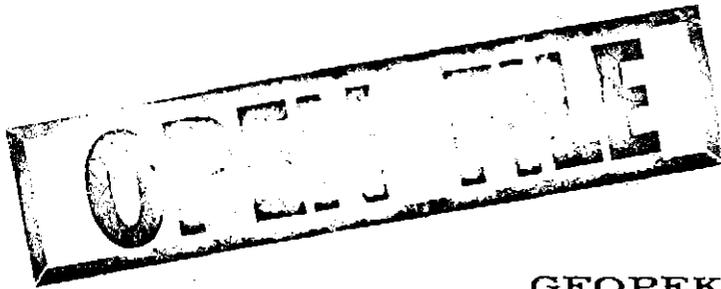


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**GEOPEKO**

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

**EL 41/89 MT BERTHA  
RELINQUISHMENT REPORT**

INCLUDING REPORT ON EXPLORATION ACTIVITY

DECEMBER 1991 TO JUNE 1992

TCR 92 - 3368

MINES	
EL 41/89	
- 8 JUL 1992	
	Labels
LETTER	
3. 7. '92	
REFERS	
Folio 112.	Date

Ian Mathison  
June, 1992

T268

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

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	- Lead	
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	- Zinc	

## 1.0 INTRODUCTION

### 1.1 Location and Access (Fig. 1)

EL 41/89, Mt Bertha, is located in NW Tasmania approximately 20 km north of the township of Savage River.

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

### 1.2 Tenure and Land Usage

EL 41/89 of 249 km<sup>2</sup> was granted to Peko Exploration Ltd in January 1990. The EL was reduced to 92 km<sup>2</sup> in December 1990.

Approximately half of the EL is Deferred Forest Land and the remainder is part of the Savage River RAP. The area encloses 6 km<sup>2</sup> of The Arthur-Pieman Protected Area and includes part of the "Savage River" and "Norfolk Range" Australian Heritage Commission Act, Registered Entries.

### 1.3 Regional Geology

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

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

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

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

#### 1.4 Known Mineral Deposits/Occurrences

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

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

#### 1.5 Previous Exploration

Geopeko report T248 (Virgoe and Mathison, 1990) summarizes previous exploration and describes the results of Geopeko's 1990 exploration program. Report T261 (Mathison, 1991) details 1991 exploration activity:

#### 1.6 Scope of this report

The aim of Geopeko's exploration of EL 41/89, was to use water sampling, rock chip sampling, geological mapping and the results of previous exploration to delineate prospective and geochemically anomalous areas within the EL. Areas worthy of further investigation were to be followed up with more detailed exploration:

Due to major problems with the DHMR's analytical techniques for stream water geochemistry, little work was carried out in EL 41/89 in 1991. It was felt necessary to suspend exploration until these problems were corrected and consequently a waiver of expenditure commitment was sought and granted. Reconnaissance water sampling recommenced in December 1991 and was completed in February 1992. A temporary extension of the licence was negotiated to allow the results of 1992 sampling to be evaluated. A large part of the Arthur River Project area was selected for relinquishment after this interpretation. This report summarizes exploration activity between January 1990 and November 1991 and describes exploration activity from December 1991 to June 1992.

## **2.0 EXPLORATION ACTIVITY UNDERTAKEN BY GEOPEKO**

### **2.1 January 1990 to November 1990 (Virgoe & Mathison, 1990)**

Five water samples were collected from creeks near the Savage River Pipeline Road. No gold or base metal anomalies were detected. Previous exploration activity was reviewed and Dr.D.Leaman completed an interpretation of public domain aeromagnetic and gravity data. Three geophysical anomalies worthy of further exploration were identified.

### **2.2 December 1990 to November 1991. (Mathison, 1991)**

No field work was attempted. Comstaff's geochemical data was compiled.

### **2.3 December 1991 to June 1992.**

#### **2.3.i Water Geochemistry**

##### **Sample Collection**

Water samples were collected from streams with a drainage area between 1 and 5 km<sup>2</sup>. Occasional check samples were collected from streams with drainage areas up to 10 km<sup>2</sup> including two or more other samples. At each sample site pH of the water, water colour, float geology, outcrop geology, and vegetation type were recorded. Possible contamination from roads, forestry operations, mines, or farms was noted. Sample sites were marked with numbered aluminium tags and flagging tape. Three water samples were collected from each site:

1. A 100 ml sample of raw stream water was collected in a new 125 ml polyethylene sample bottle. Cu, Pb, Cd and Zn were determined by ICP-MS and As by graphite furnace AAS.
2. Au was extracted from one litre of water in the field onto a sachet of activated charcoal. Au was determined by neutron activation at Becquerel Laboratories.
3. Cu, Pb and Cd were preconcentrated on site by coprecipitation from one litre of water. Metal values were determined by CSIRO using voltammetry.(PDV)

All sample bottles were washed several times in the stream water before treating or collecting samples.

### Statistical Analysis of Results

Cumulative frequency plots were made for PDV.Cu, PDV.Pb, ICPMS.Zn and GFAAS.As. The following anomalous levels were selected using inflexion points.

Element (DL)	1. Possibly Anomalous	% <1	2. Probably Anomalous	% <2
Cu (0.1)	1.5 ppb	85	3.0 ppb	95
Pb (0.05)	0.75 ppb	90	1.4 ppb	97
As (0.01)	0.16 ppb	80	0.30 ppb	97.5
Zn (0.1)	1.7 ppb	85	3.0 ppb	95
Au (0.1)	0.1 ppt	?		

