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CRA EXPLORATION PTY. LIMITED.

PIPERS RIVER EL 53/80

GEOLOGICAL REPORT FOR YEAR ENDING 17th DECEMBER, 1982.

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Date : 2nd December, 1982.

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1. SUMMARY

Work in the license area has been concentrated on three main targets:

1. "Deep lead" auriferous gravels in Tertiary age sub-basaltic stream channels.

2. Base metal mineralisation of the Cobar or Selwyn basin type in the Ordovician-Devonian age Mathinna Beds.

3. Primary gold mineralisation in the Mathinna Beds.

Field mapping and reconnaissance ground magnetometer traversing has adequately defined the margins of the deep lead basalts. Scout drilling will be the next step in defining the sub-basaltic gravels and assessing their gold content.

A reconnaissance stream sediment survey has been completed over most of the license area at a density of one or two samples per square kilometre. Most of the variations in the elements analysed can be ascribed to lithological variations in the Mathinna beds, or to elevations in background associated with Devonian granodiorite intrusions.

Limited follow-up of a number of anomalies has not defined any immediate areas that warrant more detailed investigation. Future work would be best concentrated on:

A. A more detailed survey of the shale/phyllite or "lutite" facies of the Mathinna Beds, as these have higher base metal values.

B. The elevated arsenic values associated with the granodiorite intrusions are also associated with a number of gold occurrences. The area has some potential for low grade disseminated gold mineralisation analogous to Carlin-style mineralisation.

2. CONCLUSIONS

2.1 The Back Creek deep lead offers the best potential for economic gold mineralisation. The lead has a length of between seven and twelve kilometres, but is narrow and does not have a high tonnage potential.

2.2 The Pipers Brook and Forester river deep leads are virtually unknown and little gold has been won from them in the past, although their headwaters are well exposed. They would constitute a less promising target than the Back Creek lead.

2.3 The most promising area of the Mathinna Beds for grass roots base metal exploration is the black slate/phyllite sequence in the western and south-central portion of the license. However, no outstanding anomalies are evident from the work to date, and the target would have low priority.

2.4 Contact aureoles of granodiorite cupolas centred around the Lisle -Golconda area have some potential for disseminated gold mineralisation, although small size quartz vein systems appear to be more likely sources for the known alluvial gold.

3. RECOMMENDATIONS

3.1 Scout drilling to define and evaluate sub-basaltic deep lead gravels of the Back Creek deep lead, to be located approximately parallel to ground magnetometer traverse number eight.

3.2 Limited detailed stream sediment and soil geochemistry over the black slate/phyllite facies of the Mathinna Beds.

3.3 Limited detailed stream sediment/rock chip geochemistry in the Lisle /Golconda area with special enphasis on evaluating the nature of known primary gold mineralisation.

4. INTRODUCTION

E.L. 53/80 was granted on the 17th of January, 1980, and was primarily intended to cover the known sub-basaltic deep leads of the Back Creek area. The remainder of the license was taken with three potential targets in mind:

1. To examine the possibility of auriferous gravels in the ancestral Back Creek, Pipers Brook and Forester river systems.

2. 'Hard rock' gold mineralisation in the Mathinna Beds, particularly fine grained disseminated gold analogous to Carlin-style mineralisation.

3. The base metal potential of the Mathinna beds had not been previously assessed.

A reconnaissance stream sediment sampling programme was undertaken in the latter portion of 1981, following a literature review by P.J. Legge and associates. (CRAE unpublished report No. 10156). The survey utilised the conventional minus eighty mesh fraction at a density of one or two samples per square kilometre. Samples were analysed for copper, lead, zinc, silver and arsenic, with some batches for maganese and cobalt. The results of the survey are discussed in section 6 of this report.

Subsequent work has been concentrated mainly on defining the courses of the sub-basaltic river channels by field checking of previous Mines Department one inch to one mile mapping, and by widely spaced ground magnetometer traversing. Most of the reported mineral occurrences have been examined in the field, and the more promising anomalies from the drainage survey have been re-sampled.

5. GEOLOGIC SETTING

A sketch map of the major geologic features of the license is shown in Figure 1. The basement rocks or Mathinna Beds, consist of a sandstone and siltstone turbidite sequence with inte-calated slates and phyllite; of Ordovician-Devonian age. The dominant strike direction is NW - SE, with a progressive decrease in age from West to East. Devonian granodiorites intrude the Mathinna beds on the eastern margin of the license. Minor amounts of gold have been won from the Mathinna beds, with the most significant activity at Lisle-Golconda (estimated 250,000 oz of alluvial gold) and Back Creek (9,000 oz).

Areas of Tertiary to Quaternary gravels are widespread throughout the license, together with extensive valley fill deposits of Tertiary basalt. The alluvial gold won has come from these deposits, after being derived from small quartz vein systems within the Mathinna beds. However, the source of the gold at Lisle remains unresolved, with a strong possibility that it was eroded from a low grade disseminated source in the contact aureole of the Devonian granodiorite.

6. GEOCHEMISTRY

Sample locations for the minus 80 mesh samples are shown on plan number TasH 94, together with locations of various rock chip samples and soil samples collected at various localities. Twenty two samples were re-analysed in the minus 10 plus 80 mesh fraction to assess whether dilution of anomalies by windblown sand and/or colluvial detritus had occured. Values for copper, lead, zinc and arsenic are shown on plans Tash 95 to Tash 98, with the coarse fraction results shown in brackets at the appropriate locations. Values for manganese and cobalt are given in Appendix one, together with the various rock chip and soil sample results. A few stream sediment and rock chip samples for CRAE's adjoining EL 35/81 were taken late in 1982 and are included here for ease of presentation. In general, the results for all elements are low, with the spread of values being influenced by three geological factors,viz;

1. The arenaceous sequence of the Mathinna beds (in the northern and north eastern portion of the license) is low for all elements.

2. The finer grained black slate sequence of the Mathinna beds (in the eastern portion of the license) has a higher background than the arenaceous sequence, (between 2 and 5 times higher for the range of elements).

3. The granodiorite cupolas and contact aureoles in the southern and south eastern portion of the license are marked by scattered elevated metal values.

Few specific high contrast anomalies are present when the results are viewed in this context. A small area centred around 5447000 mN, 507000mE (the Dead Horse Creek area) was chosen for detailed follow up in the "high background" area of the Mathinna Beds on the south eastern margin of the license. Sample locations are shown on plan Tash 99, with analytical values on plan Tash 100. Another small creek at 5445000 mN 510500 mE was chosen as part of the low background area. The overall pattern of the results tends to confirm that higher background levels are associated with the finer grained units.

These factors will have to be considered if any re-evaluation of the survey is undertaken, but two inferences may be drawn:

A. The slate sequence has intrinsically higher base metal values and should receive the bulk of future attention for base metal exploration.

B. The anomalous arsenic associated with the granodiorite cupolas and contact aureoles is also associated with a significant number of alluvial gold occurrences for which no major quartz vein sources have been located (but which have recorded disseminated gold in hornfelsed sediments, eg. Bessell's Reward). This are a has some potential for further "grass-roots" gold exploration.

7. DEEP LEADS

7.1 Geology

The general disposition of the Tertiary to Quaternary gravels, sands and basalts is shown in Figure 1. The pre-basalt drainage was from north to south, with accumulation of gold, derived from the Mathinna Beds, in the stream gravels.

There are at least two generations of basalt extrusion, as revealed by Mines Department drilling at Back Creek (Marshall, 1969). The first flow only partially covered the original stream channels. There followed a period of erosion of basalt and reworking of the exposed gravels at the heads of the stream valleys. The second flow covered these reworked deposits and effectively completely filled the pre-basaltic valleys, giving a series of confined valley flows. These have been named the Back Creek, Pipers River, Pipers Brook and Forester River leads and are shown on figure 1.

Following the basalt extrusion, erosion continued until the Cainzoic. A succession of minor changes in sea level gave rise to the extensive deposits of Quaternary gravels (probably reworked Tertiary gravels) and windblown sands in the northern portion of the license. Little gold is recorded from these gravels. The Quaternary deposits conceal the northerly extension of the Back Creek lead for 2 or 3 kilometres to the south of Tam O'Shanter Bay.

The present day distribution of outcropping and sub outcropping basalt (marked by ferruginous gravel and limonite concentrations), is shown on plan No. Tash 104 for the Back Creek, Pipers River and Pipers Brook Leads.

The major lead systems will be briefly discussed below:

A. Back Creek and Pipers River Leads — Plan Tash 104

The two leads join approximately four kilometres north east of the Back Creek goldfield and then north to the coast beneath Tam O'Shanter Bay. Known primary gold deposits as a provenance, from the Back Creek goldfield, and the Leura mine(situated immediately south of the confluence). Very little gold recorded south from Back Creek, either alluvial or hard rock. Potentially productive length of the two leads approximately 10 - 12 kilometres. Channel depths unknown, but likely to be 100 metres plus. Channel widths and geometry unknown but likely to be narrow (see section 7.1.1).

B. Pipers Brook Lead — Plan Tash 104

Trends NNW from the centre of the license area to the coast at Weymouth. No recorded primary gold mineralisation in the area; no significant alluvial gold working on the gravels exposed at the margins of the lead. Depths, widths, unknown, but probably similar to the Back Creek system.

C. Forester River Lead — Figure 1.

Originally very extensive, extends from near Lisle in the south to the coast at Bridport. Scattered remnants of basalt along its length indicate that it has been substantially eroded. The absence of major alluvial workings over such a shallow lead system indicate that it has little potential.

7.1.1 Gold Distribution

The Back Creek goldfield offers the only indication of gold distribution in the sub-basaltic wash. The gold is derived from east west trending quartz veins which traverse slates and sandy beds; typical occurences are the Sir John Franklin, Union and Leura Mines.

The gold was found in the lowest horizons of wash overlying bedrock, until the leads reached the margins of the basalt. At this point a false bottom was developed; the lowest horizon being equivalent to the earliest generation of gravels. This wash dipped steeply away on top of the bedrock beneath the basalt. (Broadhurst, 1935). The other wash horizon was characterised by more water worn gold, and probably corresponds to the period of reworking and redeposition of the older gravels in the period between the major basalt flows. The bulk of the gold produced from the field came from above the false bottom. It is not clear whether this is due to the lower horizon having an intrinsically lower gold content (which was subsequently upgraded), or whether the lower lead channels were not adequately prospected. The only attempt to mine the deep lead gravels (by the Back Creek Deep Lead Mining Company), was discontinued before the main channel of the lead was located.

Two important inferences may be down from these observations:

A. The original stream systems probably had high gradients and were relatively youthful. This implies that the width of gold bearing wash is likely to be restricted. In addition gold grainsize is likely to be coarse and irregularly distributed, which will create significant sampling difficulties.

B. The interbasaltic wash is likely to be restricted in extent and to show a progressive decrease in gold concentration with increasing distance from the source as it is transported over barren material. As such, it does not constitute a primary target.

Given these constraints, the only avenue for evaluating the nature of the Back Creek deep lead is by scout drilling.

7.2 Geophysics

Ground magnetometer traverses were used in areas of alluvial cover to detect deep lead basalts. The basalt is marked by a pronounced 'edge' effect and high noise levels, in contrast to the smooth profiles obtained over the Mathinna Beds. Eight traverses were completed over the Back Creek Lead; traverse locations are given on plan Tash 104, and the profiles are reproduced in Appendix two. Traverses 3,4,5 and 6

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indicate that the Back Creek lead continues northwards through to Tam O'Shanter Bay after its confluence with the Pipers River Lead, rather than north easterly to Wey mouth as previously interpreted (Marshall, 1969). The character of the magnetic response precludes computer modelling of the data for predicting subsurface basalt geometry.

8. REFERENCES

Broadhurst, E., 1933 — Report on Lefroy and Back Creek Goldfields. Bull Geol. Surv. Tas. No. 42.

Legge, P.J., & Assoc. — Lead-zinc potential in the Mathinna Beds of North East Tasmania, July, 1980. CRAE unpublished report No. 10156.

Marshall, B. — Geological Survey Explanatory Report - Pipers River 1:63,360 sheet, 1969. Tas Dept. of Mines Report No. 1475.

Montgomery, A., 1894a. — Report to Secretary Mines, Tasmania, 1894.

9. KEYWORDS

Geochem - drainage, stream sediments, regional geology, geophysics - mag, Deep Leads, gold.

10. LOCATION

Launceston SK 55 - 4.

11. LIST OF PLANS

EL 53/80 Pipers River Area - Sample Location Plan	Tash 094
" " " - Pb Stream Sediment Geochemistry	Tash 095
" " " - Zn Stream Sediment Geochemistry	Tash 096
" " " - Cu Stream Sediment Geochemistry	Tash 097
" " " - As Stream Sediment Geochemistry	Tash 098
" Dead Horse Creek Area - Sample Location Plan	Tash 099
" " " " - Pb, Zn, As, (Au) Geochemistry	Tash 100
" Deep Lead Basalts and ground magnetic traverses	Tash 104

12. LIST OF FIGURES

13. LIST OF APPENDICES

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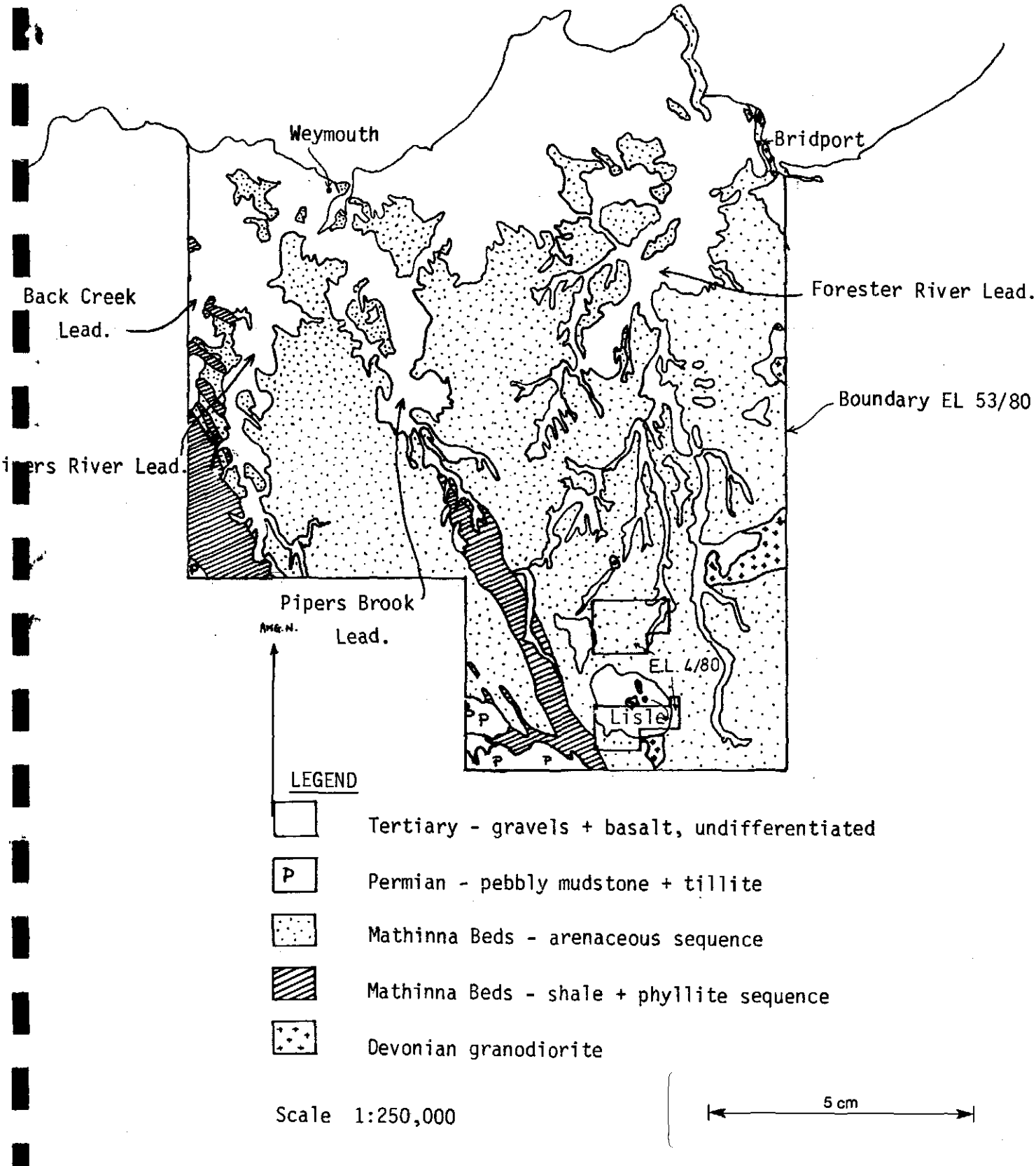

Figure 1. Geological sketch map of Pipers River EL 53/80.

