

185001

See EL 38/94  
8/7/99 Folio 68

NABOWLA  
EL38/94

~~PARTIAL SURRENDER REPORT~~

**MICROFILMED**  
FICHE No.015094

*June 1999*

## Table of Contents

### 1.0 TENEMENT INFORMATION

- 1.1 Location
- 1.2 Tenure
- 1.3 Land Status/Usage
- 1.4 Topography and Vegetation
- 1.5 Access

### 2.0 GEOLOGY

### 3.0 EXPLORATION CARRIED OUT

- 2.1 Rock Chip Sampling
- 2.2 Aeromagnetic Interpretation

### 4.0 CONCLUSIONS

### FIGURES

Figure No.	Title
1	E.L. 38/94 "Nabowla" location

**PLANS**

<b>Plan No.</b>	<b>Title</b>
1	Plan showing tenement retained and relinquished
2	Rock chip sample locations
3	Au rock chip results
4	Cu rock chip results
5	Pb rock chip results
6	Zn rock chip results
7	Ag rock chip results
8	As rock chip results
9	Bi rock chip results
10	Mo rock chip results
11	Sb rock chip results
12	Aeromagnetic Interpretation

**APPENDICES**

A	Rock Chip Sample Coordinates and Assay Results
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## **1.0 TENEMENT INFORMATION**

### **1.1 Location**

E.L. 38/94 "Nabowla" is located in north-east Tasmania, west of Scottsdale and north of Lilydale (Figure 1).

### **1.2 Tenure**

The licence was granted to Silverthorne Resources on the 11th of November, 1994. Anglo Australian Resources N.L. joint ventured into the licence on the 13th of June, 1995. The licence covers an area of 249 square kilometres.

The licence is due for a 50% compulsory reduction on 11 November 1999. Anglo Australian Resources have elected to voluntarily reduce the tenement to 108 square kilometres before that time.

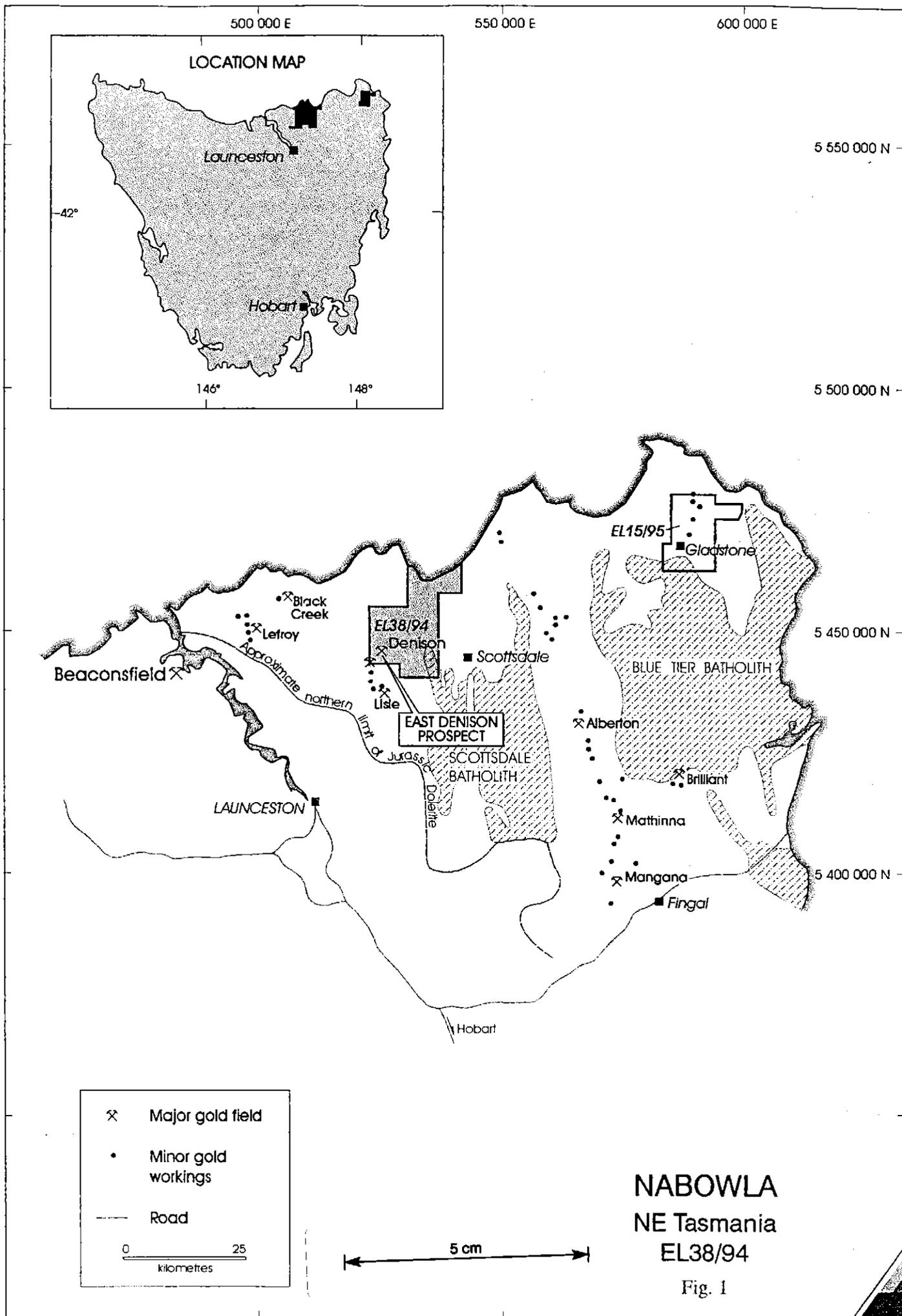
The areas retained and relinquished are shown on Plan 1.

### **1.3 Land Status/Usage**

The majority of the land area covered by the E.L. is private freehold land and is used for a variety of purposes including private forestry, cropping, and mixed farming. The remainder is mostly State Forest and is being used for production forestry.

### **1.4 Topography/Vegetation**

The E.L. consists of gently undulating topography covered by open dry eucalypt forest where clearing for agriculture has not taken place. Gullies carry wetter, denser vegetation.



## 2.5 Access

Access is generally very good. There are many roads and tracks in areas cleared for agriculture and where logging operations have been or are taking place. The Denison gold field is approximately 30-40 minutes drive from Launceston

## 2.0 GEOLOGY

The Eastern Tasmanian Terrane is the southernmost Australian expression of the Lachlan Fold Belt, and in north eastern Tasmania it is comprised of an early Ordovician to early Devonian folded succession of tubiditic quartzwackes and pelites (the Mathinna Group) which have been correlated with rocks of the Melbourne Trough in Victoria. Mathinna Group rocks have undergone regional low-grade metamorphism and thermal metamorphism where they have been intruded by calc-alkaline granitoid batholiths of Devonian age. *Thermal aureoles are commonly sharply defined and vary in width from about 800 to 5,000 meters.* Flat-lying sediments of the late Carboniferous – early Permian to Triassic Parmeener Supergroup unconformably overlie both the Mathinna Group and the Devonian granitoids. The Parmeener Supergroup rocks are intruded by thick sheets of Jurassic dolerite. Areas of Tertiary basalt and associated Tertiary sediments occur in north eastern Tasmania and in some places have filled pre-existing drainage systems to form deep leads, some of which contain alluvial gold. Quaternary alluvium occurs in river valleys and in coastal areas Quaternary windblown aeolian sands obscure much of the underlying bedrock.

Gold mineralisation occurs in the Mathinna Group sediments throughout north east Tasmania. At some locations the gold mineralisation appears to be granitoid related, as at Golden Ridge and in the Lisle-Golconda-Panama goldfield, and in other locations there is no spatial relationship to granitoids, such as the Lyndhurst-Alberton-Mathinna-Mangana “gold corridor” and the Lefroy goldfield. In this respect, there are similarities with the gold mineralisation in Victoria. At Gladstone, textural evidence in a gold and tin bearing rock from the thermal aureole of a granitoid suggests that gold mineralisation occurred before thermal metamorphism and that tin mineralisation was subsequent to thermal metamorphism (Roach, 1994).

