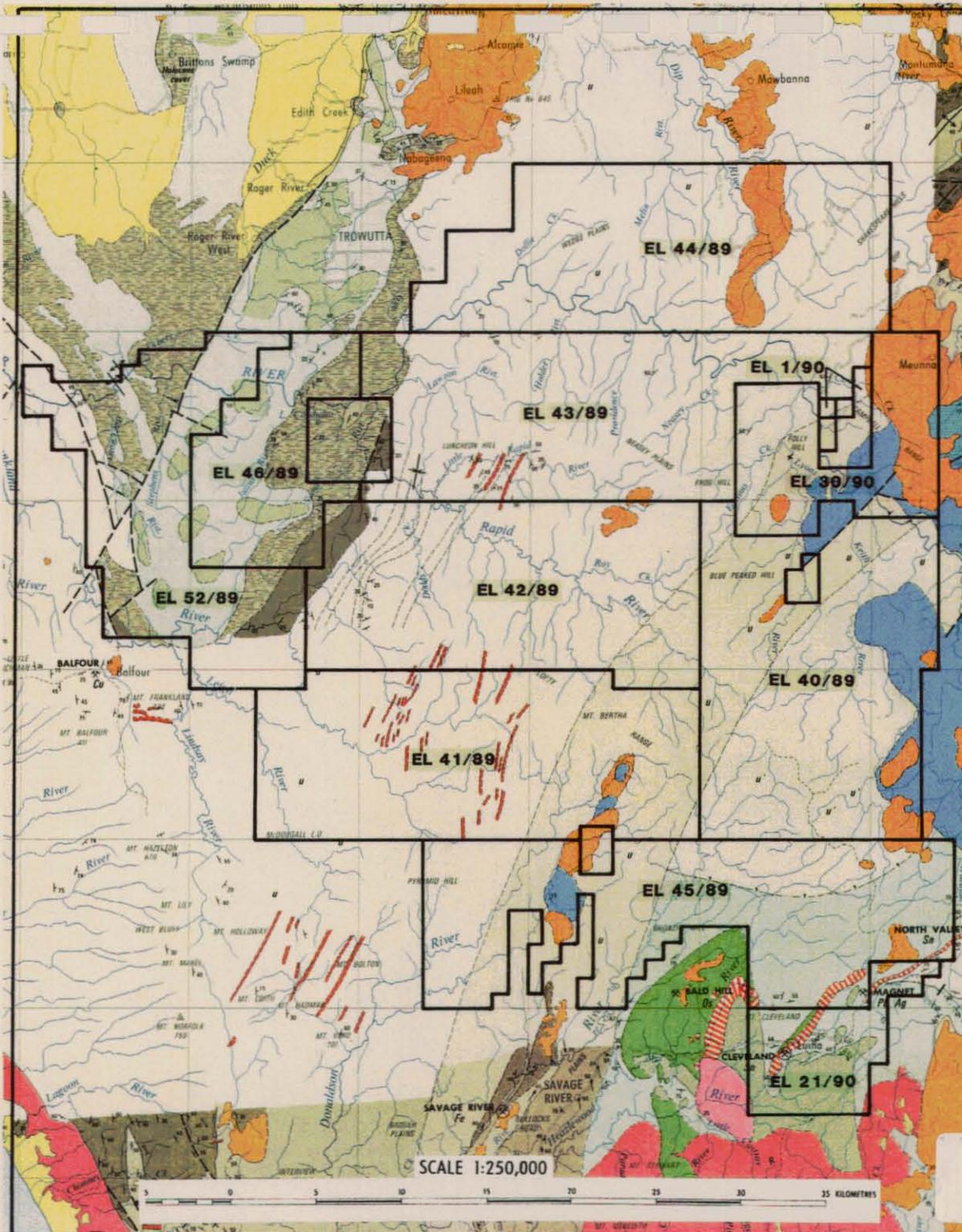
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ARTHUR RIVER PROJECT
LOCATION PLAN

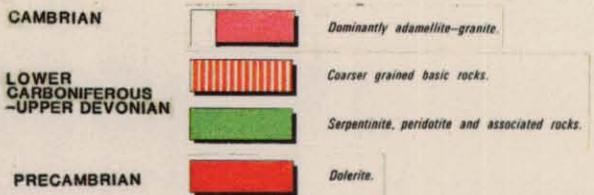
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Amendments

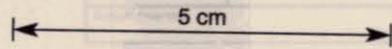
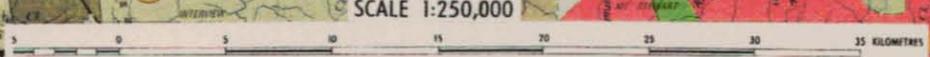
Fig 1



IGNEOUS ROCKS



	GEOPEKO	
	A DIVISION OF PEKO WALLSEND OPERATIONS LTD	
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Geologist:	ARTHUR RIVER PROJECT	
Checked:	REGIONAL GEOLOGY	
Map Ref:	TASMANIA	



072011

TABLE 1

STRATIGRAPHIC CORRELATION ADOPTED FOR THIS REPORT

	ROCKY CAPE BLOCK	CORINNA	LYONS RIVER (Arthur lineament)	CLEVELAND - VAGATAH	ZEEBAM (Ord - Dev seqs omitted)	DUNDAS TROUGH (Ord - Dev seqs omitted)
T	Tb - Tertiary Basalt Tc - Tertiary gravel	Tb - Tertiary Basalt Tc - Tertiary gravels	Tb - Tertiary Basalt Tc - Tertiary gravel	Tb - Tertiary Basalt Tc - Tertiary gravel	Tb - Tertiary Basalt Tc - Tertiary gravels	Tb - Tertiary Basalt Tc - Tertiary gravels
P-C			P - Parmebee Supergroup Fluviatile sandstone, coal measures, glaciomarine & glacial deposits			
D	Intrusion of Sandy Cape Granite	Intrusion of Pipean Granite		Intrusion of Cleveland Granite	Intrusion of Kenison Bell & Meenshirk Granite	Intrusion of Granite Top, House-top, & other granites
C	Christmas Hills Sequence Cs - Unnamed Quartz-wacke, siltstone, mudstone, conglomerate			HMA & LOTI andesite & tholeiitic basaltic and Intrusion/emplacement of Ultramafic bodies	Dundas Group - siltstone, mudstone, sandstone, polymict conglomerate, minor acid tuff	Dundas Group - siltstone, mudstone, sandstone, polymict conglomerate, minor acid tuff
EG	Ea - Smithton Dolomite Eb - Smithton Basalt Mafic volcanoclastics and tholeiitic basalts Ec - Black River Dolomite Dolomite, silicified dolomite, chert Ed - Forest Conglomerate and Quartzite	Ea - Corinna Dolomite Eb - Bernafai Volcanics Ec - Savage Dolomite Ed - Forest Conglomerate and Quartzite	Timbs Group Amphibolite, ironstone, magnesite, serpentinite Amphibolite & green schist meta basalt & dolerite Or mica schist, phyllite, meta siltstone & sst	Ew - Unnamed mafic vols. volcanoclastics and turbidites with some carbonates	Crinson Creek Formation Volcanoclastic litho-wacke siltstone, & mudstone with minor carbonate and tholeiitic basalt	Crinson Creek Formation Red chert, mudst & dolomite Lam siltst, sst & dolomite Mudstone & carbonate Or sst, siltst & dolomite Polymict cgl & sandstone
PG	Prg - Jacobs Quartzite Quartzite Pri - Irbay Siltstone Black mudstone, minor siltstone, sandstone, & dolomite Prd - Detention Quartzite Quartzite & siltstone Prc - Cowrie Siltstone Laminated siltstone pyritic mudstone	Pd - Donaldson Formation Quartzose turbidites Pi - Interlo- slate and Quartzite	Burnie Fm equivalents - Pelitic & quartzose schist	Pt - Burnie Formation Interbedded quartzose quartz-wacke & siltstone with minor mafic vols	Omual Formation Interbedded quartz-wacke and siltstone with some carbonates & mafic vols	Omual Formation Interbedded quartz-wacke and siltstone with some carbonates & mafic vols

TABLE 2 EL 30/90 WATER GEOCHEMISTRY

(a) Dept. of Mines - Hobart 1990 Water Samples

Sample Number	Original	TOC ppm	Repeat	AAS-GF	NAA	Repeat Sample
	Au ppt		Au ppt	Pb ppb	Au ppt	
20072	82.8	3.6	18.0	0.5	-	c.f. 21045
20073	118.8	3.5	1.3	0.2	-	c.f. 21046
20144	3.3	9.1	-	-	4.8	
20145	2.5	2.4	-	-	4.0	
20677	19.5	7.4	-	-	-	

(b) ANALABS - Melbourne 1990 Water Samples

Sample Number	Graphite Furnace - A.A.S.				A.A.S.
	Cu ppb	Pb ppb	Zn ppb	As ppb	Au ppt
20072	1.1	6.0	<10	<0.5	5.0
20073	0.8	2.5	<10	<0.5	<5
20144	3.4	5.5	11.0	<0.5	-
20145	1.5	2.2	9.0	<0.5	-
20677	1.6	1.5	6.0	<0.5	-