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APPENDIX ONE

Geochemical Sample Ledger.

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER / LEFROY No 44/81 Sample numbers 932687 - 692, 932989 - 990 Collected by G. BROADBENT Sheet no. 1

Area / Prospect CURRIES RIVER DAM WALL. Date 27.11.81

Map / Photo reference Tas 4 94 Analysed by ANALABS DPO no. 30128

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Grid ref	Geological Observations
32687	f	g.s.									11	13	95	0·1		125		16	EQ961503	Coarse grained siliceous agglomerate -rounded grey + white qtz grains to 10 mm, silica cement, and stained greenish where weathered. – Cu staining.
688	"	"									48	53	93	0·3		240		7	"	Finely bedded (max 1mm) grey pyritic siltstone and black slate with qtz veinlets
689	"	"									27	37	93	0·2		240		3	"	Dark grey pyritic slate with 2-3% visible py.
690	"	"									48	27	57	0·2		120		0·5	"	Black carbonaceous pyritic slate - 10% py.
691	"	"									16	29	91	0·05		275		0·5	"	Grey mic. silty greywacke, weathers greenish grey - pyritic?
692	"	"									30	56	48	0·2		155		22	"	Black pyritic slate with 10% visible sulphide.
32989	oc	4m x 0·5m rc.									12	38	12	0·2		30		0·5	EQ303428	Grey, almost black, micaceous siltstone -slightly tuffaceous?
990											52	127	44	0·05		150		42	"	Brown siliceous limonitic capping developed on top of same unit (samp No 989)

* 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 LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 932679 – 686 Collected by G. Broadbent / B. Morley, A. Crich / D Stutted. Sheet no. 2

Area / Prospect Drainage Survey. Date 27.11.81

Map / Photo reference Tas #94 Analysed by ANALABS DPO no. 30129

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	As	Grid ref	Geological Observations
																				Eastings all 500000	
	Red numbers - TASSED database numbers.																			Northings all 5400000	
																				1:100,000 Grid Sheet prefix 'EQ'	
932679 1001	ss										x	20	14	x	–	55	–	x	1	EQ 306504	
932680 1002	ss										x	16	15	x	–	85	–	10	x	304509	
932681 1003	ss										1	17	9	0.1	–	10	–	5	1	245460	
932682 1004	ss										x	19	8	x	–	20	–	15	1	243479	
932683 1005	ss										1	19	11	0.1	–	20	–	10	1	253485	
932684 1006	ss										x	10	11	x	–	25	–	15	x	254487	
932685 1007	-80#	ss									5	36	17	0.2	–	25	–	15	2	245498	
	-10 +80#	ss									5	10	15						2		
932686 1008	-80#	ss									3	24	15	0.2	–	90	–	15	1	244502	
	-10 +80	ss									5	15	20						2		

* 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 LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 932799-805 Collected by B. Morley / D. Stafford. Sheet no. 3

Area / Prospect Drainage Survey Date 27-11-81

Map / Photo reference Tas # 94 Analysed by ANALABS DPO no 30122

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	As	Bi	Grid ref	Geological Observations
932799 1009	ss										25	11	52	0.1	–	630	–	24	3	x	073483	
											•											
932800 1010	-80#										53	27	93	0.1	–	1310	–	37	13	x	073478	
	-10+80#										75	50	105						51			
932801 1011	ss										6	9	58	0.2	–	70	–	7	2	x	076470	
932802 1012	"										7	6	60	0.1	–	780	–	15	1	x	080471	
932803 1013	"										25	16	74	0.2	–	68	–	9	2	x	066452	
932804 1014	-80#										18	15	35	0.2	–	610	–	16	2	x	082437	
	-10+80#										40	55	50						17			
932805 1015	-80#										28	17	62	0.1	–	1350	–	20	4	x	084428	
	-10+80										35	25	55						8			

* 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)

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No. 53/80 Sample numbers 932806 – 816 Collected by B. Morley / D. Shuttard. Sheet no. 4

Area / Prospect Drainage Survey. Date 9.11.81

Map / Photo reference Tas H 94 Analysed by ANALABS. DPO no. 30122

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	Mo	Mn	Au	Co	As	Bi		
		o/c sample type ***																		
		s sample type ****																		
932806 1016	ss								10	17	97	0.1	–	1650	–	26	2	X	097439	
932807 1017	ss								34	20	129	0.1	–	440	–	26	10	X	074472	
932808 1018	ss								54	18	73	X	–	1400	–	33	5	X	073511	
932809 1019	ss								15	10	101	0.1	–	43	–	9	3	X	075509	
932810 1020	ss								41	22	320	0.3	–	290	–	22	7	X	073509	
932811 1021	ss								16	11	22	0.1	–	42	–	7	2	X	076516	
932812 1022	ss								35	14	75	0.1	–	980	–	50	2	X	077526	
932813 1023	ss								6	13	18	0.1	–	167	–	12	1	X	103518	
932814 1024	ss								9	16	34	X	–	1010	–	23	1	X	106518	
932815 1025	ss								1	1	7	X	–	17	–	3	X	X	109516	
932816 1026	ss								X	2	7	0.1	–	17	–	2	X	X	111517	

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* 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 oc = rock chip (state interval & length) oc = chan. sample (state interval)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

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Tenement name PIPERS RIVER No. 53/80 Sample numbers 932817 – 828 (825 – 828) Collected by B Morley / D Stafford Sheet no. 5

Area / Prospect Drainage Survey Date 10.11.82

Map / Photo reference T.S.H 94 Analysed by ANALABS DPO no. 30122

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	Mo	Mn	Au	Co	Bi	As		
		o/c sample type ***																		
		s sample type ****																		
932817 1027	ss								6	9	26	X	-	157	-	9	X	1	110521	
932818 1028	"								2	1	11	X	-	30	-	3	X	1	135503	
932819 1029	"								4	6	24	0.1	-	520	-	10	X	1	132491	
932820 1030	"								2	2	10	X	-	58	-	5	X	1	133489	
932821 1031	"								1	1	10	0.1	-	17	-	3	X	1	146493	
932822 1032	"								1	X	7	0.1	-	13	-	2	X	X	150455	
932823 1033	"								2	2	15	0.1	-	70	-	6	X	1	150456	
932825 1034	"								2	4	14	01	-	69	-	6	X	1	155458	
932826 1035	"								1	X	6	01	-	21	-	4	X	2	177457	
932827 1036	"								12	8	51	X	-	1800	-	46	X	1	180447	
932828 1037	"								11	12	92	0.1	-	350	-	23	X	2	185444	

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* 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 LEDGER

Tenement name PIPERS RIVER. No 53/80. Sample numbers 932829 - 839 Collected by B Morley / D. Stafford. Sheet no. 6

Area / Prospect Drainage Survey Date 10-11-82

Map / Photo reference Tas H 94 Analysed by ANALABS DPO no 30122

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	As	Grid ref	Geological Observations
932829	ss										8	12	53	X	-	390	-	13	X	2	195437	
1038																						
932830	"										2	X	7	0.1	-	17	-	3	X	1	200434	
1039																						
932831	"										3	7	17	0.1	-	220	-	13	X	2	192443	
1040																						
932832	"										1	X	7	X	-	12	-	2	X	1	172434	
1041																						
932833	"										6	11	23	X	-	109	-	10	X	2	168437	
1042																						
932834	"										7	4	37	X	-	390	-	16	X	1	177436	
1043																						
932835	"										2	2	12	0.1	-	66	-	6	X	1	177421	
1044																						
932836	"										4	7	36	0.1	-	350	-	12	X	1	143425	
1045																						
932837	"										2	1	17	0.1	-	147	-	6	X	1	133431	
1046																						
932838	"										3	4	23	0.1	-	220	-	8	X	1	126443	
1047																						
932839	"										3	1	12	0.2	-	56	-	4	X	X	120449	
1048																						

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* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No. 53/80 Sample numbers 932840 - 850 Collected by B Morley / D Stalker Sheet no. 7
Area / Prospect Drainage Survey Date 10.11.81
Map / Photo reference Tas H 54 Analysed by ANALABS DPO no. 30122
A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	175	Grid ref	Geological Observations
932840	ss								3	4	13	0.2	-	18	-	3	x	1	101487	
1049																				
932841	"								6	10	25	0.2	-	31	-	5	x	1	102486	
1050																				
932842	"								5	7	20	0.2	-	29	-	4	x	x	101484	
1051																				
932843	-80#								22	11	240	0.1	-	930	-	37	x	8	091508	
1052	-10 +80								30	20	345							20		
932844	"								5	8	54	0.3	-	220	-	15	x	3	091497	
1053	"																			
932845	"								4	3	10	0.2	-	22	-	4	x	1	103470	
1054																				
932846	"								4	6	22	0.2	-	103	-	6	x	x	107468	
1055																				
932847	"								4	6	29	0.2	-	430	-	10	x	x	108469	
1056																				
932848	"								10	7	37	0.1	-	122	-	8	x	1	106476	
1057																				
932849	-80#								16	16	110	0.1	-	1510	-	23	x	33	101453	
1058	-10 + 80								15	15	70							19		
932850	"								7	7	55	0.1	-	290	-	13	x	3	098445	
1059																				

* 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

5950019

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No. 53/80 Sample numbers 932851 - 861 Collected by B. Morley J.D. Shuttard Sheet no. 8

Area / Prospect Drainage Survey Date 10.11.81

Map / Photo reference Tas H 94 Analysed by ANALABS DPO no. 30122

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	Mo	Grid ref	Geological Observations
932851 1060	ss										1	2	9	0.1	-	35	-	4	X	X	146444	
932852 1061	"										2	5	19	0.2	-	190	-	7	X	1	138418	
932853 1062	"										5	6	25	0.2	-	330	-	9	X	2	126431	
932854 1063	"										3	8	24	0.1	-	270	-	9	X	1	118435	
932855 1064	"										5	8	32	0.1	-	680	-	13	X	2	119437	
932856 1065	"										6	8	35	0.2	-	640	-	11	X	3	114421	
932857 1066	"										3	6	10	0.2	-	86	-	5	X	1	119428	
932858 1067	"										6	8	46	0.2	-	105	-	13	X	2	094540	
932859 1068	"										19	18	134	0.2	-	7100	-	97	X	7	092542	
932860 1069	"										34	21	116	0.3	-	5300	-	86	X	7	086529	
932861 1070	-80										31	33	163	0.3	-	1850	-	93	X	10	082571	
	-10+80										40	35	165							7		

020 39 50 20

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER. No. 53/80 Sample numbers 932862 - 872 Collected by B Morley / D. Stuttard. Sheet no. 9

Area / Prospect Drainage Survey. Date 10.11.81

Map / Photo reference Tas H 94 Analysed by ANALABS. DPO no. 30122

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	Mo	Mn	Au	Co	Bi	As	
		o/c sample type ***																	
		s sample type ****																	
932862	SS								11	7	54	0.2	—	1240	—	36	x	4	097530
1071																			
932863	-80								19	16	139	0.6	—	105	—	11	x	16	106539
1072	-10 +80								15	20	110							15	
932864	"								15	11	128	0.3	—	760	—	31	x	5	106538
1073																			
932865	"								13	8	26	0.4	—	47	—	6	x	3	101557
1074																			
932866	-80								7	8	116	0.5	—	158	—	14	x	17	100552
1075	-10 +80								25	35	345							100	
932867	"								19	9	55	0.1	—	3000	—	69	x	4	144553
1076																			
932868	"								12	16	80	0.1	—	3900	—	75	x	5	141556
1077																			
932869	"								3	4	21	0.2	—	230	—	10	x	2	143557
1078																			
932870	"								15	7	104	0.1	—	290	—	22	x	5	143559
1079																			
932871	"								18	9	93	0.1	—	3100	—	60	2	4	132570
1080																			
932872	-80								30	19	80.	0.5	—	950	—	46	x	8	119563
1081	-10 +80								40	45	95							26	

* 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

5950021

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 932873 - 883 Collected by B Morley / D. Stafford Sheet no. 10
Area / Prospect Drainage Survey Date 10-11-81
Map / Photo reference Tas H 94 Analysed by ANALABS DPO no. 30122
A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	As	Grid ref	Geological Observations
932873	-80										16	16	168	0.3	-	910	-	43	x	8	116564	
1082	-10 +80										15	40	235							31		
932874	SS										26	9	350	0.2	-	1720	-	89	x.	2	133545	
1083																						
932875	"										5	3	20	0.2	-	85	-	9	x	1	132547	
1084																						
932876	"										5	4	36	0.2	-	161	-	13	x	4	139536	
1085																						
932877	"										5	8	29	0.3	-	27	-	4	x	1	147582	
1086																						
932878	"										3	7	23	0.2	-	940	-	18	x	3	144581	
1087																						
932879	"										3	6	17	0.3	-	21	-	3	x	1	147580	
1088																						
932880	"										2	4	13	0.3	-	164	-	11	x	2	151576	
1089																						
932881	"										23	8	90	0.3	-	207	-	90	x	5	150569	
1090																						
932882	-80										7	19	65	0.1	-	6000	-	133	x	17	163552	
1100	-10 +80										10	25	75							75		
932883	"										3	8	34	0.2	-	141	-	15	x	4	173567	
1101																						

595022

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER. No. 53/80 Sample numbers 932884 – 894 Collected by B. Morley / D. Stafford. Sheet no. 11

Area / Prospect Drainage Survey. Date 10.11.81

Map / Photo reference Tas H 94 Analysed by ANALABS. DPO no. 30122

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Ca	Bi	As	Grid ref	Geological Observations
932884	ss										7	7	32	0.1	–	49	–	8	x	3	168572	
1102																						
932885	"										6	9	36	0.1	–	160	–	22	x	5	194580	
1103																						
932886	-80										4	10	30	0.2	-	35	–	9	x	12	208584	
1104	-10+80										0.5	10	30							14		
932887	"										5	10	42	0.3	–	162	–	6	x	3	258568	
1105																						
932888	"										2	5	10	0.2	–	43	–	7	x	2	194562	
1106																						
932889	"										16	16	95	0.4	–	20	-	4	x	2	194558	
1107																						
932890	"										1	1	6	0.3	–	9	-	3	x	1	196559	
1108																						
932891	"										4	8	32	0.3	-	136	–	9	x	2	159476	
1109																						
932892	"										5	6	36	0.3	-	53	–	6	x	1	160475	
1110																						
932893	"										3	4	20	0.3	-	134	-	10	X	2	156481	
1111																						
932894	"										3	5	21	0.3	–	121	–	13	X	1	167454	
1112																						

* 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

5360230

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name... PIPERS RIVER ... No 53/80. Sample numbers... 932895 - 905 ... Collected by... B. Morley / D. Stafford / A. Crick ... Sheet no. 12

Area / Prospect... Drainage Survey ... Date... 10.11.81

Map / Photo reference... Tas H 54 ... Analysed by... ANALABS. ... DPO no. 30122/30124

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	Mo	Mn	Au	Co	Bi	As		
		o/c sample type ***																		
		s sample type ****																		
932895 1113	ss								7	4	31	0.2	–	300	–	16	x	1	165457	
932896 1114	"								2	2	19	0.3	–	65	–	10	x	1	172464	
932897 1115	"								2	3	23	0.3	–	270	–	10	x	1	174462	
932898 1116	"								1	1	8	0.3	–	12	–	2	x	1	176472	
932899 1117	"								3	2	19	0.3	–	46	–	6	x	2	171502	
932900 1118	"								5	11	60	0.2	–	580	–	26	x	5	172500	
932901 1119	"								5	5	33	x	–	175	–	8	–	5	274557	
932902 1120	"								7	20	48	0.1	–	5750	–	83	–	4	284552	
932903 1121	"								13	11	70	0.1	–	220	–	13	–	3	279554	
932904 1122	"								2	2	8	x	–	55	–	4	–	x	318587	
932905 1123	"								3	3	25	x	–	170	–	6	–	x	321571	

932895 932904

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER. No. 53/80 Sample numbers 932906 – 916 Collected by A. Crick / I. Hall. Sheet no. 13.