Approximately 75% of the area of E38/94 is underlain by Mathinna Group sediments. Apart from some 5% Tertiary basalt and gravel cover, the rest of the area is covered by Quaternary sands and alluvium.

Mathinna Group rocks mapped in the area (Marshall et al, 1965) are predominantly siltstones and sandstones. However, a significant unit of pelitic rocks, considered to be a more favourable lithology for gold mineralisation in "slate belt gold" regions, occurs near the Lebrina area.

Structurally the Mathinna Group sediments are broadly folded in sub-horizontal NNW trending fold axes, although there is only sparse structural data available from the Mines Department mapping.

Gold mineralisation occurs in quartz reefs, veins or stockworks, typically trending ENE and associated with pyrite and/or arsenopyrite or galena, or in veins and shears associated with NNW trending shear systems. McIntosh Reid (1925, 1926) has also reported gold mineralisation at the Bessells Reward Prospect near the Lisle goldfield as occurring in a "gold impregnated sandstone" which is not associated with quartz veining but rather with secondary mica and varying degrees of ferruginisation.

### **3.0 EXPLORATION CARRIED OUT**

#### **3.1**

An interpretation of magnetic, radiometric and gravity data was completed in October 1997 by John Ashley of Southern Geoscience Consultants. The magnetic interpretation over the relinquished portion of the tenement is shown on Plan 12. The source of the airborne data was the MRT Netgold database, the tenement area being covered by two surveys flown in 1993. The most important aspects of the interpretation relating to gold exploration on the relinquished portion of the tenement are as follows:

There is a north-north-east trending wide zone of faulting/shearing/fracturing passing through the northern part of the tenement. This is a parallel, subsidiary shear system to the

east of the regional NNE-SSW trending structural corridor hosting the East Denison mineralisation to the south west. Specific target zones are identified where north-west trending structures cross this feature.

Other specific target areas are interpreted where potassium anomalies not coincident with hills occur along the structural corridor.

Also of interest are a series of north west – south east trending magnetic sedimentary units in close proximity to the Scottsdale batholith to the east interpreted to be contact metamorphosed sediments of the Mathina Group.

### 3.2 Rock Chip Sampling

A total of 68 regional rock chip samples were collected over target zones identified from the aeromagnetic interpretation considered to be structurally favourable for hosting gold mineralisation. Efforts concentrated on:

- (a) the interpreted contact metamorphosed sedimentary units of the Mathina Group (on contact with the Scottsdale Batholith) to the south west of the relinquished portion tenement; and
- (b) the NNE – SSW trending structural corridor to the north of the relinquished portion of the tenement.

Sample locations are shown on Plan 2 and sample coordinates and assay results are shown in Appendix A. All samples were assayed for gold, copper, lead, zinc, silver, arsenic, bismuth, molybdenum and tin by Australian Laboratory Services in Perth for low level detection (1ppb Au) analysis. No results providing sufficient encouragement to proceed with more detailed rock chip sampling densities or to embark on soil sampling campaigns were received.

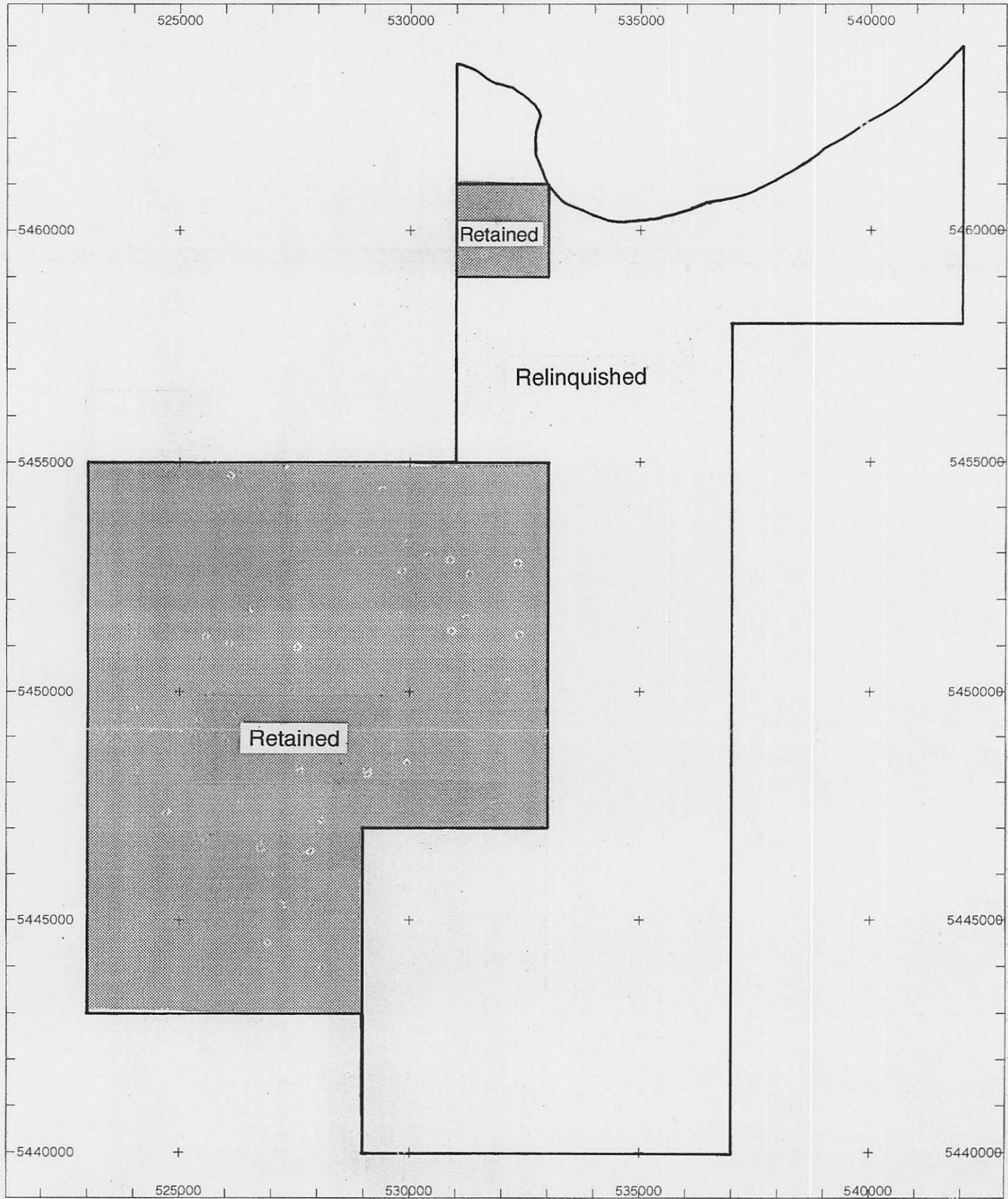
(ANTIMONY? (Sb not Sn in tables, maps)).

### 4.0 CONCLUSIONS

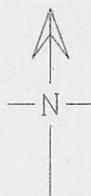
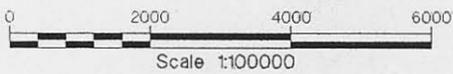
Late in 1998 an independent consultant visited the East Denison Prospect on the retained portion of E38/94 and reviewed all exploration results. The structural setting of

the mineralisation, previously thought to be complex, was clarified. Gold mineralisation is now interpreted to occur in a well defined, continuous, fault controlled, NNE-SSW trending zone which dips shallowly at 15° - 20° easterly and is traceable by geochemistry for 1.25 kilometres. Mineralisation is associated with quartz vein stockworks and silicification in sandstones and siltstones of the Mathina Group.

Regionally this mineralisation is associated with a major NNE-SSW trending structural corridor identified from the aeromagnetic interpretation. This corridor is evident from the coast to the west of Bridport and passes through the retained portion of E38/94 over a strike length of some 25 kilometers through the East Denison Prospect and into the Golconda goldfield to the south. Regional rock chip sampling of weaker subsidiary parallel shear systems falling on the tenement to the east of this major structural corridor has not identified gold anomalism of any significance which may warrant further investigation. As a consequence, that portion of the tenement has been elected for relinquishment.



