

CRA EXPLORATION PTY. LIMITED

of M	A.O.	C.G.	E.O.	D.S.M.E
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REF. No. 6773/83				

PROGRESS REPORT ON EL 36/80INTERVIEW - PINNACLESWESTERN TASMANIAFOR THE PERIOD ENDING 30th JUNE, 1983.

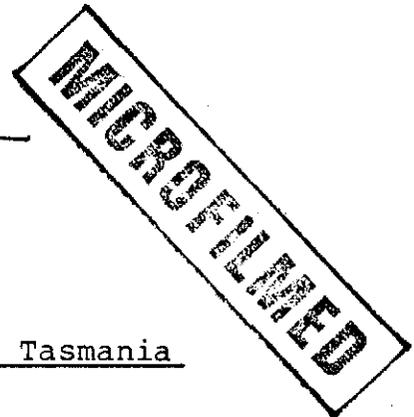
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Date : 10th June, 1983.

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1. SUMMARY

During 1982-83 summer period, exploration has been conducted over the Interview River Area (Dickson and Weber, 1983) and later in the vicinity of the Interview - Pinnacles. Exploration work consisted of locating aeromagnetic anomalies on the ground with reconnaissance ground magnetic traverses. Selected anomalies were mapped and soil geochemical sampling completed. Stream sediment sampling of creeks in the vicinity of Interview Pinnacles was undertaken.

The Interview - Pinnacles aeromagnetic anomaly corresponds to a unit of disseminated magnetite. Soil sampling over the siltstone sequence outlined a low-order lead anomaly (210 ppm) with corresponding increases in Zinc and Barium. A stream sediment sample taken south of Interview - Pinnacles contained anomalous basemetal values. This sample was taken in a fault/dolerite dyke zone and should be followed up.

2. INTRODUCTION

Exploration Licence EL 36/80 was granted on the 29th May, 1981. The licence is subject to a Joint Venture agreement with Geopeko Limited.

The EL 36/80 was applied for to cover the southern extensions of the Balfour - Norfolk magnetic trend and also the eastern side of the Interview Copper workings and minor galena mineralisation.

An aeromagnetic survey commissioned during 1981 by the Tasmanian Department of Mines outlined a number of anomalies. Several of these anomalies were followed up earlier in the field season (Dickson and Weber, 1983) and this report outlines work completed during April - May, 1983. The Interview - Pinnacles magnetic anomaly was located on the ground and several ground magnetometer traverses were completed.

Mapping and bedrock geochemical sampling were undertaken over the magnetic anomaly.

An attempt to locate the Mount Sunday anomaly was unsuccessful.

Streams near the Mount Sunday - Interview Pinnacles aeromagnetic anomalies were sampled.

Access to the area is difficult and can only be gained during the dry summer months.

3. CONCLUSIONS

1. The Interview - Pinnacles magnetic anomaly is caused by disseminated magnetite within an Interview Siltstone unit. A low-order Pb-Zn-Ba anomaly occurs within this unit.
2. Stream sediment sampling south of Interview - Pinnacles revealed an area containing moderate base metal values.

4. RECOMMENDATIONS

1. The northern line (5200N) be extended to the west to cover the northern extension of the siltstone unit that contained a low order Pb-Zn-Ba soil anomaly on line 5000N.
2. The anomalous (Pb-Zn) stream sediment anomaly south of Interview - Pinnacles be followed up to determine whether there is potential for base metal mineralisation.
3. The stream sediment sampling programme be extended to cover the whole of the licence area.

5. REGIONAL GEOLOGY

The area covered in this report is relatively inaccessible and little previous detailed mapping has been completed. The first report of 'any' consequence was Bulletin 10 written by L.K. Ward, 1910 when inspecting the mineral leases in this area.

The Rocky Cape area is underlain by Adelaidean Group equivalents (1400 - 600Ma). The dominant rocks in the southern section of EL 36/80 are the Lagoon River Quartzites and the Interview Siltstone (Bell 1972). The Lagoon River Quartzites are usually well bedded, fairly massive and light grey to white in colour. Mines Department mapping (1:63360 Pieman Heads sheet) record they are well sorted and cross-bedded. These features were not found to be prominent in the field, and are probably masked by secondary silicification. The Interview Siltstone sequence form a monotonous unit of finely laminated light grey to medium green-grey chloritic siltstones showing many sedimentary features. These include minor bedding displacements, graded bedding, cross-bedding and scour and fill structures. This unit often contains thin quartzite bands and a moderate to strong cleavage (axial plane) has developed. Some sub-units contain disseminated magnetite giving rise to magnetic anomalies.

These two formations have been intruded at about 725 Ma (Solomon 1981) by a dolerite dyke swarm which have been called the Cooee Dolerites from the type section on the north coast. The dolerite dykes are thought to have been intruded at the commencement of the Penguin Orogeny which later metamorphosed both the sedimentary units and the dolerite dykes. The dykes are generally narrow elongate bodies some concordant and some discordant to the surrounding sediments (Spry 1957). Spry also noted they were broken up by north-west trending faults. In thin section descriptions (see Petrology report Appendix Three) the dykes show extensive alteration and have been described as gabbo's which have undergone metamorphism to amphibolites.

During 1980-1981 CRA Exploration - Geopeko Ltd. Joint Venture partners commissioned Professor S.W. Carey to complete a detailed airphoto interpretation over EL 36/80. The results of this work have been reported previously (Weir 1982, Dickson 1982).

6. PRIOR EXPLORATION/SURVEYS

6.1 Regional Mapping

The first known report is in 1901 when Waller visited and reported on the Interview Granite Tungsten workings about 5 kilometres west of the copper workings. In 1911 Ward, K.L. produced Bulletin 10 where he described the general geology of the mineral occurrences/leases he inspected. Apart of the Interview River Copper and Galena workings no mineral leases or workings are known in the portion of EL 36/80 covered by this report.

In 1957 Spry and Ford described the Geology of the Corinna - Pieman Heads area and in 1969 the Tasmanian Department of Mines produced a 1:63360 scale Geology map of the area.

6.2 Other Companies

6.2.1 Pickands Mather (P.M.I.) EL 12/65

Pickands Mather completed a large stream sediment survey throughout their licence area EL 12/65. The results of this survey were computerised by Weir (1982).

6.2.2 ACI Syndicate EL's 48/70 and 49/70

They conducted an extensive stream sediment sampling programme between Granville Harbour and Sandy Cape looking for tin and tungsten mineralisation associated with Devonian granites.

The ACI Syndicate spent 24 hours appraising the Interview Copper workings using a helicopter (Bell 1972). They completed a stream sediment survey in the area of the workings, mapped the workings and surrounding area. This map with extra CRAE information can be found in Dickson and Weber 1983.

They concluded the mineralisation is developed within hydrothermal veins with a possible genetic relationship to the nearby Interview Granite. Other non-hydrothermal lode systems occur which carry pyrite and haematite but these were not worthy of follow-up work.

6.2.3 Esso Australia EL 2/73

Esso contracted Geoterrex to fly an INPUT survey over the licence area. A helicopter followup of anomalies followed. No INPUT anomalies were recorded in the portion of EL 36/80 covered in this report.

6.3 CRA Exploration EL 1/77 and EL 36/80

A panned concentrate survey in 1977 was completed at a density of one sample per 30 to 50 square kilometres.

A consultants report on the lead-zinc potential of the Younger Precambrian rocks of N.W. Tasmania (Legge 1980) concluded the Interview Copper workings area was not favourable for syngenetic/stratabound mineralisation.

In 1980-1981 Professor S.W. Carey was commissioned to complete a detailed airphotograph interpretation of this area. The results were recorded in Dickson (1982).

During 1982 all previous stream sediment sampling on the West Coast of Tasmania was computerised. Statistical parameters were calculated and the results plotted. Results are recorded in a report by Weir (1982). The results for EL 36/80 can be found in Dickson (1982) which also included stream sediment samples taken during a reconnaissance helicopter trip along the Lagoon River just west of the Interview licence area. Although samples were collected outside EL 36/80 many samples were collected from streams draining the licence area.

The last CRAE report on this area Dickson and Weber (1983) outlined exploration work completed earlier in the field season over the Interview Copper workings and adjacent magnetic anomalies.