(c) ANALABS - Melbourne - 1990 Repeat Samples

Sample Number	Graphite Furnace - A.A.S.				T.O.C. ppm	NAA Au ppt
	Cu ppb	Pb ppb	Zn ppb	As ppb		
21045	1.3	0.2	6.0	3.5	3.0	<2.0
21046	1.8	0.6	7.5	1.0	3.4	<2.0

(d) CSIRO - Sydney 1992 Water Samples

Sample Number	NAA Au ppt	ICP - MS straight water				ICPAES Zn ppb	AASGF As ppb	PDV - precon		
		Cu ppb	Pb ppb	Cd ppb	Zn ppb			Cu ppb	Pb ppb	Cd ppb
22420	<1	0.22	0.07	<0.5	0.80	<10	0.11	0.41	<0.05	<0.05
22421	<1	<0.5	<0.5	<0.5	0.82	<10	0.17	0.19	0.22	<0.05
22422	<1	<0.5	<0.5	<0.5	0.78	<10	0.14	0.85	0.13	<0.05
22423	<1	0.67	<0.5	<0.5	1.20	<10	0.22	1.20	0.27	<0.05
22808	<1	<0.5	<0.5	<0.5	<0.5	<10	0.16	0.69	0.35	<0.05
22809	<1	0.50	<0.5	<0.5	<0.5	<10	0.17	0.45	0.15	<0.05

072014

APPENDIX 1
E.L. SCHEDULE

TASMANIA

No. E.L. 30/90

(Regulation 6A)

The Mining Act 1929**EXPLORATION LICENCE**

Issued to PEKO EXPLORATION LTD of PO BOX 162, DEVONPORT, TAS. 7310 in respect of 91 square kilometres of land in the Land Districts of Wellington and Russell vicinity of Folly Hill as described in the schedule hereto.

This licence shall remain in force until the nineteenth day of April 1992.

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) and Schedule 'B' 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 \$2,000 (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.
13. The licensee shall satisfy the minimum expenditure of \$18,500 during the first year of the licence.

SCHEDULE

Commencing at a north west corner at grid co-ordinates 362 000 metres E. 5 447 000 metres N. thence grid east to 367 000 metres E. grid south to 5 442 000 metres N. again grid east to 370 000 metres E. grid north to 5 450 000 metres N. again grid east to 374 000 metres E. again grid south to 5 439 000 metres N. grid west to 371 000 metres E. again grid north to 5 440 000 metres N. again grid east to 372 000 metres E. again grid north to 5 441 000 metres N. again grid west to 369 000 metres E. again grid south to 5 440 000 metres N. aforesaid again grid west to 367 000 metres E. aforesaid again grid south to 5 438 000 metres N. again grid west to 362 000 metres E. aforesaid thence again grid north to the point of commencement.

The area excludes 77 ha Mining Lease.

Land Tenure:

The area comprises: Crown Land
 State Forest
 Private Property

The area includes part of Pruana RAP and part of the Australian Heritage Commission Act Registered Entry Savage River.

Note: The land tenure table is a guide only.

EXCLUSIONS

The area embraced by this licence includes State Forests but does not include:

- (a) All other public reserves or municipal reserves or roadways.
- (b) All forms of mining tenements and water licences including leases, water licences, easement licences, special and exploration licences, prospectors licences, miners rights, permits to enter, owners consents and owners rights which were in lawful possession or marked out prior to the date of marking out of this licence.
- (c) Land exempt from the provisions of the Mining Act, 1929.
- (d) Land under the National Parks and Wildlife Act, 1970, not subject to the Mining Act, 1929.
- (e) All Crown reservations or other land set apart or dedicated for any public purposes.



MINISTER FOR RESOURCES AND ENERGY

Date April 30, 91

APPENDIX 2
WATER GEOCHEMISTRY
Sample Descriptions

ARTHUR RIVER PROJECT WATER SAMPLES - EL 30/90

DATE 06/02/1990 NUMBER 20072 MAP FOLLY TYPE WATER

EL 1/90 NORTH 5446720 EAST 370000 SAMPLER KJV

UNIT Tb on Pa
 WIDTH 6.0 FLOAT_1 qz
 DIRECTION 0 FLOAT_2 Wpyl
 COLOUR very weak FLOAT_3 MSar
 FLOW moderate

LEVEL high

CONTAM

VEGETATION logged

DRAINAGE AREA 8.0

DATE 06/02/1990 NUMBER 20073 MAP FOLLY TYPE WATER

EL 1/90 NORTH 5446980 EAST 370160 SAMPLER KJV

UNIT Tb on Pa
 WIDTH 4.0 FLOAT_1 qz
 DIRECTION 0 FLOAT_2 MSar
 COLOUR very weak FLOAT_3
 FLOW moderate

LEVEL high

CONTAM

VEGETATION logged

DRAINAGE AREA 2.0

DATE 20/02/1990 NUMBER 20144 MAP FOLLY TYPE WATER

EL 1/90 NORTH 5444700 EAST 366880 SAMPLER JHF

UNIT Pa
 WIDTH 2.0 FLOAT_1
 DIRECTION 265 FLOAT_2
 COLOUR med brown FLOAT_3
 FLOW moderate

LEVEL low

CONTAM

VEGETATION rain forest

DRAINAGE AREA 1.0

Note: These samples drain EL 30/90
 02/07/1992

ARTHUR RIVER PROJECT WATER SAMPLES - EL 30/90

DATE 20/02/1990 NUMBER 20145 MAP FOLLY TYPE WATER

EL 1/90 NORTH 5444140 EAST 367240 SAMPLER JRF

WIDTH	5.0	UNIT	Pa
DIRECTION	260	FLOAT_1	
COLOUR	clear	FLOAT_2	
FLOW	moderate	FLOAT_3	

LEVEL low

CONTAM

VEGETATION rain forest

DRAINAGE AREA 3.0

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

EL 43/89 NORTH 5444520 EAST 363000 SAMPLER KJV

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

LEVEL low

CONTAM

VEGETATION rain forest

DRAINAGE AREA 2.0

Note: These samples drain EL 30/90
02/07/1992

ARTHUR RIVER PROJECT WATER SAMPLES - EL 30/90
REPEAT SAMPLES

DATE 02/10/1990 NUMBER 21046 MAP FOLLY TYPE WATER

EL 30/90 NORTH 5446980 EAST 370160 SAMPLER MAT

UNIT Pa
WIDTH 5.0 FLOAT_1
DIRECTION 0 FLOAT_2
COLOUR very weak FLOAT_3
FLOW moderate

LEVEL

CONTAM

VEGETATION wet eucalypt

DRAINAGE AREA 2.0

DATE 02/10/1990 NUMBER 21045 MAP FOLLY TYPE WATER

EL 30/90 NORTH 5446700 EAST 370020 SAMPLER MAT

UNIT Pa
WIDTH 0.0 FLOAT_1
DIRECTION 0 FLOAT_2
COLOUR clear FLOAT_3
FLOW

LEVEL

CONTAM

VEGETATION rainforest

DRAINAGE AREA 6.0

Note: These samples drain EL 30/90
02/07/1992

ARTHUR RIVER PROJECT - 1991-92 WATER SAMPLES

EL 30/90 - FOLLY SHEET

SAMPLE NUMBER 22420

DATE 26/02/1992 EL1/90

MAP FOLLY

AMG COORDS. 367400 mE 5442200 mN

VEGETATION MIXED FOREST

STREAM FLOW MODERATE
 LEVEL AVERAGE
 WIDTH 1.5m
 DIRECTION 0°

CONTAMINATION FROM NONE
 WATER COLOUR WEAK BROWN
 PH 0.00
 DRAINAGE AREA 1.6 km²

GEOLOGY
 OUTCROP

FLOAT 70 % Qtz frags
 20 % Ssst
 10 % Sslt

SAMPLE NUMBER 22421

DATE 26/02/1992 EL30/90

MAP FOLLY

AMG COORDS. 367000 mE 5444400 mN

VEGETATION MIXED FOREST

STREAM FLOW MODERATE
 LEVEL AVERAGE
 WIDTH 1.5m
 DIRECTION 0°

CONTAMINATION FROM ROADS
 WATER COLOUR CLEAR
 PH 0.00
 DRAINAGE AREA 2.5 km²

GEOLOGY
 OUTCROP

FLOAT 60 % Ssst
 20 % Msch
 20 % Sslt

Alluvial contamination ?

02/07/1992

ARTHUR RIVER PROJECT - 1991-92 WATER SAMPLES

EL 30/90 - FOLLY SHEET

SAMPLE NUMBER 22422 DATE 26/02/1992 EL30/90 MAP FOLLY

ANG COORDS. 366800 mE 5444700 mN

VEGETATION MIXED FOREST

STREAM FLOW MODERATE
 LEVEL AVERAGE
 WIDTH 1.5m
 DIRECTION 0°

CONTAMINATION FROM ROADS
 WATER COLOUR VERY WEAK
 PH 0.00
 DRAINAGE AREA 0.5 km²

GEOLOGY

OUTCROP

FLOAT 0 % Msch
 0 % Ssst
 0 % Sslt

X Ref No 20144

SAMPLE NUMBER 22423 DATE 26/02/1992 EL1/90 MAP FOLLY

ANG COORDS. 366600 mE 5445700 mN

VEGETATION MIXED FOREST

STREAM FLOW MODERATE
 LEVEL AVERAGE
 WIDTH 1.5m
 DIRECTION 0°

CONTAMINATION FROM ROADS
 WATER COLOUR WEAK BROWN
 PH 0.00
 DRAINAGE AREA 2.0 km²

GEOLOGY

OUTCROP

FLOAT 0 %
 0 %
 0 %

No float. Muds and sands.