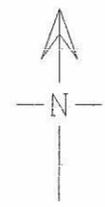
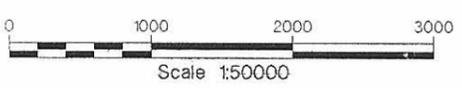
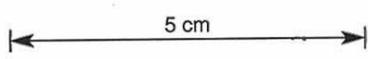
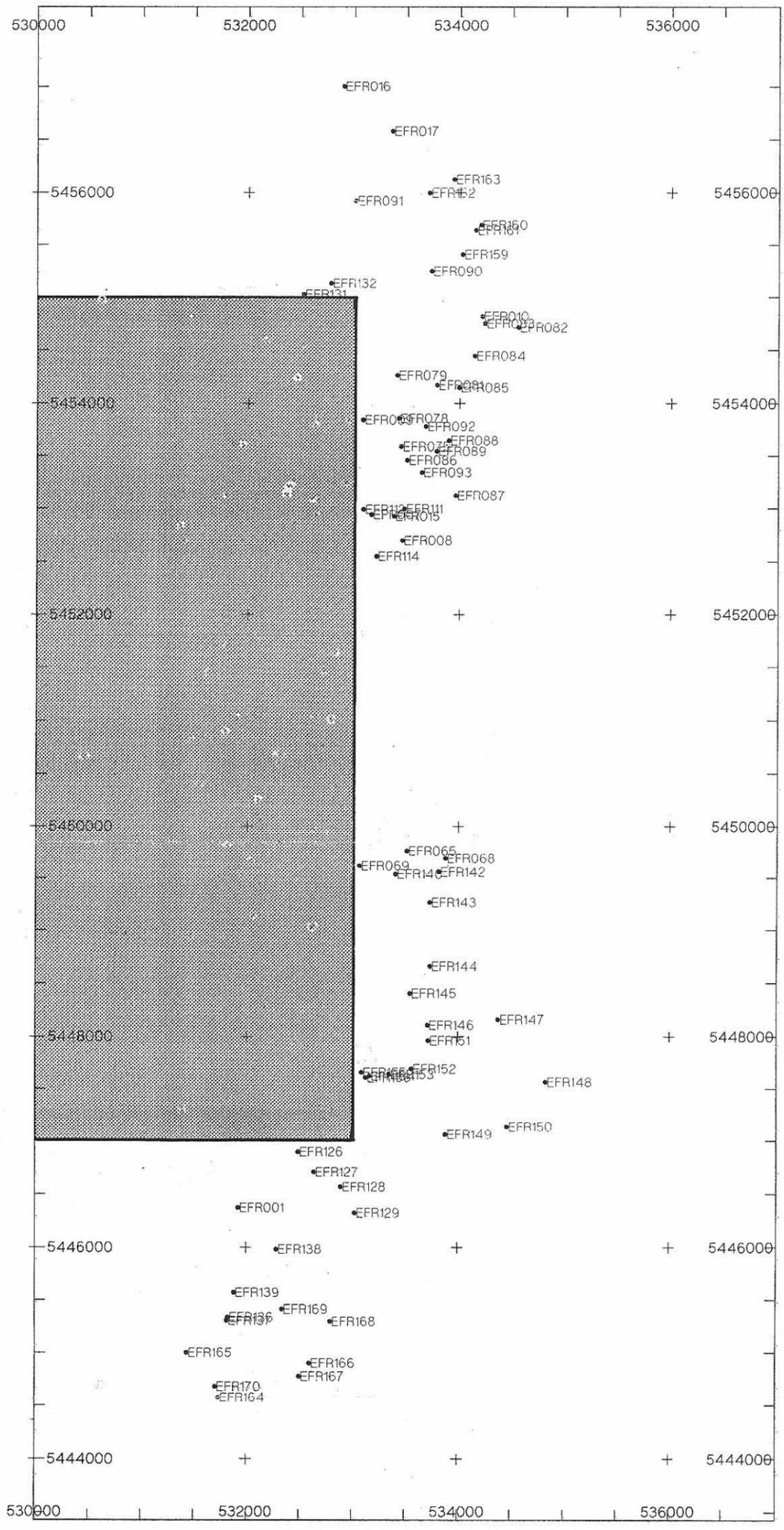
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**ANGLO AUSTRALIAN RESOURCES NL**

E38/94 North East Tasmania  
Plan showing tenement  
retained and relinquished

GEO:	SCALE 1:100000	REPORT:Surrender
DRAWN: D. Kruger	DATE: 30-06-1999	PLAN:1



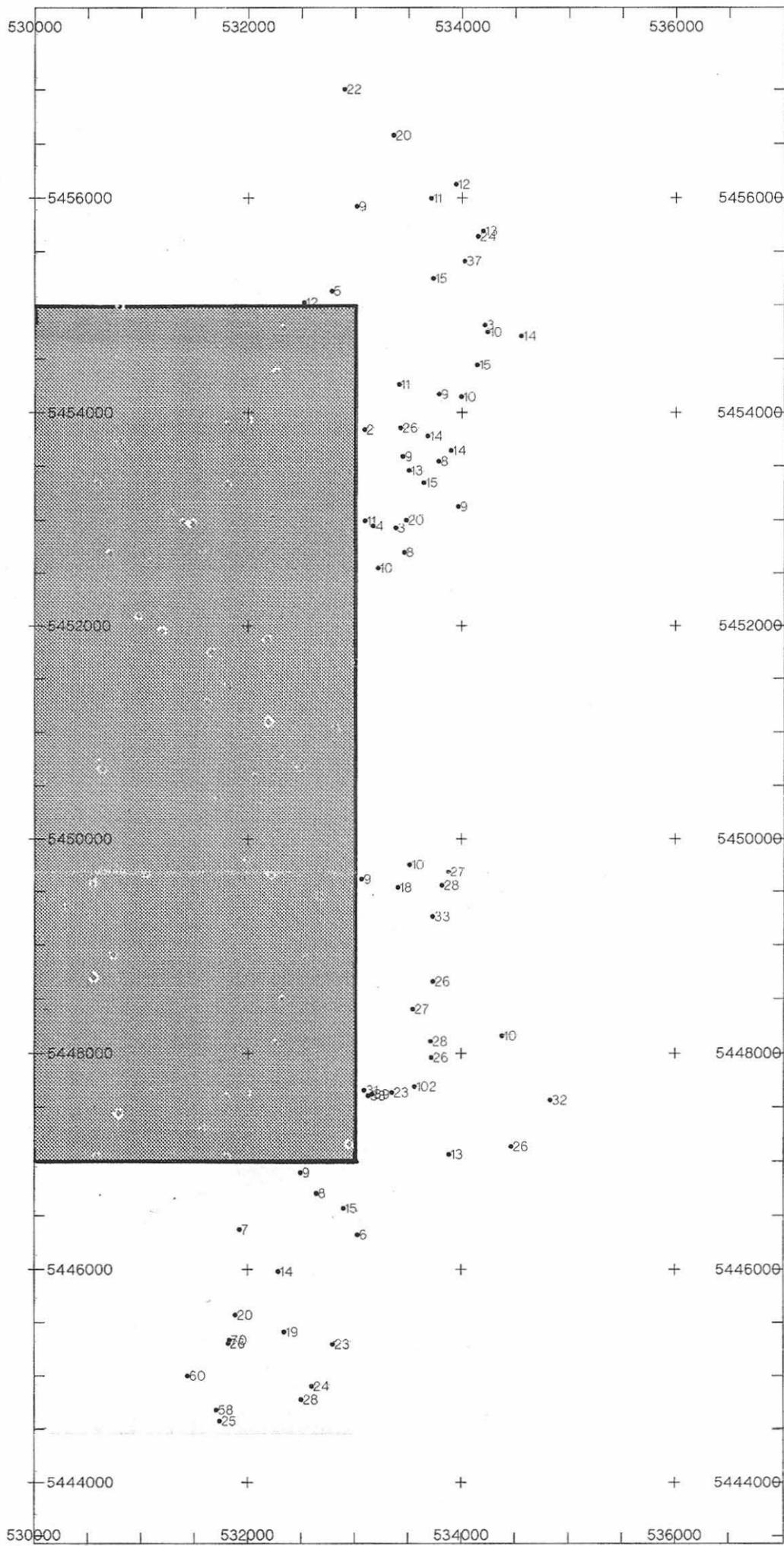
**ANGLO AUSTRALIAN RESOURCES NL**

E38/84 (Relinquished)  
Rock Chip Sample Locations

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DRAWN: D. Kruger	DATE: 01-07-1999	PLAN:2