6.4 West Coast Regional Aeromagnetic Survey

During 1981 the Tasmania Department of Mines with the assistance of a special grant from the Federal Government flew a low level aeromagnetic survey covering an area from Macquarie Harbour to Mt. Bischoff and from the coast east to Tyennan Block. This survey was the first major aeromagnetic survey undertaken since the RTZ Aeromagnetic survey in 1956. The 1981 survey outlined magnetic features in greater detail and when combined with results from the CRAE geochemical compilation lead to the selection of a

number of exploration targets.

7. EXPLORATION

7.1 Interview Copper Anomaly

No further exploration work has been completed since the last report (Dickson and Weber 1983) apart from a helicopter reconnaissance trip. The old workings were inspected and it was agreed that the quartz-magnetite-sulphide horizon trending east-west through the No. 3 workings should be further delineated with ground magnetometer traversing and bedrock geochemical sampling.

7.2 Silver Reward Area

The shaft and surrounding area were inspected in the helicopter reconnaissance trip. The surrounding siltstones show evidence of a carbonate component and surrounding rock samples collected are anomalous in lead.

This area is recommended for further gridding, mapping, ground magnetics and soil rock geochemical sampling, both around the old workings and over the elongate magnetic anomaly to the south.

7.3 Interview - Pinnacles Anomaly

This anomaly was located on the ground and two lines (5000N and 5200N) of ground magnetometer readings taken. Bedrock geochemical sampling was completed over the magnetic zones (refer plans TASH 1417, 1421, 1418, 1422). The ground magnetics indicate the anomaly is caused by disseminated magnetite within the Interview

Siltstone. However at one of the magnetic peaks there is a minor lead anomaly (210 ppm and 80 ppm) with corresponding rises in the Zinc and Barium assays. This zone should be followed north and south to determine whether the basemetal values increase and indicate underlying mineralisation.

7.4 Mount Sunday Anomaly

Two traverses were completed over the plotted position of this anomaly but it was not located.

7.5 Stream Sediment Sampling

A total of thirteen stream sediment samples were collected in the vicinity of the Interview - Pinnacles area. The results generally reflect background values however sample 975450 is anomalous in lead and zinc. This sample was collected within a fault zone which also contains a dolerite dyke. A thin section description of this rock can be found in Appendix Two Sample 975448.

The results of the stream sediment sampling can be found in Appendix One and plotted on plans TASH 1413 and 1423. Equivalent values have been plotted for Copper, Lead and Zinc as well. These equivalent values were derived in the Rocky Cape Stream Sediment Survey by Weir (1982). Some equivalent values from this study have been plotted on plan TASH 1423.

The equivalent value range in parts per million for copper, lead and zinc can be found in Table 1 (following).

TABLE ONE (from Weir 1982)

<u>Cu</u>		<u>Pb</u> (+ 100ppm treated as anomalous)		<u>Zn</u>	
<u>Symbol</u>	<u>Range</u>	<u>Symbol</u>	<u>Range</u>	<u>Symbol</u>	<u>Range</u>
-	<0.1	-	<1	-	<0.1
1	0.1-3	1	1-3	1	0.1-36
2	3-9	2	3-6	2	36-56
3	9-18	3	6-18	3	56-126
4	18-40	4	18-28	4	126-501
5	40-112	5	28-40	5	501-100000
6	112-10000	6	40-71	+	>100000
7	>10000	7	71-100		
		+	>100		

The northern portion of EL 36/80 should be stream sediment sampled to determine its potential for basemetal and tin/tungsten mineralisation.

8. REFERENCES

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9. KEYWORDS

Burnie SK 55-3, Precambrian - Proterozoic - Up, assays -
geochem, copper, lead, zinc, tin, tungsten, Geochem - drainage,
Geophys - mag.

10. LIST OF PLANS

TASH 1414 EL 36/80 Interview - Pinnacles Area 1 : 500 000
Area Of Exploration - Unavailable

TASH 1411 ✓ Interview Pinnacles EL 36/80 1 : 50 000
Geology - Aeromagnetic Anomalies (In Back Pocket)
Grid Plan

TASh 1413 ✓	Interview Pinnacles EL 36/80 Geology, Stream Sediment, Rock Sample, Locations And Results	1 : 25 000
TASh 1417 ✓	Interview Pinnacles Anomaly Ground Magnetics Line 5000N	1 : 5000
TASh 1421 ✓	Interview Pinnacles Anomaly Sample Results Line 5000N	1 : 5000
TASh 1418 ✓	Interview Pinnacles Anomaly Ground Magnetics Line 5200N	1 : 5000
TASh 1422 ↓	Interview Pinnacles Anomaly Sample Results Line 5200N	1 : 5000
TASh 1423 ↓	Interview Pinnacles EL 36/80 Regional Stream Sediment Results	1 : 50 000 (In Back Pocket)

11. LIST OF APPENDICIES

APPENDIX ONE : Geochemical Sampling Ledgers

APPENDIX TWO : Petrological Descriptions

APPENDIX ONE

GEOCHEMICAL SAMPLING LEDGERS

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name: INTERVIEW - PINNACLES No. 378 sample numbers: 975583 - 602 Collected by: GBL
 Area / Prospect: INTERVIEW PINNACLES ANOMALY
 Map / Photo reference: A 02143
 Sheet no. ONE
 Date: 17.04.83
 DPO no. 30228
 Analysed by: ANALABS (COOSE)

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Bi	As	Au	Ba	W			Sn
		oc	o/c sample type ***																		
		f	s sample type ****																		
975583	S	PA	1m	C'					X	X	65	0.5	X	100		642	X	3	4725E	Sl gr - mod yellow clay.	
975584	S	PA	80cm	C'					X	X	45	X	X	100		602	X	X	4750E	Sl gr yellow gy clay.	
975585	S	PA	70cm	C'					S	X	50	X	10	X		625	X	4	4775E	Mod yellow clay.	
975586	S	PA	70cm	C'					S	X	50	X	X	X		689	X	X	4800E	Mod - al. gr yellowish clay.	
975587	S	PA	70cm	C'					S	X	45	X	10	X		674	X	X		DUPLICATE.	
975588	S	PA	50cm	B ₂					X	S	30	X	10	100		570	X	X	4825E	Gy-gr clays	
975589	S	PA	50cm	B ₂ -C'					S	S	45	X	10	X		584	X	3	4850E	Mod br-gy clays with 40% blue gr weathered siltstones chips.	
975590	S	PA	20cm	B ₂					S	S	45	X	X	X		567	X	4	4875E	Sl yellow gy clays over siltstones.	
975591	S	PA	90cm	C'					S	X	75	X	10	X		621	X	X	4900E	Gy yellow clays	
975592	S	PA	90cm	C'					S	X	80	X	X	X		655	X	6	4925E	Mod grad-gy yellow weathered siltstone	
975593	S	PA	70cm	B ₁					S	X	65	X	X	X		601	X	X	4950E	Gy-gr al yellow clays.	
975594	S	PA	60cm	B ₂ -C'					S	X	55	X	X	100		575	X	X	4975E	Yellow-gr tags clays 50-50.	
975595	S	PA	1m	C'					10	S	55	X	X	X		720	X	4	5000E	DUPLICATE - Mod - bright yellow clays and weathered siltstones.	
975596	S	PA	1m	C'					10	X	55	X	X	X		709	X	X			
975597	S	PA	70cm	C'					15	X	75	X	10	X		591	X	X	5025E	mod - bright yellow clays.	
975598	S	PA	15m	B ₂ -C'					10	S	45	X	X	X		557	X	X	5050E	40% lt gy weathered siltstone 60% mod br B ₂ .	
975599	S	PA	70cm	B ₂ -C'					10	X	60	X	X	X		485	X	X	5075E	mod br mudstone blue-gy weathered siltstone	
975600	S	PA	50cm	B ₂ -C'					S	S	65	X	10	X		515	10	X	5100E	yellow gr-gy weathered clay-siltstone with 60% mod br-gy clays B ₂ .	
975601	S	PA	60cm	B ₂ -C'					15	210	180	2.0	X	X		915	X	X	5125E	mod yellow br + mod yellow clays.	
975602	S	PA	20cm	B ₁					S	95	80	1.0	X	X		643	X	X	5150E	Mod-br clays very minor weathered gr-gy or yellow siltstones.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type auger hole or pit depth m A B or C horizon