### Results (See Drawing 2056A and Appendix 2)

Locations of samples have been plotted onto 1:25,000 scale base maps. Print outs of sample details and results are appended as Appendix 2. Results are summarized below:

for 29 samples

Element	Possibly anomalous	Probably anomalous
Cu	4	-
Pb	1	-
Zn	2	-
As	1	-
Au	1	-

### Discussion of Results

The Au value of 1.3 ppt from SN 22029 is not supported. Most other possibly anomalous samples are also weakly anomalous in only one element. SN 22030, which reported 1.4 ppb Cu and 2.5 ppb Zn is the only exception. This sample drains Tertiary basalt and underlying gravels, as does SN 22029:

#### 2.3.ii Geology (See Drawing 2056B)

Float and outcrop mapping indicate an extensive thin cover of Tertiary basalt over most of the EL. Metamorphic rocks, micaceous schists and greenschists are exposed in incised creek beds and in the southern part of the EL. These metamorphic rocks represent units within and west of the Arthur Lineament.

**2.3.iii Rock Geochemistry (Appendix 3 & Drawing 2056A)**

Six of the rock samples collected from EL 41/90 during the 1991-92 program were selected for analysis. A suite of trace elements were determined by ICP - OES after perchloric digestion at Classic Labs, Adelaide. Au was determined by fire assay.

No results indicative of significant mineralization were reported. Minor elevated Cu and Cr occur in basic igneous rocks, as would be expected.

**2.3.iv Comstaff Stream Sediment Sampling (Drawings 2314A, B, C).**

Results of Comstaff's regional stream sediment (-80#) and panned concentrate sampling were obtained from the Mines Department, computerized and plotted on 1:25000 bases. Because of the different bases used by Comstaff and Geopeko there is a systematic shift of sample locations from the stream sampled of 200-300 metres. Rectification has not yet been attempted. The existing maps are quite useful and major drainage systems can be identified easily.

Copper (2314A) Twenty-two stream sediments were collected from the Bertha 1:25000 sheet. None is anomalous (Range 2-28ppm).

Lead (2314B) Seven of the 22 samples were assayed for Pb. None is anomalous (Range 6-18ppm).

Zinc (2314C) None of the 22 samples is anomalous for Zn (Range 8-82ppm).

### **3.0 CONCLUSIONS**

- \* The Arthur Lineament in the south-eastern part of EL 41/89 has not been tested. Access to this area requires track cutting.
- \* Water samples from the rest of the area are not encouraging. No indications of extensive, near surface mineralization were detected.
- \* The extensive, thin cover of Tertiary basalt will hinder further exploration in this area.
- \* Detailed stream sediment coverage of the Bertha 1:25000 sheet is far from complete.

### **4.0 RECOMMENDATIONS**

EL 41/89 should be relinquished. Further exploration in this area will be expensive. The limited funds available for further exploration in the Arthur River Project Area should be conserved for more advanced prospects.