183011





5 cm

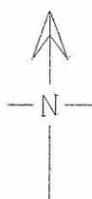
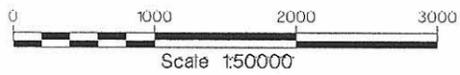
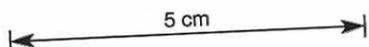
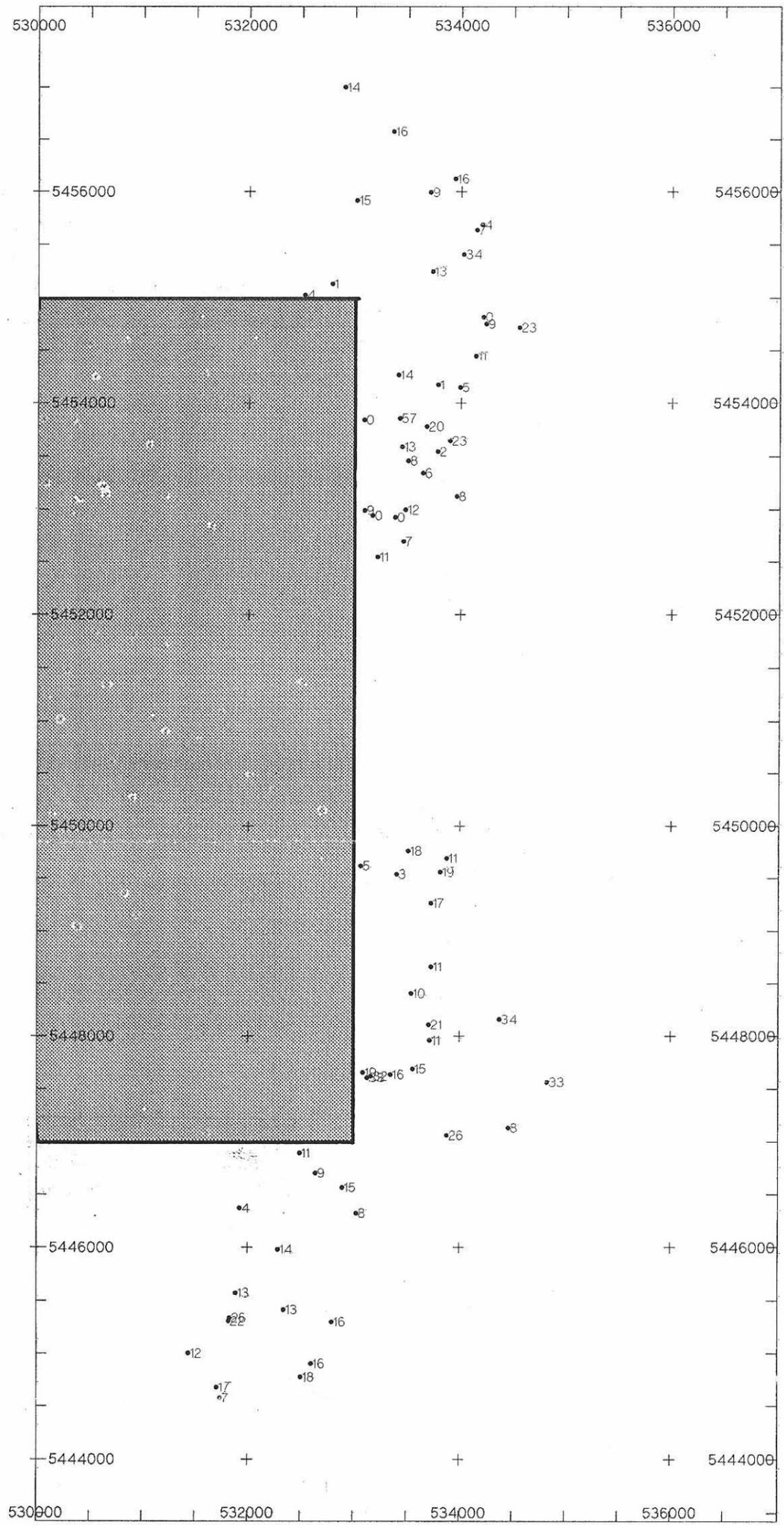


**ANGLO AUSTRALIAN RESOURCES NL**

E38/94 (Relinquished)  
Cu rock chip results  
Cu values in ppm

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DRAWN: D. Kruger	DATE: 01-07-1999	PLAN:4

185013

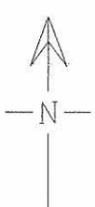
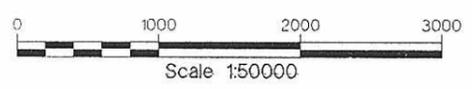
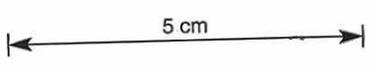
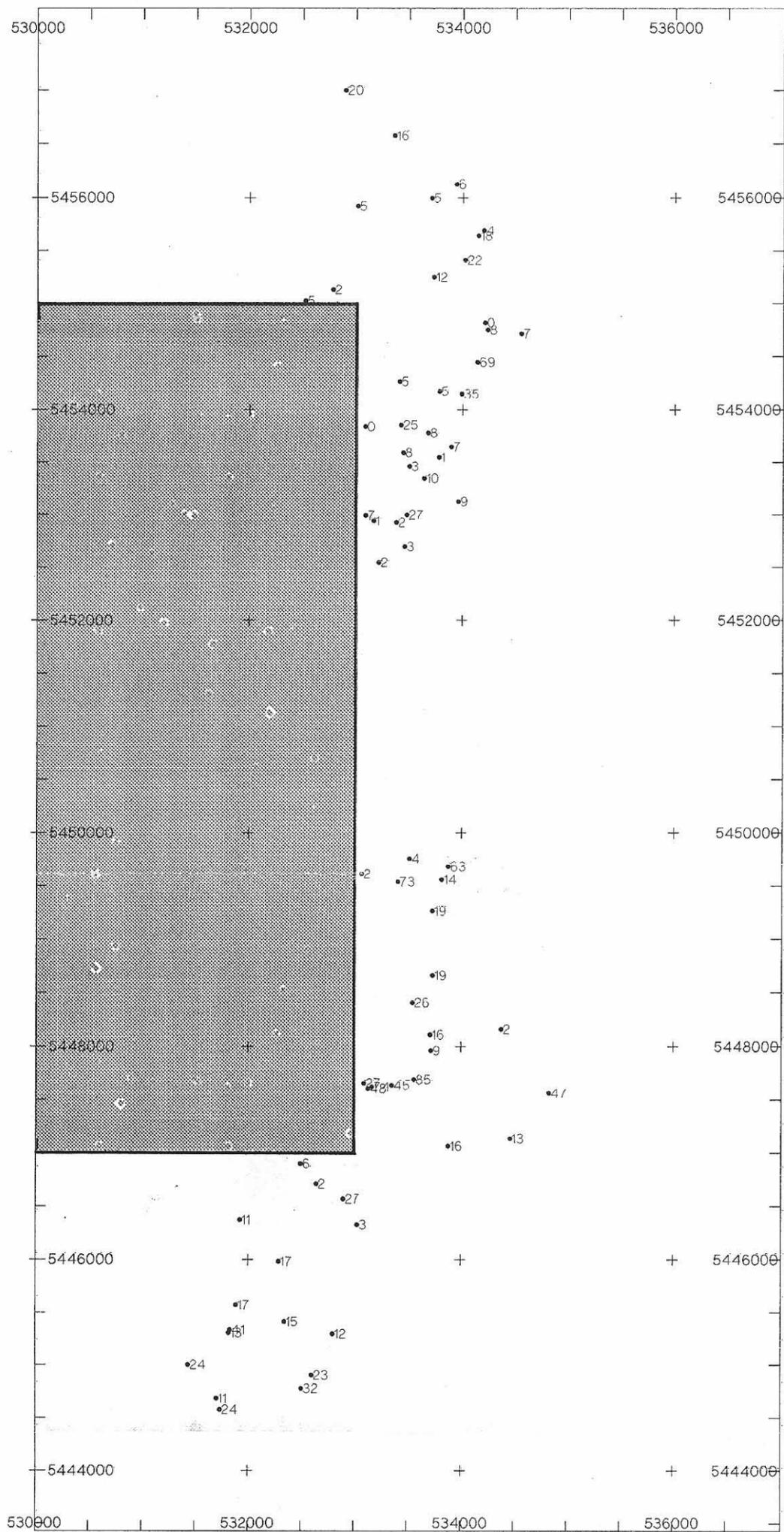


