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CRA EXPLORATION PTY LIMITED

**MICROFILMED**

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	DEPT. OF MINES			
REF. No.	1304/85			

BOULDER RIVULET EL 61/83

PROGRESS REPORT FOR PERIOD

FEBRUARY 1984 - JANUARY 1985

**OPEN FILE**

Date: 14 January 1985

Author: D J Weir

Submitted to: T W Dickson

Accepted by: *TW Dickson*

Copies: CRAE Burnie  
 CRAE Sydney  
 CRAE Canberra  
 Department of Mines,  
 Tasmania

Report No: 13058

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237002

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## 1.0 SUMMARY

One kilometre of 'C' horizon soil sampling, ground magnetics and Genie EM survey was completed at the Strike aeromagnetic anomaly.

Anomalous tungsten (max 130 ppm) and manganese (max 80 ppm) soil geochemical values were obtained over a zone 150m wide coincident with a ground magnetic high (200nT) and a weak EM conductor at depth. The anomaly lies in an easterly dipping sequence of Precambrian siltstones and quartzites.

Resampling of the tungsten anomaly has confirmed its anomalous nature though at a reduced level (max 70 ppm).

3.2 Km of grid (200m x 800m) has been established in preparation to follow up.

## 2.0 INTRODUCTION

Application for the Boulder Rivulet Licence area was made on the basis of a strong tungsten soil geochemical anomaly coincident with an aeromagnetic high situated on the eastern boundary of EL 12/80, Leigh River.

EL 61/83, covering an area of 35 Km<sup>2</sup> was granted in February 1984. A programme of gridding, 'C' horizon soil geochemistry and ground magnetics was initiated but has not been completed.

### 3.0 CONCLUSIONS

A strong tungsten soil anomaly (max 130 ppm) over a width of 150 metres is coincident with a ground magnetic high and weak EM conductor at depth has not been fully tested. The presence of elevated tungsten and manganese may indicate proximity to sulphides at depth.

### 4.0 RECOMMENDATIONS

'C' horizon soil geochemistry and ground magnetics should be completed over the already established grid to test the continuity of the tungsten anomaly. Further EM work might be warranted on the basis of these results.

### 5.0 GEOLOGY

Little is known concerning the geology of this area.

Photointerpretation (Carey 1981, Plan TASH 2456) indicates two recognisable sedimentary groups, Phi and Sigma.

Carey states: "The Phi group is characterised by low relief, absence of outcrop traces and scant vegetation. Sink holes are common and the formation contains much dolomite and little quartzite. It is not strongly magnetic and there appears to be an unconformity at the base. I have no record of economic mineralisation associated with this group."

"The Sigma group forms prominent well wooded strike ridges with good continuity around the structures. Folding is more characteristic than faulting. The fold pattern suggests some overprinting of WNW Tyennan folding by NNE Taberabberan folds. The Sigma group appears to underlie

the Upsilon group conformably and to overlie the Phi group with unconformity."

Limited field observations in this area indicate an easterly dipping sequence of grey-green siltstones, coarse sandy "pyjama-type" siltstones and quartzites.

## 6.0 GEOPHYSICS

### 6.1 Aeromagnetics (Plan TASH 2457)

The Strike aeromagnetic anomaly obtained from the Mines Department West Coast survey was modelled by inversion and the following parameters obtained:-

Dip:	75° east
Depth:	150m
% Magnetite:	0.4%
Depth Extent:	Great

The anomaly was considered to be caused by a specific lithology and assigned a low priority.

### 6.2 Ground Geophysics

One line of ground magnetics and Genie EM survey was completed over the Strike aeromagnetic anomaly. The ground magnetics (Plan TASH 2452) indicates two anomalies, a narrow easterly dipping body situated at 7200E on the western side of a broad spikey anomaly between 7350E and 7850E which is considered to be a lithological response.

The Genie EM survey (Plan TASH 2451) shows a weak conductor at 7250E at approximately 80m depth; the limit of the system. Details of the investigations are located in Appendix I.

#### 7.0 GEOCHEMISTRY

One line of 'C' horizon soil geochemistry at 25m intervals using a hand auger was completed over the Strike anomaly. (Plan TASH 2433). Details of assay ledgers and results are located in Appendix II and plotted in profile form (Plan TASH 2450).

A zone of anomalous tungsten values (max 130 ppm) together with elevated manganese (80 ppm max) was obtained between 7175E and 7275E which is coincident with the ground magnetic high and the EM conductor.

Resampling of this anomaly at 12.5m intervals confirmed the presence of anomalous tungsten though at a reduced level (max 70 ppm W).