Area / Prospect Drainage Survey. Date 13.11.81.

Map / Photo reference Tas H 94. Analysed by ANALABS. DPO no. 30124

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	As	Grid ref	Geological Observations
		o/c sample type ***																		
		s sample type ****																		
932906	ss								7	9	23	0.1	–	140	–	9	–	4	322575	
1124																				
932907	"								5	9	21	0.1	–	135	–	12	–	3	321573	
1125																				
932908	"								5	13	22	0.1	–	90	–	6	–	5	319575	
1126																				
932909	"								2	2	16	x	–	115	–	5	–	x	303573	
1127																				
932910	"								5	9	23	0.1	–	275	–	13	–	1	304552	
1128																				
932911	"								2	3	20	x	–	215	–	5	–	x	306555	
1129																				
932912	"								5	10	24	0.1	–	150	–	6	–	2	304543	
1130																				
932913	"								4	9	16	0.1	–	65	–	5	–	3	300544	
1131																				
932914	"								5	3	20	0.1	-	100	_	6	–	1	311556	
1132																				
932915	"								4	3	32	0.1	–	165	–	8	–	1	315550	
1133																				
932916	"								3	2	23	x	–	185	–	6	–	x.	324542	
1134																				

* 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

5 6 9 5 0 2 5

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER. No 53/80 Sample numbers 932917 - 927 Collected by A. Crich / I. Hall Sheet no. 14

Area / Prospect Drainage Survey Date 13:11:81

Map / Photo reference Ins H 094 Analysed by ANALABS DPO no 30124

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	As.	Grid ref	Geological Observations
932917 1135	ss										2	2	13	X	-	55	-	3	-	1	325543	
932918 1136	"										3	2	17	X	-	60	-	5	-	1	325538	
932919 1137	"										6	7	49	0.1	-	155	-	11	-	2	321534	
932920 1138	"										3	3	16	X	-	180	-	5	-	3	318538	
932921 1139	"										2	2	12	X	-	135	-	3	-	1	315529	
932922 1140	"										2	3	15	0.1	-	125	-	3	-	2	285529	
932923 1141	"										6	4	35	0.1	-	255	-	9	-	5	281529	
932924 1142	"										1	X	6	0.1	-	45	-	2	-	1	294525	
932925 1143	"										8	19	43	0.1	-	2700	-	69	-	6	295505	
932926 1144	"										6	9	28	0.1	-	420	-	18	-	2	291510	
932927 1145	"										3	12	13	X	-	220	-	13	-	2	267535	

* 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

932917 932927

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER. No 53/80. Sample numbers 932928 -934 / 932975 - 978 Collected by B. Morley / A. Crith / I. Hall. Sheet no. 15

Area / Prospect Drainage Survey. Date 30-11-81

Map / Photo reference Tas H094 Analysed by ANALABS DPO no 30124 / 30129

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	As	Grid ref	Geological Observations
		o/c sample type ***																		
		s sample type ****																		
932928	ss								7	5	24	0.1	-	395	-	24	-	1	265535	
1146																				
932929	"								2	1	8	0.1	-	50	-	3	-	X	240526	
1147																				
932930	"								2	2	7	0.1	-	10	-	3	-	1	240527	
1148																				
932931	"								2	4	11	X	-	30	-	4	-	1	240518	
1149																				
932932	"								1	1	5	0.1	-	5	-	2	-	X	239519	
1150																				
932933	"								X	7	11	0.1	-	15	-	5	-	X	060557	
1151																				
932934	"								18	35	17	0.2	-	25	-	10	-	19	054549	
1152																				
932975	"								3	25	20	0.1	-	365	-	25	-	1	265518	
1153																				
932976	-80								3	21	17	0.1	-	60	-	10	-	X	278525	
1154	-10+80								5	15	15							2		
932977	"								3	20	18	0.2	-	65	-	15	-	X	270494	
1155																				
932978	-80								6	24	46	0.1	-	525	-	30	-	2	293487	
1156	-10+80								5	10	35							8		

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: PIPERS RIVER. No: 53/80. Sample numbers: 932979 – 991. Collected by: B. Morley / D. Stafford. Sheet no.: 16.
Area / Prospect: Drainage Survey. Date: 30-11-81
Map / Photo reference: Ins 4094. Analysed by: ANALABS. DPO no: 30129
A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	Mn/S	Grid ref	Geological Observations
		o/c sample type ***																		
		s sample type ****																		
932979	-80								7	24	35	0.2	-	190	-	20	-	3	292499	
1157	-10+80								5	20	35							18		
932980	ss								x	13	10	0.1	-	60	-	10	-	1	317475	
1158																				
932981	"								x	9	11	x	-	105	-	15	-	1	317477	
1159																				
932982	-80								2	17	22	0.1	-	130	-	5	-	1	309467	
1160	-10+80								5	10	15							1		
932983	-80								5	30	38	0.1	-	1600	-	35	-	4	309466	
1161	-10+80								5	5	25							5		
932984	-80								3	22	19	0.1	-	140	-	15	-	x	312460	
1162	-10+80								5	20	25							0.5		
932985	"								1	15	10	0.2	-	55	-	10	-	x	313458	
1163																				
932986	-80								x	15	15	0.1	-	115	-	15	-	1	313462	
1164	-10+80								5	10	15							4		
932987	"								2	21	19	0.1	-	145	-	15	-	x	312457	
1165																				
932988	-80								8	32	45	0.1	-	460	-	30	-	3	277460	
1166	-10+80								10	30	80							18		
932991	-80								7	36	30	0.1	-	275		15	-	16	304437	
1167	-10+80								10	30	45							35		

* 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 co = rock chip (state interval & length) cc = channel sample (state length)

932979 932980 932981 932982 932983 932984 932985 932986 932987 932988 932991

029

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No. 53/80 Sample numbers 932992 - 933000 Collected by B. Morby / D. Stafford Sheet no. 17

Area / Prospect Drainage Survey Date 30.11.81

Map / Photo reference Tas H 094 Analysed by ANALABS DPO no. 30129

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	Bi	As	Grid ref	Geological Observations
932992 1168	ss										2	21	18	0.1	-	135	-	25	-	1	298483	
932993 1169	"										2	15	19	X	-	175	-	25	-	1	299485	
932994 1170	"										x	13	10	x	-	65	-	15	-	1	313485	
932995 1171	"										2	15	12	x	-	50	-	5	-	1	325485	
932996 1172	"										x	15	9	x	-	60	-	10	-	x	326487	
932997 1173	"										1	16	12	x	-	90	-	10	-	1	311495	
932998 1174	"										3	14	11	x	-	50	-	10	-	1	307496	
932999 1175	"										10	40	15	0.3	-	55	-	20	-	15	314496	
933000 1176	"										4	22	19	0.1	-	325	-	10	-	2	313497	

595029

* 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 ro = rock sample cc = rock chip (state interval & length) cc = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER. No 53/80 Sample numbers 973001 – 023 Collected by G BROTHERTON / IS MORLEY ACRICK D STUTTERD Sheet no. 18

Area / Prospect DRAINAGE SURVEY. Date 10.12.81

Map / Photo reference ST. PATRICKS 1:100,000 Sheet N° 8315 ; Tas H 94 Analysed by ANALABS DPO no. 30124

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	As	Grid ref	Geological Observations
973001	ss	1177									18	15	148	0.1	–	860	–	24	3	218409	
973002	"	1178									19	18	122	0.1	–	1800	–	19	4	220402	
973003	"	1179									13	12	99	0.1	–	850	–	24	3	209386	
973004	"	1180									42	21	142	0.1	–	1150	–	32	5	223345	
973005	"	1181									56	16	95	x	–	530	–	29	5	224346	
973006	"	1182									12	8	49	0.1	–	320	–	10	5	211349	
973007	"	1183									10	8	69	0.1	–	360	–	14	4	199362	
973008	"	1184									24	14	200	0.1	–	710	–	22	4	232355	
973009	"	1185									16	9	153	0.1	–	740	–	18	7	234356	
973010	"	1186									21	14	87	0.2	–	110	–	9	3	235361	
973011	"	1187									15	13	81	0.1	–	560	–	17	3	226368	
973012	"	1188									17	14	151	0.1	–	710	–	20	5	229371	
973013	"	1189									17	14	54	x	–	595	–	15	8	223370	
973014	"	1190									27	18	100	0.1	–	340	–	20	8	216377	
973015	"	1191									25	16	97	0.1	–	505	–	17	6	222380	
973016	"	1192									26	18	139	x	–	805	–	20	7	225378	
973017	"	1193									9	6	32	0.1	–	85	–	9	8	242375	
973018	"	1194									15	12	25	x	–	420	–	11	5	246374	
973019	"	1195									9	13	45	0.1	–	100	–	10	12	238389	
973020	"	1196									14	16	40	0.1	–	380	–	13	8	261405	
973021	"	1197									7	11	42	0.2	–	665	–	20	6	275410	
973022	"	1198									42	25	33	0.5	–	110	–	12	250	265418	
973023	"	1199									13	16	54	0.1	–	550	–	14	14	247417	

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

** Stream sed. sample description fl = flow; wi/[illegible] width; al = alluvial

973001 973030

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 973024 – 046 Collected by G BROADBENT / B MORLEY / ALRICK D STUTTERD Sheet no. 10

Area / Prospect DRAINAGE SURVEY. Date 10·12·81

Map / Photo reference ST. PATRICKS 1:100,000 Sheet N° 8315 ; Tas H094 Analysed by ANALABS DPO no. 30124

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	As	Grid ref	Geological Observations
973024	SS	1200									8	15	27	0·1	–	480	–	21	15	238425	
973025	"	1201									11	15	50	0·1	–	285	–	13	12	228413	
973026	"	1202									5	8	23	0·1	–	155	–	9	9	284422	
973027	"	1203									4	4	17	0·1	–	135	–	5	3	286412	
973028	"	1204									4	5	22	0·1	–	210	–	5	3	295430	
973029	"	1205									13	10	74	0·2	–	450	–	16	6	298421	
973030	"	1206									5	11	25	0·1	–	110	–	7	2	315408	
973031	"	1207									3	1	9	x	–	50	–	4	2	320408	
973032	"	1208									3	15	13	0·3	–	40	–	3	2	324411	
973033	"	1209									17	10	36	0·2	–	800	–	15	17	331407	
973034	"	1210									12	8	51	0·2	–	570	–	14	10	326382	
973035	"	1211									11	6	40	0·7	–	140	–	6	6	320388	
973036	"	1212									10	8	61	0·2	–	530	–	14	8	318387	
973037	"	1213									10	12	65	0·3	–	550	–	14	7	302404	
973038	"	1214									9	6	27	0·1	–	160	–	7	3	302388	
973039	"	1215									9	8	34	0·2	–	775	–	8	5	303391	
973040	"	1216									8	8	41	0·2	–	230	–	7	2	295388	
973041	"	1217									14	10	53	0·3	–	30	–	8	2	298381	
973042	"	1218									10	11	75	0·2	–	1250	–	17	6	303375	
973043	"	1219									17	18	129	0·3	–	670	–	22	3	317368	
973044	"	1220									10	8	50	0·2	–	175	–	8	5	316364	
973045	"	1221									29	16	104	0·3	–	4500	–	48	5	312356	
973046	"	1222									13	8	42	0·2	–	285	–	11	3	306354	

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 973047 – 069 Collected by G BROADBENT / B MORLEY ACRICK D STUTTERD Sheet no. 20

Area / Prospect DRAINAGE SURVEY. Date 10·12·81

Map / Photo reference ST. PATRICKS 1:100,000 Sheet N° 8315, Tas H094 Analysed by ANALABS DPO no. 30124

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl wi al co ca pH; o/c sample type ***; s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	As	Grid ref	Geological Observations
973047	ss	1223		10	7	56	0·2	–	840	–	17	5	305337	
973048	"	1224		18	13	130	0·2	–	2000	–	23	11	307334	
973049	"	1225		14	11	83	0·2	–	1750	–	23	12	298340	
973050	"	1226		19	14	134	0·3	–	2900	–	29	11	297341	
973051	"	1227		8	4	47	0·1	–	270	–	12	14	274324	
973052	"	1228		19	15	96	0·3	–	1450	–	16	7	277329	
973053	"	1229		9	4	48	0·1	–	245	–	8	2	276341	
973054	"	1230		24	14	55	0·4	–	430	–	13	7	269327	
973055	"	1231		9	6	56	0·2	–	340	–	10	19	264333	
973056	"	1232		20	18	110	0·3	–	1·10%	–	62	23	256337	
973057	"	1233		5	7	34	0·2	–	190	–	8	7	258352	
973058	"	1234		9	4	42	0·2	–	235	–	11	7	267361	
973059	"	1235		12	7	58	0·2	–	1200	–	12	5	273370	
973060	"	1236		8	8	26	0·1	–	210	–	8	4	283383	
973061	"	1237		14	10	36	0·2	–	210	–	10	8	286384	
973062	"	1238		7	6	30	0·1	–	190	–	8	7	281440	
973063	"	1239		4	8	15	0·2	–	30	–	6	3	276437	
973064	"	1240		6	18	30	0·2	–	220	–	16	14	246444	
973065	"	1241		5	9	21	0·2	–	70	–	8	9	248443	
973066	"	1242		2	2	10	0·2	–	25	–	3	5	226438	
973067	"	1243		1	x	6	0·1	–	10	–	2	3	238453	
973068	"	1244		8	13	51	0·2	–	75	–	13	12	226443	
973069	"	1245		2	3	12	0·1	–	35	–	2	3	226429	

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

595032

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 973070 – 078 Collected by G BROADBENT / B MORLEY / ALRICK D. STUTTERD Sheet no. 1 21

Area / Prospect DRAINAGE SURVEY. Date 10.12.81

Map / Photo reference ST. PATRICKS 1:100,000 Sheet N° 8315 . Tm 4094 Analysed by ANALABS DPO no. 30124

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	Co	As	Grid ref	Geological Observations
973070	SS	1246									12	11	42	0·2	–	1900	–	33	7	172533	
973071	"	1247									3	5	11	0·2	–	35	–	4	3	180520	
973072	"	1248									1	6	9	0·2	–	20	–	3	3	200539	
973073	"	1249									1	2	6	0·2	–	10	–	2	3	197540	
973074	"	1250									1	1	4	0·2	–	5	–	2	3	217559	
973075	"	1251									2	6	7	0·3	–	15	–	3	4	233548	
973076	"	1252									5	10	20	0·2	–	65	–	10	5	257560	
973077	"	1253									6	13	24	0·2	–	105	–	9	7	257561	
973078	"	1254									4	9	20	0·2	–	90	–	11	3	268555	

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

973070 973078

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 973201 - 210 Collected by G. BROADBENT / A. CRICK Sheet no. 22

Area / Prospect Platypus Road As anomaly (sample no 932849) Date 4.12.81

Map / Photo reference RETREAT 1:25,000 topo sheet. Tas H 099 Analysed by ANALABS. DPO no 30130/30131

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon 30130 / 30131	Cu	Pb	Zn	Ag	Co	Mn	Au	As	Sb	Ba	Grid ref	Geological Observations
		o/c sample type ***																		
		s sample type ****																		
973201	ss	wet	0.6			Follow up to			9	13	58	0.2		295	0.008	12		660	EQ 103450	Collected by A. Crick.
1255						No 932849			16	16	75	X	12	275		17	10	800		
202	ss	Tributary from south.							15	20	52	0.1		33	0.008	23		800	EQ 104449	
1256									31	30	91	0.1	10	135		36	5	800		
203	ss	"	"	"	"				20	15	37	0.3		24	0.004	7		700	EQ 104447	
1257									21	17	42	X	7	30		11	6	750		
204	ss	Main Creek from east							17	15	82	0.1		360	0.096	20		800	EQ 104449	
1258									23	22	97	X	17	360		25	8	900		
205	ss		"	"	"	"			15	10	57	0.05		210	0.038	3		520	EQ 106448	
1259			"	"	"	"			18	11	59	X	12	195		6	6	550		
206	ss		"	"	"	"			20	11	74	0.1		415	0.004	1		640	EQ 107448	
1260									20	15	78	X	17	440		7	5	680		
207	pan con.	30m upstream from 932849. 3 level pans taken to 204 gms							8	2	16	0.1		21	0.008	12		380	EQ 102451	O/c greyish brown mic. greywacke, qtz float, minor qtz veining ± limonite capping. Float same.
208	oc	0.6 m x 0.2m r.c.							16	12	52	0.1		660	0.008	59		530	"	O/c - brownish Fe oxide cement developed on qtz vein, above
									1											
209	oc	1.5m x 0.4 m r.c.							17	21	66	0.5		59	0.013	9		1750	"	Black weakly pyritic slate, strongly cleaved 20°→130, 30m upstream from pan-con site
210	oc	0.9m x 0.2m r.c.							45	15	200	0.05		2500	0.008	89		780	"	Brown mic. greywacke from pan-con site

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIRERS RIVER No 53180 Sample numbers 973724–741 Collected by G. BROADBENT Sheet no. 23

Area / Prospect AREA OF QTZ FLOAT - Follow up to float sample No 952694 - soil samples Date 24.6.82

Map / Photo reference WEYMOUTH 1:25,000 topo. sheet. ; Tas H094 Analysed by ANALABS DPO no.