### **5.0 ENVIRONMENTAL DISTURBANCE AND REHABILITATION**

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

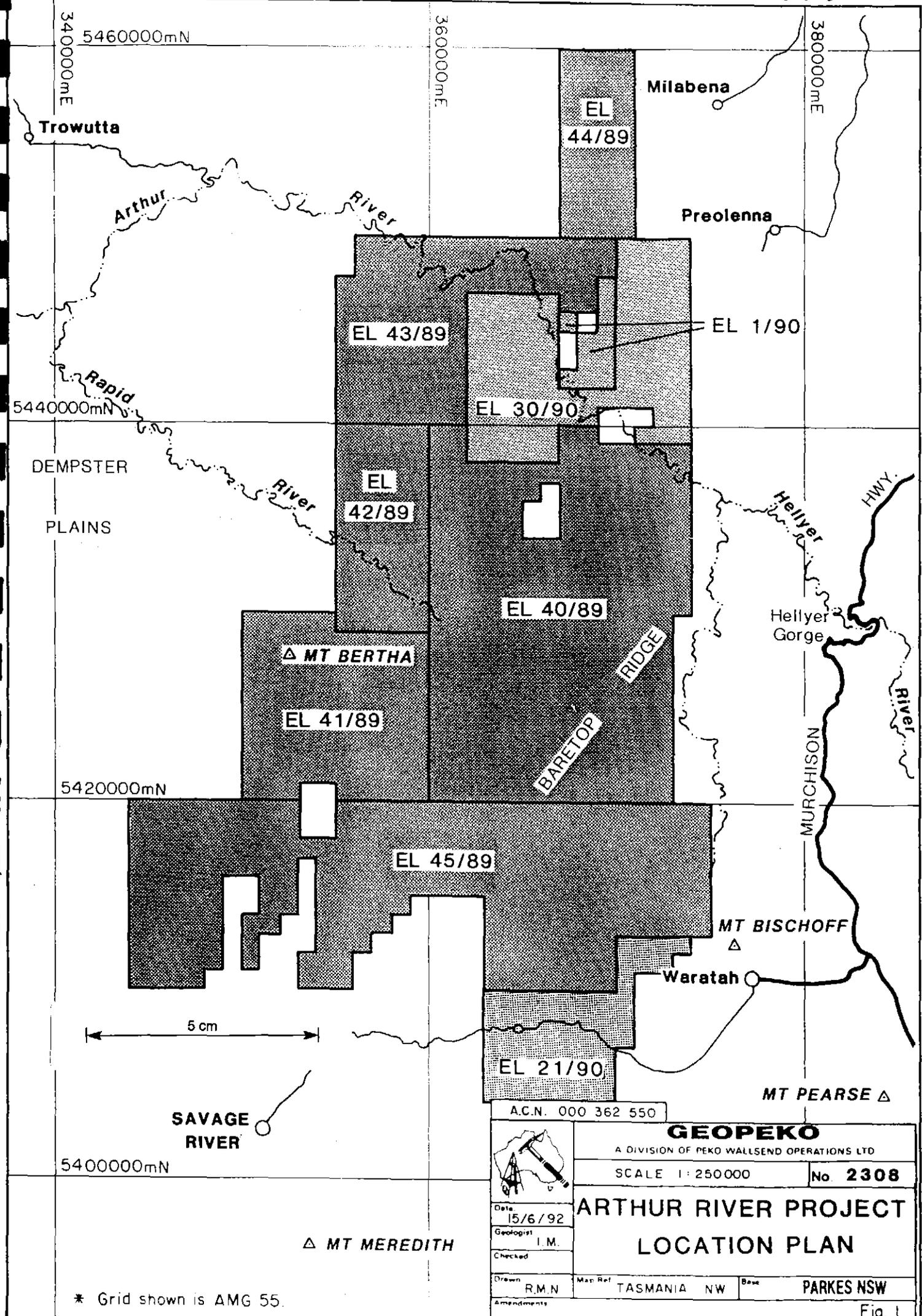
*Jan Matheson*

## REFERENCES:

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

**HATHISON, I.J., VIRGOE, K.** (1990) - Mt Bertha EL 41/89 - Report  
on Exploration Activity - January 1990 to November 1990.  
Unpublished Geopeko report T248.

**HATHISON, Ian** (1991) - EL 41/89 Mt Bertha - Report on  
Exploration Activity December 1990 to November 1991.  
Unpublished Geopeko report T261.



\* Grid shown is AMG 55.

A.C.N. 000 362 550

**GEOPEKO**  
A DIVISION OF PEKO WALLSEND OPERATIONS LTD

SCALE 1:250000 No 2308

**ARTHUR RIVER PROJECT  
LOCATION PLAN**

Date	15/6/92
Geologist	I.M.
Checked	
Drawn	R.M.N.
Map Ref	TASMANIA NW
Base	PARKES NSW
Amendments	

Fig. 1.

**APPENDIX 1**  
**WATER GEOCHEMISTRY**  
**SAMPLE DETAILS AND RESULTS**

**ARTHUR RIVER PROJECT**  
**WATER GEOCHEMISTRY - 1991-92 SAMPLES - CSIRO ANALYSES**  
**EL 41/89 & EL 42/89 - BERTHA SHEET**

SAMPLE NUMBER	-----ICPMS - RAW WATER -----				-PDV - 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	EL	HAF
22029	0.60	-0.50	-0.50	1.40	1.10	0.40	-0.05	-0.05	1.30	-10	41/89	BERTHA
22030	-0.50	-0.50	-0.50	0.80	0.70	0.50	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22031	0.80	-0.50	-0.50	0.60	1.20	0.40	0.40	-0.05	-1.00	-10	41/89	BERTHA
22032	-0.50	-0.50	-0.50	2.50	1.40	0.30	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22033	-0.50	-0.50	-0.50	2.50	0.50	0.30	-0.05	0.07	-1.00	-10	41/89	BERTHA
22034	0.60	1.30	-0.50	1.30	0.80	0.90	0.07	0.06	-1.00	-10	41/89	BERTHA
22035	-0.50	-0.50	-0.50	-0.50	0.30	0.20	0.50	0.08	-1.00	-10	41/89	BERTHA
22036	-0.50	-0.50	-0.50	-0.50	2.20	0.40	0.13	-0.05	-1.00	-10	41/89	BERTHA
22037	0.50	-0.50	-0.50	0.84	1.90	0.68	0.10	0.12	-1.00	-10	41/89	BERTHA
22038	-0.50	-0.50	-0.50	0.63	0.60	0.40	0.30	-0.05	-1.00	-10	41/89	BERTHA
22039	-0.50	-0.50	-0.50	0.75	0.39	0.31	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22057	-0.50	-0.50	-0.50	0.70	0.85	0.10	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22058	-0.50	-0.50	-0.50	1.00	0.77	0.08	-0.05	0.21	-1.00	-10	41/89	BERTHA
22059	-0.50	-0.50	-0.50	0.72	0.90	0.09	-0.05	0.07	-1.00	-10	41/89	BERTHA
22308	-0.50	-0.50	-0.50	-0.50	1.00	0.50	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22309	-0.50	-0.50	-0.50	1.00	0.58	0.16	-0.05	0.09	-1.00	-10	41/89	BERTHA
22310	0.94	-0.50	-0.50	-0.50	1.20	0.05	-0.05	0.13	-1.00	-10	41/89	BERTHA
22311	0.68	-0.50	-0.50	0.70	0.46	0.28	-0.05	0.10	-1.00	-10	41/89	BERTHA
22312	-0.50	-0.50	-0.50	-0.50	0.68	0.12	-0.05	0.06	-1.00	-10	41/89	BERTHA
22313	-0.50	-0.50	-0.50	0.70	0.48	0.06	-0.05	0.06	-1.00	-10	41/89	BERTHA
22314	-0.50	-0.50	-0.50	-0.50	0.55	0.01	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22315	-0.50	-0.50	-0.50	-0.50	0.25	0.11	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22316	0.58	-0.50	-0.50	1.10	0.44	0.17	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22348	2.60	-0.50	-0.50	0.96	0.86	0.42	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22349	2.70	-0.50	-0.50	0.92	1.70	0.29	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22353	2.00	-0.50	-0.50	1.40	0.86	0.27	0.18	-0.05	-1.00	-10	41/89	BERTHA
22354	3.20	-0.50	-0.50	0.50	0.24	0.12	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22355	3.40	-0.50	-0.50	1.10	0.75	0.25	0.40	-0.05	-1.00	-10	41/89	BERTHA
22356	2.00	-0.50	-0.50	1.00	1.00	0.18	-0.05	-0.05	-1.00	-10	41/89	BERTHA
22321	-0.50	-0.50	-0.50	-0.50	1.30	0.40	-0.05	-0.05	-1.00	-10	42/89	BERTHA

