#### 8.0 LOCATION

Burnie SK55-3 1:250 000 sheet

#### 9.0 KEYWORDS

Geophysics - mag, EM  
Assays - geochem, surf.  
Precambrian - siltstone, quartzite

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10.0 LIST OF PLANS

<u>Plan TASH No</u>		<u>Scale</u>
2356	Boulder Rivulet EL 61/83 Photo-Interpretation	1:100 000
2457	Boulder Rivulet EL 61/83 Aeromagnetic Contour Plan	1:50 000
2452	Boulder Rivulet EL 61/83 Strike Anomaly, ground magnetic profile	1:5 000
2451	Boulder Rivulet EL 61/83 Strike Anomaly, Genie EM profile	1:5 000
2433	Boulder Rivulet EL 61/83 Grid location plan	1:50,000
2450	Boulder Rivulet EL 61/83 Strike Anomaly, soil geochemical profiles	1:5 000

11.0 LIST OF APPENDICES

- I Ground geophysics on the Boulder Rivulet area, EL 61/83
- II Geochemical ledgers and assay results

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APPENDIX I

GROUND GEOPHYSICS ON THE BOULDER RIVULET AREA,

EL 61/83

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CRA EXPLORATION PTY. LIMITED  
(INC. IN N.S.W.)

2ND FLOOR, BELLERIVE QUAY,  
31 CAMBRIDGE ROAD, BELLERIVE, 7018, TASMANIA, AUSTRALIA

P.O. BOX 138  
ROSNY PARK 7018  
TELEGRAMS: CRAEX  
TELEX: AA57144  
TELEPHONE: 44 3533  
AREA CODE: (002)

IN REPLY PLEASE QUOTE

MEMO TO :D.J. WEIR  
COPY TO :T.W. DICKSON

MEMO FROM :T. VON STROKIRCH

SUBJECT: GROUND GEOPHYSICS ON THE BOULDER RIVULET AREA  
EL 61/83

As ground follow up on the Leish river anomalies a program of geological mapping, ground geophysics and geochemistry was performed. The geophysics consisted of ground magnetic readings taken at 12.5 metre stations along all the lines excepting the Bridge anomaly. This served to prove that the lines were positioned correctly on the airborne magnetic anomalies. The lines were then surveyed with the GENIE reconnaissance ground EM system during October 1984. Readings were taken at 25 metre spacings using two frequency pairs (337Hz/112Hz and 3037Hz/112Hz) and a receiver/transmitter spacings of 100 metres. The details of the Strike anomaly on EL 61/83 follow.

STRIKE ANOMALY

Two separate magnetic anomalies can be differentiated on the ground magnetics. The western response is derived from a narrow (less than 20 metres width) tabular source dipping steeply to the east at a depth of approximately 50 metres. The second is produced by a magnetic unit which extends from 7300E to 7675E. It dips at 50 degrees to the east and is at less than fifteen metres depth. Geological evidence indicates that this is a siltstone unit containing small amounts of disseminated sulphide which would have to be pyrrhotite to give a response of this magnitude. Following the magnetic survey an EM survey was conducted in the hope that there might be a sulphide concentration in the area. No strong conductors were discovered. A feature at 7250E may

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be a deep body of moderate conductivity at the penetration limit of the system (about 80 metres here). This would put it on the eastern flank of the first magnetic unit. At the far eastern end of the line there is a sharp rise in the response of both EM frequencies. This may be the edge of a conductor but if so it is not magnetic and considerable encouragement from geochemistry would be needed to extend the line. Relatively conductive surface material is to be found between 7300E to 7400E and 7500E to 7650E. This is probably due to preferential weathering or simply to topographical variation.

#### CONCLUSIONS AND RECOMMENDATIONS

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The line is generally uninteresting geophysically speaking. If there is any geochemical response it might be useful to follow up the possible conductors with the one at 7250E being perhaps the most promising though with the limitations of the GENIE system it is not possible to feel sure that this is a real conductor and it would be necessary to use a deeper penetration TEM technique over it to confirm it.

T. von Strokirch

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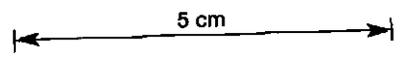
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APPENDIX II