02/07/1992

ARTHUR RIVER PROJECT - 1991-92 WATER SAMPLES

EL 30/90 - FOLLY SHEET

SAMPLE NUMBER 22808 DATE 26/02/1992 EL30/90 MAP FOLLY

ANG COORDS. 366700 mE 5443800 mN

VEGETATION MIXED FOREST

STREAM FLOW	SLOW	CONTAMINATION FROM	ROADS
LEVEL	AVERAGE	WATER COLOUR	CLEAR
WIDTH	1.0m	PH	7.00
DIRECTION	0°	DRAINAGE AREA	0.5 km ²

GEOLOGY
OUTCROP

FLOAT 50 % Qtz pebbles cobbles
50 % Msst-phy
0 %

SAMPLE NUMBER 22809 DATE 26/02/1992 EL30/90 MAP FOLLY

ANG COORDS. 366500 mE 5444800 mN

VEGETATION MIXED FOREST

STREAM FLOW	SLOW	CONTAMINATION FROM	ROADS
LEVEL	AVERAGE	WATER COLOUR	CLEAR
WIDTH	1.0m	PH	6.50
DIRECTION	0°	DRAINAGE AREA	0.7 km ²

GEOLOGY
OUTCROP

FLOAT 50 % Qtz pebbles cobbles
30 % Msln dk gy
20 % Mqzt

02/07/1992

03/07/1992

ARTHUR RIVER PROJECT
 WATER GEOCHEMISTRY - 1991-92 SAMPLES - CSIRO ANALYSES
 BL 1/90, 30/90 & 43/89 - FOLLY SHEET

SAMPLE NUMBBR	r-----ICPMS - RAW WATER -----				rPDV - Preconcentrated-			GF AAS	NAA	ICPAES	LOCATION	
	Cu ug/l	Pb ug/l	Cd ug/l	Zn ug/l	Cu ug/l	Pb ug/l	Cd ug/l	As ug/l	Au ng/l	Zn ug/l	BL	MAP
22410	-0.50	-0.50	-0.50	0.73	0.63	0.15	0.20	0.15	-1.00	-10	43/89	FOLLY
22411	-0.50	-0.50	-0.50	1.20	0.63	0.15	0.30	0.19	-1.00	-10	43/89	FOLLY
22412	-0.50	-0.50	-0.50	1.30	0.92	0.23	0.40	0.21	-1.00	-10	43/89	FOLLY
22413	-0.50	-0.50	-0.50	1.00	0.63	0.32	0.20	0.24	-1.00	-10	43/89	FOLLY
22414	-0.50	-0.50	-0.50	1.00	0.74	0.45	-0.05	0.20	-1.00	-10	43/89	FOLLY
22415	-0.50	-0.50	-0.50	1.70	0.60	0.48	-0.05	0.20	-1.00	-10	43/89	FOLLY
22416	-0.50	-0.50	-0.50	1.00	0.50	0.15	-0.05	0.21	-1.00	-10	43/89	FOLLY
22417	0.50	-0.50	-0.50	1.50	0.96	0.45	0.35	0.36	-1.00	-10	43/89	FOLLY
22418	-0.50	-0.50	-0.50	1.60	0.85	0.18	-0.05	0.21	-1.00	-10	43/89	FOLLY
22419	-0.50	-0.50	-0.50	1.70	0.37	0.29	-0.05	0.13	-1.00	-10	43/89	FOLLY
22420	-0.50	-0.50	-0.50	0.80	0.41	-0.05	-0.05	0.11	-1.00	-10	1/90	FOLLY
22421	-0.50	-0.50	-0.50	0.82	0.19	0.22	-0.05	0.17	-1.00	-10	30/90	FOLLY
22422	-0.50	-0.50	-0.50	0.78	0.85	0.13	-0.05	0.14	-1.00	-10	30/90	FOLLY
22423	0.67	-0.50	-0.50	1.20	1.20	0.27	-0.05	0.22	-1.00	-10	1/90	FOLLY
22801	-0.50	0.65	-0.50	0.85	0.33	0.40	-0.05	0.10	74.00	-10	43/89	FOLLY
22802	0.50	-0.50	-0.50	0.78	0.90	0.70	-0.05	0.19	-1.00	-10	43/89	FOLLY
22803	-0.50	-0.50	-0.50	0.04	0.90	0.33	-0.05	0.19	-1.00	-10	43/89	FOLLY
22804	-0.50	-0.50	-0.50	0.52	0.90	0.27	-0.05	0.24	-1.00	-10	43/89	FOLLY
22805	-0.50	-0.50	-0.50	1.76	1.00	0.60	-0.05	0.14	-1.00	-10	43/89	FOLLY
22806	0.55	-0.50	-0.50	1.32	0.51	0.53	-0.05	0.16	-1.00	-10	43/89	FOLLY
22807	-0.50	-0.50	-0.50	0.85	0.47	0.14	-0.05	0.16	-1.00	-10	1/90	FOLLY
22808	-0.50	-0.50	-0.50	-0.50	0.69	0.35	-0.05	0.16	-1.00	-10	30/90	FOLLY
22809	0.50	-0.50	-0.50	-0.50	0.45	0.15	-0.05	0.17	-1.00	-10	30/90	FOLLY

APPENDIX 3
ROCK CHIP GEOCHEMISTRY
Sample Descriptions & Results

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - POLLY HILL

NUMBER 21545 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 650 TO 900
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SILTSTONES TO TALC SCHISTS
 COMMENTS POOR OUTCROP
 PURPOSE

NUMBER 21546 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 900 TO 1000
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SILTSTONE WITH QUARTZ VEINS
 COMMENTS
 PURPOSE

NUMBER 21547 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1000 TO 1050
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHISTS, STRIKING NORTH DIPPING NEAR VERTICAL
 COMMENTS QUARTZ VEINS
 PURPOSE

NUMBER 21548 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1050 TO 1100
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SANDY SCHIST WITH QUARTZ
 COMMENTS
 PURPOSE

NUMBER 21549 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1100 TO 1150
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHIST, INTERBEDDED SANDSTONE
 COMMENTS QUARTZ VEINS
 PURPOSE

NUMBER 21550 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1150 TO 1200
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHISTY SANDSTONE
 COMMENTS QUARTZ VEINS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21551 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1200 TO 1250
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHISTS, CREEK/FAULT? ON CONTACT, DOLERITE METADOLERITE WITH SCHIST
 COMMENTS
 PURPOSE

NUMBER 21552 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1250 TO 1300
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SANDY SCHIST SANDSTONE
 COMMENTS QUARTZ VEINS
 PURPOSE

NUMBER 21553 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1300 TO 1350
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHIST
 COMMENTS LARGER QUARTZ VEINS IN RUSTY OXIDISED INTERBEDS
 PURPOSE

NUMBER 21554 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1350 TO 1400
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SANDY SCHIST WITH QUARTZ VEINS
 COMMENTS
 PURPOSE

NUMBER 21555 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1400 TO 1450
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHIST WITH LARGE QUARTZ GRAINS (2MM) IN OXIDISED IRON RICH LAYERS
 COMMENTS
 PURPOSE

NUMBER 21556 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1450 TO 1500
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS SANDY SCHIST
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - POLLY HILL
 NUMBER 21557 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1500 TO 1550
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHISTOSE ROCKS. MICACEOUS SANDSTONE. QUARTZ GRAINS APPROX 2MM
 COMMENTS VERY WEATHERED, RUST/OXIDISED ZONES IRON RICH
 PURPOSE

NUMBER 21558 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1550 TO 1600
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SANDY SCHIST
 COMMENTS
 PURPOSE

NUMBER 21559 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1600 TO 1650
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MICACEOUS SANDSTONE
 COMMENTS QUARTZ GRAINS APPROX 2MM WITHIN LINEATED MICA
 PURPOSE

NUMBER 21560 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1650 TO 1700
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHISTY SANDSTONE
 COMMENTS
 PURPOSE

NUMBER 21561 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1700 TO 1750
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MICACEOUS SANDSTONE, LINEATED ROCK
 COMMENTS FISSILE - FRACTURING PARALLEL TO LINEATION
 PURPOSE

NUMBER 21562 SAMPLER GC TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1750 TO 1800
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHISTY SANDSTONE
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21563 SAMPLER GC TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1800 TO 1850
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHIST WITH QUARTZ INTERBEDS GRAINS APPROX. 2MM
 COMMENTS RUST ZONES SHOW HIGH FE CONTENT
 PURPOSE

NUMBER 21564 SAMPLER BT TYPE RC EL 30/90 DATE 06/12/1990
 LOCATION CANN CREEK FROM 1850 TO 1900
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21565 SAMPLER MD TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK FROM 1900 TO 1950
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MICACEOUS SANDSTONE
 COMMENTS QUARTZ VEINS
 PURPOSE