01/07/1992

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ARTHUR RIVER PROJECT - 1991-92 WATER SAMPLES

EL 41/89 - BERTHA SHEET

SAMPLE NUMBER 22349

DATE 29/01/1992 EL41/89 MAP BERTHA

ANG COORDS. 350975 mE 5420125 mN

VEGETATION

STREAM FLOW

LEVEL

WIDTH 2.5m

DIRECTION 0°

CONTAMINATION FROM

WATER COLOUR

PH 8.90

DRAINAGE AREA 3.0 km<sup>2</sup>

GEOLOGY

OUTCROP

FLOAT 70 % Qtz

20 % Msch

10 % Mslt

SAMPLE NUMBER 22353

DATE 01/02/1992 EL41/89 MAP BERTHA

ANG COORDS. 356075 mE 5420225 mN

VEGETATION

STREAM FLOW

LEVEL

WIDTH 1.5m

DIRECTION 0°

MODERATE

AVERAGE

CONTAMINATION FROM

WATER COLOUR

PH 9.00

DRAINAGE AREA 1.0 km<sup>2</sup>

NONE

GEOLOGY

OUTCROP

FLOAT 90 % Qtz

10 % Msch mica

0 %

SAMPLE NUMBER 22354

DATE 01/02/1992 EL41/89 MAP BERTHA

ANG COORDS. 355100 mE 5420300 mN

VEGETATION

STREAM FLOW

LEVEL

WIDTH 3.5m

DIRECTION 0°

MODERATE

AVERAGE

CONTAMINATION FROM

WATER COLOUR

PH 9.00

DRAINAGE AREA 1.8 km<sup>2</sup>

NONE

GEOLOGY

OUTCROP

FLOAT 60 % Qtz

30 % Tl

10 % Msch mica



**APPENDIX 2**

**ROCK GEOCHEMISTRY**

SAMPLE DETAILS AND RESULTS  
(Includes all rock samples collected)

29/06/1992

ARTHUR RIVER PROJECT  
ROCK CHIP AND FLOAT SAMPLING

EL41/89 - BERTHA SHEET

NUMBER	TYPE	EL	MAP	EAST	NORTH	LITHOLOGY1
22135	ROCK CHIP	41/89	BERTHA	354423	5424051	Mgnsh, Qtz epidote py Vn
22136	ROCK CHIP	41/89	BERTHA	354218	5423714	Msch ser chl
22137	ROCK CHIP	41/89	BERTHA	354102	5423656	Qtz Fs intrusive? py
22138	ROCK CHIP	41/89	BERTHA	354028	5423632	Msch chl sil
22140	FLOAT	41/89	BERTHA	353341	5422005	Volc tuff? chl ser
22171	ROCK CHIP	41/89	BERTHA	352659	5420706	Mgnsch (voic?)

## ARTHUR RIVER PROJECT - EL 41/89

## DESCRIPTIONS OF ASSAYED ROCK SAMPLES - BERTHA SHEET

EL	MAP	NUMBER	TYPE	LITHOLOGY	DESCRIPTN
41/89	BERTHA	22170	ROCK CHIP	Msch-qzt	Quartz mica schist with quartzite lenses fol 030-040/90.
41/89	BERTHA	22171	ROCK CHIP	Mgsch	Intermediate volcanic? to Mgsch m gn, wk fol(W-S).
41/89	BERTHA	22172	ROCK CHIP	Msch	Sericitic rock m gn fol 060/90.
41/89	BERTHA	22173	ROCK CHIP	Ssst	Quartz arenite, sericite matrix, Fe sin.
41/89	BERTHA	22174	ROCK CHIP	Mphy	Phyllite ser, chl fol 030/90.
41/89	BERTHA	22174	ROCK CHIP	-	Qtz gravel, schists, ?Fs qtz metamorphic?
41/89	BERTHA	22208	FLGAT	TERTIARY EPICLASTIC	Soft, friable, Fe saturated. Comprises poorly sorted 1-3cm sub to well rounded clasts.
41/89	BERTHA	22209	ROCK CHIP	SCHIST	Silver green to silver grey, unaltered chl-musc schist, moderate fol with clear qtz "eyes".

## ARTHUR RIVER PROJECT - EL 41/89

## DESCRIPTIONS OF ASSAYED ROCK SAMPLES - BERTHA SHEET

EL	MAP	NUMBER	TYPE	LITHOLOGY	DESCRIPTN
41/89	BERTHA	22132	FLOAT	-	Tertiary basalt, some vnqtz and qtz gravel.
41/89	BERTHA	22133	FLOAT	Qtz gravel	Quartz gravel and vein quartz with minor chlorite schist.
41/89	BERTHA	22134	ROCK CHIP	Msch	Mica quartz schist, some chloritic schist - fol 054/80SE.
41/89	BERTHA	22135	ROCK CHIP	Msch	Mica chl schist, qtz+epidote +py veining - fol 036/90.
41/89	BERTHA	22136	ROCK CHIP	Msch	Sericite (chlorite) schist - fol 300/90.
41/89	BERTHA	22137	ROCK CHIP	QFP	Quartz feldspar intrusive? Some vein qtz & PY.
41/89	BERTHA	22138	ROCK CHIP	Mgnsch	Chloritic schist, siliceous? fol 020/90 strg Fe stn
41/89	BERTHA	22139	STREAM SED	-	Stream sediment sample.
41/89	BERTHA	22140	FLOAT	Msch volc?	Acid-intermediate tuft? now a ser schist.
41/89	BERTHA	22141	ROCK CHIP	Msst	Meta sandstone mas, some bedding 165/45W qtz vn.
41/89	BERTHA	22142	ROCK CHIP	Tb	Tertiary basalt.
41/89	BERTHA	22143	ROCK CHIP	Tb	Tertiary basalt amygdaloidal.
41/89	BERTHA	22143	ROCK CHIP	Msst-qtz, qtz vn.	Meta sandstone - quartzite, quartz vein.
41/89	BERTHA	22144	ROCK CHIP	Msst - sch	Msst - quartz mica schist fol 040/90-60SE
41/89	BERTHA	22145	ROCK CHIP	Mqzt - sch	Mica quartz schist, some qtz, ser, chl fol 010/90-70W.
41/89	BERTHA	22145	ROCK CHIP	Msch - phy	Quartz mica schist - phyllite fol 000/80W.
41/89	BERTHA	22148	ROCK CHIP	Msch-qtz	Quartz mica schist, some qtz fol 010-020/90-80E.