GEOCHEMICAL LEDGERS AND ASSAY RESULTS

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Sample Number	LOCATION						ROCK TYPE		MINERALISATION					METAL CONTENT ppm / %										Geological Observations				
	Co-ordinates AMG / Grid		Exposure	S Type	Width (m)	Interval		Major Rock	Minor Rock	Alteration	Visible	Style	Major	Minor	Minor	Gangue	LOOK	Cu	Pb	Zn	Ni	Co	Ag		Cr	As	Sn/W	Mag Suc.
	East	North				From	To																					
55951	5085	5000	1	4	-1	-1	-1	8	-1	-1	3	-1	80	-1	-1	-1	140	75	70	25	15	2	10	10	35/410	0.1	LEIGH AEROMAG ANOMALY. Pg. Slst. - psammitic.	
55952	5025	5000	2	4	-1	-1	-1	93	-1	-1	-1	-1	-1	-1	-1	250	45	70	65	25	2	20	<1	5/410	-	Amphibole like. Grey banded slst.		
55953	4910	5000	2	4	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	15	30	40	20	10	1	10	<1	25/410	0.1	Quartzite - leached		
55954	4200	5000	2	4	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	20	5	15	15	5	<1	340	3	25/410	-	Coarsely banded pillowed. → Dirty Sandstone. Cross bedding.		
55955	4050	5000	1	4	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	50	25	45	20	10	<1	70	6	25/410	-	COARSELY BANDED PILLOWED. → Dirty Sandstone. Cross bedding.		
SOURCE AND STRIKE AEROMAG ANOMALIES.																												
55966	5700	5000	1	4	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	10	10	15	15	5	<1	120	3	25/410	-	Pg. Slst. v. psammitic.		
55972	6835	5000	2	4	-1	-1	-1	8	-1	4	-1	-1	-1	-1	-1	25	20	30	15	5	<1	30	2	25/410	-	Chloritic slst.		
55974	6880	5000	2	3	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	15	40	55	15	5	<1	45	3	25/410	-	Psammitic siltstone. → Dirty Sandstone.		
55977	7360	5000	1	4	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	20	15	35	10	5	<1	20	4	25/410	0.2	Pg. Slst.		
ODD AND END ANOMALIES																												
55982	4725	5000	1	4	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	10	10	65	25	15	1	10	1	25/410	-	green siltstone, well cleaved? appear faulted.		
55985	4840	5000	1	4	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	15	15	60	25	10	1	20	2	25/410	0.2	green f. lam. slst.		
55988	4325	5000	2	4	-1	-1	-1	8	-1	18	-1	-1	-1	-1	-1	55	60	70	110	35	3	30	<1	25/410	0.3	v. weath. green slst? / basalt? equigranular		
55992	3870	5000	1	4	-1	-1	-1	8	-1	4	-1	-1	-1	-1	-1	15	15	60	30	20	1	10	<1	25/410	0.1	green lam. siltstone Chloritic?		
993	3525	5000	1	4	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	10	10	10	10	5	<1	110	1	25/410	-	v. sandy siltstone → Dirty Sandstone.		
55995	3480	5000	1	4	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1	10	20	20	10	5	<1	20	2	25/410	0.2	Pg. Slst.		

GEOCHEMICAL ROCK SAMPLING LEDGER

DETECTION LIMIT  
ANALYTICAL METHOD

Element Name LEIGH RIVER EL 12/80.

Project Asmania follow up. AMG Zone

Sheet No. 1572

Area / Prospect REBE GRID LINES

DPO's 30470

Laboratory ALS Brisbane.

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SS

Sample Number	LOCATION		SAMPLE DESC.					SITE DESCRIPTION										METAL CONTENT ppm / %										Geological Observations			
	AMG Co-ordinates		S Type	Mesh	% Gravel	% Sand	% Silt	Organic	Width	Flow	Bank	Catchment	Vegetation	Straining	Contam.	Silt Rating	Outcrop	Maj. Float	Min. Float	LOOK	Cu	Pb	Zn	Ni	Co	Cr	As		Sn	W	Ba
	East	North																													
055975	7050	5000	1	4	30	40	30	-1	0.5	4	3	-1	3	-1	-1	1	-1	100	8		10	15	20	15	5	190	2	<5	<10	210	
055976	7285	5000	1	4	40	30	30	-1	0.5	5	2	-1	3	-1	-1	3	100	100	-1		10	15	20	25	10	500	2	<5	10	210	
055978	7530	5000	1	4	-1	50	50	2	0.5	4	3	-1	1	-1	-1	3	-1	-1	-1		10	15	15	20	5	540	2	<5	10	90	
055979	7560	5000	1	4	20	40	40	-1	1.5	5	3	-1	1	-1	-1	1	-1	8	100		5	20	15	15	5	260	2	<5	10	140	
055980	7950	5000	1	4	20	40	40	-1	2.0	5	3	-1	1	-1	-1	2	8	8	100		15	25	20	25	10	700	4	<5	10	160	
ODD AND END ANOMALIES.																															
055981	4900	5000	1	4	20	40	40	-1	1.5	4	3	-1	3	-1	-1	2	-1	8	-1	1	15	25	55	40	20	140	<1	<5	10	270	No % Float Green f. lam Siltstones.
055983	4600	5000	1	4	40	20	40	-1	4.0	4	2	-1	3	-1	-1	1	-1	8	-1		10	20	30	25	15	230	3	<5	10	330	Float: Green lam Siltst.
055984	4540	5000	1	4	20	20	60	1	0.5	3	2	-1	3	-1	-1	1	8	8	-1		10	10	10	20	10	390	2	<5	10	120	% Green-gray f. lam Siltst.
055986	4390	5000	1	4	20	30	50	-1	0.5	3	3	-1	3	-1	-1	2	-1	100	8		5	20	10	20	10	460	2	<5	10	180	float: Quartzite + f. lam Siltst => py. rock.
987	4370	5000	1	4	5	40	55	1	2.0	3	3	-1	3	-1	-1	1	-1	100	-1		5	15	10	10	5	260	2	<5	10	120	float: Quartzite.
055989	4265	5000	1	4	20	30	50	1	1.5	3	2	-1	3	-1	-1	1	8	-1	-1		5	20	10	15	5	360	5	<5	10	120	% Coarsely banded Siltstone => dirty Sandstone.
990	3975	5000	1	4	80	10	10	-1	10.0	5	2	-1	3	-1	-1	4	-1	8	100		10	20	20	25	10	390	3	<5	10	230	No % float Siltstones or Quartzite. Sample 2 bank edge.
991	3965	5000	1	4	10	40	50	1	1.0	4	3	-1	3	-1	-1	1	-1	8	-1		5	15	10	20	5	500	3	<5	10	150	No % float Pyrominitic Siltstone.
994	3490	5000	1	4	-1	60	40	-1	0.5	3	3	-1	1	-1	-1	1	-1	-1	-1		5	15	10	15	10	400	2	<5	10	140	No % No float - Deeply.
55996	3375	5000	1	4	5	45	50	1	5.0	3	4	-1	1	-1	-1	2	-1	100	-1		10	20	15	30	10	920	2	<5	20	110	