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Sn.	Grid ref	Geological Observations
973724	S	Power Auger			0.5m.	C				30	5	25	x			0.016	27	3	550 E a086587	Yellow clay loam with qtz fragments.
725	S	"		"	0.6m	C				55	15	25	x			0.013	47	7	20m mag north of 724	Yellow clay loam with qtz fragments.
726	S	"		"	0.8m	C				25	5	25	x			0.010	54	5	40m N of 724	Pale yellow silty clay.
727	S	"		"	0.6m	"				30	5	30	x			0.013	33	9	60m N of 724	Yellow sticky clay - Tertiary sand?
728	S	"		"	0.8m	"				5	5	15	x			x	18	7	80m N of 724	" " " — " "
729	S	"		"	0.8m	"				30	10	25	0.5			0.011	37	8	100m N of 724	" " " — " "
730	S	"		"	0.8m	"				100	x	25	x			0.049	83	4	20m mag. S. of 724	White + yellow siltstone - Mathinna beds.
731	S	"		"	0.7m	C				90	5	25	x			0.060	88	5	40m S. of 724	Yellow - grey sticky clay - " "
732	S	"		"	0.8m	C				70	10	25	x			0.013	75	6	60m S. of 724	White siltstone, weathered " "
733	S	"		"	1.0m	C				15	x	25	0.5			0.009	19	9	80m S. of 724	Yellow/orange sandy clay - Tertiary sand?
734	S	"		"	1.0m	C				5	x	15	x			0.006	92	8	100m S. of 724	" " " " — " "
735	S	"		"	0.7m	C				80	10	25	x			0.046	75	5	20m E of 724	Spotted grey and yellow sandy clay - Mathinna Beds?
736	S	"		"	0.6m	C				20	x	25	x			0.018	47	6	40m E of 724	Yellow clay with minor qtz
737	S	"		"	0.4m	C				20	10	25	x			0.010	55	8	60m E " "	Yellow weath. siltstone + shale
738	S	"		"	0.4m	C				25	x	20	x			0.014	57	7	80m E " "	Yellow clay with qtz gravel.
739	S	"		"	0.7m	C				40	5	25	x			0.017	56	10	100m E " "	Yellow - brown sandy clay - Tertiary?
740	"	"		"	0.7m	C				30	x	25	x			0.011	49	10	20m mag W of 724	Yellow weath. siltstone - Mathinna beds.
741	S	"		"	0.6m	C				25	5	25	x			0.007	36	5	40m W of 724	Sticky yellow clay - Tertiary sands?

* 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

595035

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER. No 53/30 Sample numbers 973742 - 755 Collected by G. BROADBENT Sheet no. 24

Area / Prospect Date 24.6.82

Map / Photo reference RETREAT 1:25,000 topo sheet (5044) ; Tas H099 Analysed by ANALABS DPO no 30148

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Grid ref	Geological Observations
																			r	DEAD HORSE CREEK' + tributaries.
973742	SS	trickle	0.2m								25	10	35					8	EQ054446	Main stream, draining to NNW, no o/c, weathered slate
1261																			EQ05444[illegible]	in sample, abundant brown Fe rich sludge.
746	SS	"	1.0m								10	10	25				X	3	EQ109448	Float - abundant limonite stained qtz
1262																				ragged + vuggy, black slate.
747	SS	"	0.7m								15	25	45				X	9	EQ110449	o/c - grey mudstone, cleaved, str 110°
1263																				float - qtz and slate frags.
749	SS	"	0.6m								20	10	60				X	7	EQ110449	o/c - black slate with ferruginised qtz veins
1264																				, str 296. Quartz float. Trib from south.
750	SS	"	0.6m								15	10	60				X	3	EQ110449	No o/c - Brown Fe stained sandstone + qtz float.
1265																				Trib from East
751	SS	"	0.5m.		✓		1266				20	5	65				0.007	2	EQ111447	No o/c - shale siltstone + qtz float
752	SS	"	0.2m		✓		1267				15	15	40				X	5	EQ112444	No o/c qtz, slate, siltstone float.
753	SS	"	0.2m				1268				10	5	25				X	4	EQ114449	No o/c black slate, weathered yellow + brown
																				siltstone + slate float, minor qtz.
754	SS	"	0.3m		✓		1269				10	5	55				X	3	EQ112450	No o/c - qtz, siltstone and slate float.
755	SS	dry	0.2m		✓		1270				10	X	40				X	8	EQ108447	No o/c - slate, minor qtz float

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 973756 – 775 Collected by G. BROADBENT / I. HALL Sheet no. 25

Area / Prospect DEAD HORSE CK AREA. Date 24.6.82

Map / Photo reference RETREAT 1:25,000 topo. sheet (5044) Tas H099. Analysed by ANALABS DPO no 30147 / 30148

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As			Grid ref	Geological Observations
		o/c sample type ***																		
		s sample type ****																		
973756	oc	6 x 0.2m	r.c.						115	20	25	1.0			0.011	33			EQ103446	Abundant small qtz veins in brown and black slate - shear zone striking 165°
757	ss	wet	0.7m	✓	✓		1271		25	10	85					2			EQ070462	No o/c - alluvium
758	ss	trickle	0.3m	✓	✓		1272		10	5	15					1			EQ069462	No o/c - slate + siltstone float, qtz rubble.
759	ss	"	0.3m		✓		1273		30	5	45					3			EQ069464	No o/c - qtz, slate + siltstone float.
760	ss	wet	0.7m	✓	✓		1274		25	5	75					3			EQ069464	Dead Horse Ck - No o/c, alluvium.
761	ss	trickle	0.3m		✓		1275		55	15	70					4			EQ064464	No o/c - qtz, slate float
762	ss	"	0.3m		✓		1276		15	15	15					2			EQ064461	No o/c - float ferrug. mic. siltstone.
763	ss	"	0.3m	✓	✓		1277		35	10	35					1			EQ068457	No o/c - abundant qtz float, ragged + vuggy.
764	ss	wet	0.7m	✓	✓		1278		25	10	50					3			EQ069457	No o/c - alluvium (Dead Horse Ck.)
765	ss	"	0.7m	✓	✓		1279		20	X	45					2			EQ068454	No o/c - alluvium (Dead Horse Ck.)
766	ss	"	0.7m	✓	✓		1280		15	10	35					4			EQ068453	No o/c - alluvium (Dead Horse Ck.)
767	ss	"	0.6m	✓	✓		1281		30	10	45					3			EQ068454	Tributary from w. No o/c - alluvium, minor qtz float
768	ss	"	0.5m	✓	✓		1282		45	10	55					7			EQ063455	No o/c - alluvium + colluvium, qtz float.
769	ss	"	0.5m	✓	✓		1283		75	25	100					5			EQ063456	No o/c colluvium, minor qtz float.
775	ss	wet	0.5m						20	5	40					5			EQ051461	No o/c qtz gravel + slate float.

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 973776-782; 784-792 Collected by G. BROADBENT Sheet no. 26

Area / Prospect DEAD HORSE CREEK AREA Date 24.6.82

Map / Photo reference RETREAT 1:25,000 sheet area . Tas # 099 Analysed by ANALABS DPO no. 30148

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Grid ref	Geological Observations
		o/c sample type ***																
		s sample type ****																
973776	SS	dry	0.3m		✓		1284		40	20	75					5	EQ064467	Weathered slate + qtz float - no o/c.
777	Ss	wet	0.4m		✓		1285		40	15	85					9	EQ064468	Abundant white qtz gravel - prob washed out of colluvium
778	ss	wet	0.5m		✓		1286		45	15	140					20	EQ069467	" " " " " " " " "
779	ss	wet	0.7m	✓	✓		1287		35	15	105					5	EQ072469	Alluvium - washed clayey sand, minor qtz gravel.
780	ss	trickle	0.3m		✓		1288		35	X	65					5	EQ072471	Washed qtz gravel from colluvium, minor slate
781	ss	"	0.4m		✓		1289		20	15	35					7	EQ069476	float, minor qtz gravel, slate, washed from colluvium
782	ss	"	0.4		✓		1290		10	X	15					2	EQ068477	Quartz gravel, minor slate
784	ss	"	0.3m		✓		1291		10	5	20					4	EQ068477	Trib from west - slate, qtz float
785	f	g.s.							25	X	525	X			X	53	EQ068475	Poorly cellular porous crystalline haematite - goethite rock. Non magnetic
786	f	g.s.							60	X	385	X			0.021	34	"	Ferruginised brown siltstone, porous, with secondary Fe oxides in cavities (small py veins orig.?)
787	f.	g.s.							110	10	210	X			0.005	17	"	Clayey weathered siltstone, slightly ferruginised
788	f	g.s.							115	30	275	X			X	33	"	Porous, slightly Mn iferous ferruginised siltstone with rounded nodules of crystalline Fe oxides to 10mm
789	f.	g.s.							50	X	495	X			X	36	"	Ferruginous claystone with stringers & secondary Fe oxides (after sulphides?)
790	f	g.s.							10	X	695	X			X	29	"	Massive cellular crystalline secondary goethite gossan?
791	ss	wet	0.5m		✓		1292		35	10	55					4	EQ071484	Qtz gravel, minor slate, basalt float.
792	ss	dry	0.3m		✓		1293		25	5	40					4	EQ070484	Trib from SW - angular qtz gravel, slate float.

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 973793-800 1056001 - 014 Collected by G. BROADBENT / I. HALL Sheet no. 27

Area / Prospect DEAD HORSE CREEK AREA Date 20.7.82

Map / Photo reference RETREAT 1:25,000 sheet area, WEYMOUTH 1:25,000 sheet. Tas H099 ; Tas H 094 Analysed by ANALABS DPO no. 30148

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH (o/c sample type ***; s sample type ****)	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Grid ref	Geological Observations
973793	ss	wet	0.6m		✓		1294		30	5	50					6	EQ069485	Qtz gravel (angular), slate fragments
794	ss	"	0.5		✓		1295		20	X	45					8	EQ068486	Angular qtz gravel and slate float.
795	ss	"	0.3		✓		1296		35	10	40					7	EQ066488	" " " " ", minor basalt float
796	ss	"	0.3		✓		1297		10	X	20					3	EQ066487	Trib. from S.W. qtz, slate float.
797	ss	"	0.6	✓	✓		1298		30	10	70					9	EQ052471	Vein qtz, slate, float.
798	ss	dry	0.5	✓	✓		1299		40	X	20					5	EQ041469	Floodplain sands from dry channel.
799	ss	dry	0.4	✓	✓		1300		10	X	15					3	EQ057535	Silt sample from flood channel.
800	ss	wet	0.4	✓	✓		1301		15	15	140					19	EQ062537	Ironstone gravel, qtz sand, basalt float.
							*											
1056001	ss	wet	0.5	✓	✓		1302		15	X	35					6	EQ059543	Ironstone gravel, qtz sand (windblown), basalt float
1056002	ss	wet	0.5	✓	✓		1303		5	X	10					4	EQ037565	Mainly windblown sand, minor qtz float.
1056003	ss	dry	0.3	✓	✓		1304		5	X	20					3	EQ003544	Dry creek - coarse sand and fine qtz gravel.
1056004	ss	"	0.3	✓	✓		1305		30	5	40					4	EQ006527	Dry creek - sand and silt from flood channel.
005	ss	trickle	0.4		✓		1306		10	5	25					67	DQ992470	Qtz float and sand, minor slate, no o/c.
006	ss	"	0.4		✓		1307		10	X	30					5	DQ999465	Qtz and minor slate float, no o/c.
007	ss	dry	0.3		✓		1308		5	X	15					2	EQ000461	Dry gully, poorly defined channel - washed soil.
008	ss	wet	0.3		✓		1309		5	5	60					6	DQ983489	Qtz + slate float, washed sand + gravel.
009	ss	wet	0.5		✓	(follow up to 932863)	1310		10	X	85				X	7	EQ108541	Collected by I. Hall - Trib from north - Main creek.
010	ss						1311		15	5	95				X	7	EQ112541	
011	ss						1312		10	X	15				X	4	EQ114541	
012	ss						1313		15	X	150				X	8	EQ110541	
013	ss						1314		15	X	30				X	5	EQ110541	
014	ss						1315		25	5	25				X	5	EQ110543	

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 1056015-020, 1056051-053 Collected by C. BROADBENT / I. HALL Sheet no. 28

Area / Prospect Various drainage samples Date 20.7.82

Map / Photo reference WEYMOUTH 1:25,000 topo. sheet ; RETREAT 1:25,000 ST PATRICKS 1:100,000 Tas H 094 Analysed by ANALABS DPO no. 30148/30150

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Wt	Grid ref	Geological Observations
		o/c sample type ***																	
		s sample type ****																	
1056015	SS						1316		15	10	165				X	5		EQ116542	Collected by I. Hall.
016	SS	dry	0.4	✓	-		1317		15	X	175				0.006	6		EQ103541	Dry creek ; silt from flood channel.
017	SS	dry	0.4	✓	✓	follows up to 932866	1318		20	X	225				X	6		EQ105541	Dry creek - sand from flood channel.
018	SS	dry	0.3	✓	-		1319		65	X	575				X	8		EQ108540	Dry creek - black clay soil from bed of flood channel.
019	SS	wet	0.4	✓	✓		1320		10	5	25					3		EQ040536	Qtz gravel + sand, rare slate float
020	SS	trickle	0.3	✓	✓		1321		5	X	15					5		EQ019529	Qtz gravel + sand, much alluv. + colluvium.
Follow	-up	sampling	to	973056	,	WSLE	AREA.												
1056051	SS	flowing	0.8		✓		1322		30	20	95					20		EQ257337	Re-sample of 973056. Coarse gravelly sediment with few fines - float mostly black hornfelsed sandstone and brown mudstones/siltstones, rare qtz.
052	SS	flowing	0.8		✓		1323		30	25	80					17		EQ256336	Float same as 051
053	SS	"	0.8		✓		1324		25	30	75					20		EQ255335	" " " "
054	pan.con.	same site as 1056051, poor quality - tapsites behind boulders 3 full pans taken, reduced to 19gm					1325		20	20	85				X	16	19-00	EQ257337	Float black hornfelsed sandstone, weathered brown hornfelsed mudstones. H.M content of concentrate low and very little qtz in sample.
	Dead	Horse	Ck	Area														EQ067449 ↓	High concentration of sandy alluvium + colluvium ; minor basalt derived ferrug. gravels. Minor angular qtz.
1056078	SS	flowing	0.7	✓	✓		1326		25	35	125					7			
079	SS	flowing	0.6	✓	✓		1327		20	10	55					4		EQ067451	Angular qtz and minor slate float.