ANALYTICAL REPORT

Job: 2AD0622  
O/N: 50081

Sample	Ag	As	Bi	Cd	Co	Cr	Cu
22135	<1	<3	<5	<2	34	52	60
22136	<1	<3	<5	<2	44	64	200
22137	<1	9	<5	<2	26	66	11
22138	<1	<3	<5	<2	32	340	92
22140	<1	<3	<5	<2	34	165	105
22171	1	<3	5	<2	40	75	98
Units	ppm						
DL	1	3	5	2	2	2	2
Scheme	IC1						

CLASSIC LABORATORIES

ANALYTICAL REPORT

Job: 2AD0622  
O/N: 50081

Sample	Fe	Mn	Mo	Ni	Pb	P	V
22135	3.14	1060	<3	46	5	910	125
22136	5.90	700	<3	70	10	760	185
22137	3.20	320	<3	32	<5	340	17
22138	6.50	390	<3	75	10	1480	185
22140	4.92	610	<3	70	10	290	120
22171	5.30	1080	<3	54	10	790	170
Units	%	ppm	ppm	ppm	ppm	ppm	ppm
DL	0.01	5	3	2	5	5	2
Scheme	IC1	IC1	IC1	IC1	IC1	IC1	IC1

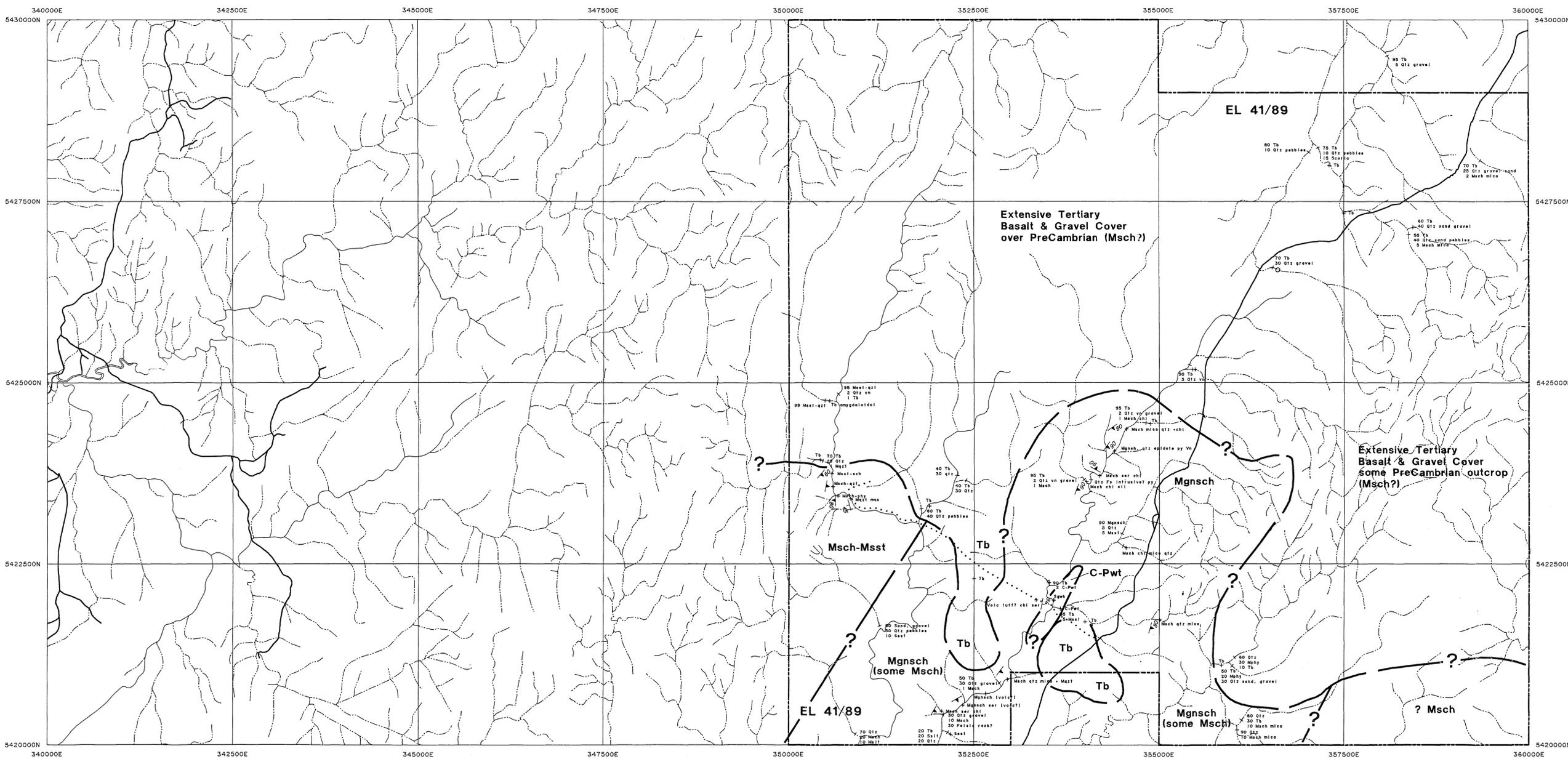
CLASSIC LABORATORIES

ANALYTICAL REPORT

Job: 2AD0622  
O/N: 50081

Sample	Zn	Au Avg	Au Au Rpl	Au SS1
22135	48	0.02	0.02	--
22136	66	<0.01	<0.01	--
22137	16	<0.01	<0.01	--
22138	32	<0.01	<0.01	--
22140	62	<0.01	<0.01	--
22171	74	<0.01	<0.01	--
Units	ppm	ppm	ppm	ppm
DL	2	0.01	0.01	0.01
Scheme	IC1	FA1	FA1	FA1