C.B.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name: INTERVIEW - PINNACLES No. 36/80 sample numbers: 975603 - 623 Collect by: CBW Sheet no. Two
 Area / Prospect: INTERVIEW - PINNACLES ANOMALY Date: 7.1.83
 Map / Photo reference: A 02143 Analysed by: ANALABS (COOEE) DPO no. 3028

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Bi	As	Au	Ba	W	Sn		
		o/c sample type ***																		
		s sample type ****																		
975603	S	PA	1m	'C'				x	15	75	x	x	x		720	x	x	5175E	DUPLICATE - Mod yellow clays	
975604	S	PA	1m	'C'				x	5	65	x	x	x		702	x	x			
975605	S	PA	6cm	'C'				S	30	70	0.5	x	x		598	x	x	5200E	Gy-gr weathered siltstones	
975606	S	PA	15cm	'B ₁ '				S	15	35	x	x	x		530	x	x	5225E	Med gy-br clays	
975607	S	PA	15cm	'B ₂ '				S	10	35	x	x	x		638	x	4	5250E	Med br-gy clays over siltstones.	
975608	S	PA	30cm	'B ₂ C'				S	35	40	0.5	10	x		473	x	x	5275E	Lt gy clays 'C' + med br-gy clays B ₂ .	
975609	S	PA	1m	'C'				x	x	85	x	x	x		608	x	3	5300E	DUPLICATE - Pala-lt gr-gy siltstones	
975610	S	PA	1m	'C'				x	x	85	x	x	x		613	x	x			
975611	S	PA	90cm	'C'				S	x	50	x	10	x		709	x	x	5325E	Lt gr-gy weathered siltstones.	
975612	S	PA	1m	'C'				S	x	105	x	x	x		663	x	x	5350E	Lt gr-gy weathered siltstones	
975613	S	PA	1m	'C'				15	x	85	x	x	x		684	x	4	5375E	Lt yellowy gr-gy weathered siltstones.	
975614	S	PA	4cm	'C'				S	x	55	x	x	x		672	x	x	5400E	Lt yellowy gy clays with weathered gr-gy siltstone fragments.	
975615	S	PA	15cm	'C'				S	10	45	x	x	x		564	x	x	5425E	Med yellow-gy clays + weathered siltstones	
975616	S	PA	1m	'C'				S	x	105	0.5	x	x		630	x	x	5450E	DUPLICATE - Med yellow weathered siltstones.	
975617	S	PA	1m	'C'				S	5	105	0.5	x	x		630	x	4			
975618	S	PA	5cm	'C'				S	5	55	x	x	x		533	x	x	5475E	Gy-yellow clays with weathered siltstones	
975619	S	PA	1m	'C'				S	x	65	x	x	x		700	x	x	5500E	Lt yellow gy clays with weathered siltstone fragments.	
975620	S	PA	1.1m	'C'				x	x	85	x	x	x		673	x	x	5525E	Gy-gr weathered siltstones.	
975621	S	PA	80cm	'C'				S	5	35	x	x	x		683	x	x	5550E	Lt gy-olgr weathered siltstones.	
975622	S	PA	15cm	'C'				S	x	100	x	x	x		482	x	x	5575E	DUPLICATE - near 9% Pale-gy weathered siltstones.	
975623	S	PA	15cm	'C'				S	5	100	x	x	x		458	x	x			

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name: INTERVIEW - PINNACLES No. 2/80 Sample numbers: 975624 - 634 Collect by: CBW Sheet no: THREE
 Area / Prospect: INTERVIEW - PINNACLES ANOMALY Date: 18.04.83
 Map / Photo reference: Analysed by: ANALABS (COOFE) DPO no: 30228
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Bi	As	Au	Ba	W	Sn		
		o/c sample type ***																		
		s sample type ****																		
975624	S	PA	5cm	B ₁ B				S	x	35	x	x	x		353	x	x	5600E	On soil - some yellow + gy ga siltstones not good sample.	
975625	S	PA	1.2m	C'				S	x	165	x	x	x		710	x	x	5625E	Yellow gy-gy weathered siltstones.	
975626	S	PA	80cm	C'				S	x	100	x	x	x		590	x	x	5650E	Yellow gy-gy weathered siltstones + clays	
975627	S	PA	20cm	C'				x	x	85	x	x	x		567	x	x	5675E	70% lt gy weathered siltstones 30% mod bn clays	
975628	S	PA	11m	B ₂ C'				x	S	75	x	x	x		606	x	x	5700E	Gy-gy clays + siltstones + mod bn clays.	
975629	S	PA	20cm	C'				x	x	100	x	x	x		704	x	x	5725E	Yellow-gy clays - weathered siltstones	
975630	S	PA	30cm	B ₁ '				S	15	30	x	x	x		444	24	x	5750E	Tertiary gravels or qtz chips - blue-gy weathered siltstones - mod bn muds all 30% not a very good sample.	
975631	S	PA	30cm	B ₁ C'				x	S	50	x	x	x		586	x	x	5775E	mod bn clays with large fragments of siltstone - gy-gy and yellow.	
975632	S	PA	60cm	B ₂ C'				x	S	20	x	x	x		458	x	x	5800E	Mod gy clays with reef qtz? minor red-yellow weathered siltstones.	
975633	S	PA	40cm	B ₂ '				x	S	30	x	x	x		431	x	x	5825E	Yellow-gy + gy-bn clays under dbn gy bn clays - poor sample.	
975634	S	PA	1m	C'				x	10	105	x	x	x		609	13	3	5850E	Gy-blue weathered siltstone 80% under Tert gravels? minor contamination with Tert gravels and mod bn clays.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type as = arab sample rc = rock chip (state interval & length) cs = channel sample

C.R.A. 'PLORATION GEOCHEMICAL SAMPLE' 'DGER

Tenement name: INTERVIEW - PINNACLES No. 36/70 sample numbers: 975635 - Collect by: (GSW) Sheet no. Four
 Area / Prospect: INTERVIEW - PINNACLES ANOMALY. Date: 18. 04. 83
 Map / Photo reference: Analysed by: ANALABS (COOE) DPO no. 30228
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss * oc f s	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Bi	As	Au	Ba	W			Sn
			o/c sample type ***																		
			s sample type ****																		
																		5200N	LIME.		
975635	S	PA	50cm	B ₂ '				S	X	85	X	X	X		609	11	X	5300E	Gr-gy clays.		
975636	S	PA	1m	B ₂ '				S	X	65	X	10	X		579	X	X	5325E	Gy-br clays maybe weathered siltstone		
975637	S	PA	1m	C'				S	X	105	X	X	X		600	X	X	5350E	Gr-gy-br weathered siltstone.		
975638	S	PA	60cm	C'				S	X	120	X	X	X		481	X	X	5375E	Gy-ga weathered siltstone clays.		
975639	S	PA	70cm	C'				S	X	105	X	X	100		593	X	3	5400E	Yellow-br clays.		
975640	S	PA	70cm	C'				S	X	40	X	10	100		580	X	X	5425E	Br-gy - yellow clays.		
975641	S	PA	80cm	C'				X	X	115	X	10	X		536	A	X	5450E	Gy-ga-br weathered siltstone clays.		
975642	S	PA	80cm	C'				S	X	100	X	10	X		551	X	X		DUPLICATE of above		
975643	S	PA	40cm	C'				X	X	115	X	X	X		531	X	X	5475E	Gy-ga weathered siltstone		
975644	S	PA	60cm	C'				S	X	75	X	X	100		615	X	X	5500E	Yellow br clays.		
975645	S	PA	30cm	C'				S	X	100	X	X	X		591	X	S	5525E	Yellow br clays.		
975646	S	PA	40cm	C'				X	X	40	X	X	100		640	X	X	5550E	Brown-gy clays		
975647	S	PA	70cm	C'				S	X	80	X	X	X		700	X	X	5575E	Gr-br clays weathered siltstone		
975648	S	PA	50cm	C'				X	X	55	X	X	X		598	X	X	5600E	DUPLICATE - Yellow-br clays		
975649	S	PA	50cm	C'				X	X	65	X	10	X		628	X	3				
975650	S	PA	50cm	C'				S	S	75	X	X	X		508	X	11	5625E	Yellow-br-ga clays.		
975651	S	PA	50cm	C'				S	X	50	X	X	X		580	X	X	5650E	Yellow-br-ga clays.		
975652	S	PA	40cm	B ₂				X	S	30	X	X	X		949	X	3	5675E	Brown-gy clays		
975653	S	PA	50cm	C'				X	X	115	X	10	X		571	12	X	5700E	Brown blue weathered siltstone - clays.		
975654	S	PA	50cm	C'				S	X	80	X	X	X		518	X	X	5725E	Blue-dull-br-yellow clays.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample description