GEOCHEMICAL STREAM SEDIMENT SAMPLING LEDGER

DETECTION LIMIT.  
ANALYTICAL METHOD

element Name: LEIGH RIVER EL12/80	Project: Aeromag follow up	AMG Zone: SS	Sheet No.: 2 of 3
area / Prospect: REGE GRID LINES.	DPO's: 30470		Laboratory: ALS Brisbane.
map / Photo Ref:	Sample No's:		Collected By: DTW. Date: 8/9/83

237014

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SOIL - SAMPLE & FIELD SHEET

SL 014

SAMPLE NUMBER	LOCATION			SAMPLE DESCRIPTION							GEOLOGY										GEOLOGICAL OBSERVATIONS				
	East	North	Zone	Soil Type	Gravel %	Sand %	Silt %	Clay %	Org %	Depth	Colour	Moisture	Structure	Consistency	Expanding	Shrinkage	Site	Rock	Flora			Min/Alt	Scint	Look	Veget.
114240	7100E	5000N	S5	80A						40	L. Grey	B	R	N	-		QTZ.								
114241	7112.5E									40	ll. grey	C	R	N	40		SML	QUAR							
114242	7125E									30	ll. grey	B	R	N	-		QUAR								
114243	7137.5E									50	ll. grey	B	R	N	-		QUAR								
114244	7150E									80	ll. grey	B	R	N	100		SML								
114245	7162.5E									30	ll. grey	B	R	N	-		QUAR								
114246	7175E									60	ll. grey	B	R	N	-		QUAR								
114247	7187.5E									40	ll. grey	B	R	N	-		QUAR								
114248	7200E									40	ll. grey	B	R	N	-		QUAR								
114249	7212.5E									-	ll. grey	B	R	N	-		QUAR								
1142420	7225E									10	ll. grey	B	R	N	-		QUAR								
1142421	7237.5E									30	ll. grey br	C	R	N	-		QUAR								
1142422	7250E									25	ll. grey	C	R	N	-		QUAR								
1142423	7262.5E									25	ll. grey	C	R	N	-		QUAR								
1142424	7275E									25	ll. grey	B	R	N	-		QUAR								
1142425	7287.5E									60	ll. grey	C	R	N	-		SML								
1142426	7300E									100	ll. grey	C	R	N	-		SML								
1142427	7312.5E									90	ll. grey	C	R	N	-		SML								
1142428	7325E									80	ll. grey	C	R	N	-		SML								
1142429	7337.5E									100	ll. grey	C	R	N	-		SML								
1142430	7350E									110	ll. grey	C	R	N	-		SML								
1142431	7362.5E									60	ll. grey	C	R	N	-		SML								
1142432	7375E									30	ll. grey	B	R	N	-		QUAR								
1142433	7387.5E									-	ll. grey	B	R	N	-		QUAR	BLSH.							
1142434	7400E									80	ll. grey	C	R	N	-		SML								

PROJECT LEIGH RIVER

1:250 000 SHEET BURNIE SK 55-3

COLLECTED BY B. Morley, P. Moore

TEMENT EL 12/80

SAMPLE NOS 1142410 - 434

DATE JAN. 1984

INVESTIGATION SOURCE & STRIKE AERONAV  
 PRIMARY - REPEAT SAMPLING DPO: 30482



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Sample Number	SOIL DESCRIPTION										BEDROCK				LOOK	METAL CONTENT ppm / %										Geological Observations	
	Co-ordinates AMG / Grid		Depth (m)	Colour	Horizon	% Rock	% Sand	% Silt	% Clay	Organic	Soil Type	Rock Type	Alteration	Vis Min		Min. Type	Cu	Pb	Zn	Ni	Co	Ag	Fe	Mn	Sn		W
	East	North																									
1142013	7200	5000	0.5	040	4	50	40		10		2					5	10	15	15	5	<1	0.85	70	<5	80		
014	7225		0.4	060	1	50	40		10							5	15	15	15	5	<1	0.83	75	10	80		
015	7250		0.4	034	4	40	20		40							5	10	20	15	5	<1	1.19	85	<5	110		
016	7275		0.9	036	3	10	10		80							5	15	20	20	5	<1	1.05	75	15	120		
017	7300		0.5	030	3	10	60		30							2	15	20	10	5	<1	0.70	25	<5	30		
018	7325		0.4	093	3	20	40		40							2	15	20	10	5	<1	0.77	30	5	40		
019	7350		0.7	093	4	40	20		40							5	45	20	10	5	<1	0.66	25	<5	40		
020	7375		0.6	050	3	10	60		30							5	20	20	15	5	<1	0.55	25	5	30		
021	7400		0.4	053	3	10	40		50							5	15	20	15	5	<1	0.75	35	<5	50		
022	7425		0.6	030	3	20	30		50							5	20	20	20	5	<1	0.91	35	5	40		
023	7450		0.7	039 02	3	20	40		40							5	15	20	15	5	<1	0.94	55	<5	70		
024	7475		0.6	030	3	20	40		40							5	15	20	15	5	<1	0.81	45	10	60		
025	7500		0.5	085	4	30	00		30							5	15	25	20	5	<1	1.07	60	<5	80		
026	7525		0.8	030	3	20	30		50							5	15	15	15	5	<1	0.75	45	<5	60		
027	7550		0.6	039	3	30	40		30							5	15	20	15	5	<1	0.75	30	<5	30		
028	7575		0.6	036	3	20	50		30							5	15	15	15	5	<1	0.68	40	<5	50		
029	7600		0.5	083	3	30	50		20							5	20	15	15	5	<1	0.72	45	<5	50		
030	7625		1.0	030	4	40	20		30							5	15	15	15	5	<1	0.63	35	<5	60		
031	7650		0.2	030	3	20	30		50							5	20	30	20	5	<1	1.25	55	<5	70		
032	7675		0.4	083	3	30	40		30							2	20	20	15	5	<1	0.80	45	<5	60		