**GEOLOGICAL LEGEND**

- TERTIARY**  
Tb Basalt
- CARBONIFEROUS - PERMIAN**  
C-Pwt Wynyard Tillite
- PRE CAMBRIAN -**
- |                  |                     |                |                                                                          |
|------------------|---------------------|----------------|--------------------------------------------------------------------------|
| <b>SEDIMENTS</b> | <b>METAMORPHICS</b> | <b>COLOURS</b> | <b>LOCATION SYMBOLS</b>                                                  |
| Ssst sandstone   | Msch schist         | bk black       | + Location of outcrop with description                                   |
| Sgwk greywacke   | Mphy phyllite       | wh white       | ○ Location of stream float with percentages of each float type in stream |
| Ssll siltstone   | Mgnst greenstone    | gn green       | ○ Location of stream sediment sample                                     |
| Sdol dolomite    | Mgnsch greenschist  | gy grey        |                                                                          |
| Ssha shale       | Mqzt quartzite      | pl pale        |                                                                          |
|                  | Msla slate          | dk dark        |                                                                          |
|                  |                     | bn brown       |                                                                          |
- 
- |                  |                |
|------------------|----------------|
| <b>VOLCANICS</b> | <b>OTHER</b>   |
| Volc volcanic    | U/m ultramafic |
| tuff tuff        |                |
- 
- |                   |                  |                           |
|-------------------|------------------|---------------------------|
| <b>MINERALOGY</b> | <b>TEXTURES</b>  | <b>STRUCTURES</b>         |
| qtz quartz        | Vn vein, veining | ▬ bedding                 |
| fs feldspar       | lam laminated    | ⌋ foliation               |
| Fe iron           | stn stain        | ▬ definite contact        |
| py pyrite         | wth weathered    | - - - approximate contact |
| ser sericite      | clvd cleaved     | ⌋ foliation               |
| chl chloride      | foin foliation   | - - - possible contact    |
| sl siliceous      | mas massive      |                           |