**ANGLO AUSTRALIAN RESOURCES NL**

E38/94 (Relinquished)  
 Pb rock chip results  
 Pb values in ppm

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185014

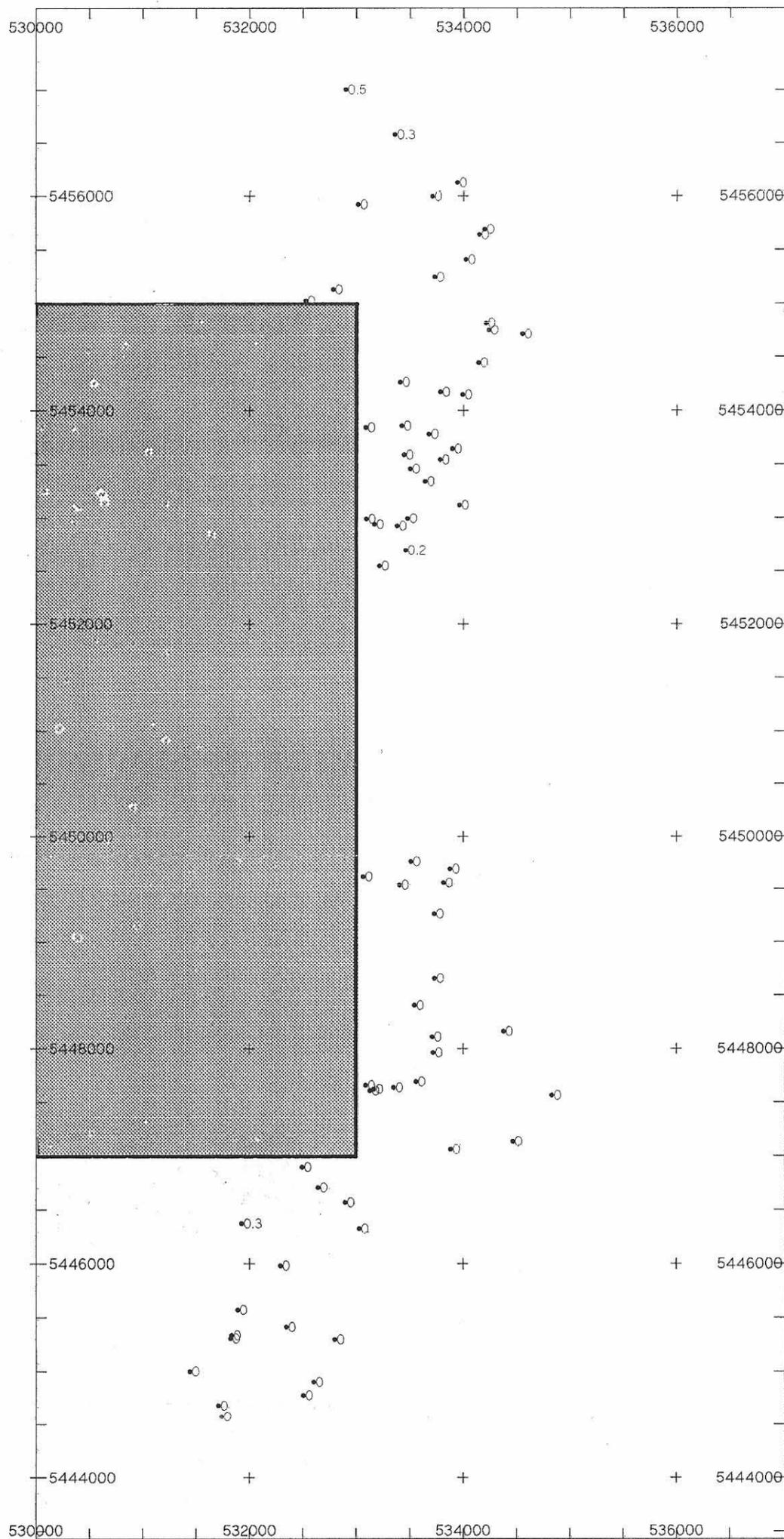


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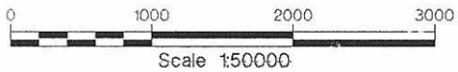
E38/94 (Relinquished)  
 Zn rock chip results  
 Zn values shown in ppm

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185015



5 cm



**ANGLO AUSTRALIAN RESOURCES NL**

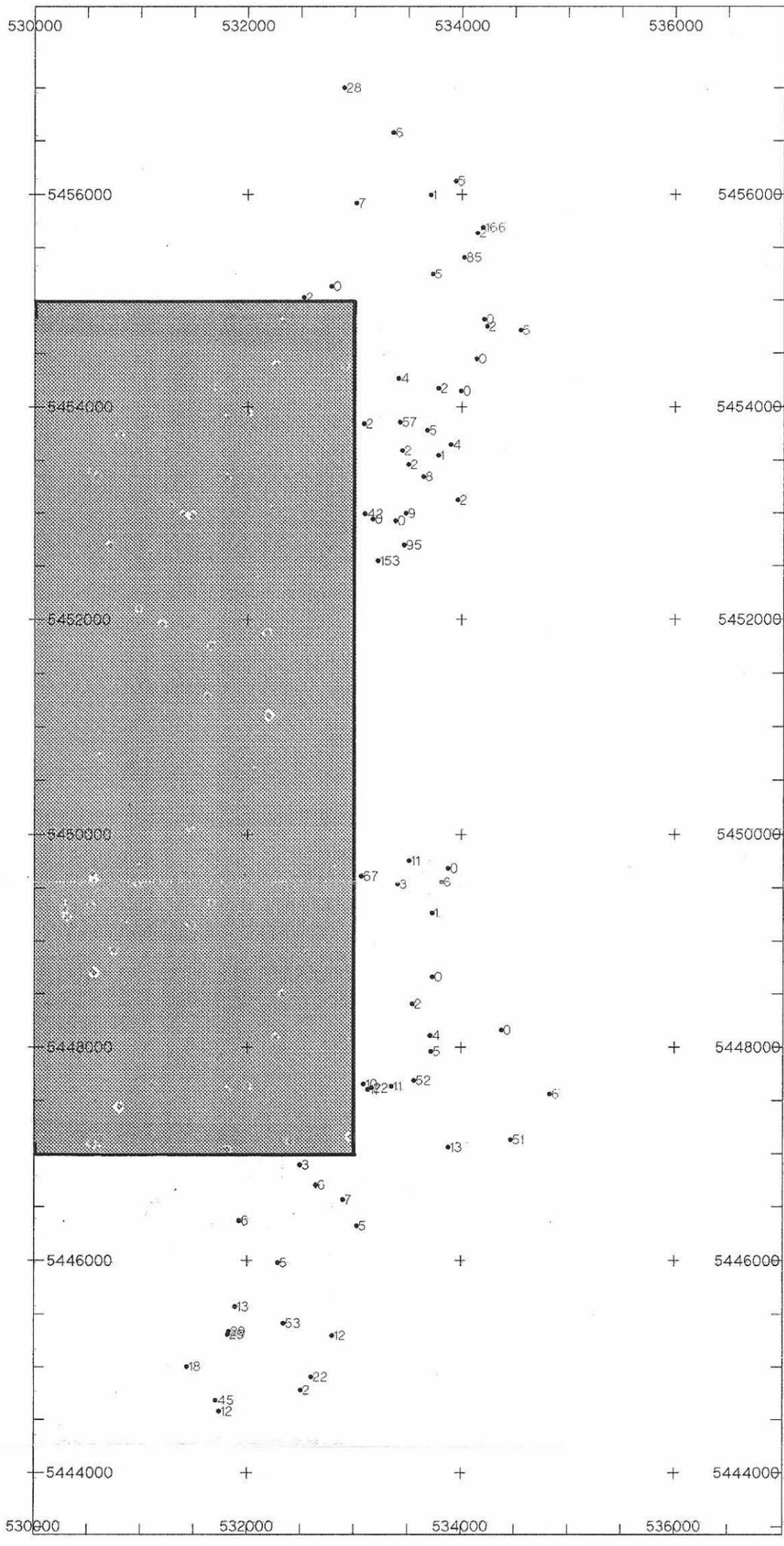
E38/94 (Relinquished)