GEOCHEMICAL SOIL SAMPLING LEDGER

DETECTION LIMIT  
ANALYTICAL METHOD

Tenement Name LEIGH RIVER EL 12/80

Project AEROMAG FOLLOW UP AMG Zone 55

Sheet No. 354

Area / Prospect SOURCE AND STRIKE AEROMAG ANOMS.

DPO's 30469

Laboratory: ALS, Bonobone.

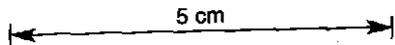
4.0 / Photo D.1

No's 1142013 037

Collected By BIN RC EN

Date 15/09/83

237010



# CRA EXPLORATION PTY. LTD.

TASMANIA

Sample Number	SOIL DESCRIPTION										BEDROCK				METAL CONTENT ppm / %										Geological Observations		
	Co-ordinates AMG / Grid		Depth (m)	Colour	Horizon	% Rock	% Sand	% Silt	% Clay	Organic	Soil Type	Rock Type	Alteration	Vis Min	Min Type	LOOK	Cu	Pb	Zn	Ni	Co	Ag	Fe	Mn		Sn	W
	East	North																									
1142033	7700		0.7	095	3	30	30		40							5	15	25	15	10	<1	0.80	30	<5	30		
034	7725		0.6	095	4	50	30		20							5	15	20	20	10	<1	0.87	50	5	50		
035	7750		0.3	093	3	40	30		30							5	15	20	15	5	<1	0.75	45	<5	40		
036	7775		0.5	054	3	40	30		30							5	15	20	15	5	<1	0.72	40	<5	50		
037	7800		0.7	094	4	30	40		30							5	15	20	15	5	<1	0.75	60	<5	60		
038	7825		0.3	093	4	60	30		10							5	15	15	15	5	<1	0.75	40	<5	50		
039	7850		0.4	040	3	30	30		40							5	15	15	15	5	<1	0.74	60	<5	70		
040	7875		0.5	093	3	30	30		40							5	15	20	20	5	<1	0.84	55	15	90		

## GEOCHEMICAL SOIL SAMPLING LEDGER

DETECTION LIMIT  
ANALYTICAL METHOD

Tenement Name LEIGH RIVER EL12/80

Project AEROMAG FOLLOW UP AMG Zone SS

Sheet No. 4 of 4

Area / Prospect SOURCE AND STRIKE AEROMAG ANOMS.