NUMBER 21566 SAMPLER MD TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK FROM 1950 TO 2000
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MICACEOUS SANDY SCHISTS
 COMMENTS QUARTZ VEINS
 PURPOSE

NUMBER 21567 SAMPLER MD TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK FROM 2000 TO 2050
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MICACEOUS SCHIST WITH QUARTZ VEINS
 COMMENTS MUCH IGNEOUS OUTCROP
 PURPOSE

NUMBER 21568 SAMPLER MD TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK FROM 2050 TO 2100
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MICA SCHISTS WITH QUARTZ VEINS
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - POLLY HILL
 NUMBER 21569 SAMPLER MD TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK FROM 2100 TO 2150
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MICA SCHISTS WITH QUARTZ VEINS
 COMMENTS
 PURPOSE

NUMBER 21570 SAMPLER MD TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK FROM 2410 TO
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS HAND SPEC.
 PURPOSE

NUMBER 21571 SAMPLER MD TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK FROM 2500 TO 2550
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MICACEOUS SCHIST
 COMMENTS MOSTLY DOLERITE, SMALL APPROX 22M SCHIST OUTCROP
 PURPOSE

NUMBER 21695 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION POLLY HILL ROAD FROM 1050 TO 1120
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21694 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION POLLY HILL ROAD FROM 1000 TO 1050
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21693 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION POLLY HILL ROAD FROM 900 TO 1000
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS 100 M SAMPLE, NO OUTCROP
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21692 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY HILL ROAD FROM 850 TO 900
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21691 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 800 TO 850
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21690 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 750 TO 800
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21689 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 700 TO 750
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21688 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 650 TO 700
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21687 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 600 TO 650
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

02/07/1992

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21686 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 550 TO 600
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21685 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 500 TO 550
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21684 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 450 TO 500
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21683 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 400 TO 450
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21682 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 350 TO 400
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21681 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 300 TO 350
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21680 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 250 TO 300
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS NO VEIN QUARTZ IN OUTCROP
 PURPOSE

NUMBER 21679 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 200 TO 250
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21678 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 150 TO 200
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21677 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 100 TO 150
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21676 SAMPLER MJD TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 50 TO 100
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21675 SAMPLER EV TYPE R/C EL 30/90 DATE 12/12/1990
 LOCATION FOLLY RD- WYNSMITH HLS FM LYONS RVR CROSSING FROM 0 TO 50
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL
 NUMBER 21674 SAMPLER KV TYPE R/C? EL 30/90 DATE 11/12/1990
 LOCATION FOLLY HILL WORKINGS FROM TO
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY TRENCH WORKINGS NORTHERN SIDE OF ROAD
 COMMENTS
 PURPOSE

NUMBER 21673 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY HILL WORKINGS FROM TO
 ANG COORDINATES EAST 0 NORTH-0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21672 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY ROAD (CIRCULAR WORKINGS, SANDED WALLS) FROM TO
 ANG COORDINATES EAST 0 NORTH-0
 LITHOLOGY
 COMMENTS UNCONSOLIDATED MATERIAL
 PURPOSE

NUMBER 21671 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY ROAD FROM TO
 ANG COORDINATES EAST 0 NORTH-0
 LITHOLOGY
 COMMENTS UNCONSOLIDATED MATERIAL
 PURPOSE

NUMBER 21670 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY HILL ROAD FROM 550 TO 600
 ANG COORDINATES EAST 0 NORTH-0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21669 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY HILL ROAD FROM 500 TO 550
 ANG COORDINATES EAST 0 NORTH-0
 LITHOLOGY
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21668 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY HILL ROAD FROM 450 TO 500
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21667 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY HILL ROAD FROM 400 TO 450
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21666 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY HILL ROAD FROM 350 TO 400
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21665 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION FOLLY HILL ROAD FROM 300 TO 350
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21664 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION CHUCKLING CREEK FROM 250 TO 300
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SILTY WHITE QUARTZ ARENITE DECO INTO FRAGMENTS
 COMMENTS
 PURPOSE

NUMBER 21663 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION CHUCKLING CREEK FROM 200 TO 250
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SILTY WHITE QUARTZ ARENITE DECO INTO FRAGMENTS
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21662 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION CHUCKLING CREEK FROM 150 TO 200
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY DECO ORANGE CLAYEY GREEN/WHITE SILTSTONE & WHITE/GREY GRANITE RICH
 COMMENTS -> INTERBEDDED WITH EACH OTHER
 PURPOSE

NUMBER 21661 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION CHUCKLING CREEK FROM 100 TO 150
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY WEATHERED DECO SANDY AND CLAYEY ROCK ORANGE BROWN
 COMMENTS IRON STN
 PURPOSE

NUMBER 21660 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION CHUCKLING CREEK FROM 50 TO 100
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 21659 SAMPLER KV TYPE R/C EL 30/90 DATE 11/12/1990
 LOCATION CHUCKLING CREEK FROM 0 TO 50
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY
 COMMENTS
 PURPOSE

NUMBER 20375 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 0 TO 50
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SILTSTONE BEDROCK
 COMMENTS QUARTZ FRAGMENTED RICH CLAY
 PURPOSE

NUMBER 20376 SAMPLER 0 TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 500 TO 100
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SILTSTONE
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 20377 SAMPLER 0 TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 100 TO 150
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY Sltst NO OUTCROP
 COMMENTS SOME ANGULAR QUARTZ FRAGMENTS IN GREY CLAY
 PURPOSE

NUMBER 20378 SAMPLER 0 TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 150 TO 200
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GREY Sltst
 COMMENTS
 PURPOSE

NUMBER 20379 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 200 TO 250
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY Sltst
 COMMENTS
 PURPOSE

NUMBER 20380 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 250 TO 300
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY FSLE Slt
 COMMENTS WEATHERED PYRITE
 PURPOSE

NUMBER 20381 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 300 TO 350
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY BLACK FSLE Slt
 COMMENTS
 PURPOSE

NUMBER 20382 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 350 TO 400
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY DARK GREY FSLE Slt
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL
 NUMBER 20383 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 400 TO 450
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY DARK GREY FSLE Slt
 COMMENTS Slt AND QUARTZ VEIN
 PURPOSE

NUMBER 20384 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 450 TO 500
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GREY Slt CLAY
 COMMENTS
 PURPOSE

NUMBER 20385 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 500 TO 550
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GREY SOFT Slt AND DARK PHYLLITIC Slt
 COMMENTS
 PURPOSE

NUMBER 20386 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 550 TO 650
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY MAINLY Slt
 COMMENTS
 PURPOSE

NUMBER 20387 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 650 TO 700
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SOFT Slt CLAY
 COMMENTS
 PURPOSE

NUMBER 20388 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 700 TO 750
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GREY OR SOFT CLAY
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 20389 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 750 TO 800
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY LAMINATED SILT
 COMMENTS
 PURPOSE

NUMBER 20390 SAMPLER BT TYPE FLOAT EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 800 TO 850
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY LAMINATED Slt SILICIPIED Sst
 COMMENTS
 PURPOSE

NUMBER 20391 SAMPLER BT TYPE RC EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 0 TO 50
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY FRAGMENTED Sst Sltst BLACK Sltst
 COMMENTS
 PURPOSE

NUMBER 20392 SAMPLER BT TYPE RC EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 50 TO 100
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY Sltst
 COMMENTS
 PURPOSE

NUMBER 20393 SAMPLER BT TYPE RC EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 100 TO 150
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY DARK GREY Slt
 COMMENTS
 PURPOSE

NUMBER 20394 SAMPLER BT TYPE RC EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 150 TO 200
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY Slt ONE OUTCROP ONLY
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21835 SAMPLER GC TYPE RC EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 0 TO 70
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GREY Sslt
 COMMENTS BLACK PYRITIC Sslt, POOR OUTCROP
 PURPOSE

NUMBER 21836 SAMPLER BP TYPE RC EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 70 TO 120
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GRAY Sslt, IRON STAINED, WEATHERED OUTCROP
 COMMENTS
 PURPOSE

NUMBER 21837 SAMPLER BP TYPE RC EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 160 TO 210
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GRAY Sslt
 COMMENTS
 PURPOSE

NUMBER 21838 SAMPLER BP TYPE RC EL 30/90 DATE 28/11/1990
 LOCATION WYNSMITH HILLS ROAD FROM 210 TO 260
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY NO OUTCROP UNTIL 240M THEN GREY Sslt
 COMMENTS QUARTZ VEIN IN OUTCROP
 PURPOSE

NUMBER 20244 SAMPLER MAT TYPE RC PT EL 30/90 DATE 15/11/1990
 LOCATION LOGGING TRACK EAST OF WYNSMITH HILLS FROM O/C TO
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GREEN MG UGB OR Bdd NOT CLEAVED INTRUDES. LAMINATED Sslt
 COMMENTS
 PURPOSE