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name INTERVIEW PINNACLES No. 3780 sample numbers 975434 - 441 Collected by (GSL) Sheet no. FIVE
 Area / Prospect INTERVIEW - PINNACLES ANDMAY AREA (STREAM SEDIMENTS + ROCKS) Date 16 APRIL 1983
 Map / Photo reference Analysed by ANALABS (COSEE) DPO no. 30228
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %												Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Bi	Ni	Cr	Ba	W	Sn				
		o/c sample type ***																				
		s sample type ****																				
975434	SS	5m ³ /s	10m	✓					10	x	20	x	x	5	90	226	20	8	5000N 4677E	GRD REFS OR 1:100000 GRD CO-ORDS - PIEMAN SHEET. Gy mds + al brich sands. Site fair		
975435	SS	91m ³ /s	40m	✓					15	5	50	x	10	10	70	426	x	5	5000N 4677E	Gy-br mainly mds only al sands. Site fair		
975436	SS	02m ³ /s	20m	✓					5	5	10	x	x	5	135	106	x	x	5000N 5335E	Shallow creek bed of sands + cobbles gy mds not very interesting Site poor		
975437	SS	02m ³ /s	30m	✓					x	15	10	x	x	x	140	92	x	x	5000N 5335E	Gy-br mds + sands - of gits - cobbles Site fair		
975438	SS	12m ³ /s	13m	✓			✓		5	25	20	x	x	5	200	283	x	3	5000N 5335E	Med br mds with sands - Site fair		
975439	SS	sample	1m	✓	✓				5	10	65	x	x	25	40	556	x	x	346979	Yellow + br clay + siltstone frags. From pit hole with siltstone sequences, minor basalt float		
975582	%	gs.							5	5	70	0.5	x	70	70	597	x	4	346979	Finely laminated siltstone, hematite speckling bedding planes, al. chloritic. 195/53 ² /285.		
975440	SS	201m ³ /s	20m	✓	✓				5	10	50	x	x	20	75	426	x	x	346979	Approx 30m NE of last SS. - weathered siltstone fragments, minor reef of + ofite - clays site-poor		
975441	SS	02m ³ /s	20m	✓	✓				5	x	35	x	x	20	55	442	x	4	347979	Approx 50m NE of 975440 flowing in same direction (ii) N.W. of br mds + weathered siltstone fragments.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.B.A. 'PLORATION GEOCHEMICAL SAMPLE' TOWER

Tenement name INTERVIEW - PINNACLES No. 76 sample numbers 975444 Collect by GAL Sheet no. SIX SEVEN
 Area / Prospect REGIONAL STREAM SEDIMENT + ROCK SAMPLING Date 17.04.83
 Map / Photo reference Analysed by ANALABS (COOKE) DPO no. 322P
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Bi	Ni	Cr	Ba			W	Sn
		o/c sample type ***																		
		s sample type ****																		
975444	SS	0.2%	1m	✓				x	x	15	x	x	10	215	211	x	x	338999	1:100000 PIEMON SHEET. Ch flowing N into Interview River, gytite mainly c.v. & grained well rounded - clean, ref gyt - 2 ^d silicified gyt grains - v. gritty sample Site fair.	
975445	SS	0.1%	2m	✓				x	x	5	x	10	10	255	31	13	x	348991	Small creek - mainly gytite + ref of gyt particles	
975446	SS	0.2%	1.6m	✓				x	x	10	x	x	5	205	95	x	x	349984	Med br muds minor sands Site - good.	
975447	f	gs						35	35	135	0.5	x	375	810	57	x	x	362985	Pyritic gytite 5-10% py in creek mud ref of float + devite.	
975448	%	cs.						75	45	120	x	x	165	145	72	x	5	362985	About 10m upstream devite? - much finer grained maybe more basic - T.S. - ALTERED MICROGABRO.	
	ALS REPEAT							80	45	100	2	25	115	50	6.77%	<10	<5			
975449	SS	4%	1.3m	✓	✓			5	10	5	x	10	5	245	39	x	x	362985	At same location as py gytite 975447. v. f.g. gyt sands + silt, ref gyt, py gytite, devite float - Site fair.	
975450	SS	trickle	2m	✓	✓			25	35	45	x	10	40	300	186	x	x	362985	0.5m W. small trib. med br muds some ref of float + devite float. Sample site - fair.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type oc = ash ml - k h / s s l p t h

C.R.A. 'PLORATION GEOCHEMICAL SAMPLE' REGISTER

Tenement name: INTERVIEW - PINNACLES No. 3/80 sample numbers: 375655 - 659 Collect. by: GGW Sheet no. EIGHT
 Area / Prospect: REGIONAL STREAM SEDIMENT FROM SAMPLING Date: 19.04.83
 Map / Photo reference: Analysed by: ANALABS (COSEE) DPO no. 30228
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %												Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Bi	Ni	Cr	Ba	W	Sn				
		o/c sample type ***																				
		s sample type ****																				
375655	SS	10.13?	?	✓					10	55	115	x	x	20	150	321	x	7	342979	Undefined creek - 3 localities ~10m. Dk br muddy clay + sands. Site - fair		
375656	SS	-	1m	✓					5	15	30	x	x	10	120	345	x	x	341975	Med br muds and sands - water course upto 6m wide. minor defined way 1m wide. Drained Test Bonell hill to S.W. Site - fair		
375657	SS	10.13?	12m?	✓					x	15	25	x	x	10	40	424	x	x	343369	Ill defined channel 12m wide med-lt br muds + sands Site - fair		
375658	SS	0.2	2m	✓					x	15	20	x	10	10	170	188	x	x	343964	Med-lt br muds (mins) and sands - gravelly sample. Site - fair		
375659	SS	5.7	1m	✓	✓				5	25	40	x	10	10	165	171	x	3	340960	Upto 5m wide in flood, qtz grits and sands minor blue-green muds from siltstones.		
375660	SS	10.7	1.2m	✓	✓				5	25	15	x	x	10	355	x	x	x	344954	Major creek draining major Diorite head sample sandy - Site - fair.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample

APPENDIX TWO

PETROLOGICAL REPORTS

Central Mineralogical Services



39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. G.B. Weber
Senior Geologist
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BURNIE / TAS. 7320

18th February, 1983

REPORT CMS 83/2/4

YOUR REFERENCE:	D.P.O. No. 30221
DATE RECEIVED:	11th February, 1983
SAMPLE NOS.:	975377, 975400
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

Copy to:
The Chief Geologist
C.R.A. Exploration Pty. Ltd.
G.P.O. Box 384D
MELBOURNE / VIC. 3001

H.W. Fander
H.W. Fander, M. Sc.

Copy & Invoice to:
Administration Officer
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
ROSNY PARK / TAS. 7018

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

Job No. CMS 83/2/4 Date Received: 11.2.1983

Reference D.P.O. No. 30221

Sample No. 975377, 975400

Nature of Sample: Hand Specimens

DESCRIPTION SECTION No. 45230, 45231

a. Hand Specimen:

b. Microscopic: 975 377 (T.S. 45230) INTERVIEW-RIVER TRAVERSE INTERVIEW COPPER WORKINGS EL 36/80

This is a breccia, believed to be a sedimentary formation, i.e. a deposited rock, but derived from a tectonically-affected source.