DPO's: 30469

Laboratory: ALS Brisbane

Map / Photo Ref. Aerial R 1:100 000 Td/a

Sample No's 1142033 - 040

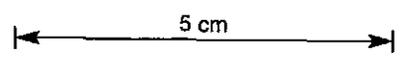
Collected By DM BS SW

Date: 15/9/83

237017

017

S



NSW

# CRA EXPLORATION PTY. LTD.

Sample Number	SOIL DESCRIPTION										BEDROCK					METAL CONTENT ppm / %										Geological Observations		
	Co-ordinates AMG / Grid		Depth (m)	Colour	Horizon	% Rock	% Sand	% Silt	% Clay	Organic	Soil Type	Rock Type	Alteration	Vis Min	Min. Type	LOOK	Cu	Pb	Zn	Ni	Co	Ag	Fe	Mn	Sn		W	
	East	North																										
142222	6700	5000	0.5	086	5	30	40	-1	30	-1	2					5	10	15	10	15	1	0.67	10	<5	10			
223	6725	"	0.6	030	4	10	20	"	70	"	2					5	15	15	15	15	1	0.63	40	<5	50			
224	6750	"	0.7	062	4	20	10	"	70	"	2					5	15	15	15	10	1	0.68	40	<5	60			
225	6775	"	0.8	060	4	40	10	"	50	"	2					15.5	10	15	10	15	1	0.57	35	<5	40			
226	6800	"	0.4	080	4	10	10	"	80	"	2					45	15	20	10	10	1	1.66	30	<5	30			
227	6825	"	0.4	081	3	10	30	"	60	"	2					25	20	20	10	15	1	1.12	25	<5	20			
228	6850	"	0.5	082	4	30	10	"	60	"	2					25	20	20	10	15	1	2.18	50	<5	30			
229	6875	"	0.9	080	4	10	10	"	80	"	2					20	25	20	10	15	1	2.63	45	<5	20			
1142001	6900	"	1.0	087	4	20	20	"	60	"	2					15	5	10	10	20	10	15	5	<1	2.11	45	5	30
1142002	6925	"	0.6	098	4	30	60	"	10	"						5	10	15	10	10	<1	0.84	30	<5	30			
003	6950	"	0.7	036	4	30	60	"	10	"						5	10	20	10	5	<1	0.59	55	<5	30			
004	6975	"	0.6	090	4	40	50	"	10	"						5	10	20	15	5	<1	0.64	45	<5	50			
005	7000	"	0.6	080	4	30	60	"	10	"						5	15	30	15	10	1	2.01	55	<5	10			
006	7025	"	0.6	096	4	40	40	"	20	"						5	10	25	15	10	<1	0.63	40	<5	30			
007	7050	"	0.8	030	4	40	40	"	20	"						5	10	30	10	10	<1	0.90	60	5	20			
008	7075	"	0.6	030	4	40	20	"	40	"						5	15	25	15	10	<1	0.70	40	<5	10			
009	7100	"	0.8	030	4	40	60	"		"						5	10	25	15	5	<1	0.63	50	<5	30			
010	7125	"	0.8	130	4	60	20	"	20	"						5	10	15	10	5	<1	0.67	40	<5	50			
011	7150	"	0.5	060	1	70	10	"	20	"	11					5	10	15	15	5	1	0.76	35	<5	20			
012	7175	"	0.6	034	4	40	40	"	20	"						10	10	20	25	5	<1	1.32	86	10	130			

## GEOCHEMICAL SOIL SAMPLING LEDGER

DETECTION LIMIT.

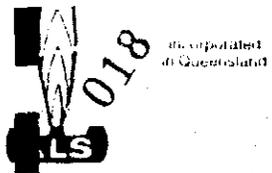
ANALYTICAL METHOD

Location Name LEIGH RIVER EL12/80	Project: AEROMAG ANOMALY FOLLOW UP AMG Zone: 55.	Sheet No.: 2 of 4
Area / Prospect SOURCE AND STRIKE AEROMAG ANOMALS.	DPO's: 30471, 30469	Laboratory: ALS Brisbane.
Scale: 1:100 000 TAD.	Sample No's: 114222-230 - 1142002 - 012	Collected By: BS + SW. Date: 15/9/83

237018

LABORATORY SERVICES LTD.  
 CONSULTING ANALYTICAL CHEMISTS  
**LABORATORY REPORT 237019**

32 Shand Street  
 Stafford, Q 4053  
 PO Box 66,  
 Everton Park, Q 4053  
 Phone: (07) 352 5577  
 Telex: ALSEV 42344



Client: **CRA EXPLORATION PTY. LIMITED**  
 Address: **P.O. BOX 138  
 ROSNY PARK. TAS. 7018**

Page 1 of 2

**Batch Number: C057**

Contact: **MR. J. WEIR**

No. of Samples: 25  
 Date Received: 08/03/84  
 Date Completed: 14/03/84

Order No: **DPO 30482** Sample Type: **SOIL**

SAMPLE NUMBER	Element Unit Method	Cu ppm IC580	Pb ppm IC580	Zn ppm IC580	Ni ppm IC580	Co ppm IC580
1142410		2	<5	<2	10	5
1142411		2	<5	<2	5	5
1142412		2	5	<2	5	5
1142413		2	<5	<2	10	5
1142414		2	<5	<2	5	5
1142415		2	<5	<2	5	<5
1142416		2	5	<2	5	<5
1142417		2	5	<2	5	<5
1142418		2	5	<2	10	<5
1142419		2	5	<2	5	<5
1142420		2	<5	<2	5	<5
1142421		2	<5	<2	5	<5
1142422		2	5	<2	5	<5
1142423		2	<5	<2	10	5
1142424		2	<5	<2	5	<5
1142425		2	<5	5	5	5
1142426		2	<5	10	5	5
1142427		2	<5	5	5	<5
1142428		20	<5	5	15	5
1142429		5	<5	10	5	5
1142430		2	<5	20	5	5
1142431		2	<5	10	5	<5
1142432		2	<5	2	5	<5
1142433		2	<5	<2	5	<5
1142434		5	<5	40	5	5
Detection Limit:		2	5	2	5	5

Comments:

*Ground into  
 DSK 22/3/84*



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Signatory: *[Signature]*

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# Australian Laboratory Services (Pty. Ltd.)