NUMBER 20245 SAMPLER MAT TYPE RC EL 30/90 DATE 15/11/1990
 LOCATION LOGGING TRACK EAST OF WYNSMITH HILLS FROM VEIN TO
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY YELLOW STAINED QUARTZ WITH SERICITE AND Sslt INCLUSIONS
 COMMENTS QUARTZ AREA ABOUT 1M WIDE IN CRENULATION IN CLEAVAGE
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - POLLY HILL

NUMBER 20246 SAMPLER MAT TYPE RC EL 30/90 DATE 15/11/1990
 LOCATION LOGGING TRACK EAST OF WYNSMITH HILLS FROM O/C TO VEIN
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY QUARTZ VEIN PATCHES 1M THICK IN CLEAVAGE IN Sslt
 COMMENTS SERICITE AND YELLOW STAIN AROUND QUARTZ
 PURPOSE

NUMBER 20247 SAMPLER MAT TYPE RC EL 30/90 DATE 16/11/1990
 LOCATION WYNSMITH HILLS FROM ROAD TO
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GREEN MG MBb WITH WEAK lf OR CLEAVAGE
 COMMENTS
 PURPOSE R/C AND Pet

NUMBER 21413 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 0 TO 100
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY QUARTZ MICA SCHIST
 COMMENTS
 PURPOSE

NUMBER 21414 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 100 TO 150
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY QUARTZ MICA SCHIST WEATHERED SILTSTONE AT TOP END
 COMMENTS
 PURPOSE

NUMBER 21415 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 150 TO 250
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY OLD SCHIST WITH MICA ONLY VISIBLE MINERAL
 COMMENTS
 PURPOSE

NUMBER 21416 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 250 TO 300
 ANG COORDINATES EAST 0 NORTH 0
 LITHOLOGY GOOD GRADE QUARTZ MICA SCHIST GRADED INTO PHYLLITE AT 290
 COMMENTS
 PURPOSE

ARTHUR RIVER PROJECT - ROCK CHIP SAMPLING

EL 30/90 - FOLLY HILL

NUMBER 21417 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 300 TO 350
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SCHIST GRADING INTO WEATHERED PHYLLITE - QUARTZ MICA
 COMMENTS
 PURPOSE

NUMBER 21418 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 350 TO 400
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY DECAYED SANDSTONE/PHYLLITE
 COMMENTS
 PURPOSE

NUMBER 21419 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 400 TO 450
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY WEATHERED PHYLLITE TO SCHIST
 COMMENTS QUARTZ IN SCHIST. EXCELLENT OUTCROP
 PURPOSE

NUMBER 21420 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 450 TO 500
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY SOLID SCHIST. QUARTZ MICA WITH SOME Ssst
 COMMENTS
 PURPOSE

NUMBER 21421 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 500 TO 550
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY QUARTZ MICA SCHIST WITH INTRUSION OF Ssst (IGNEOUS) AT 530+
 COMMENTS
 PURPOSE

NUMBER 21422 SAMPLER BP TYPE RC EL 30/90 DATE 07/12/1990
 LOCATION CANN CREEK TRIB. FROM 550 TO 600
 AMG COORDINATES EAST 0 NORTH 0
 LITHOLOGY QUARTZ MICA SCHIST. GOOD OUTCROP
 COMMENTS
 PURPOSE



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Phone (004) 31 8937

14 Thirkell St. Doon Taz 7320

Fax No. (004) 31 8990

ANALYTICAL REPORT No. 106480.60.07623

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

Geopeko
P.O. Box 180
Rosebery
Tasmania 7470

ORDER No.

PROJECT

50068

Arthur

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09/01/91

1

59

SAMPLE NUMBERS

SAMPLE DESCRIPTION

ELEMENT/METHOD

Various

RC Prep: SP009, SP016

Cu, Pb, Zn, Ni/SA101

Various

RC

Au, Au(R), Au(S)/EB313, Au/RAW, Au/Wt

REMARKS

RESULTS

TO

Mr Ian Mathison
Geopeko
P.O. Box 180
Rosebery
Tasmania 7470

RESULTS

TO

RESULTS

TO

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ANALYTICAL DATA

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REPORT DATE

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PAGE

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UJBE No.	SAMPLE No.	Cu	Pb	Zn	Ni	Au				
1	21662	15	<5	15	15	<0.005				Folly H. Rd 30'00
2	21663	5	<5	5	<5	<0.005				
3	21664	5	5	15	<5	<0.005				
4	21665	10	<5	15	10	<0.005				
5	21666	5	<5	<5	<5	<0.005				
6	21667	30	<5	25	15	0.008				
7	21668	5	<5	<5	<5	<0.005				
8	21669	10	<5	10	5	<0.005				
9	21670	5	<5	10	5	<0.005				
10	21671	5	<5	5	<5	<0.005				Trench
11	21672	5	5	<5	<5	<0.005				Old asphalt w/c
12	21673	5	<5	5	<5	<0.005				"
13	21674	10	10	10	15	<0.005				"
14	21675	5	<5	5	<5	<0.005				Folly Rd
15	21676	5	5	5	<5	0.008				
16	21677	5	5	5	<5	<0.005				
	21678	5	5	<5	<5	0.010				
18	21679	15	5	25	20	0.008				
19	21680	5	<5	<5	<5	<0.005				
20	21681	5	5	<5	<5	0.005				
21	21682	5	<5	<5	<5	<0.005				
22	21683	5	5	5	5	0.005				
23	21684	5	<5	<5	5	0.012				
24	21685	5	<5	<5	5	0.005				
25	21686	5	5	<5	5	<0.005				

Results in ppm unless otherwise specified

T = element present, but concentration too low to measure

X = element concentration is below detection limit

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SAMPLE PREFIX		REPORT NUMBER					REPORT DATE	CLIENT ORDER No.	PAGE	
		106480.60.07623					09/01/91	50068	3 OF 3	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ni	Au				
	21687	5	<5	10	15	<0.005			Folly Pond 30/90	
2	21688	5	<5	<5	5	<0.005				
3	21689	5	<5	<5	5	<0.005				
4	21690	5	<5	<5	<5	<0.005				
5	21691	5	<5	<5	5	<0.005				
6	21692	5	<5	<5	5	<0.005				
7	21693	5	<5	<5	5	<0.005				
8	21694	5	<5	<5	5	<0.005				
9	21695	5	<5	<5	5	<0.005				
10										
11										
12										
23	21659	10	5	5	15	0.060			Folly Hill 30/90	
24	21660	5	<5	<5	<5	<0.005				
25	21661	70	<5	25	35	<0.005				
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	5	0.005				
24	UNITS	ppm	ppm	ppm	ppm	ppm				
25	METHOD	GA101	GA101	GA101	GA101	GG313				

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
 X = element concentration is below detection limit

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Fax No. (004) 31 8890

ANALYTICAL REPORT No. 106480.60.07584

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24/12/90

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92

SAMPLE NUMBERS

SAMPLE DESCRIPTION

ELEMENT/METHOD

21401/22, <215, 01/69, 71

RC Prep: 6P005, SP009, 6P016

Cu, Pb, Zn, Ni/6A101

21401/22, <215, 01/69, 71

RC

Au, Au(R), Au(S)/66313, Au/RAN, Au/Wt

RESULTS

TO

Miss Katrina Virgoe
Geopeko
P.O. Box 180
Rosebery
Tasmania 7470

RESULTS

TO

RESULTS

TO

REMARKS

pp Al Vernon
AUTHORISED OFFICER

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106480.60.07584

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002437

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BE No.	SAMPLE No.	Cu	Pb	Zn	Ni	Au	Au (R)	Au (S)		
13	21413	50	5	80	70	<0.005	-	-	Trace (see Cr)	30/90
14	21414	45	10	135	85	<0.005	-	<0.005		
15	21415	45	15	70	35	<0.005	-	-		
16	21416	50	20	100	40	<0.005	-	-		
	21417	SNR	-	-	-	-	-	-		
18	21418	15	<5	100	35	<0.005	-	-		
19	21419	50	5	110	40	<0.005	-	-		
20	21420	45	5	125	50	<0.005	-	-		
21	21421	45	5	130	50	<0.005	-	-		
22	21422	55	5	130	60	<0.005	<0.005	-		30/90
11	██████	35	10	85	60	<0.005	-	-		
12	██████	25	10	85	60	<0.005	-	-		
13	██████	20	5	85	30	<0.005	-	-		
14	██████	35	15	80	25	<0.005	<0.005	-		
15	██████	30	10	80	50	<0.005	-	-		
16	██████	35	10	100	250	<0.005	-	-		1/90
	21545	40	15	85	50	<0.005	-	-		30/90
18	21546	45	15	125	80	<0.005	-	-		
19	21547	50	5	145	70	<0.005	-	-		
20	21548	35	10	90	45	<0.005	-	-		
21	21549	55	5	120	60	<0.005	-	<0.005		
22	21550	35	5	140	65	<0.005	-	-		
23	21551	40	10	110	50	<0.005	-	-		
24	21552	45	15	110	45	<0.005	<0.005	-		
25	21553	70	10	125	50	<0.005	-	-		

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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002437