The rock consists of small and larger, irregular, angular fragments of quartz, vein-quartz/chlorite intergrowths, and mosaic quartz, in a matrix of much finer quartz and interstitial chlorite. The rock is poorly sorted, but is weakly bedded. Many of the coarser quartz particles show strain-extinction which pre-dates deposition, indicating that they were stressed at source. Fine leucoxene occurs throughout and was probably introduced with the fine pervasive chlorite.

The source rocks appear to have been mainly quartz-chlorite veins, which were brecciated eroded, re-deposited, and weakly chloritised.

975 400 (T.S. 45231) INTERVIEW RIVER TRAVERSE - INTERVIEW COPPER WORKINGS EL 36/80

This is an amphibolite, and the petrological evidence suggests an igneous origin; its pale colour is due to the light-coloured actinolitic amphibole, low in Fe.

The rock consists mainly (60-70 %) of pale amphibole, as large single crystals as well as lenses and bunches of fibres. There are semi-opaque pseudomorphs of saussuritic material (fine intergrowth of zoisite, sericite and other alteration-products) after plagioclase crystals, and lenses of clear quartz, with graphically intergrown quartz

IDENTIFICATION

975377, 975400

and feldspar. Relatively large grains of leucoxenised magnetite are scattered through the rock and provide good evidence for an igneous origin.

The primary rock was a gabbro, possibly with interstitial micrographic quartz/feldspar; it was regionally metamorphosed to the amphibolite facies.

H.W. Fander, M. Sc.

028

Central Mineralogical Services



39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. G.B. Weber
Senior Geologist
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BURNIE / TAS. 7320

12th May, 1983

REPORT CMS 83/5/3

YOUR REFERENCE:	D.P.O. No. 30230
DATE RECEIVED:	4th May, 1983
SAMPLE NOS.:	3 Samples
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

Copy to:
The Chief Geologist
C.R.A. Exploration Pty. Ltd.
G.P.O. Box 384D
MELBOURNE / VIC. 3001

Copy & Invoice to:
Administration Officer
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
ROSNY PARK / TAS. 7018

H.W. Fander
H.W. Fander, M. Sc.

REPORT CMS 83/5/3975 448(SOUTH OF
INTERVIEW -
PINNACLES)

(EL 36/80)

(T.S. 45868)

This rock can be classified as an altered microgabbro representing either a basic minor intrusive or the core zone of a relatively thick flow, depending on field relationships.

Major constituents are epidote-sericite ("saussurite") stained albite pseudomorphs of plagioclase laths and chlorite pseudomorphs after subprismatic to subophitic pyroxene. The chlorite represents a retrograde replacement of uralitic (i.e. pyroxene-pseudomorphous) actinolite which persists locally as corroded relics. Leucoxenised opaques are disseminated throughout and traces of apatite occur as ultrafine subacicular particles associated with a sparse epidote-stained albitic mesostasis.

The late chloritic alteration is stress-related. The generally distinct relict "doleritic" (subophitic) fabric is locally obscured by chloritic fractures grading into zones of semi-mylonitic granulation. The sectioned area includes rare ultrafine, partly oxidised pyrite particles and possibly minor traces of oxidised chalcopyrite.

975 661(DESTINATION
CREEK)

(EL 1/77)

(T.S. 45869)

This sample is representative of a chloritic slate or, strictly, a fine-grained phyllite.

The rock is weakly lenticularly banded (primarily a weakly silty shale-parted argillaceous siltstone) and consists largely of fine to semi-sericitic muscovite with intergrown quartz, accessory poorly twinned albite, and more or less pervasive chlorite which is partly pseudomorphous after metamorphic biotite, consistent with a mild retrogression from mid- to low-greenschist facies. Relict detrital apatite, zircon, and overgrown schorl are thinly disseminated throughout. Magnetite euhedra comprise 1-2 % of the rock, are of "metablastic" habit (i.e. metamorphically crystallized) with incipient pressure shadows, and apparently represent recrystallized detrital opaques. These are accompanied by relatively conspicuous fine silt-sized leucoxenitic semi-opaques. There are no detectable sulphides.

This rock is broadly arkosic. There are no tangible pyroclastic or volcanomict features, although finer detail is obscured by metamorphic features.

975 662(SILVER REWARD
AREA)

(EL 36/80)

(T.S. 45870)

This rock is analogous to 975661, and is similarly classified as a retrogressively chloritised phyllite. In contrast, this metasediment is now feldspathic and is derived from a relatively mature siltstone.

Major constituents are subpolygonal/weakly directed quartz and subordinate biotite-pseudomorphous chlorite. Accessories include semi-sericitic muscovite and very thinly disseminated martitised/oxidised magnetite, along with traces of relict detrital zircon, schorl and leucoxenitic semi-opaques.

A faint relict microscale bedding lamination is essentially paralleled by the weak primary phyllitic fabric, and is locally enhanced by sericitic lenses. A secondary cleavage intersects these features at a high angle.

Patchy Fe-staining reflects partial weathering of the phyllosilicates. There is no detectable sulphide component.

D. Cowan, B. Sc.

031

E.L. 1/77

E.L. 36/80

335 000 ME

EXPLANATION

Tb TERTIARY BASALT

PEdol DOLERITE OR METADOLERITE DYKES: Generally cause linear vegetation anomalies. Non magnetic, probably equivalent to Coee Dolerites. T.S. description reveal they have undergone mild metamorphism and the original rocks may have been 'micro-gabros' They may have been intruded as thin sills.

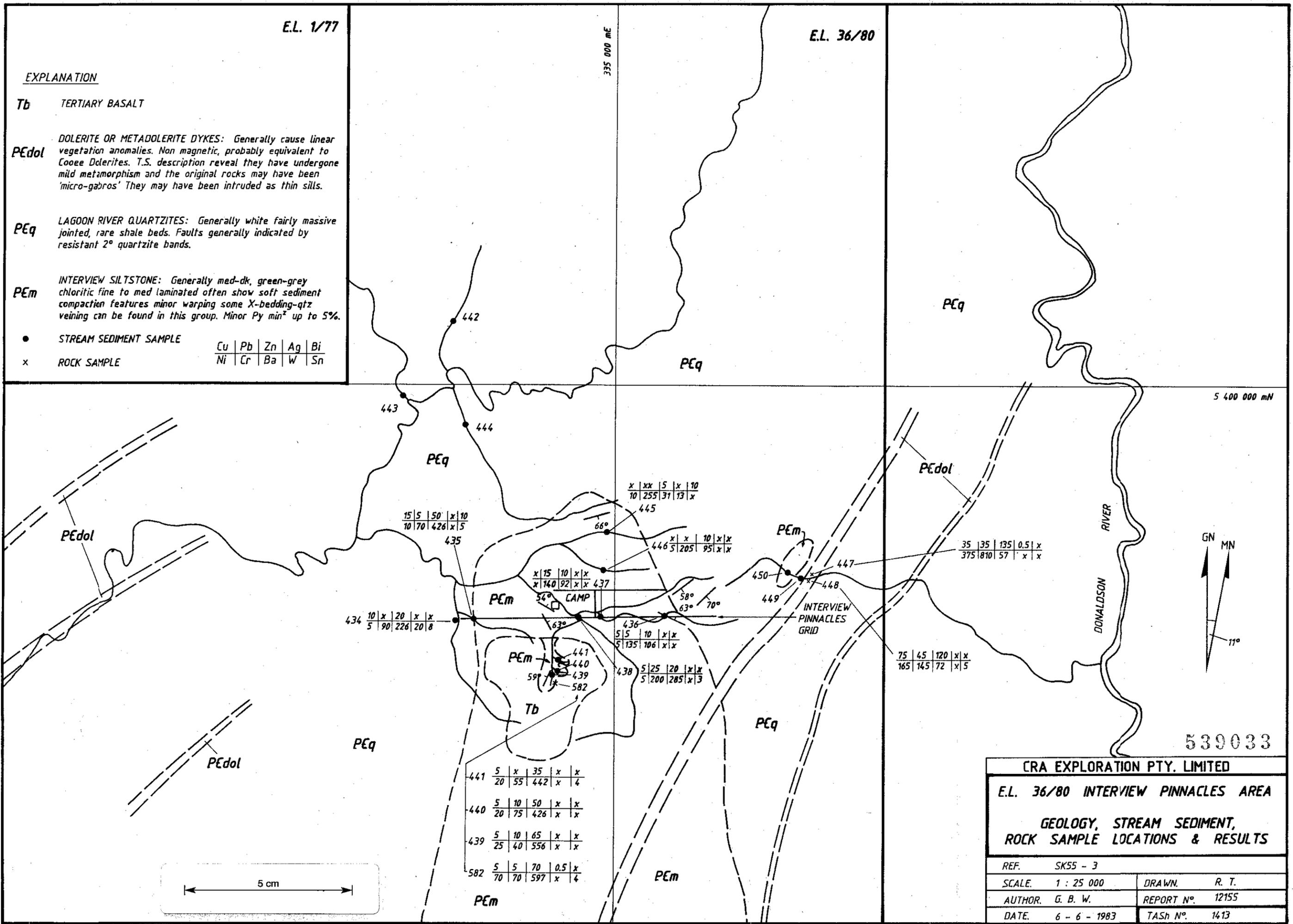
PEq LAGOON RIVER QUARTZITES: Generally white fairly massive jointed, rare shale beds. Faults generally indicated by resistant 2° quartzite bands.