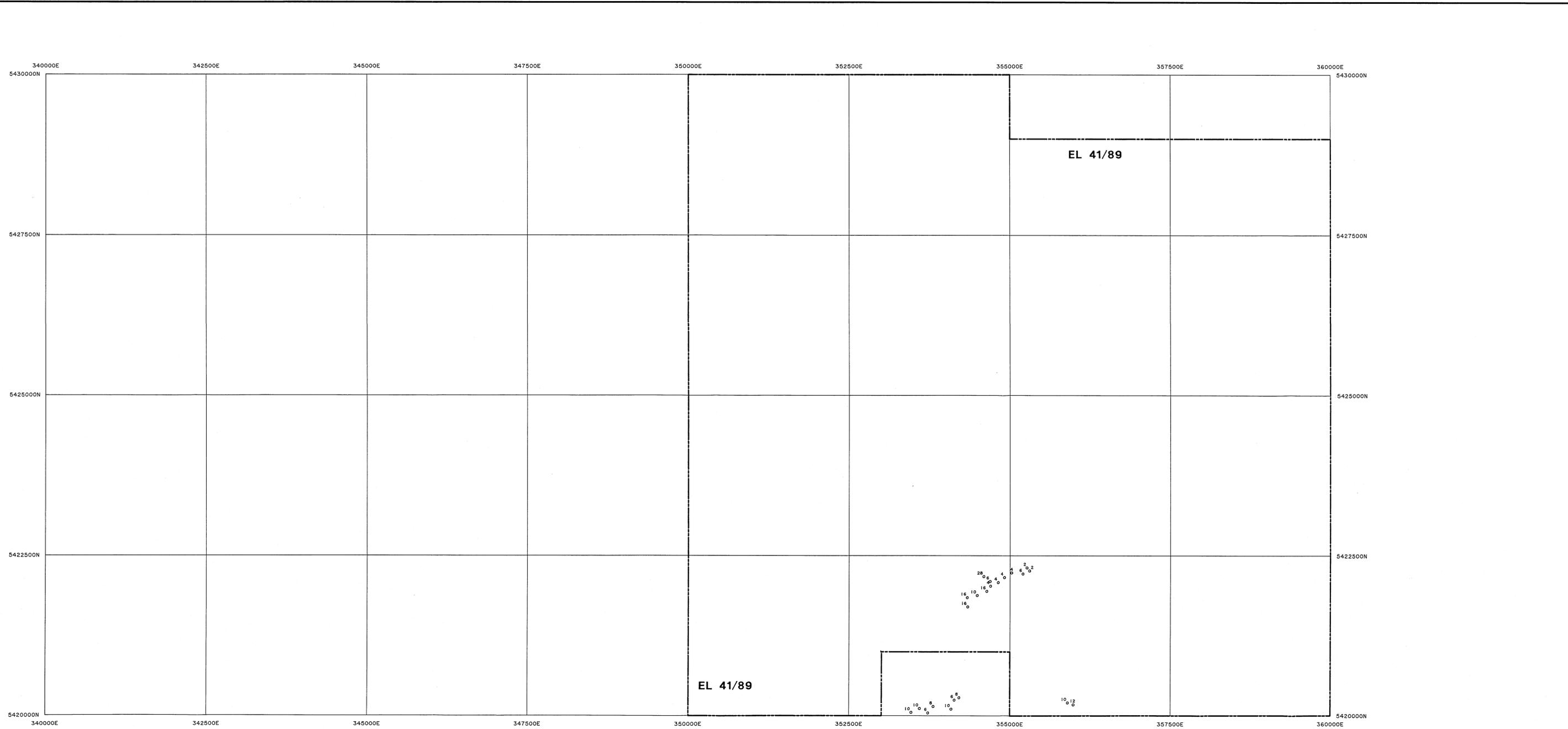
92-3368

074028

1:25000 SHEET LAYOUT

3243	3443	3643
3242	3442	3642
3241	3441	3641

	Scale	1:25000
Geo. Client:	D. G.	<b>BERTHA 3442</b> <b>FACT GEOLOGY &amp; INTERPRETATION</b>
Carib.	R. M. N.	
Checked		Job No. 82_92 100k Sheet 7915 DWG No. 2056B
Date	12/3/92	
Appended		



074031

92-3368

**SAMPLE LEGEND**

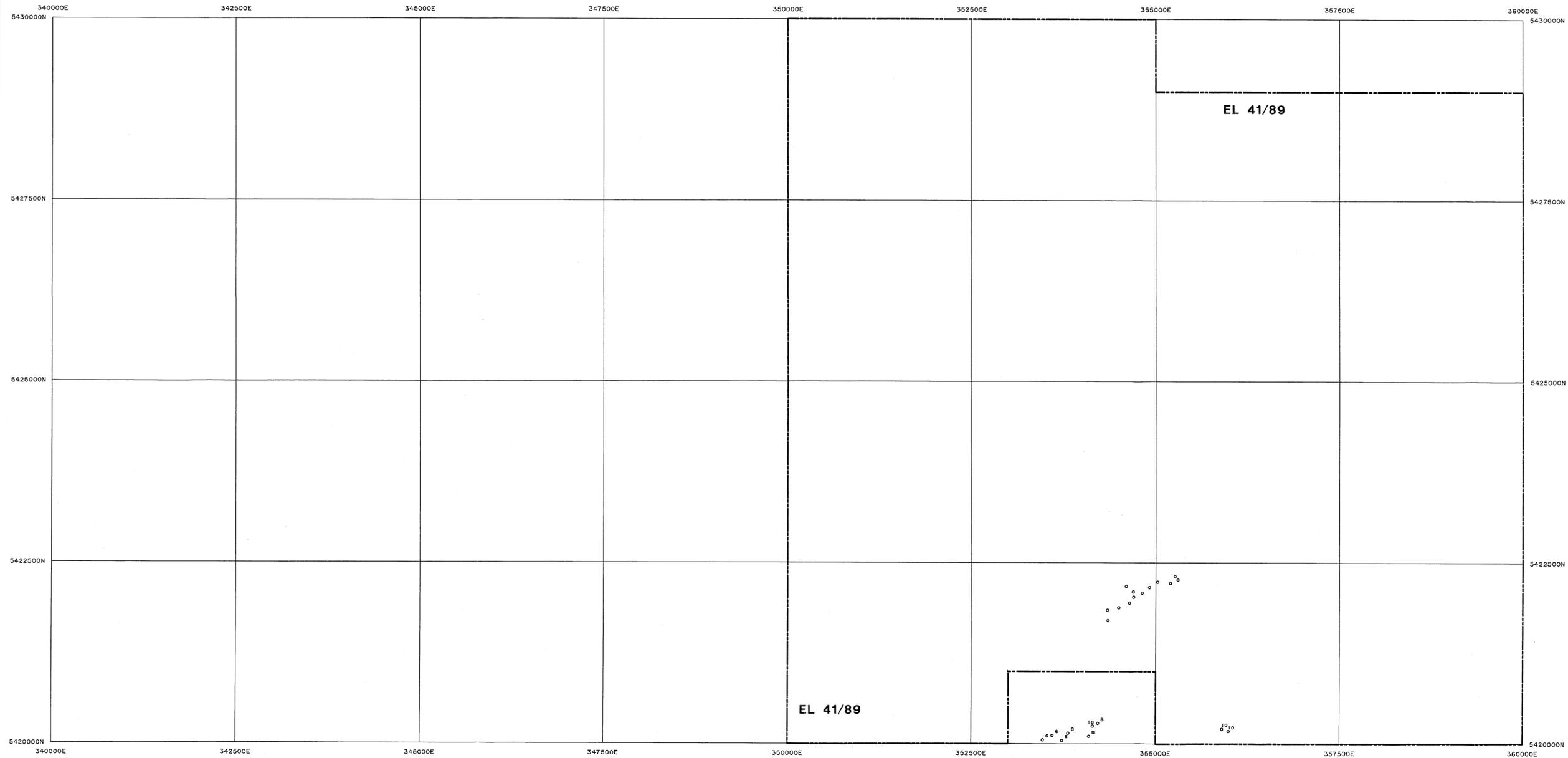
- Location of Panned Concentrate sample
- Location of Stream Sediment sample

Note: 9999 equals >10000ppm

1:25000 SHEET LAYOUT

3243	3443	3643
3242	3442	3642
3241	3441	3641

		<b>GEOPEKO</b> <small>A DIVISION OF PEKO WALLSEND OPERATIONS LTD  A.C.N. 000 081 434</small>	
		Scale 1:25000 	
<b>PARKES</b> Geo. Client: D. G. Carto: R. M. N. Checked: Date: 25/6/92 Appended:		Project / Tenure: <b>BERTHA 3442</b> <b>COMSTAFF STREAM SEDIMENT SAMPLING</b> <b>COPPER (ppm)</b>	
Job No. 201_92 100% Sheet 7915		DWG No. 2314A	