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BE No.	SAMPLE No.	Cu	Pb	Zn	Ni	Au	Au(R)	Au(S)		
	21554	30	5	95	40	<0.005	-	-		
2	21555	85	10	120	45	<0.005	-	-		
3	21556	50	5	115	45	<0.005	-	-		
4	21557	35	10	115	45	<0.005	-	-		
5	21558	40	5	95	40	<0.005	-	-		
6	21559	55	5	130	70	<0.005	-	-		
7	21560	65	10	125	50	<0.005	-	-		
8	21561	45	5	120	55	<0.005	-	-		
9	21562	55	10	100	40	<0.005	-	-		
10	21563	50	10	115	40	<0.005	-	-		
11	21564	55	5	130	55	<0.005	-	-		
12	21565	35	5	55	20	<0.005	-	-		
13	21566	100	5	105	30	<0.005	-	-		
14	21567	95	5	105	40	<0.005	-	-		
15	21568	25	5	105	45	<0.005	-	-		
16	21569	45	5	110	45	<0.005	-	-		
	21571	15	5	105	50	<0.005	-	<0.005	an ck	30/30
18										
19										
20										
21										
22	SNR = Sample Not Received									
23	DETECTION	5	5	5	5	0.005	0.005	0.005		
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
25	METHOD	GA101	GA101	GA101	GA101	GG313	GG313	GG313		

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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Fax No. (004) 31 8890

ANALYTICAL REPORT No. 106480..60..07572

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16

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
20244/47,20395/400,21653/58	RC Prep: 6P005,6P009,6P016	Cu,Pb,Zn,Ni/5A101
20244/47,20395/400,21653/58	RC	Au,Au(R),Au(S)/6S313,Au/RAW,Au/Kt

RESULTS TO	RESULTS TO	RESULTS TO	REMARKS
<p>Mir Ian Mathison Geopeko P.O. Box 180 Rosebery Tas 7470</p>			

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TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ni	Au			
1	20244	100	70	85	45	0.010		30/90	Log to Exp. U.S. 10.0
2	20245	10	50	10	<5	<0.005			
3	20246	<5	35	10	5	<0.005			
4	20247	200	60	130	70	<0.005			
5	20395	20	35	40	10	<0.005		43/89	Canon Ek
6	20396	30	40	65	20	<0.005		X	
7	20397	25	45	60	20	<0.005		.	
8	20398	20	40	60	20	<0.005		X	
9	20399	15	35	50	15	<0.005		.	
10	20400	35	45	70	45	<0.005		X	X
11	21653	20	35	40	5	<0.005		43/89	Canon Ek
12	21654	10	35	30	<5	<0.005			
13	21655	5	35	50	10	<0.005			
14	21656	5	35	50	5	<0.005			
15	21657	20	45	75	20	<0.005			
16	21658	20	40	55	5	<0.005			
17									
18									
19									
20									
21									
22									
23	DETECTION	5	5	5	5	0.005			
24	UNITS	ppm	ppm	ppm	ppm	ppm			
25	METHOD	GA101	GA101	GA101	GA101	GG313			

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
 X = element concentration is below detection limit

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Stenbo

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ANALYTICAL REPORT No. 106480.60.07557

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SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
Various	RC Prep: 6P005, 6P009, 6P016	Cu, Pb, Zn, Ni/6A101
Various	RC	Au, Au(R), Au(S)/66313, Au/RAW, Au/Wt

RESULTS TO	Mr Ian Mathison Geopeko P.O. Box 180 Rosebery Tas 7470	REMARKS
RESULTS TO		
RESULTS TO		

Stenker

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ANALYTICAL DATA

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PAGE

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18/12/90

50065

4 OF 8

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ni	Au	Au (R)		
1	20385	15	5	40	10	<0.005	-		
2	20386	35	5	20	10	<0.005	-		
3	20387	25	5	30	15	<0.005	-		
4	20388	25	10	40	15	<0.005	-		
5	20389	30	15	40	10	<0.005	-		
6	20390	85	10	85	10	<0.005	-		
7	20391	15	<5	30	5	<0.005	-	30/90	Trace from Wynnum Hills Rd Co. S.W. Qld
8	20392	10	<5	35	10	<0.005	-		
9	20393	15	<5	40	10	<0.005	-		
10	20394	10	<5	35	15	<0.005	-		
11	21601	15	<5	40	15	<0.005	-	43/89	Trace from Wynnum Hills Rd
12	21602	15	5	40	5	0.010	-		
13	21603	15	<5	40	5	0.010	-		
14	21604	15	10	40	10	0.010	-		
15	21605	15	<5	40	20	<0.005	<0.005		
16	20375	10	<5	20	10	<0.005	-	30/90	Wynnum Hills Rd
17	20376	25	5	25	15	<0.005	-		
18	20377	15	10	45	10	<0.005	-		
19	20378	15	<5	35	5	<0.005	-		
20	20379	15	<5	20	5	<0.005	-		
21	20380	15	<5	35	5	<0.005	-		
22	20381	50	5	35	15	<0.005	-		
23	20382	15	5	25	20	<0.005	-		
24	20383	15	5	25	15	<0.005	<0.005		
25	20384	35	10	30	15	<0.005	-		

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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		106480.60.07557				18/12/90		50065		8 OF 8	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ni	Au	Au (R)				
1	21837	<5	5	15	<5	<0.005	-				
2	21838	<5	95	90	200	<0.005	-				
3											
4											
23	21834	<5	5	40	<5	<0.005	--			30/90	Wonsuok Hill = Pb
24	21835	<5	5	15	5	<0.005	-				
25	21836	10	5	30	20	<0.005	-				
8											
9											
10											
11											
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14											
15											
16											
17											
18											
19											
20											
21											
22	SNR = Sample Not Received										
23	DETECTION	5	5	5	5	0.005	0.005				
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm				
25	METHOD	GA101	GA101	GA101	GA101	GG313	GG313				

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

AUTHORISED

Glenkin

APPENDIX 4
THIN SECTION PETROGRAPHY

THIN SECTION DESCRIPTIONS FOR ROCKS FROM
THE ARTHUR METAMORPHIC COMPLEX

REPORT TO GEOPEKO

by

A.J. STOLZ

February 1991

c/- CODES
GPO Box 252C,
Hobart Tas 7001.

Thin Section Descriptions.

Sample 20262 Quartz-sericite-chlorite schist (Part S.N 21550) 30/90

<u>Mineralogy:</u>	mineral	percentage abundance
	quartz	18
	albite	20
	sericite	20
	chlorite	35
	epidote	3
	magnetite/hematite	2
	sphene	2

Thin Section:

This sample is composed of xenoblastic porphyroblasts (0.5 - 1 mm diameter) of plagioclase (albite/oligoclase) which commonly display albite twinning, and are characterised by rotational trails of epidote, chlorite and elongate quartz grains. The porphyroblasts occur in a strongly deformed matrix of chlorite, sericite, quartz, epidote, sphene and minor hematite/magnetite.

The matrix retains evidence of a strong S_1 ? cleavage which wraps around plagioclase porphyroblasts, together with a later S_2 crenulation cleavage depicted by cross-cutting plates of chlorite and sericite. Pods of quartz originally aligned parallel to S_1 have been partially recrystallised and enclose recrystallised sericite aggregates aligned parallel to S_2 .

The relatively high abundances of quartz and sericite in this rock are inconsistent with a basic volcanic or intrusive precursor unless it had experienced significant silicification and potassic hydrothermal alteration. It could also be a recrystallised metasediment (perhaps siltstone) although I tend to favour it being an altered basic volcanic. An analysis of the Ti/Zr value for rocks such as this would be useful for distinguishing between altered metabasic rocks and metasediments. In general the metabasic rock will retain its relatively high Ti/Zr value (ie. > 60). The relatively small amount of epidote has probably resulted from the breakdown of detrital

calcic plagioclase during metamorphism under greenschist facies conditions.

This sample has close textural similarities to 20271 although the latter contains less chlorite, and more sericite and quartz.

Sample 20263 calc-silicate metasediment Part S.N 21562, 30/90

<u>Mineralogy:</u>	mineral	percentage abundance
	quartz	60
	epidote	25
	amphibole	5
	sphene	8
	chlorite	1
	Fe-oxides	1

Thin Section:

The equigranular texture of this rock gives it a slightly igneous appearance in hand specimen, but in thin section it comprises a recrystallised aggregate of quartz, epidote, amphibole, chlorite, albite, leucoxene after sphene and minor hematite.

The quartz aggregates have broadly polygonal boundaries with very minor development of sutured margins. Scattered throughout the quartz-rich and feldspar-poor matrix are abundant aggregates of prismatic idioblastic epidote grains with subordinate prismatic crystals of amphibole and minor chlorite. The prismatic amphibole crystals are weakly aligned within the section and may describe a weak lineation. However, the epidote crystals appear to occur in random orientations often cross-cutting this direction.

The amphibole consists of purple-blue pleochroic cores typically rimmed with pale-green actinolite. The low birefringence, strong pleochroism and other optical features of these relict amphiboles are consistent with them being transitional compositions between actinolite and the sodic amphibole glaucophane.

Amphiboles of this composition are relatively common from the Arthur Metamorphic Complex. The partial retrogression to actinolite has occurred in response to a change from peak (amphibolite facies) to greenschist facies metamorphic conditions.