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

595041

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 35/81 Sample numbers 1056100 → 105 ; 055 → 058 Collected by G. BROADBENT Sheet no 29

Area / Prospect BACK CREEK AREA - JOHN FRANKLIN TUNNEL. LISLE AREA - BESSELLS REWARD SHAFT. Date 18.8.82

Map / Photo reference T.S. #094 Analysed by ANALABS DPO no 30149

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl wi al co ca pH; o/c sample type ***; s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Grid ref	Geological Observations
1056100	oc	Selective sample of 6 small qtz veins over a 1.6m width - aggregate width of qtz 0.3m.		40	30	25	0.5			0.16	75		White quartz with thin limonitic films on fracture planes; rare small limonite filled pits after sulphides
1056101	oc	Sample of intervening wall rock between above veins - 1.3m r.c.		40	10	10	0.5			0.09	200		Pale fairly soft weathered mic. greywacke (wall rock in between the above veins)
" 102	oc	Grab sample from side of winze, pieces grabbed over 2m interval		10	X	10	0.5			0.88	120		Porous sandstone with minor thin qtz stringers, slightly micaceous and weathered.
103	oc	0.5m r.c. sample from small cuddy before winze.		10	15	20	X			0.55	300		Pale bleached sandstone as above, with some thin qtz stringers to 2cm
104	oc	1.0m r.c. from face & small drive before winze.		25	30	60	X			0.58	280		Weathered sandstone with thin qtz veins to 3cm.
105	oc	6 x 0.3m r.c. from start of channel.		20	10	50	X			0.36	250		White bleached greywacke with minor brown qtz veins to 5cm, and thin qtz stringers.
BESSELL'S REWARD SAMPLES / LISLE AREA.													
1056055	f	from dump of Bessell's Reward Shaft		80	45	100	0.5			7.18	60		Bleached white sandstone core, slightly pitted and micaceous, surrounded by secondary ferruginised/silicified brownish material which follows joints. Some thin qtz stringers to 1mm.
056	f	" " " " "		40	10	85	X			0.20	55		As above, but many more qtz stringers - to 20% rock.
057	f	" " " " "		60	45	120	X			0.23	55		Sandstone with extensive qtz veining; same as 056.
058	f	" " " " "		75	20	50	0.5			0.01	2		Laminated pinkish brown sandy siltstone/shale rock

* 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

595042 042

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 35/81 Sample numbers 1056059 - 072 Collected by G. BROADBENT Sheet no. 30

Area / Prospect LISLE AREA - BESSELLS REWARD SHAFT DUMP; OTHER MISC LOCALITIES. SOIL SAMPLES UNION MINE AREA. Date 1.8.82

Map / Photo reference Tas # 094 Analysed by ANALABS DPO no. 30149/30150 30353.

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Grid ref	Geological Observations
1056059	f	From dump of Bessells Reward shaft. 6x6.5m r.c.									40	15	65	X			1.09	20		Massive quartzite with 5-10% brownish pits - after pyr?
060	oc										25	15	20	X			0.12	16		Black shale band exposed in road cut - only slightly pyritic, with some thin grey 'qtzite' bands - recrystallised chert?
061	oc.	2m r.c.									15	X	135	X				10		Unusual hard greywacke with thin films of limonite / goethite along fine fractures.
062 → 064 from pyritic shales at Western end of Weymouth Beach.																				
062	oc	g.s.									190	20	40	1.5				12	EQ124596	Grey thinly bedded non-pyritic shale.
063	oc	g.s.									40	10	20	X				9	"	Weakly pyritic black shales - 8m oc.
064	oc	g.s.									35	30	25	X				18	"	Weakly pyritic black shales - 3m oc.
Buck Creek - in White Heads area.																				
065	f	g.s.									85	20	15	2.0			0.06	8	EQ056570	Black pyritic slate (up to 10% pg) from small shaft dump within bed of White Head, approx 50m. downstream from track.
066	f.	g.s.									50	10	45	X			X	15	EQ057548	Black pyritic slate from dump Buck Creek
Union	Mine	Area. - soil samples at 20m or 10m intervals along a line commencing at EQ051552, bearing 80° magnetic																		Deep Heads G.M. Co shaft.
1056067	s	Power Auger : 0.4m									5	20	10				0.038	2	0m EQ 051552	Grey sandy clay - qtzite derived?
068	s	" " " 0.3m									X	15	5				0.002	X	20m	Grey sandy clay loam - " " ?
069	s	" " " 1.2m									X	20	10				0.008	X	40m	Dark brown sandy clay loam - alluvium?
070	s	" " " 0.7m									X	20	5				0.002	1	60m	Pale brown sandy loam - alluvium?
071	s	" " 0.6m									X	25	15				0.029	6	80m	Grey clay and gravel - colluvium in bottom of gully
072	s	" " 0.5m									X	20	10				0.014	5	90m	Yellow siltstone and slate, minor quartz.

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No. Sample numbers 056073 – 076, 056080 – 089 Collected by C. BROADBENT Sheet no. 31

Area / Prospect ~~SOIL SAMPLES~~ UNION MINE AREA, VARIOUS. Date 25·8·82

Map / Photo reference Tas H 094 Analysed by ANALABS. DPO no 30150, 30352, 30353

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	Mn	Au	As	Grid ref	Geological Observations
056073	S	Power		Auger			0·5m			X	20	5				X	16	100m.	Yellow sandy micaceous loam - sandstone?
074	S	"		"			0·3m.			5	15	10				X	29	120m.	Yellow weath. siltstone abundant qtz float.
075	S	"		"			0·5m			20	15	15				X	24	140m.	Yellow weath. slate beneath qtz gravel horizon
076	S	"		"			0·2m			X	15	15				X	X	160m.	Grey slate bedrock, brown loam + qtz ~~topsoil~~
From	shore	platform	near	Hackett's	Workings,	Stony	Head	Area											
056077	oc.	g.s.								150	30	70					5	EQ028622	Very black cleaved slate with 5-7% very fine pyrite, weakly graphitic. From shore platform below Hacketts workings.
056082	pan.con	2 level	dishes	reduced	to	16·6g.				590	105	165				X	60	EQ028622	Pyrite concentrate panned from beach, same loc. as 077.
Dead	Horse	Creek	Area.																
056080	f.	g.s.								100	20	45					13	EQ067452	Very pyritic black slate (10-15%) from spoil heap of small dam.
081	f.	g.s.								85	10	30					1	"	Grey weathered shale from roots of tree approx 30m W of 080.

* 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

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name PIPERS RIVER No 53/80 Sample numbers 1056039 – 048 Collected by G. BRUCE ABBOTT Sheet no. 32

Area / Prospect Various Date 20:11:82

Map / Photo reference Analysed by ANALABS DPO no. 30354

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Co	Mn	Au	Fe	Grid ref	Geological Observations
1056039	f										58	48	350		29	80		32·%	E4053540	Reddish brown slightly laterite rich weathered T. basalt.
1056040	f										33	42	199		33	140		17·5%	E4053540	Lateritic Fe oxides and weath. basalt from road metal heap.
1056041	f										14	24	115		270	1·25%		18%	E4053537	Limonite slightly Mn rich capping over weath. basalt.
1056042	f										22	16	62		45	335		25%	E4053537	Slightly Fe rich weath. basalt.
1056043	f										4	14	26		5	40	0·03	3300		Bleached mica greywacke
1056044	"										40	12	13		6	55	0·01	7150		Micaceous greywacke
1056045	"										33	11	16		4	40	0·23	4550		Micaceous sandstone – white
1056046	"										17	9	16		3	30	0·05	2950		Micaceous greywacke
1056047	"										7	9	21		4	50	0·01	3550		" "
1056048	"										24	16	22		5	45	0·01	1·15%		Interbedded slate/greywacke
973785											24	1	450		41	790		48·5%		
973786											52	6	350		43	650		38·0%		
787											96	20	220		35	795		29·0%		
788											96	36	270		43	1400		37·0%		
789											40	2	410		45	1250		48·5%		
973790											11	<1	570		46	1300		54·5%		

Grabs sampled from Dump at Union Mine

Re-assay of gossan samples from Dead Horse Ck area

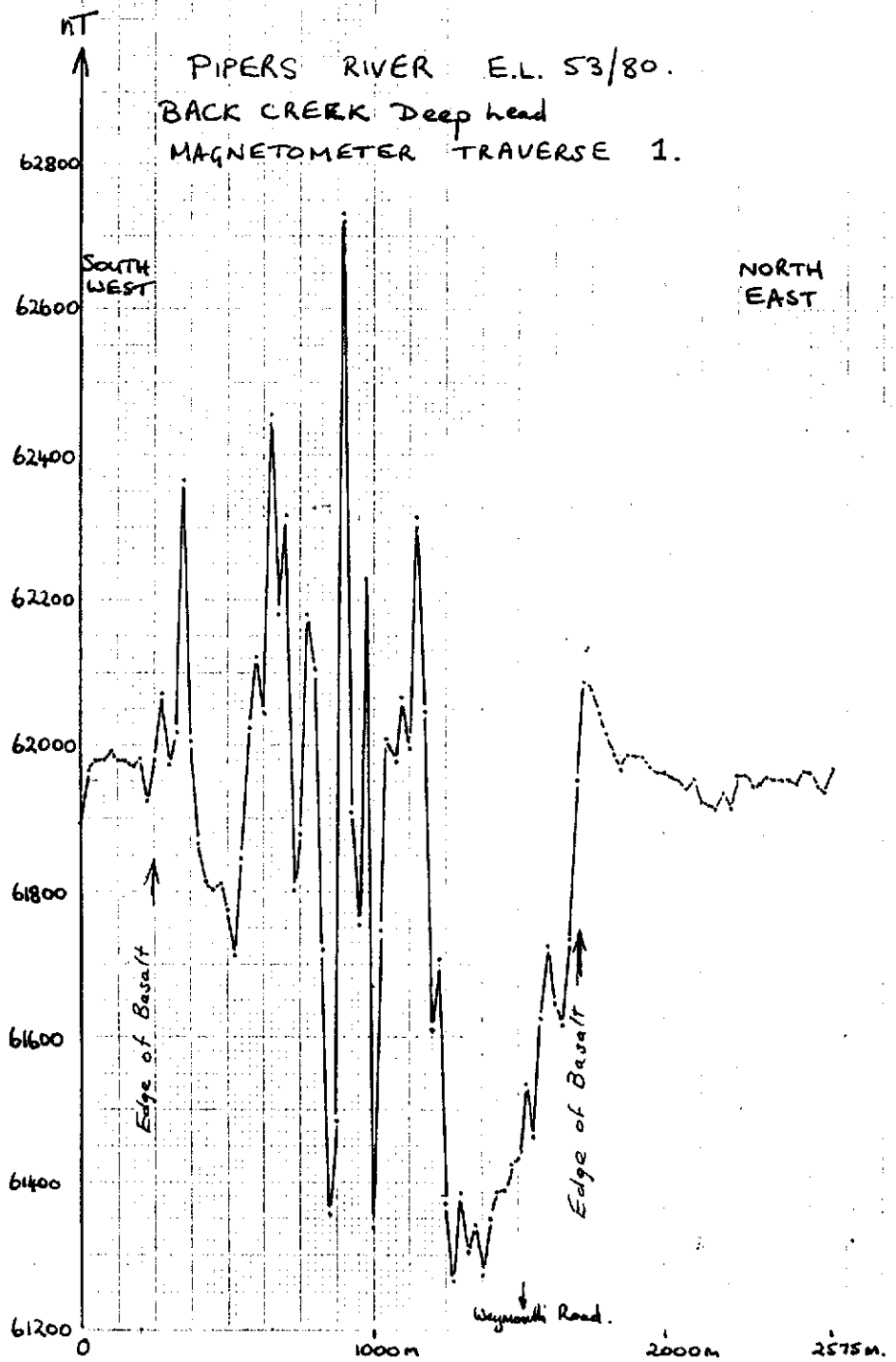
* Sample type ss = stream sediment oc = outcrop f = float s = soil

** fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

APPENDIX TWO

Ground Magnetic Profiles.

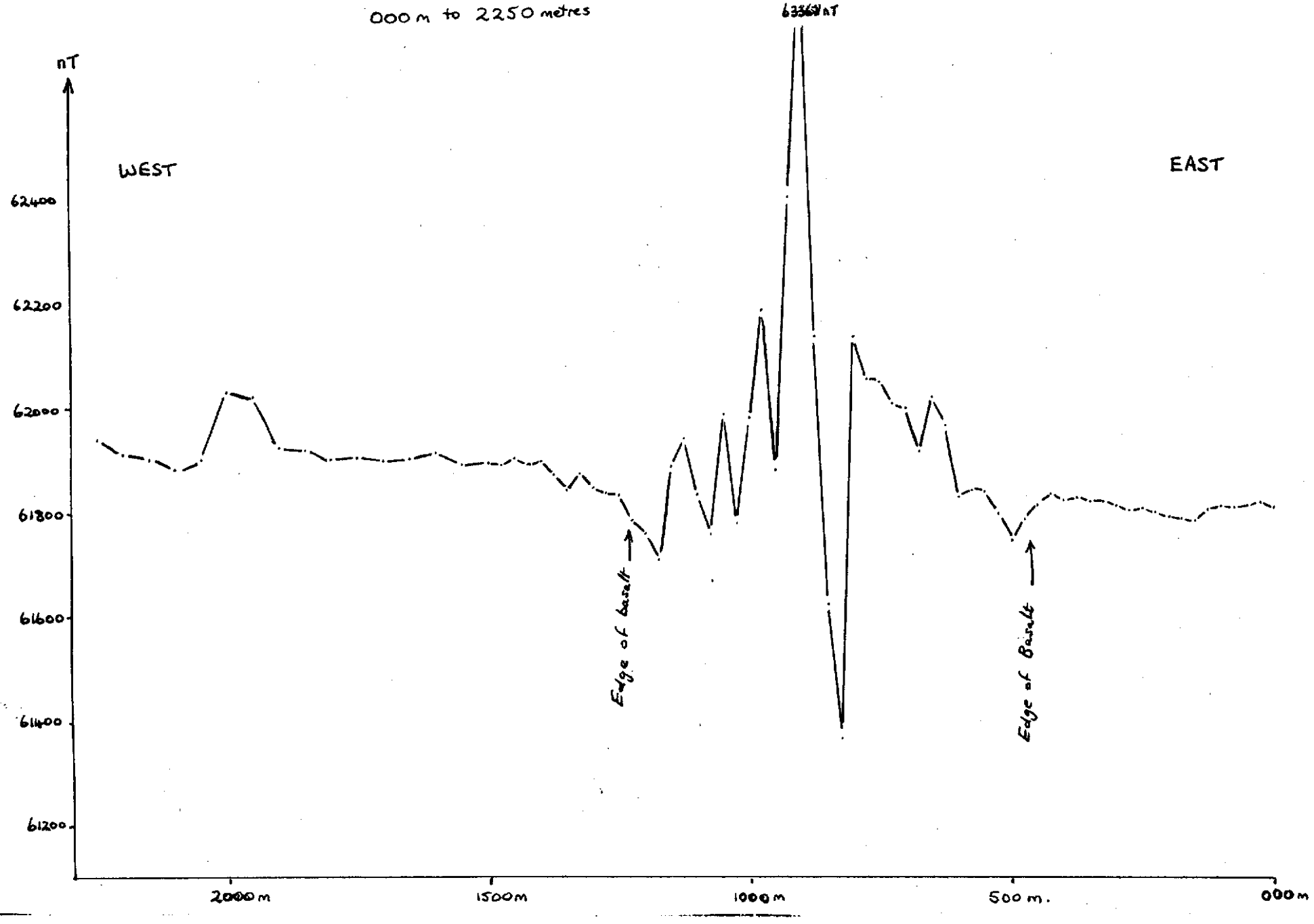
PIPERS RIVER E.L. 53/80.
BACK CREEK Deep head
MAGNETOMETER TRAVERSE 1.