Ag rock chip results

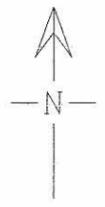
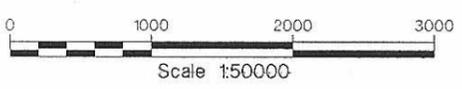
Ag values shown in ppm

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185016

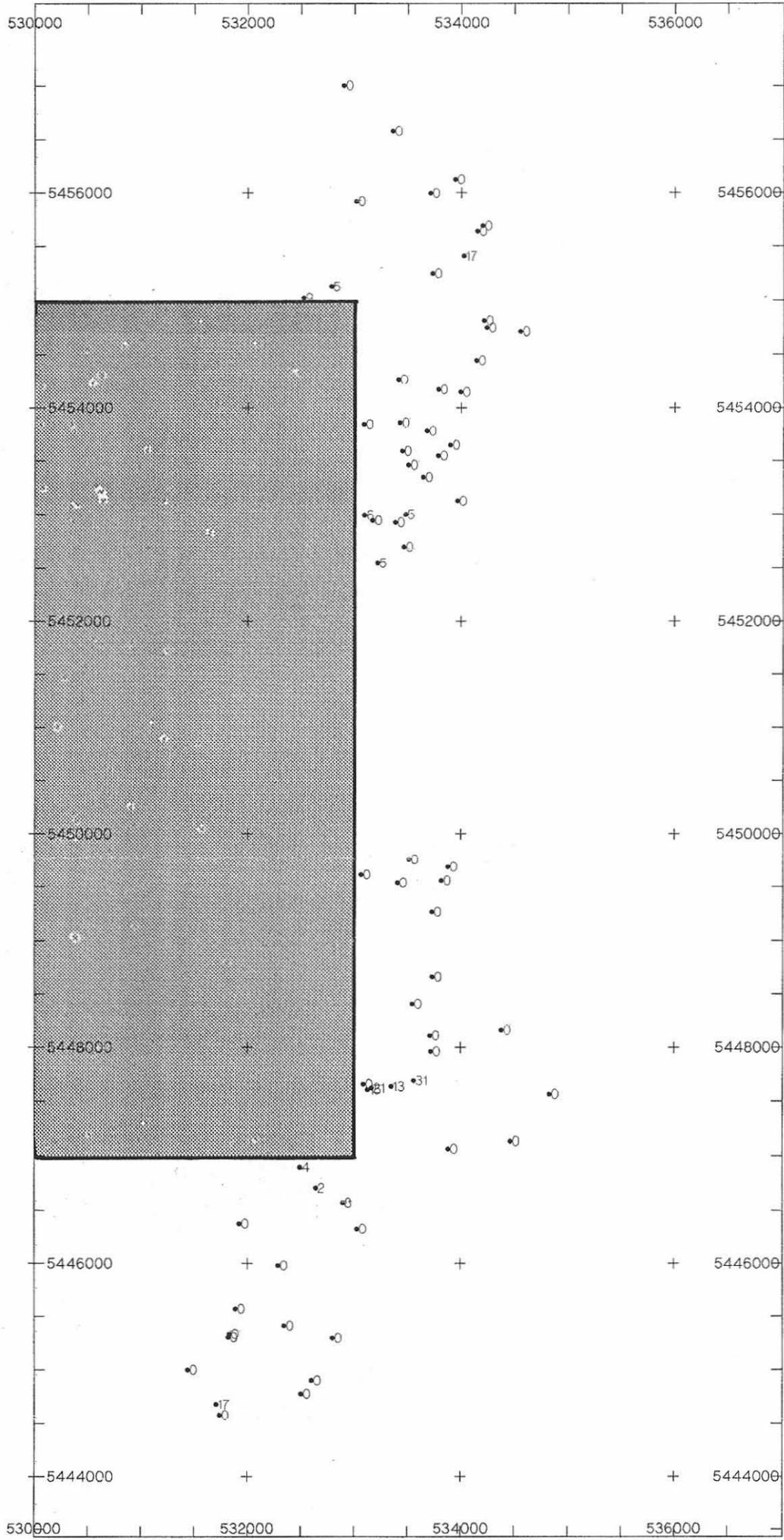


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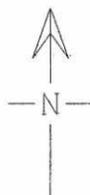
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E38/94 (Relinquished)		
As rock chip results		
As values in ppm		
GEO:	SCALE 1:50000	REPORT:Surrender
DRAWN: D. Kruger	DATE: 01-07-1999	PLAN:8