The epidote in this rock has a distinctive yellow-pink pleochroism which is consistent with a relatively Mn-rich composition.

The recrystallised mineralogy of this rock seems most consistent with an impure calcareous metasediment which originally contained appreciable quantities of quartz. This latter feature and the paucity of feldspar is inconsistent with a basic volcanic composition. The absence of sericite suggests a minimal pelitic component.

Sample 20264 Quartz-chlorite-sericite schist = SN 21570 30/90

<u>Mineralogy:</u>	mineral	percentage abundance
	quartz	70
	sericite	15
	chlorite	13
	magnetite/hematite	2

Thin Section:

This rock is composed of elongate aggregates of recrystallised quartz typified by strain extinction and sutured margins. The quartz pods are wrapped by strongly aligned sericite and chlorite which define the main S_1 cleavage. The S_1 cleavage has been partially translated by an oblique S_2 cleavage which has resulted in significant reorientation and recrystallisation of sericite and chlorite.

Both the sericite and chlorite exhibit significant Fe-staining by limonite probably precipitated by low temperature fluids migrating along the cleavage. The reddish material filling cavities is hematite and limonite possibly derived from remobilisation of Fe-oxides disseminated throughout the rock.

This rock most likely represents a metamorphosed psammo-pelitic sediment which last recrystallised under greenschist facies conditions. The origin of the cavities is uncertain, and their xenoblastic form gives no obvious clues of a specific porphyroblastic phase which has been selectively removed by weathering.

Sample 20265	Metadolerite	part SN 21537	1/90
<u>Mineralogy:</u>	mineral	percentage abundance	
	plagioclase	64	
	actinolite	15	
	chlorite	10	
	epidote	8	
	magnetite	3	
	sphene	<1	

Thin Section:

This sample consists of abundant xenoblastic to subidioblastic crystals of plagioclase (albite) typically 0.5 - 1.0 mm diameter, and subordinate idioblastic porphyroblasts of magnetite (up to 0.5 mm) and epidote in a matrix dominated by chlorite, actinolite and epidote with accessory granular sphene.

The plagioclase grains contain abundant tiny inclusions of granular epidote, with some chlorite and actinolite. The coarse idioblastic magnetite grains appear to be quite late and cross-cut plagioclase-matrix boundaries. The matrix chlorite and actinolite are weakly aligned to define a weak foliation, but there are numerous cross-cutting elongate grains which suggests some subsequent recrystallisation under low strain, possibly contact metamorphic conditions. There are also some relatively coarse-grained and randomly oriented chlorite and epidote grains in veins which trend subparallel to the original foliation direction.

Elongate pods of quartz are also aligned in this orientation. The pods also occasionally contain minor chlorite and hematite rimming magnetite. The quartz has been recrystallised to aggregates of strained grains which are elongate oblique to the trend of the elongation of the pod itself reflecting a later recrystallisation event.

The pods are likely to have been original vesicles in a shallow intrusive mafic rock, which were subsequently filled with silica.

Sample 20268

Metadolerite

Part 21501

Cannock

43/89

<u>Mineralogy:</u>	mineral	percentage abundance
	plagioclase	50
	actinolite	22
	chlorite	13
	epidote	10
	sphene	3
	biotite	2

Thin Section:

Abundant xenoblastic to subidioblastic grains of plagioclase (albite), usually with simple twinning, are scattered through a matrix dominated by actinolite, chlorite and finer-grained epidote. The larger amphibole crystals have pale-green cores and dark green to blue-green pleochroic rims.

The prismatic actinolite and platy chlorite aggregates display a weak preferred orientation defining a weak cleavage. Randomly oriented platy crystals of biotite and fine granular aggregates of sphene are disseminated throughout the rock.

This rock most likely was a fine- to medium-grained andesitic to basaltic shallow level intrusive which has subsequently recrystallised under greenschist facies conditions. It has a very similar mineralogy, composition and textural features to 20265 and they may well be the same unit.

Sample 20269 Amphibolite = SN 21582 . Lyons R. Quarry
40/89

<u>Mineralogy:</u>	mineral	percentage abundance
	plagioclase	40
	amphibole	40
	epidote	10
	chlorite	5
	quartz	3
	sphene	2
	pyrite	trace
	magnetite	trace

Thin Section:

Subidioblastic porphyroblasts of plagioclase (0.2 - 0.5 mm) and similar sized but less common porphyroblasts of epidote occur in a strongly foliated and deformed matrix dominated by a blue-green to brown amphibole, prismatic to granular epidote, chlorite, quartz and sphene.

The plagioclase porphyroblasts are strongly poikiloblastic with abundant inclusions of fine prismatic epidote, amphibole and some quartz. These inclusions are frequently arranged in curved trails defining a strong rotational fabric, and indicating syn-deformational growth of the plagioclase porphyroblasts. However, some of the epidote is clearly replacing the plagioclase porphyroblasts due to the breakdown of the relatively calcic plagioclase during the amphibolite to greenschist facies retrogression.

Matrix amphibole and chlorite strongly wrap around the plagioclase and epidote porphyroblasts, whereas the few relatively large magnetite porphyroblasts appear to cut across the cleavage.

Patches rich in quartz with minor amphibole and epidote are flattened parallel to the foliation and individual quartz grains in these patches are elongate in the same orientation.

The blue-green to brown pleochroic amphibole has optical properties similar to the amphibole in 20263 and is probably a relatively sodic high-pressure amphibole.

This rock is an amphibolite which has been partially retrogressed to a greenschist facies assemblage. The original precursor was either a basic volcanic or intrusive rock (dolerite).

Samples 20265 and 20268 have a similar mineralogy and composition to 20269 but are less deformed. 20262 is a much more quartz- and sericite-rich rock and has a closer affinities with 20271 although it contains more chlorite and less sericite.

Neasy Creek Trib.

Sample 20270

Metabasalt/metadolerite

Part 21801 43/89

<u>Mineralogy:</u>	mineral	percentage abundance
	actinolite	35
	plagioclase	35
	epidote	10
	chlorite	10
	sphene	3
	sericite	3
	quartz	3
	pyrite	<1
	magnetite	<1
	Vein:	
	quartz	80
	epidote	20
	Vein:	
	quartz	72
	chlorite	25
	actinolite	3

Thin Section:

Sparse subidioblastic phenocrysts of plagioclase (0.5 - 1.0 mm) have been completely pseudomorphed by sericite and minor chlorite, whereas a few relatively large (0.5 - 1.0 cm) patches of chlorite appear to be pseudomorphs after original ferromagnesian phases (possibly clinopyroxene). These occur in a very weakly foliated matrix of actinolitic amphibole, chlorite, fine granular epidote and interstitial plagioclase with dispersed granules of sphene and minor patches of quartz. A few relatively coarse crystals (0.3 - 0.5 mm) of pyrite are scattered throughout the matrix.

The thin section examined is transected by two quartz-rich veins, one in which elongate quartz grains and prismatic epidote crystals are strongly aligned perpendicular to the vein walls and parallel to the weak cleavage. In the other vein, the quartz and chlorite is xenoblastic and exhibits no preferred orientation.

This rock has a basic composition and was originally probably a sparsely porphyritic fine-grained dyke rock or an extrusive. The presence of sericite and pyrite indicates some weak hydrothermal alteration.