074030 92-3368

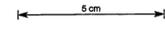
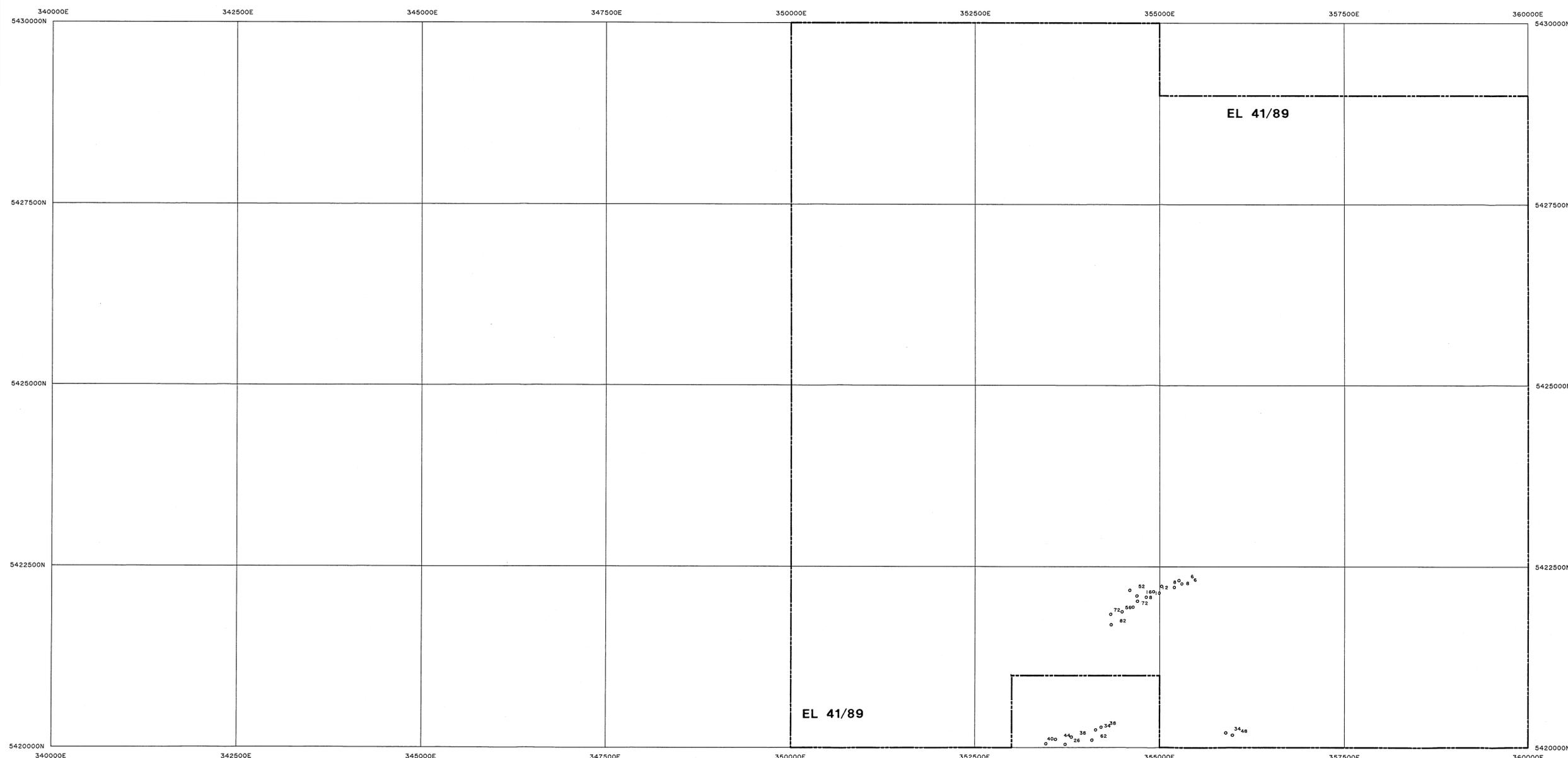
SAMPLE LEGEND

- Location of Panned Concentrate sample
  - Location of Stream Sediment sample
- Note: 9999 equals >10000ppm

1:25000 SHEET LAYOUT

3243	3443	3643
3242	3442	3642
3241	3441	3641

		<b>GEOPEKO</b>		<small>A DIVISION OF PEKO WALLSEND OPERATIONS LTD A.C.N. 000 081 434</small>
		Scale 1:25000 500 0 500 1000 1500 2000 2500m		Project / Tenure
Geo. Client. D. G.	Carto. R. M. N.	<b>BERTHA 3442</b> <b>COMSTAFF STREAM SEDIMENT SAMPLING</b> <b>LEAD (ppm)</b>		
Checked 25/6/92	Appended	Job No. 201_92 100k Sheet 7915 DWG No. 2314B		



074032  
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SAMPLE LEGEND

- Location of Panned Concentrate sample
  - o Location of Stream Sediment sample
- Note: 9999 equals >10000ppm

1:25000 SHEET LAYOUT

3243	3443	3643
3242	3442	3642
3241	3441	3641

		<b>GEOPEKO</b>	
		<small>A DIVISION OF PEKO WALLSEND OPERATIONS LTD A.C.N. 000 08 434</small>	
Scale		1:25000	
Project / Tenure			
Geo. Client	D. G.		
Carto.	R. M. N.		
Checked		<b>BERTHA 3442</b>	
Date	25/6/92	<b>COMSTAFF STREAM SEDIMENT SAMPLING</b>	
Appendix		<b>ZINC (ppm)</b>	
Job No.	201_92	100% Sheet	7915
			DWG No. 2314C