PEm INTERVIEW SILTSTONE: Generally med-dk, green-grey chloritic fine to med laminated often show soft sediment compaction features minor warping some X-bedding-qtz veining can be found in this group. Minor Py min² up to 5%.

● STREAM SEDIMENT SAMPLE

Cu	Pb	Zn	Ag	Bi
Ni	Cr	Ba	W	Sn

x ROCK SAMPLE



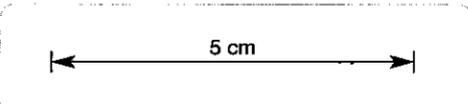
5 400 000 mN



539033

CRA EXPLORATION PTY. LIMITED	
E.L. 36/80 INTERVIEW PINNACLES AREA	
GEOLOGY, STREAM SEDIMENT, ROCK SAMPLE LOCATIONS & RESULTS	
REF. SK55 - 3	
SCALE. 1 : 25 000	DRAWN. R. T.
AUTHOR. G. B. W.	REPORT N°. 12155
DATE. 6 - 6 - 1983	TASH N°. 1413

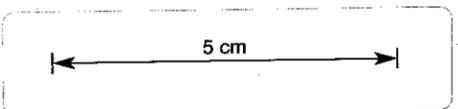
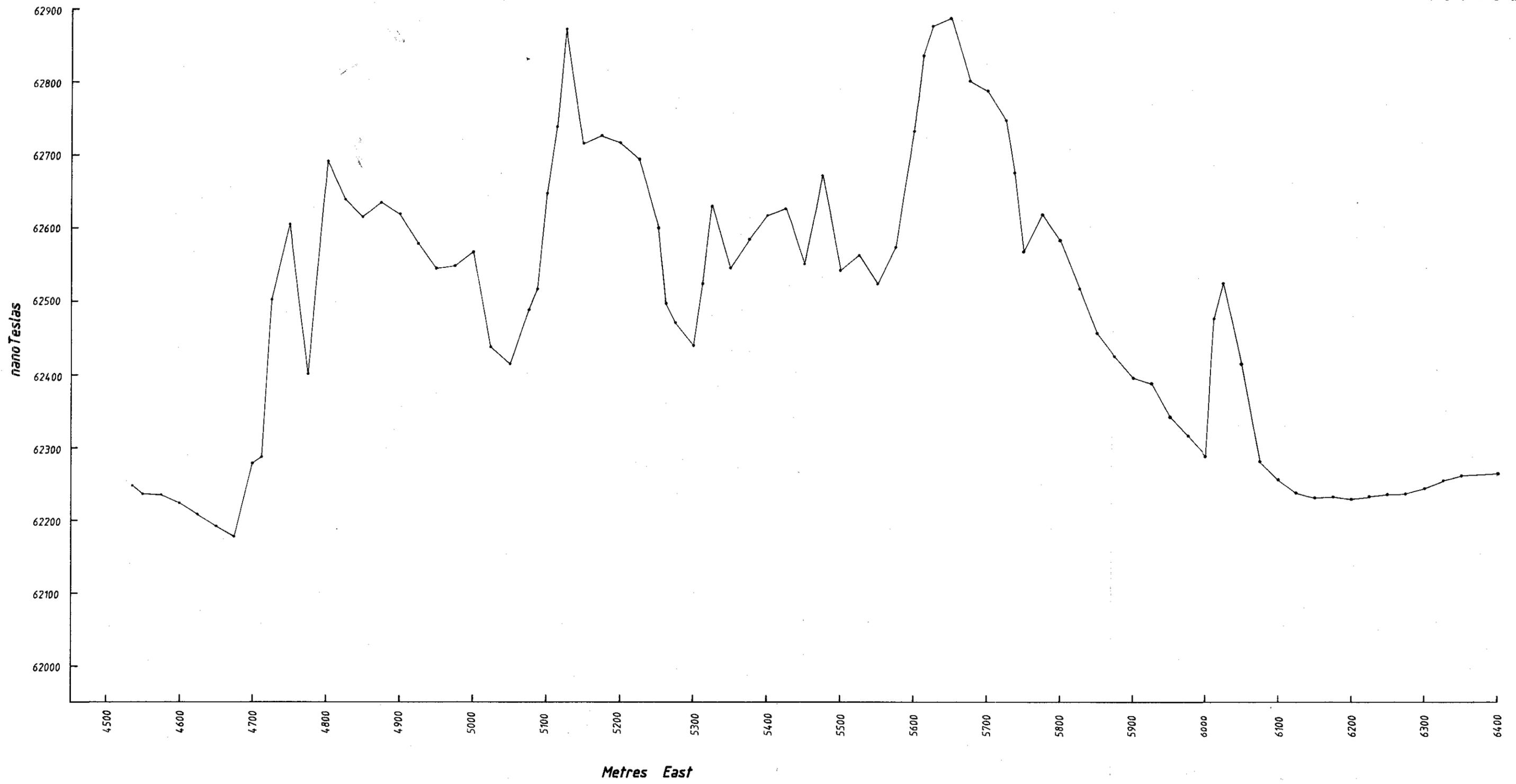
441	5	x	35	x	x
	20	55	442	x	4
440	5	10	50	x	x
	20	75	426	x	x
439	5	10	65	x	x
	25	40	556	x	x
582	5	5	70	0.5	x
	70	70	597	x	4