Sample 20271

Quartz-sericite schist

Part SW 21559

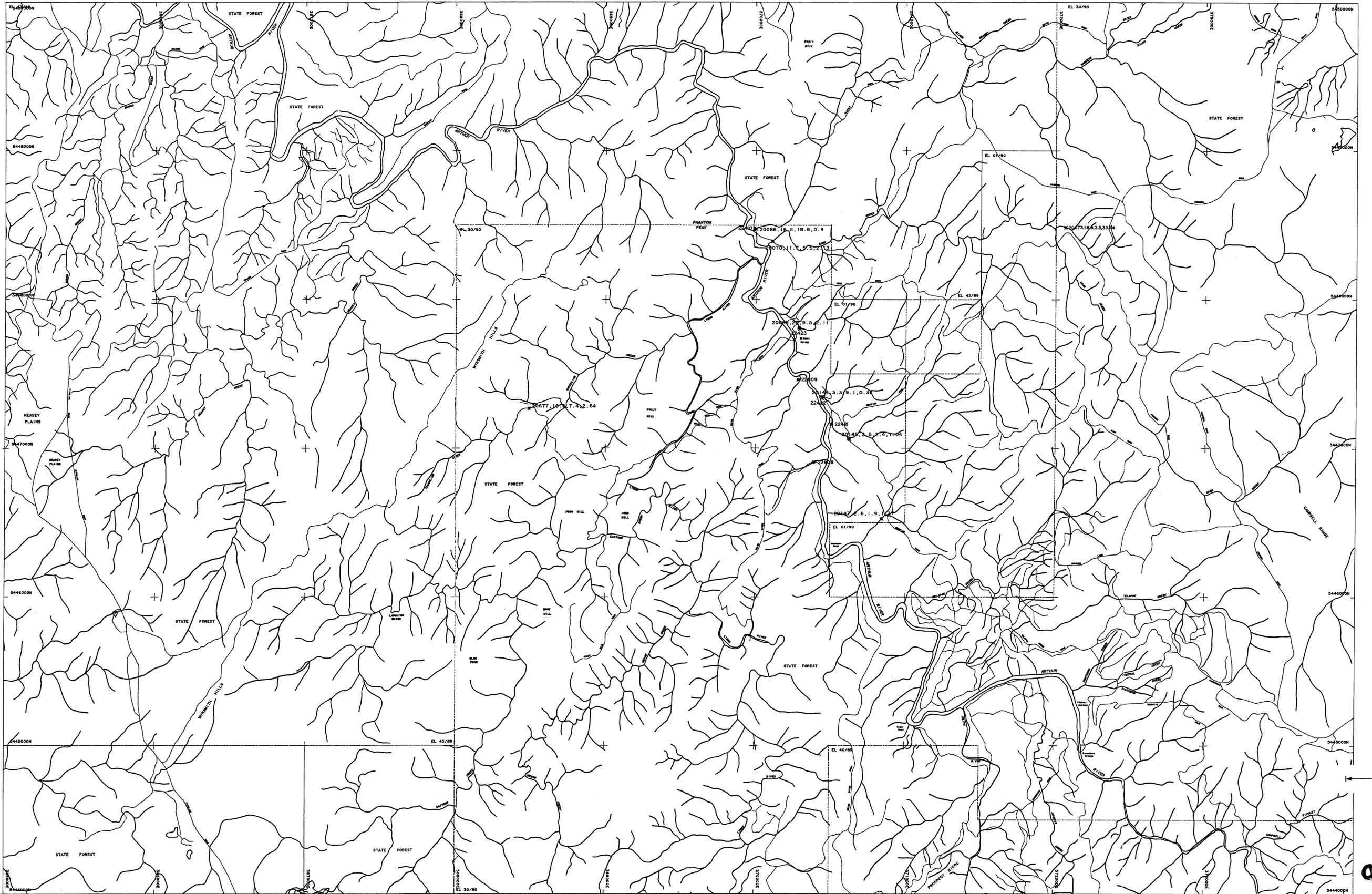
30/90

<u>Mineralogy:</u>	mineral	percentage abundance
	quartz	50
	sericite	40
	epidote	7
	sphene	2
	magnetite	1

Thin Section:

This rock consists of alternating relatively quartz-rich and sericite-rich layers which exhibit a moderate to strong S_1 foliation which has been refolded (S_2) producing a cross-cutting crenulation cleavage. Quartz-rich pods are composed of slightly elongate strained quartz crystals with sutured margins, and small amounts of sericite, sphene and magnetite. The sericite-rich bands also contain the bulk of the epidote, sphene and magnetite with minor dispersed aggregates of quartz grains.

This sample has closest similarities to 20262 with respect to textures and metamorphic history, although it contains much higher modal sericite and less chlorite. The very high sericite content combined with the presence of epidote, and absence of chlorite and albite is unusual, and suggests a peculiar very potassic whole-rock composition. This probably indicates some pre-deformation silicification and potassic hydrothermal alteration, possibly of a silicic volcanic.

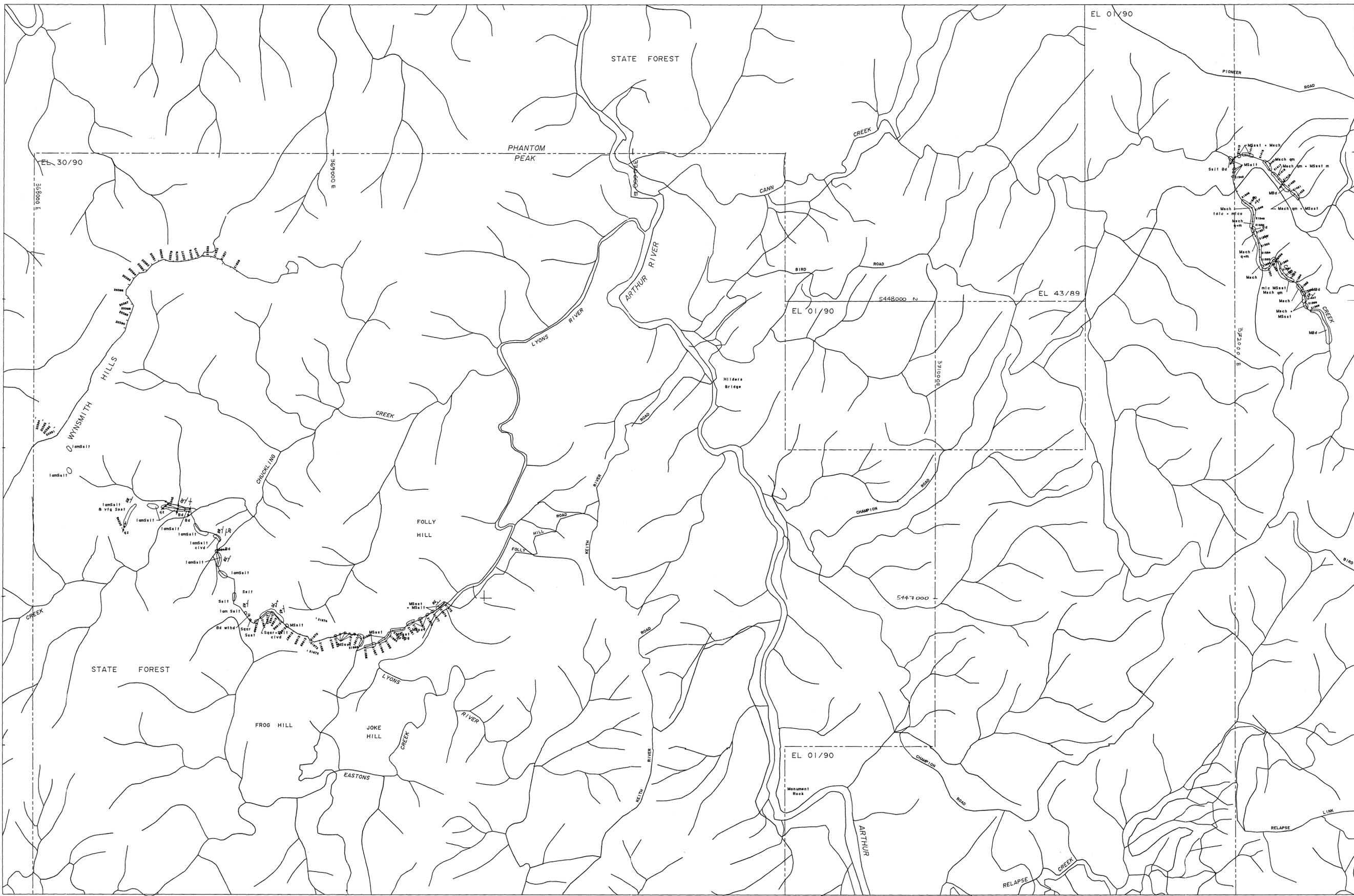


072071

5 cm

92-3310

	GEOPEKO <small>A DIVISION OF PEKO EXPLORATION LTD. A.C.N. 000 362 850</small>	
	<small>Scale 1: 25000</small>	
<small>TASMANIA</small>	<small>Map Ref. FOLLY 3644, KEITH 3643, HOLDER 3444, BERYL 3443</small>	
<small>Des. I.M.</small>	EL 30/90 WATER SAMPLE LOCATIONS	
<small>Corr. T.J.M.</small>	<small>SAMPLE NO. Autppl, Clppm, Au/C</small>	
<small>Checked</small>	<small>Date 14/4/92</small>	<small>Dwg No. 222</small>
<small>ARTHUR RIVER 7915</small>		



5448500 N

5 cm

072070

92-3370

ROCK TYPES:

- SEDIMENTS:**
 Sst sandstone
 Sqr quartz granite
 Spk greywacke
 Sst siltstone
 Ssl dolomite
 Scn conglomerate
 Sbx breccia
- IGNEOUS ROCKS:**
 Ter/Bd tertiary basalt
 C/Bd combled basalt
 Ds dolerite
- METAMORPHICS:**
 Mpy phyllite
 Mgr meta granite

SEDIMENT GRAIN SIZE:

- vf very fine grained
 fg fine grained
 mg medium grained
 cg coarse grained
- TEXTURES:**
 va vesicular
 lbd laminated
 lsm lenticled
 cld cleaved
 sin staining
 gsd graded
 wtd weathered
- COLOURS:**
 bk black
 wh white
 gn green
 gr grey
 pl pale
 dk dark
 or orange
 cr cream

MINERALOGY:

- py pyrite
 qt quartz
 Fe iron
 Mn manganese
 chd carbonate
 Tg turquoise

STRUCTURAL SYMBOLS:

- bedding
 fold
 overturned bedding
 cleavage
 fault
 rock outcrop
 floor/subcrop
 definite contact
 approximate contact
 interbedded contact

TASMANIA

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Scale 1:10000

Map Ref. FOLLY 3644, KEITH 3643, HOLDER 3444, BERYL 3443

EL 30/90

**GEOLOGICAL FACT MAPPING
AND ROCK SAMPLE LOCATIONS**

Date 14/4/92

ARTHUR RIVER 7915

Dwg No. 2123