185017



5 cm

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Scale 1:50000

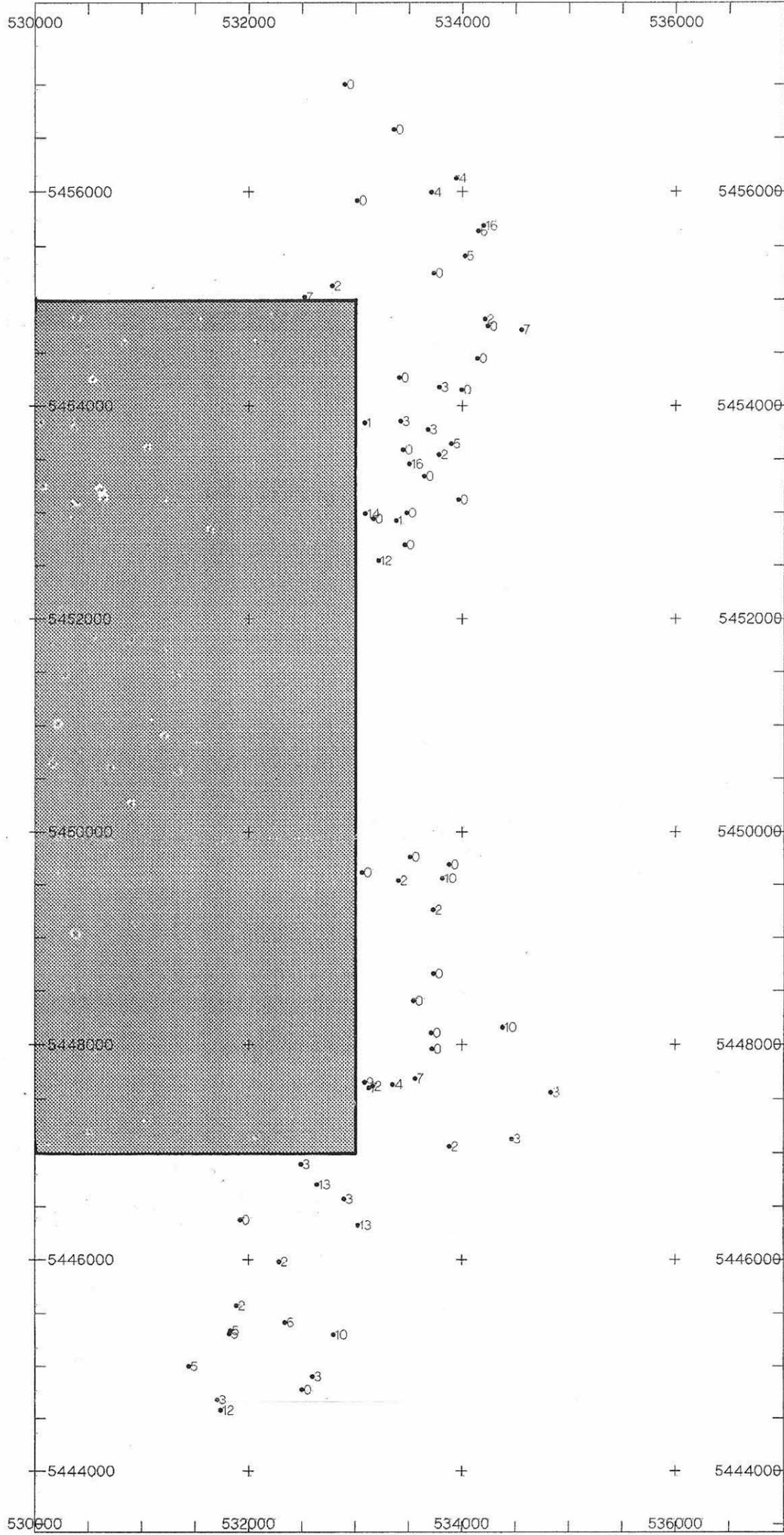


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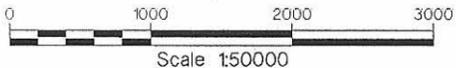
E38/94 (Relinquished)  
Bi rock chip results  
Bi values in ppm

GEO:	SCALE 1:50000	REPORT: Surrender
DRAWN: D. Kruger	DATE: 01-07-1999	PLAN: 9

185018

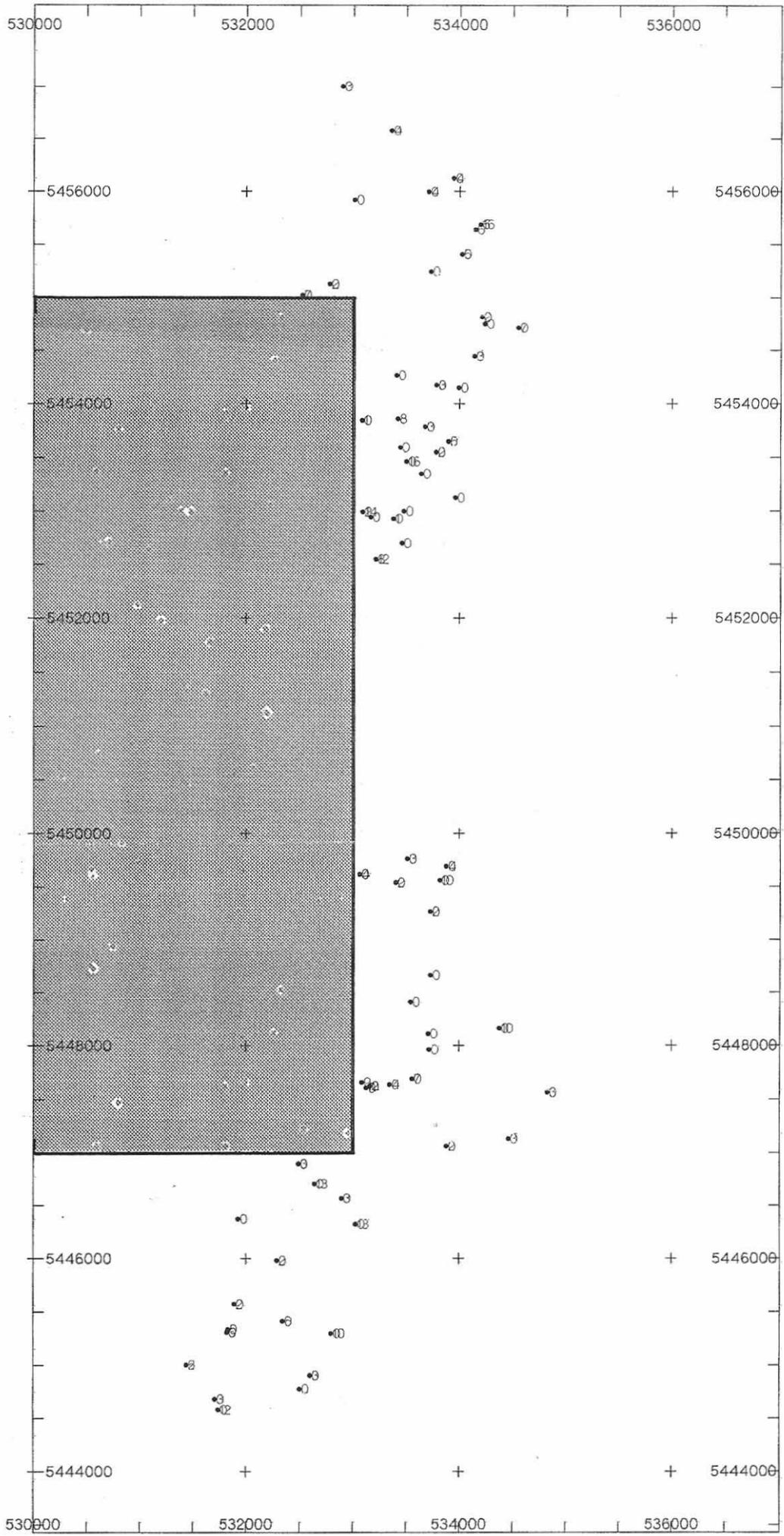


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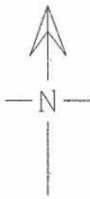


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E38/94 (Relinquished)		
Mo rock chip results		
Mo values in ppm		
GEO:	SCALE 1:50000	REPORT:Surrender
DRAWN: D. Kruger	DATE: 01-07-1999	PLAN:10