83-2012

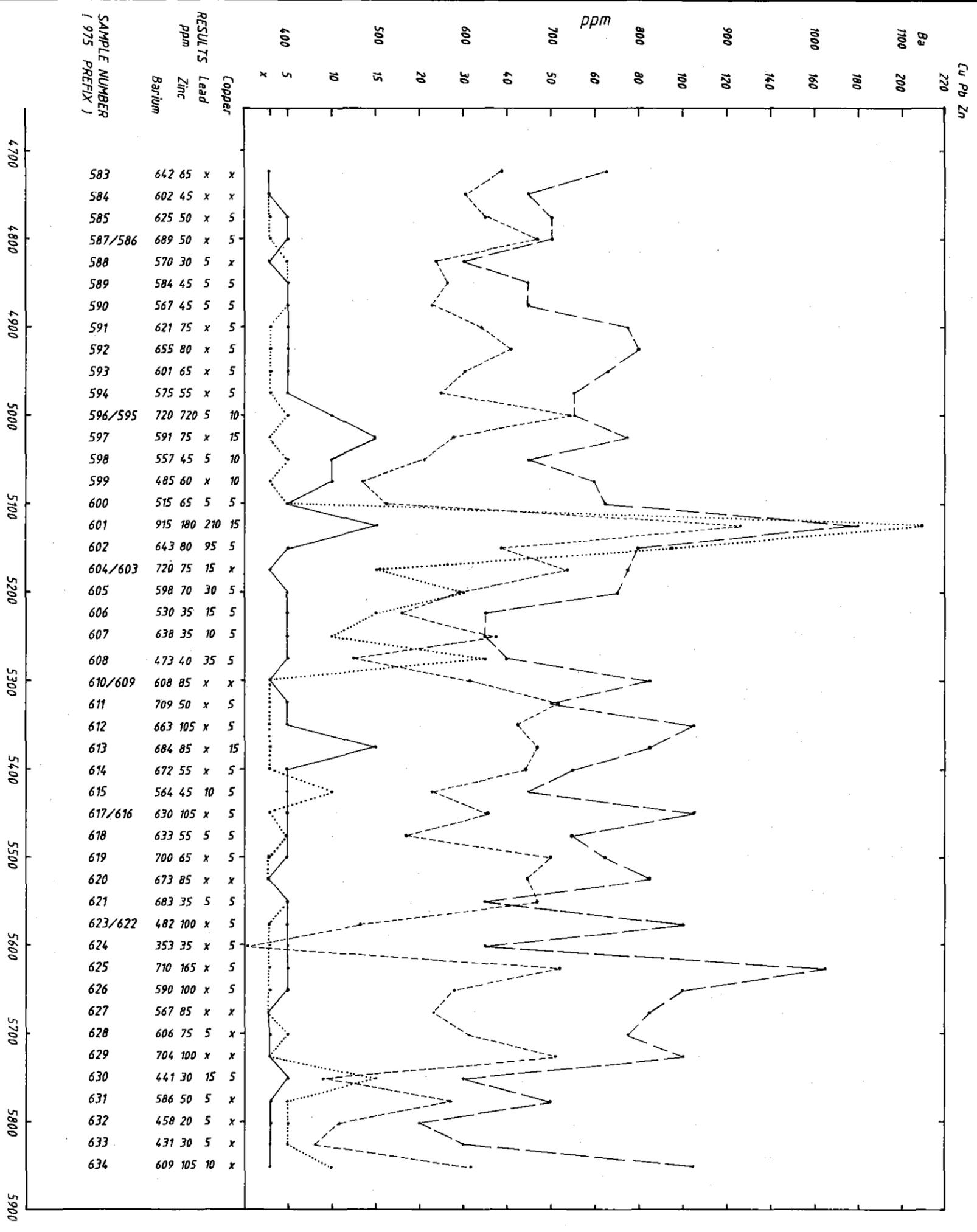
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539034



CRA EXPLORATION PTY. LIMITED	
INTERVIEW PINNACLES E.L. 36/80	
INTERVIEW PINNACLES ANOMALY	
GROUND MAGNETICS	
LINE 5000 N	
REF.	SK55 - 3
SCALE.	1 : 5000
AUTHOR.	G. B. W.
DATE.	8 - 6 - 1983
DRAWN.	R. T.
REPORT N°.	12155
TASH N°.	1417

83-2012



Metres East

5 cm

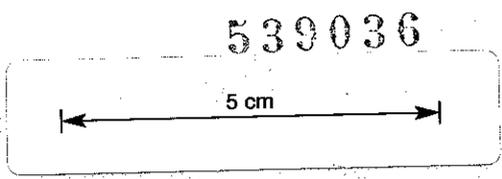
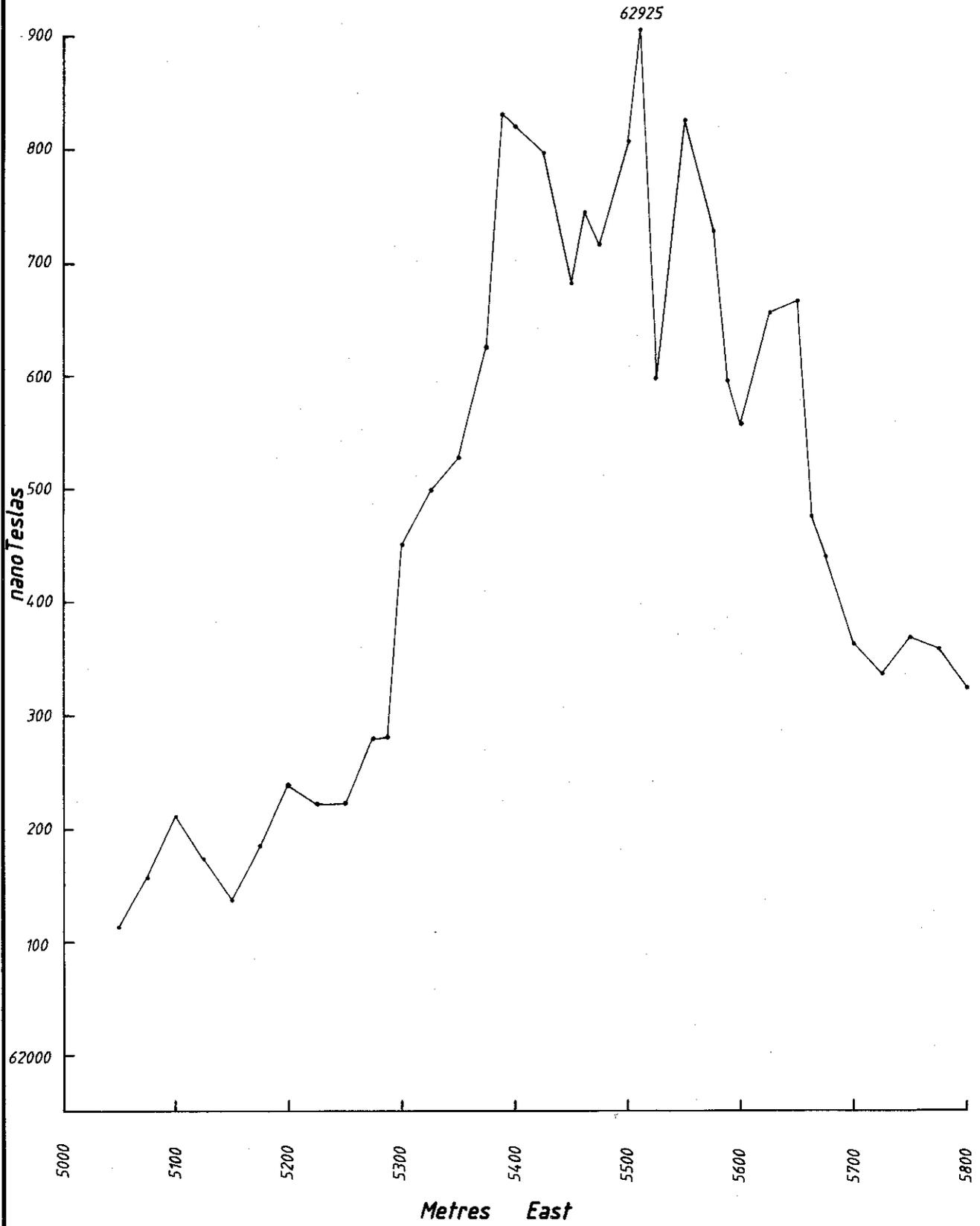
— Cu
 Pb
 - - - Zn
 - · - · Ba

539035

CRA EXPLORATION PTY. LIMITED
 INTERVIEW PINNACLES EL. 36/80
 INTERVIEW PINNACLES ANOMALY
 SAMPLE RESULTS
 LINE 5000 N.