Incorporated in Queensland

## CONSULTING ANALYTICAL CHEMISTS

# LABORATORY REPORT 237020

Office & Laboratory  
32 Shand Street  
Stafford, Q. 4053  
PO Box 66,  
Everton Park, Q. 4053  
Phone: (07) 352 5577  
Telex: ALSEV 42344

Client: CRA EXPLORATION PTY. LIMITED  
Address: P.O. BOX 138  
ROSNY PARK, TAS. 7018

Page 2 of 2

Batch Number: C057

Contact: MR. J. WEIR

No. of Samples: 25  
Date Received: 08/03/84  
Date Completed: 14/03/84

Order No. DP0 30482 Sample Type: SOIL

SAMPLE NUMBER	Element Unit Method	Fe % IC580	Mn ppm IC580	As ppm IC580	Sn ppm XRF 1A	N ppm XRF 1A
1142410		0.52	40	2	<5	20
1142411		0.71	50	2	<5	30
1142412		0.65	45	1	<5	50
1142413		0.75	50	1	<5	60
1142414		0.48	20	1	<5	20
1142415		0.60	40	1	<5	40
1142416		0.61	50	1	<5	70
1142417		0.49	45	1	<5	60
1142418		0.49	45	1	<5	60
1142419		0.49	50	1	<5	40
1142420		0.48	55	1	<5	40
1142421		0.50	55	1	<5	40
1142422		0.46	40	<1	<5	50
1142423		0.71	55	1	<5	60
1142424		0.53	45	1	<5	60
1142425		1.17	45	2	<5	20
1142426		0.86	30	2	<5	20
1142427		0.65	30	2	<5	20
1142428		1.61	25	20	<5	30
1142429		1.34	25	4	<5	10
1142430		1.00	35	2	5	20
1142431		0.61	20	1	<5	20
1142432		0.55	20	1	<5	20
1142433		0.51	30	2	<5	40
1142434		2.20	75	4	<5	10
Detection Limit:		0.01	5	1	5	10

Comments:



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Signatory: *P. J. Kilmister*

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# Australian Laboratory Services PTY. LTD.

CONSULTING ANALYTICAL CHEMISTS **237021**

## LABORATORY REPORT

Office & Laboratory  
32 Shand Street  
Stafford, Q. 4053  
PO Box 66,  
Everton Park, Q. 4053  
Phone: (07) 352 5577  
Telex: ALSEV 42344

Incorporated  
in Queensland

Page 1 of 1

**CRA EXPLORATION PTY. LIMITED**  
P.O. BOX 138  
ROSHY PARK, TAS. 7018

**Batch Number: C057-1**

Contact **MR. J. WEIR**

No. of Samples: **25**  
Date Received: **09/03/84**  
Date Completed: **14/03/84**

Order No. **DPD 30492**

Sample Type: **SOIL**

SAMPLE NUMBER	Element Unit Method	Ba ppm XRF 1A	Au ppb PM204		
1142410		170	3		
1142411		320	3		
1142412		180	5		
1142413		190	3		
1142414		420	5		
1142415		160	5		
1142416		<10	5		
1142417		<10	<3		
1142418		<10	3		
1142419		60	3		
1142420		50	3		
1142421		80	5		
1142422		<10	3		
1142423		110	3		
1142424		110	5		
1142425		650	3		
1142426		570	<3		
1142427		560	<3		
1142428		510	10		
1142429		640	5		
1142430		440	20		
1142431		570	5		
1142432		370	10		
1142433		250	3		
1142434		600	10		
Detection Limit:		10	3		