185019

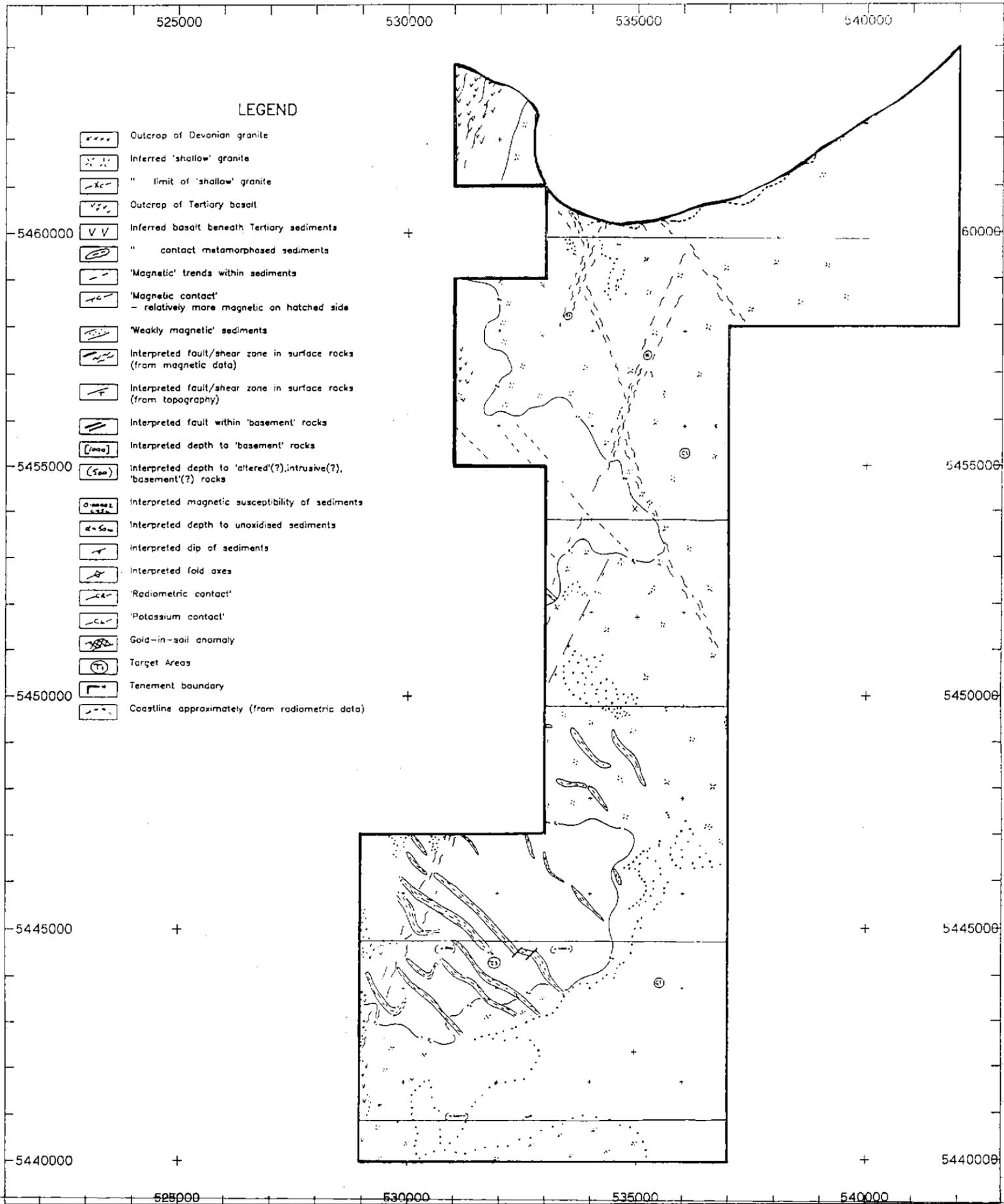


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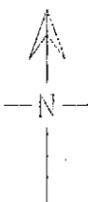
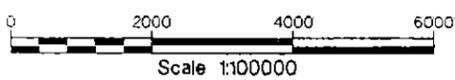


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E38/94 (Relinquished)		
Sb rock chip results		
Sb values in ppm		
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DRAWN: D. Kruger	DATE: 01-07-1999	PLAN:11

185020



5 cm



ANGLO AUSTRALIAN RESOURCES NL

E38/94 North East Tasmania  
 Partial Surrender Showing  
 Aeromagnetic Interpretation

GEO:	SCALE 1:100000	REPORT: Surrender
DRAWN: D. Kruger	DATE: 30-06-1999	PLAN: 12

185021

**APPENDIX A**

Sample No	Easting	Northing	Au (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Bi (ppm)	Mo (ppm)	Sb (ppm)
EFR001	531925	5446375	0	7	4	11	0	6	0	0	0
EFR007	533170	5452945	0.001	4	0	1	0	0	0	0	0
EFR008	533463	5452698	0.11	8	7	3	0	95	0	0	0
EFR009	533088	5453844	0.001	2	0	0	0	2	0	1	0
EFR010	534213	5454818	0	3	0	0	0	0	0	2	0
EFR015	533383	5452928	0	3	0	2	0	0	0	1	0
EFR016	532900	5457005	0.003	22	14	20	0	28	0	0	3
EFR017	533360	5456580	0	20	16	16	0	6	0	0	4
EFR065	533515	5449760	0.001	10	18	4	0	11	0	0	3
EFR068	533880	5449690	0	27	11	63	0	0	0	0	4
EFR069	533066	5449617	0	9	5	2	0	67	0	0	4
EFR075	533447	5453593	0	9	13	8	0	2	0	0	0
EFR078	533425	5453859	0.001	26	57	25	0	57	0	3	8
EFR079	533411	5454266	0	11	14	5	0	4	0	0	0
EFR081	533786	5454175	0.001	9	1	5	0	2	0	3	0
EFR082	534555	5454716	0	14	23	7	0	5	0	7	0
EFR083	534239	5454752	0	10	9	8	0	2	0	0	0
EFR084	534142	5454447	0	15	11	69	0	0	0	0	3
EFR085	533995	5454150	0	10	5	35	0	0	0	0	0
EFR086	533506	5453462	0	13	8	3	0	2	0	16	0
EFR087	533966	5453126	0	9	8	9	0	2	0	0	0
EFR088	533899	5453649	0.001	14	23	7	0	4	0	5	0
EFR089	533784	5453548	0	8	2	1	0	1	0	2	0
EFR090	533732	5455250	0	15	13	12	0	5	0	0	0
EFR091	533016	5455922	0	9	15	5	0	7	0	0	0
EFR092	533680	5453783	0	14	20	8	0	5	0	3	0
EFR093	533645	5453347	0	15	6	10	0	8	0	0	0
EFR111	533481	5453000	0	20	12	27	0	9	5	0	0
EFR112	533094	5452994	0	11	9	7	0	42	6	14	2
EFR114	533218	5452549	0.004	10	11	2	0	153	5	12	8
EFR126	532493	5446898	0	9	11	6	0	3	4	3	0
EFR127	532643	5446708	0	8	9	2	0	6	2	13	0

Sample No	Easting	Northing	Au(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Bi (ppm)	Mo (ppm)	Sb (ppm)
EFR128	532897	5446570	0	15	15	27	0	7	8	3	0
EFR129	533029	5446326	0	6	8	3	0	5	0	13	0
EFR131	532524	5455027	0	12	4	5	0	2	9	7	0
EFR132	532783	5455132	0	5	1	2	0	0	5	2	0
EFR136	531832	5445338	0	70	26	41	0	29	0	5	0
EFR137	531822	5445308	0.001	26	22	13	0	25	0	5	0
EFR138	532289	5445983	0.001	14	14	17	0	5	0	2	0
EFR139	531889	5445573	0	20	13	17	0	13	0	2	0
EFR140	533407	5449540	0.001	18	3	73	0	3	0	2	0
EFR142	533819	5449560	0	28	19	14	0	6	0	10	0
EFR143	533732	5449267	0	33	17	19	0	1	0	2	0
EFR144	533735	5448662	0.001	26	11	19	0	0	0	0	0
EFR145	533547	5448408	0	27	10	26	0	2	0	0	0
EFR146	533713	5448111	0	28	21	16	0	4	0	0	0
EFR147	534382	5448162	0	10	34	2	0	0	0	10	0
EFR148	534833	5447566	0	32	33	47	0	6	0	3	0
EFR149	533885	5447065	0	13	26	16	0	13	0	2	0
EFR150	534468	5447136	0	26	8	13	0	51	0	3	0
EFR151	533721	5447963	0	26	11	9	0	5	0	0	0
EFR152	533562	5447692	0.001	102	15	85	0	52	31	7	0
EFR153	533351	5447638	0	23	16	45	0	11	13	4	0
EFR154	533165	5447623	0	39	32	74	0	22	21	2	0
EFR155	533090	5447658	0	31	19	27	0	10	0	9	0
EFR156	533130	5447608	0.001	38	33	48	0	17	15	7	0
EFR159	534025	5455411	0	37	34	22	0	85	17	5	0
EFR160	534200	5455692	0.015	13	4	4	0	166	0	16	5
EFR161	534150	5455642	0	24	7	18	0	2	0	6	0
EFR162	533711	5455998	0	11	9	5	0	1	0	4	0
EFR163	533944	5456127	0	12	16	6	0	5	0	4	0
EFR164	531741	5444580	0	25	7	24	0	12	0	12	0
EFR165	531441	5445003	0.001	60	12	24	0	18	0	5	2
EFR166	532603	5444905	0	24	16	23	0	22	0	3	0

Sample No	Easting	Northing	Au(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Bi (ppm)	Mo (ppm)	Sb (ppm)
EFR167	532505	5444779	0	28	18	32	0	2	0	0	0
EFR168	532800	5445300	0	23	16	12	0	12	0	10	0
EFR169	532345	5445415	0.001	19	13	15	0	53	0	6	0
EFR170	531710	5444683	0	58	17	11	0	45	17	3	0

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