BACK CREEK Deep Lead.

GROUND MAGNETOMETER TRAVERSE 2.

000 m to 2250 metres

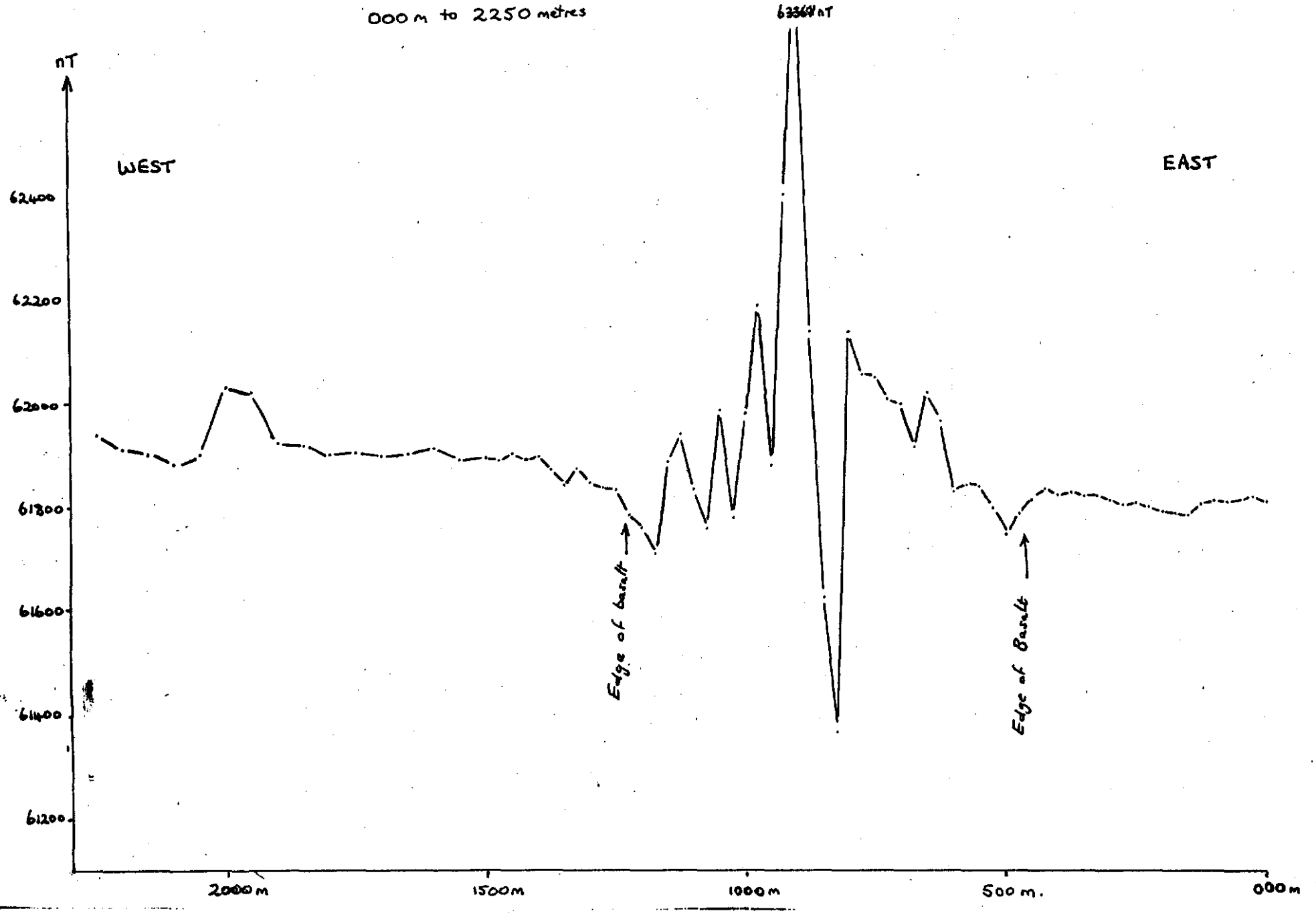


BACK CREEK Deep Lead.

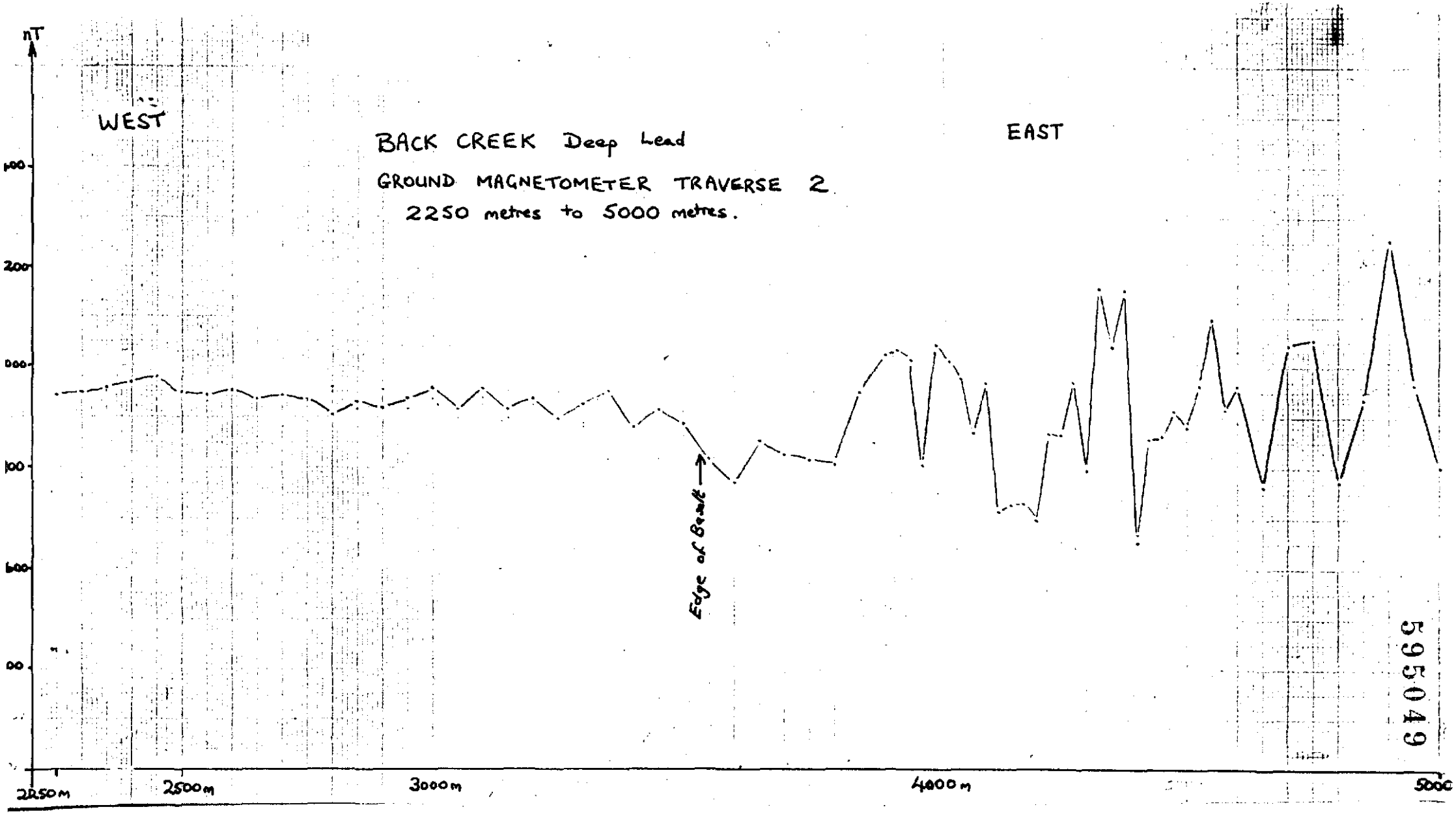
GROUND MAGNETOMETER TRAVERSE 2.

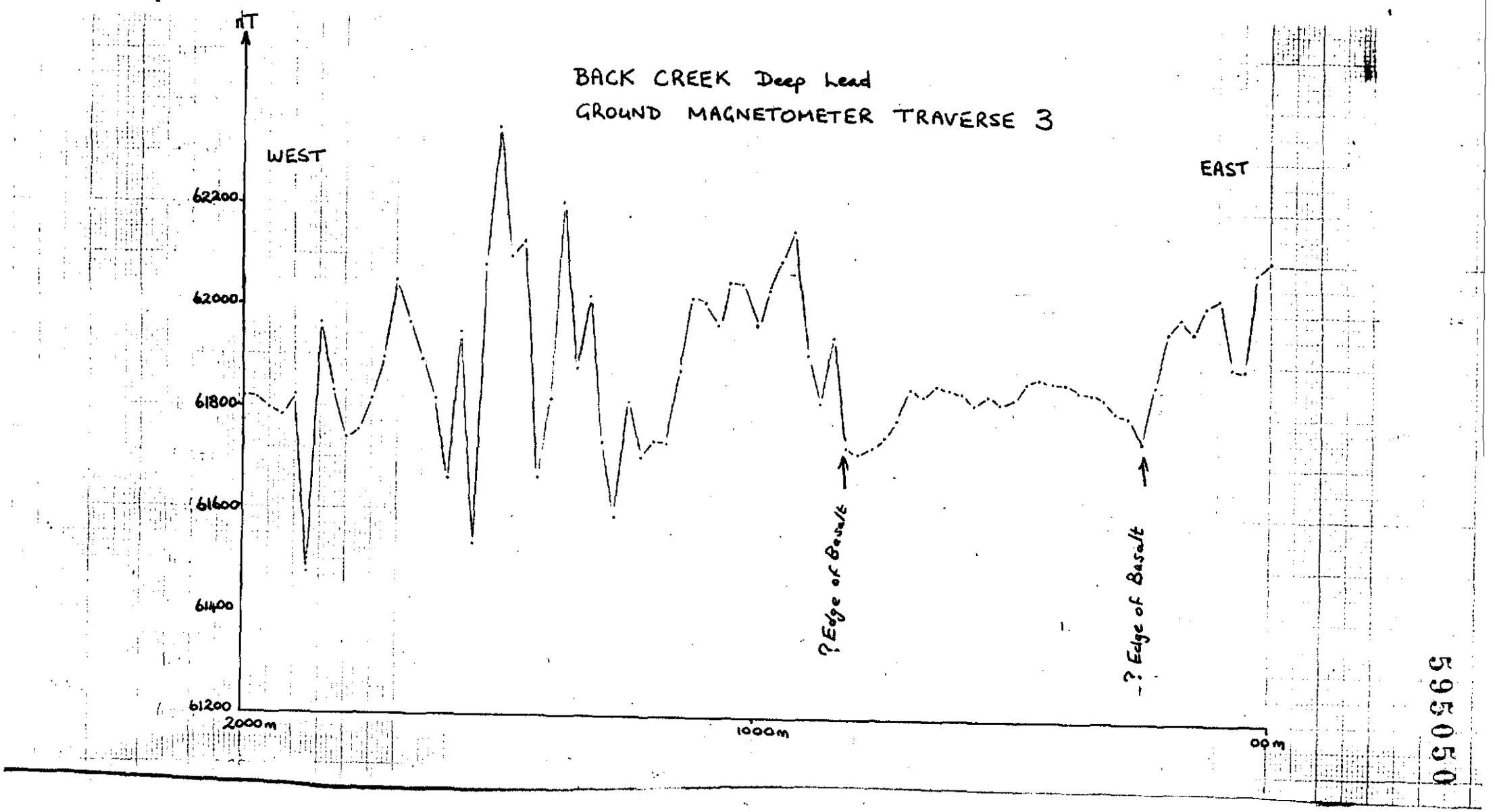
000 m to 2250 metres

048



595048


nT
WEST
EAST
BACK CREEK Deep Lead
GROUND MAGNETOMETER TRAVERSE 2
2250 metres to 5000 metres.
Edge of Basalt
2250m
2500m
3000m
4000m
5000

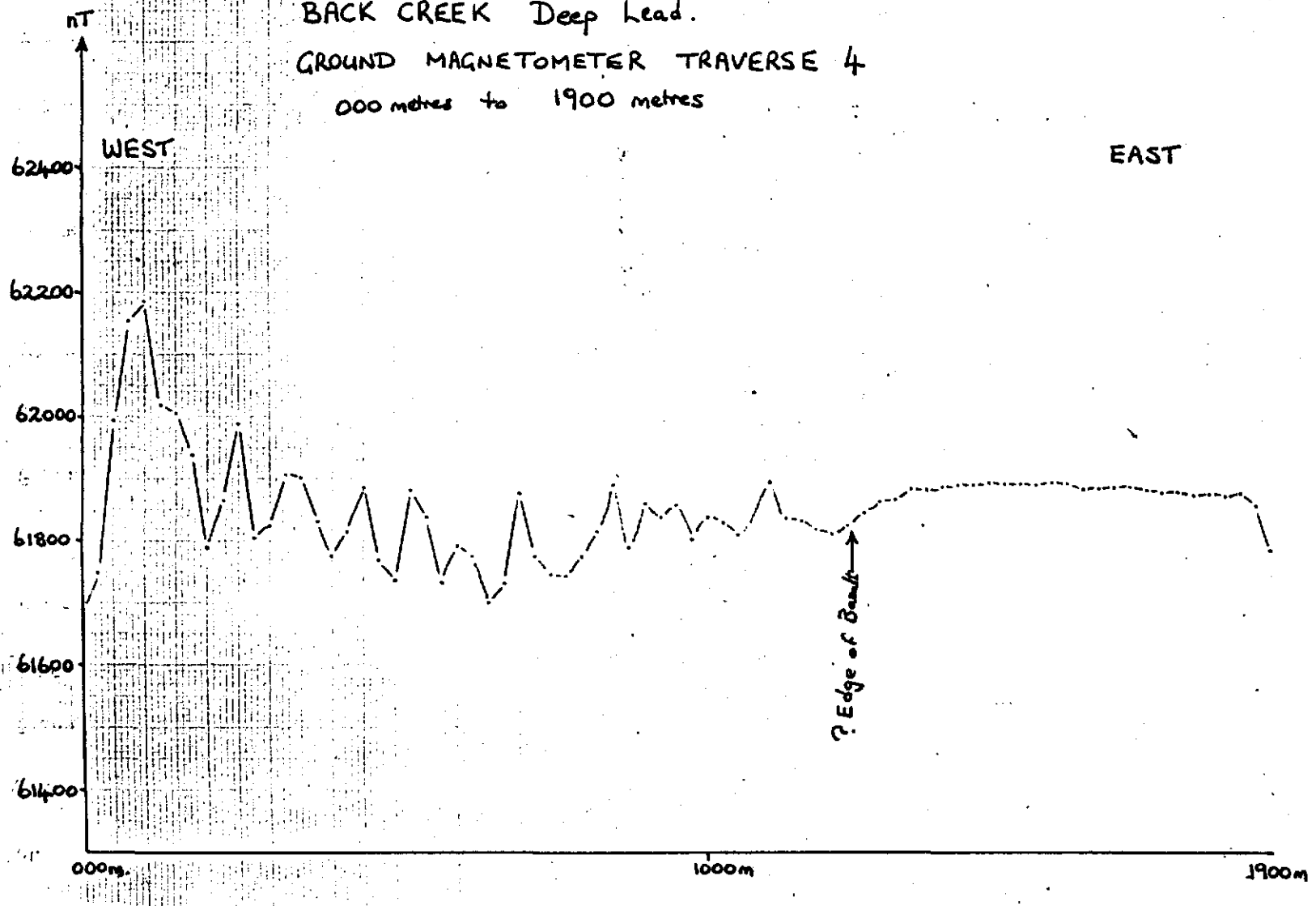

BACK CREEK Deep Lead
GROUND MAGNETOMETER TRAVERSE 3
nT
WEST
EAST
62200
62000
61800
61600
61400
61200
?Edge of Basalt
-? Edge of Basalt
2000m
1000m
0m

051

BACK CREEK Deep Lead.