REF.	SK55 - 3
SCALE	1 : 5000
AUTHOR.	G. B. W.
DATE	9 - 6 - 1983
DRAWN.	R. T.
REPORT N°	12155
TASH N°	1421

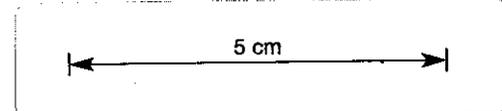
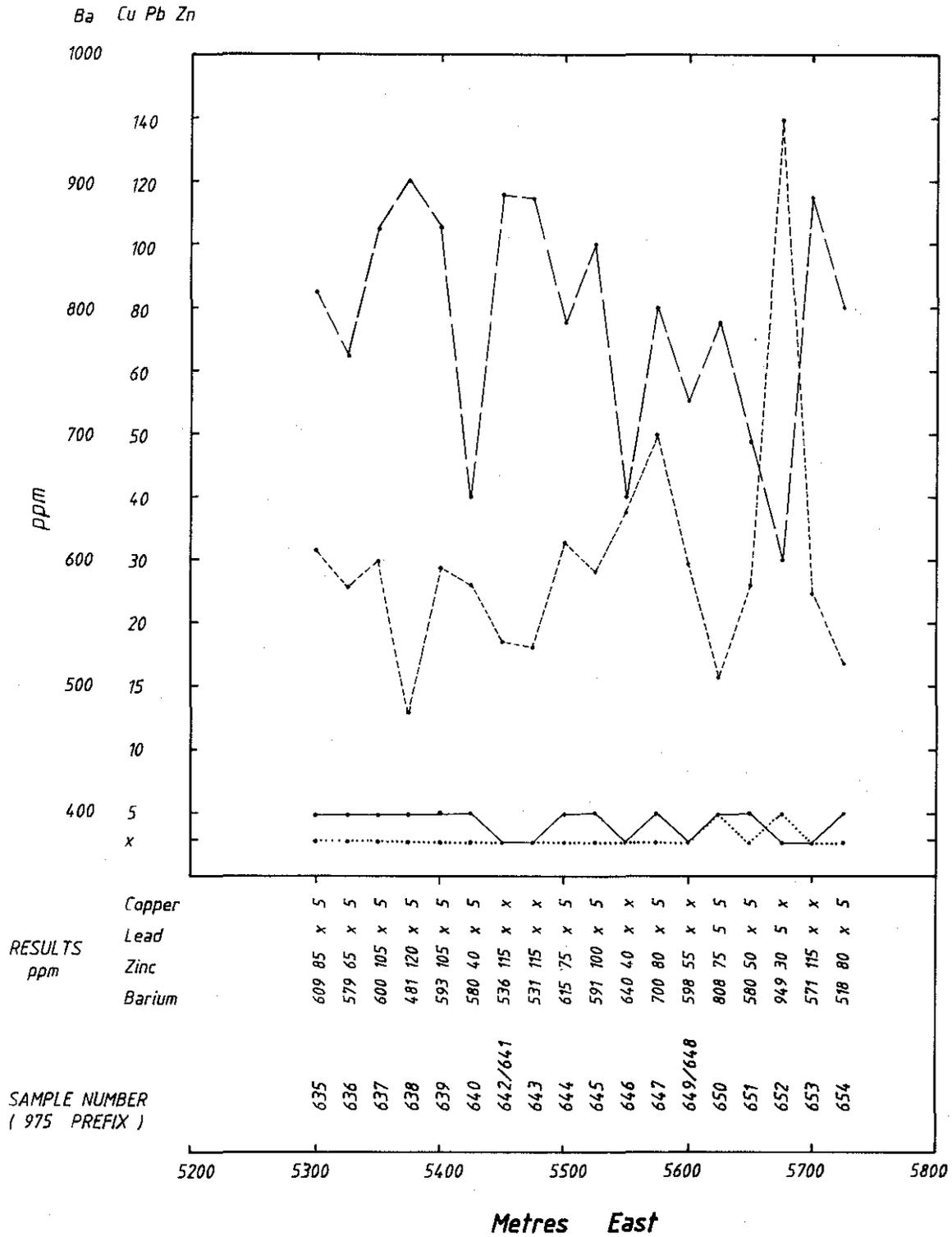
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CRA EXPLORATION PTY. LIMITED	
INTERVIEW PINNACLES E.L. 36/80	
INTERVIEW PINNACLES ANOMALY	
GROUND MAGNETICS	
LINE 5200 N	
Ref:	SK55 - 3
Scale:	1 : 5000
Author:	G. B. W.
Date:	8 - 6 - 1983
Drawn:	R. T.
Report N°:	12155
Plan N°:	TASH 1418

83-2012

035

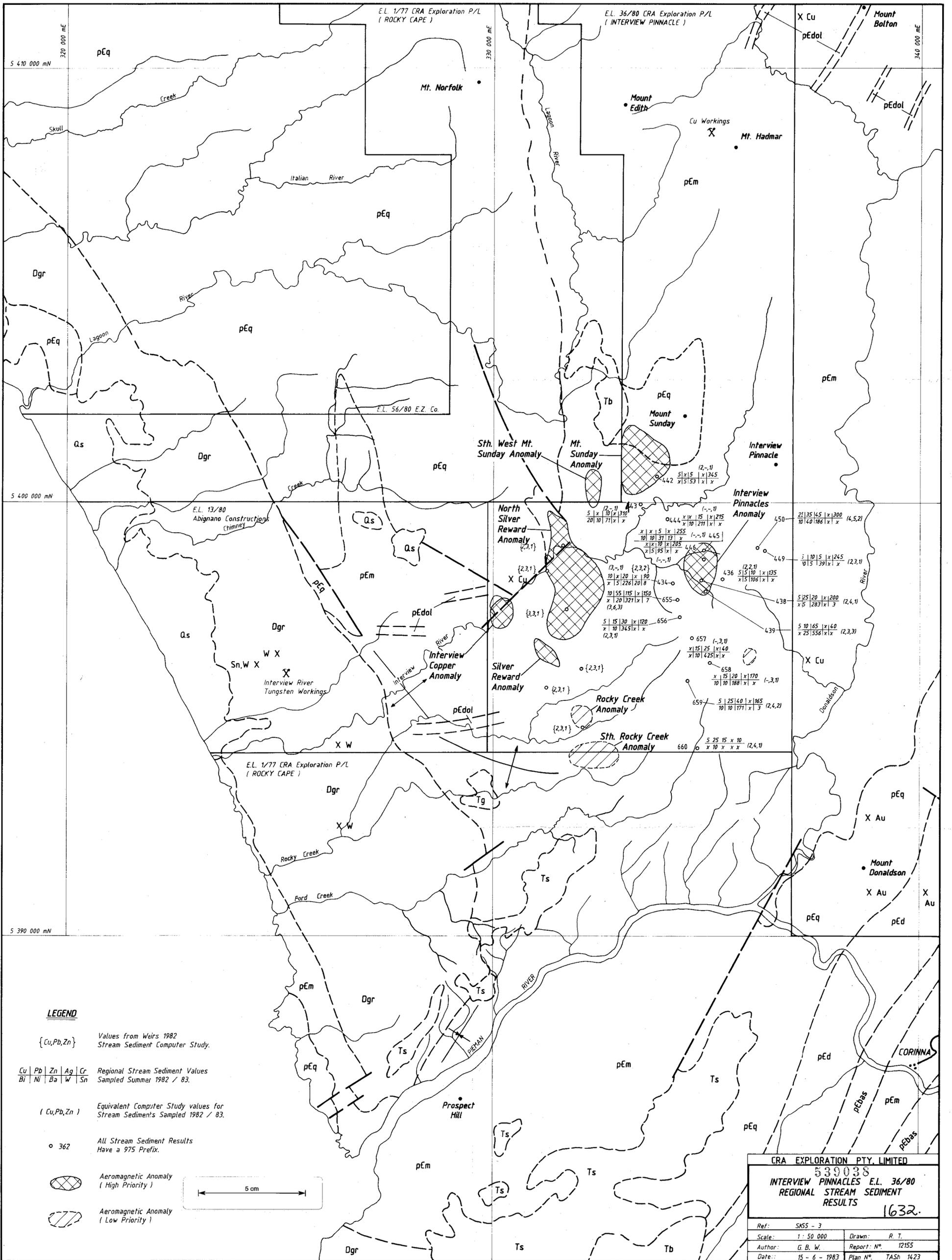


- Cu
- Pb
- - - Zn
- · - · Ba

CRA EXPLORATION PTY. LIMITED			
INTERVIEW PINNACLES E.L. 36/80			
INTERVIEW PINNACLES ANOMALY			
SAMPLE RESULTS			
LINE 5200 N.			
REF.	SK55 - 3		
SCALE.	1 : 5000	DRAWN.	R. T.
AUTHOR.	G. B. W.	REPORT N°.	12155
DATE.	9 - 6 - 1983	TASH N°.	1422

539037

83-2012



CRA EXPLORATION PTY. LIMITED	
539038	
INTERVIEW PINNACLES E.L. 36/80	
REGIONAL STREAM SEDIMENT RESULTS	
1632.	
Ref: SK55 - 3	Drawn: R. T.
Scale: 1 : 50 000	Report No: 12155
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