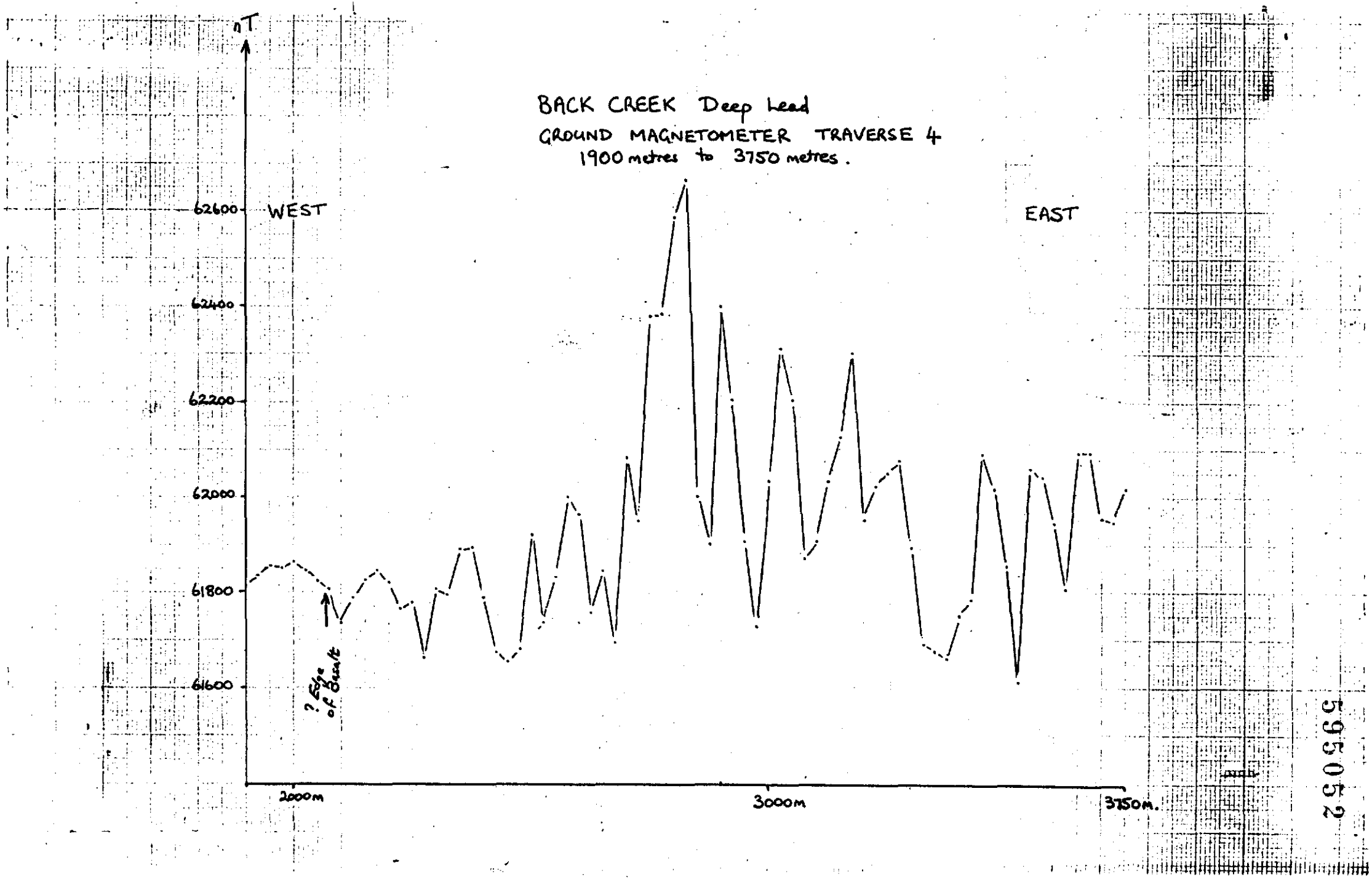
GROUND MAGNETOMETER TRAVERSE 4

000 metres to 1900 metres



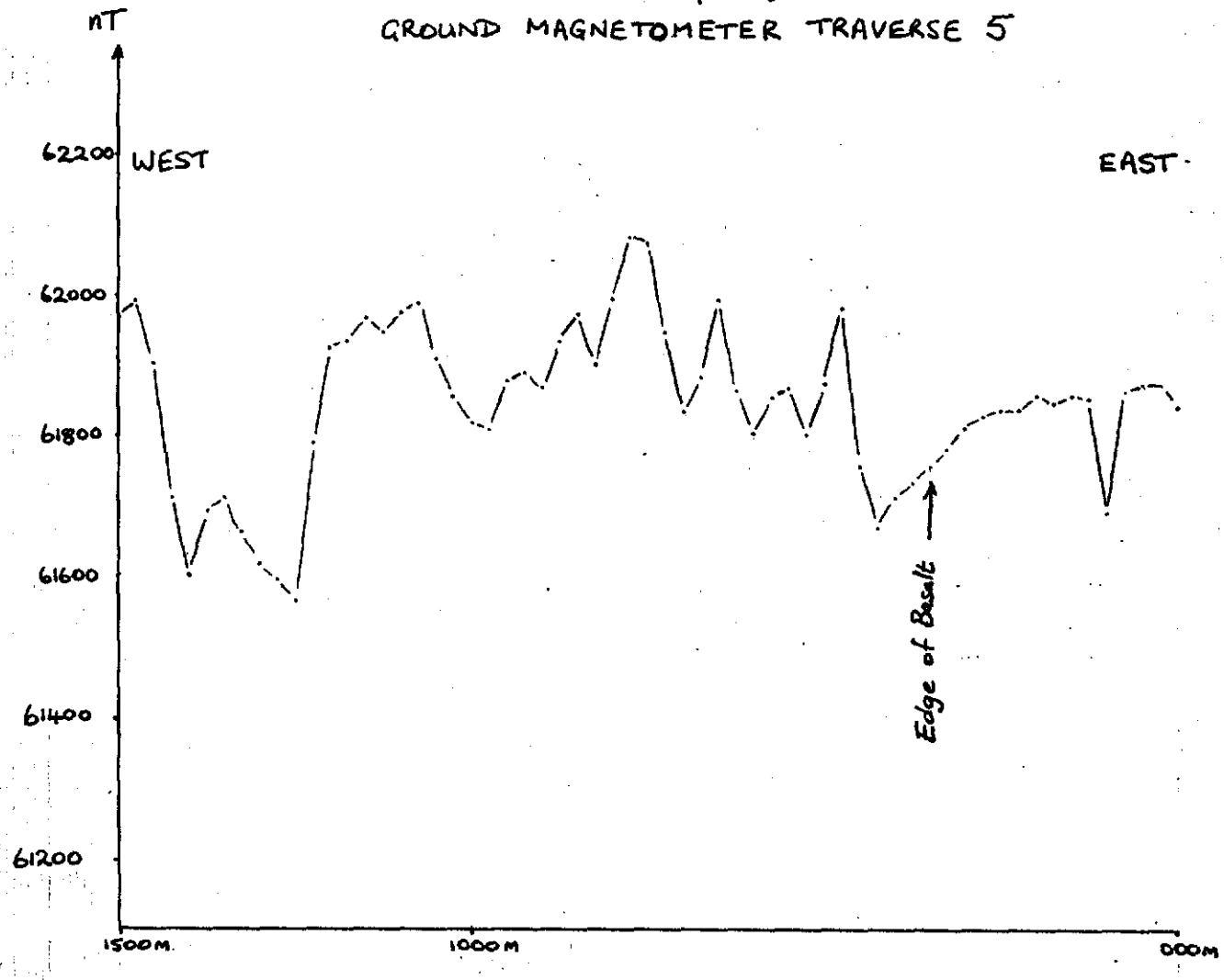
595051

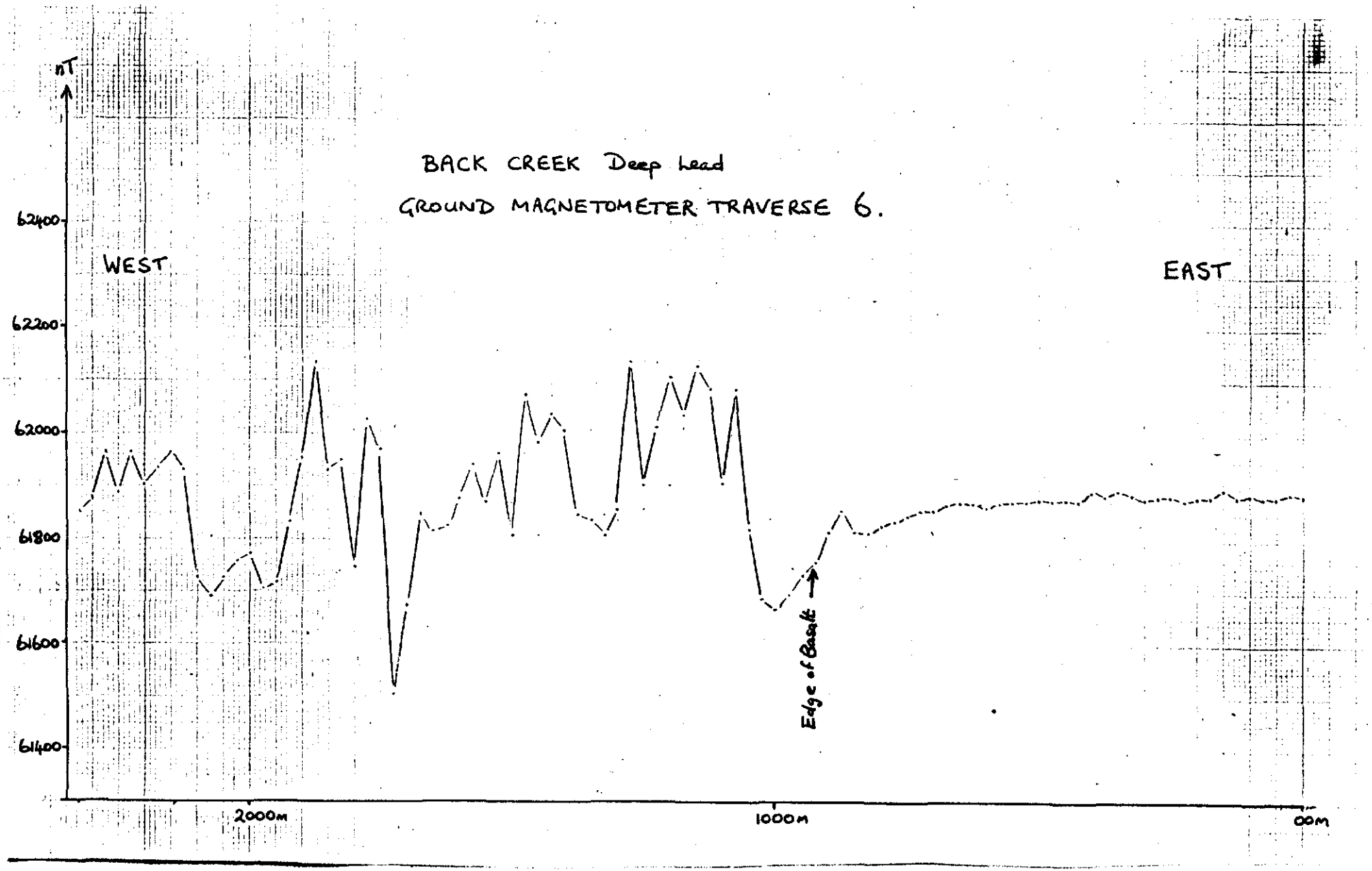
052

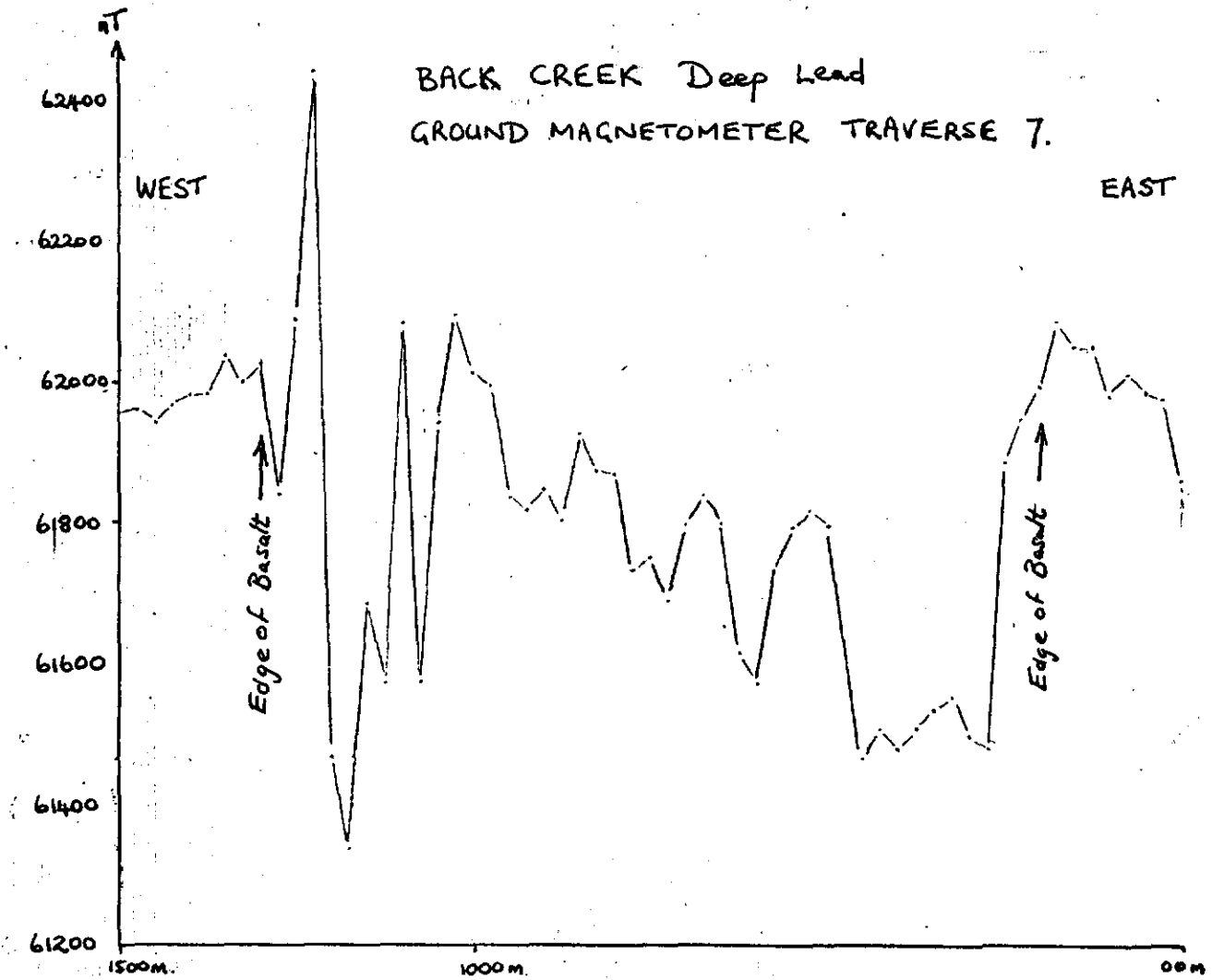

BACK CREEK Deep Lead
GROUND MAGNETOMETER TRAVERSE 4
1900 metres to 3750 metres.
nT
WEST
EAST
62600
62400
62200
62000
61800
61600
? Edge of Basalt
2000m
3000m
3750m.

599052

BACK CREEK Deep Lead
GROUND MAGNETOMETER TRAVERSE 5

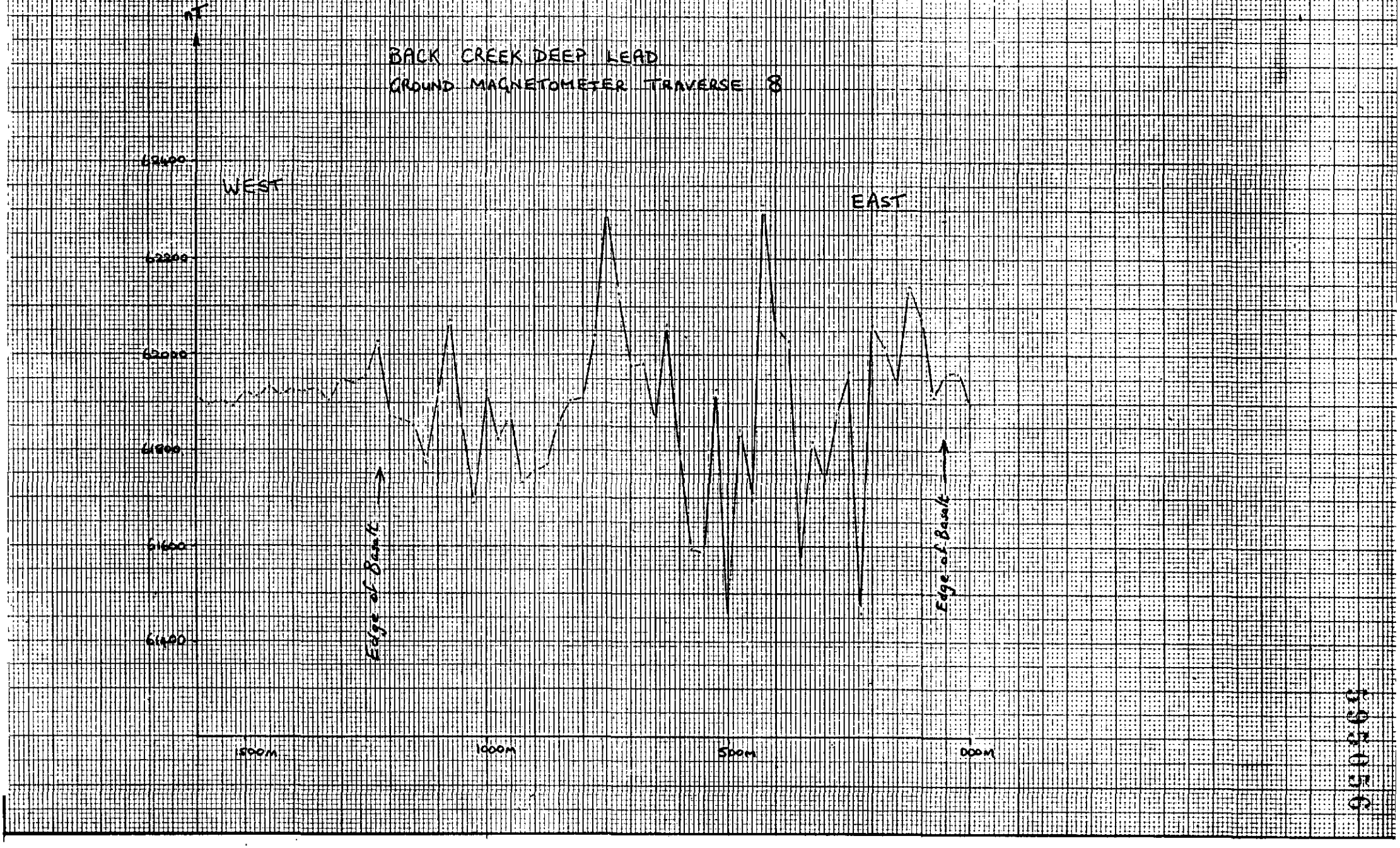



BACK CREEK Deep lead
GROUND MAGNETOMETER TRAVERSE 6.
nT
62400
62200
62000
61800
61600
61400
WEST
EAST
Edge of Basalt
2000m
1000m
0m


BACK CREEK Deep Lead
GROUND MAGNETOMETER TRAVERSE 7.
nT
62400
62200
62000
61800
61600
61400
61200
WEST
EAST
Edge of Basalt
Edge of Basalt
1500m.
1000m.
00m

056

BACK CREEK DEEP LEAD
GROUND MAGNETOMETER TRAVERSE 8



GS 1982-056

BASS STRAIT

490 000mE. 500 000mE. 510 000mE. 520 000mE. 530 000mE.

5460 000mN. 5450 000mN. 5440 000mN. 5430 000mN.

E.L.35/81

E.L.53/80

E.L.4780

E.L.4780

Beechford

Weymouth

Bellingham

Bridport

Lefroy

George Town

Bell Bay

Pipers River

Piper's Brook

Lebrina

Nabowla

Beaconsfield

Lilydale

Exeter

Kennett's Workings

Leura Mine

Bespall's Reward

PIPERS RIVER

PORT DALRYMPLE

RIVER TAMAR

EAST TAMAR

WEST TAMAR

BATMAN HIGHWAY

HIGHWAY

FRANKFORD HIGHWAY

TASMAN HIGHWAY

X932694 Soils 973724-741

1056077 -082

1056062 -064

1056076 -080

1056079 -081

1056083 -082

1056084 -083

1056085 -084

1056086 -085

1056087 -086

1056088 -087

1056089 -088

1056090 -089

1056091 -090

GRID CONVERGENCE 0·2°

GRID MAGNETIC ANGLE 13·1°

5 cm

3082

LEGEND:

- Highway
- Major Road
- Minor Road
- 932906 Stream Sediment Sample Location Number
- 1056012 Rock Sample Location + Number

595057

SCALE 1:100,000

2 1 0 2 Kilometres

CRA EXPLORATION PTY. LIMITED

E.L. 53/80

PIPERS RIVER AREA

SAMPLE LOCATION PLAN

Geologist : G.B.	Scale : 1:100,000	Report No. 11845
Drawn : T.G.D.S.	Date : Nov. 1982	Plan No. TASh 094

83-1955

BASS STRAIT

490000mE 500000mE 510000mE 520000mE 530000mE

5460000mN 5450000mN 5440000mN 5430000mN

Bridport
Weymouth
Bellingham
Beechford
Lefroy
George Town
Bell Bay
Pipers River
Pipers Brook
Lebrina
Nabowla
Beaconsfield
Exeter
Lilydale

E.L.35/81
E.L.53/80
E.L.4/80
E.L.4/80

PORT DALRYMPLE
TAMAR RIVER
PIPERS RIVER
EAST TAMAR HIGHWAY
WEST TAMAR HIGHWAY
BATMAN HIGHWAY
FRANKFORD HIGHWAY
HIGHWAY

GRID CONVERGENCE 0·2°
GRID MAGNETIC ANGLE 13·1°

5 cm

595058 3087

LEGEND:

- Highway
- Major Road
- Minor Road
- X10 (70) Stream Sediment Sample with results in p.p.m. -80# (-10 + 80#)

2 1 0 2 Kilometres
SCALE 1:100,000

CRA EXPLORATION PTY. LIMITED

E.L. 53/80
PIPERS RIVER AREA
STREAM SEDIMENT GEOCHEMISTRY
Pb

Geologist : G.B.	Scale : 1:100,000	Report No. 11845
Drawn : T.G.D.S.	Date : Nov. 1982	Plan No. TAS h 095

83-1955

BASS STRAIT

490 000mE. 500 000mE. 510 000mE. 520 000mE. 530 000mE.

5460 000mN.

5450 000mN.

5440 000mN.

5430 000mN.

Beechford

Weymouth

Bellingham

Bridport

Lefroy

George Town

Bell Bay

Pipers River

Pipers Brook

Lebrina

Nabowla

Beaconsfield

Exeter

Lilydale

E.L.35/81

E.L.53/80

E.L.4/80

PORT DALRYMPLE

TAMAR RIVER

WEST TAMAR HIGHWAY

EAST TAMAR HIGHWAY

BATMAN HIGHWAY

FRANKFORD HIGHWAY

PIPERS RIVER

TASMAN

GRID CONVERGENCE 0·2°

GRID MAGNETIC ANGLE 13·1°

5 cm

2 1 0 2 Kilometres

SCALE 1:100,000

595059 13668

LEGEND:

- Highway
- Major Road
- Minor Road
- X10 (70) Stream Sediment Sample with results in p.p.m. -80 # (-10 + 80#)

CRA EXPLORATION PTY. LIMITED

E.L. 53/80

PIPERS RIVER AREA

STREAM SEDIMENT GEOCHEMISTRY

Zn

Geologist : G.B.	Scale : 1:100,000	Report No. 11845
Drawn : T.G.D.S.	Date : Nov. 1982	Plan No. TAS h 096

83-1955

BASS STRAIT

490 000mE | 500 000mE | 510 000mE | 520 000mE | 530 000mE

54 60 000mN | 54 50 000mN | 54 40 000mN | 54 30 000mN

Bridport | Weymouth | Bellingham | Beechford | Lefroy | George Town | Bell Bay | Pipers River | Pipers Brook | Nabowla | Lebrina | Beaconsfield | Exeter | Lilydale

E.L.35/81

E.L.53/80

E.L.4/80

E.L.4/80

E.L.4/80

PIPERS RIVER

PORT DALRYMPLE

RIVER TAMAR

EAST TAMAR HIGHWAY

WEST TAMAR HIGHWAY

BATMAN HIGHWAY

FRANKFORD HIGHWAY

HIGHWAY

TASMAN

GRID CONVERGENCE 0·2°

GRID MAGNETIC ANGLE 13·1°

5 cm

2 1 0 2 Kilometres

SCALE 1:100,000

LEGEND:

- Highway
- Major Road
- Minor Road
- X10 (70) Stream Sediment Sample with results in p.p.m. -80# (-10 +80#)

595060 3085

CRA EXPLORATION PTY. LIMITED

E.L. 53/80
PIPERS RIVER AREA
STREAM SEDIMENT GEOCHEMISTRY
Cu

Geologist : G.B.	Scale : 1:100,000	Report No. 11845
Drawn : T.G.D.S.	Date : Nov. 1982	Plan No. TASh 097

83-1955

BASS STRAIT

490 000mE. 500 000mE. 510 000mE. 520 000mE. 530 000mE.

5460 000mN.

5450 000mN.

5440 000mN.

5430 000mN.

E.L.35/81

E.L.53/80

E.L.4/80

Beechford

Weymouth

Bellingham

Bridport

Pipers River

Pipers Brook

Lefroy

George Town

Bell Bay

Beaconsfield

Exeter

Lebrina

Nabowla

Lilydale

Dead Horse Creek area.

PORT DALRYMPLE

RIVER TAMAR

PIPERS RIVER

EAST TAMAR HIGHWAY

WEST TAMAR HIGHWAY

BATMAN HIGHWAY

FRANKFORD HIGHWAY

TASMAN HIGHWAY

GRID CONVERGENCE 0·2°

GRID MAGNETIC ANGLE 13·1°

2 1 0 2 Kilometres

SCALE 1:100,000

5 cm

595061
3086

LEGEND:

- Highway
- Major Road
- Minor Road
- ×10 (70) Stream Sediment Sample with results in p.p.m. - 80 # (- 10 + 80#)

CRA EXPLORATION PTY. LIMITED

E.L. 53/80
PIPERS RIVER AREA
STREAM SEDIMENT GEOCHEMISTRY
As

Geologist : G.B.	Scale : 1:100,000	Report No. 11845
Drawn : T.G.D.S.	Date : Nov. 1982	Plan No. TASh 098

83-1955

505 000 m E.

510 000 m E.

54 50 000 m N.

54 45 000 m N.

54 40 000 m N.

BRIDPORT ROAD

E.L. 35/81

E.L. 53/80

973796 973795 973794 973793 973791 973792 932799 932800 RIVER

973783 973782 973781 973784 973785-790 (Gossanous float - weath. basalt ?) 973780 932807

973797 973798 973775 973777 973778 973776 973779 CREEK HORSE 973761 973759 973760 973757 973758 973762 DEAD PIPERS RIVER ROAD

973764 973763 973769 973768 973767 973765 973766 932803 1056080 1056081 1056079 1056078

PIPERS

932804

932805

973745 PLATYPUS ROAD 932849 973207 973208-10 973201 973204 973202 973205 973746 973748 973750 973754 973753 973749 973203 973206 973747 973751 973756 973755 973752

LEGEND

973755 — Stream Sediment Sample Location Number

973756 x — Rock Sample Location + Number

595002

5 cm

3083

CRA EXPLORATION PTY. LIMITED

E.L.53/80

DEAD HORSE CREEK AREA

SAMPLE LOCATION PLAN

Ref			
Scale	1 : 25 000	Report N°.	11845
Author:	G. B.	Date:	Nov 1982
Drawn:	TGDS	Plan N°.	TASh 099

83 - 1955

505 000 m E.

510 000 m E.

54 50 000 m N.

54 45 000 m N.

54 40 000 m N.

E.L. 35/81

E.L. 53/80

BRIDPORT ROAD

DOMINANTLY BLACK SLATE SEQUENCE

DOMINANTLY ARENACEOUS SEQUENCE

DOMINANTLY BLACK SLATE SEQUENCE

DOMINANTLY ARENACEOUS BLACK SLATE SEQUENCE

RIVER

PIPERS

PIPERS RIVER ROAD

DEAD HORSE CREEK

PLATYPUS ROAD

25,20,3 · 10,40,7 · 25,45,8 · 5,50,6 · 10,55,4 · 5,40,4 · 11,52,3 · 27,93,13 (50,105,51) · 25,15,2 · 5,20,4 · 15,35,7 · 25,65,5 · 20,129,10 · 15,105,5 · 15,85,9 · 15,140,20 · 20,75,5 · 15,70,4 · 5,45,3 · 5,75,3 · 10,85,2 · 5,15,1 · 15,15,2 · 10,50,3 · 10,35,1 · 25,100,5 · 10,55,7 · 10,45,3 · 25,45,2 · 10,35,4 · 16,74,2 · 10,55,4 · 35,125,7 · 10,70,9 · 25,20,5 · 5,40,5 · 25,5,3 · 10,25,3 · -,45,3 · 10,60,3 · 5,55,3 · 5,25,4 · 10,40,7 · 5,65,2 · 15,40,5 · 25,45,9 · 25,40,8 · 2,16,12 (0·008) · 13,58,12 (0·008) · 15,82,20 (0·096) · 10,57,3 (0·038) · 20,52,23 (0·008) · 11,74,1 (0·004) · 15,37,7 (0·004)

595 063

5 cm

3084

LEGEND

Pb,Zn,As (Au) / (Pb,Zn,As) — Stream Sediment Sample, values in p.p.m. -80#

Values in ( ) are -10 + 80#

BOUNDARIES of BASEMENT LITHOLOGY TRENDS

CRA EXPLORATION PTY. LIMITED

E.L.53/80

DEAD HORSE CREEK AREA

STREAM SEDIMENT GEOCHEMISTRY

Pb, Zn, As (Au)

Ref			
Scale	1 25 000	Report N°	11845
Author:	G. B.	Date:	Nov 1982
Drawn:	TGDS	Plan N°	TASh 100

83 - 1955

505 000mE

510 000mE

515 000mE

BASS STRAIT

5 460 000mN

NOLAND BAY

WEYMOUTH

WEYMOUTH ROAD

3

4

5

6

RIVER

PIPERS

PIPERS BROOK LEAD

ROAD

BRIDPORT

E.L. 35/81

5 455 000mN

BACK CREEK GOLDFIELD

LEURA MINE

1

8

EAST

PIPERS RIVER

ROAD

Back Creek
Mag. Traverse 2

2

BACK CREEK LEAD

WEYMOUTH

ROAD

BRIDPORT

ROAD

PIPERS
RIVER

5 450 000mN

PIPERS RIVER ROAD

BRIDPORT

E.L. 53/80

PIPERS RIVER

ROAD

5 445 000mN

LEGEND

Basalt O/C + Sub O/C

Feruginous gravel + limonite concentrations - either developed on basalt, or residual after basalt.

Interpreted margin of deep lead basalt.

←7→ Ground Magnetic Traverse

595064

3089

CRA EXPLORATION PTY. LIMITED

PIPERS RIVER E.L.53/80

DEEP LEAD BASALTS and GROUND MAGNETIC TRAVERSES

Ref:			
Scale:	1 : 25 000	Report N°.	11845
Author:	G. B.	Date:	
Drawn:	T.G.D.S.	Plan N°. 1	TASh 104

5 cm

88-1955