Comments

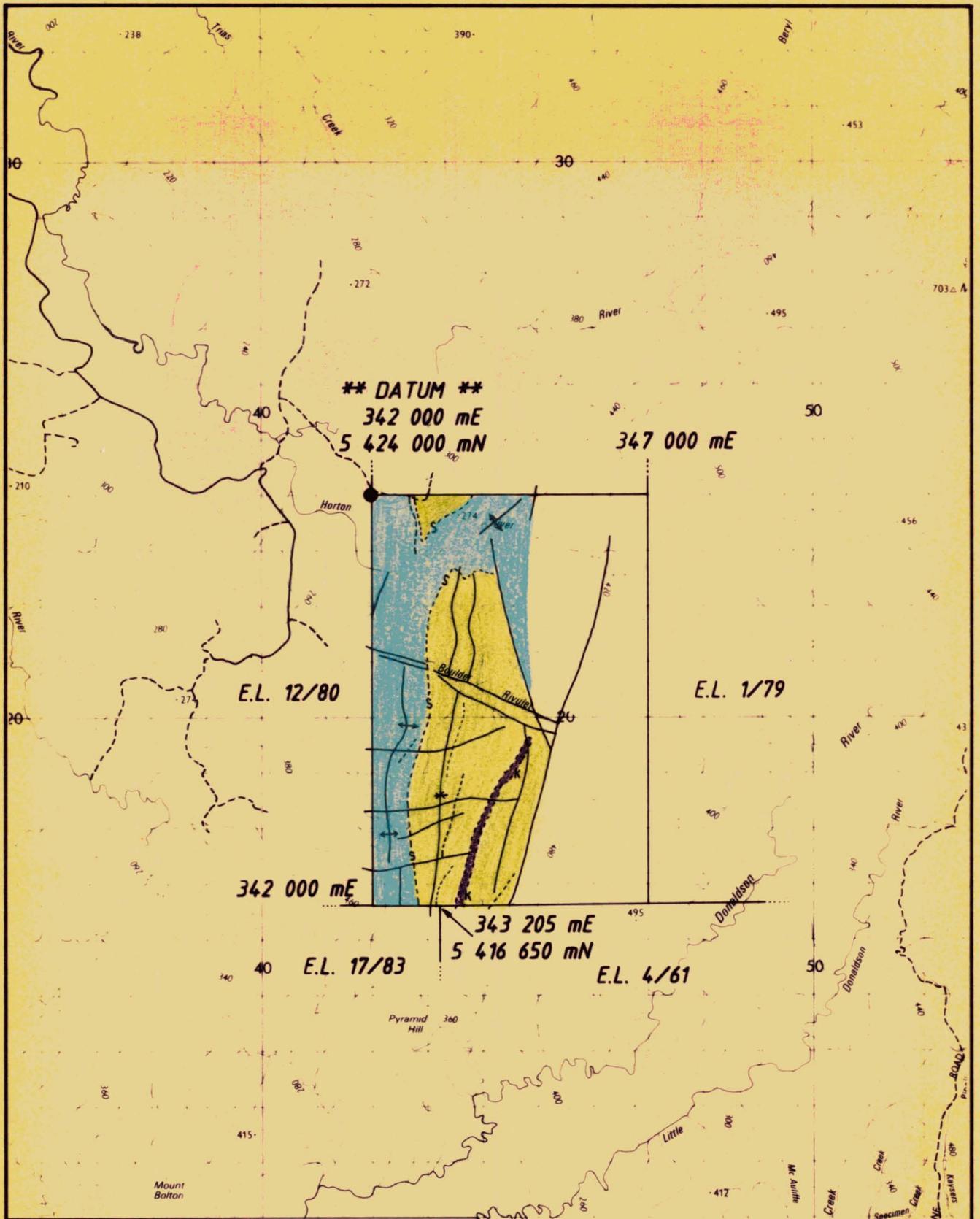


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Signatory: *[Signature]*

Registered Laboratory 825

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**LEGEND**

**SEDIMENTS**

- Sigma Group
- Phi Group

**PRECAMBRIAN**

**IGNEOUS**

- Kappa Group

**EOCAMBRIAN ?**



237022

CRA EXPLORATION PTY. LIMITED

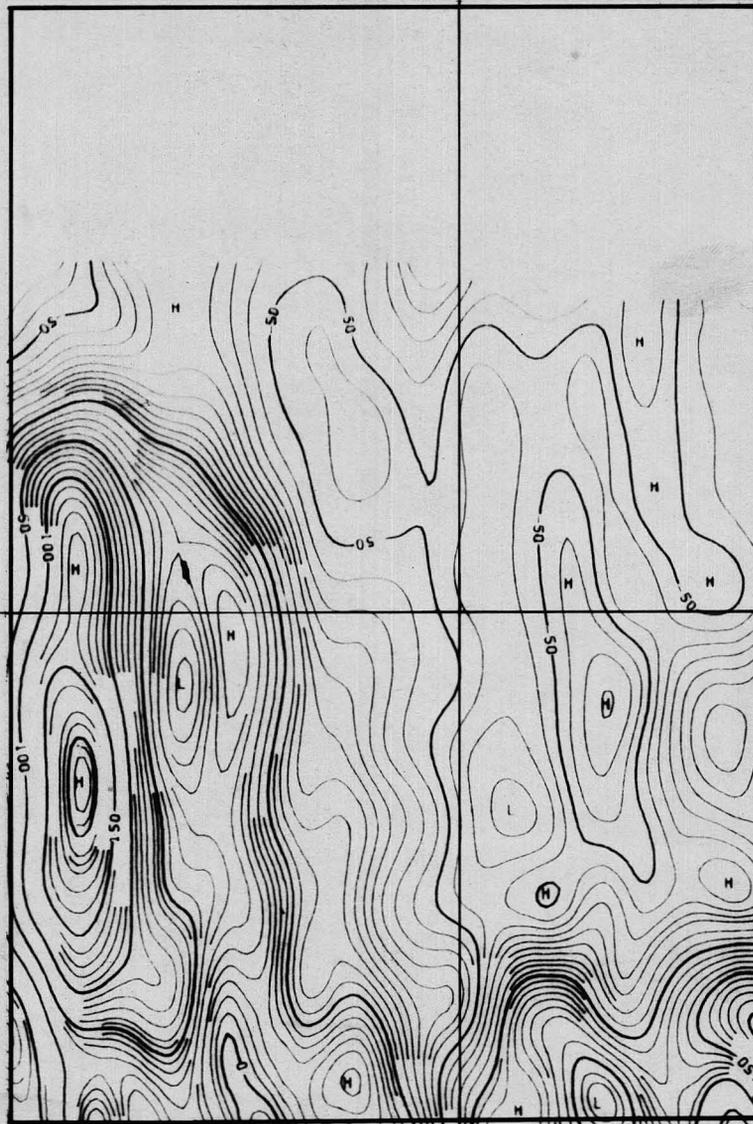
BOULDER RIVULET E.L. 61/83  
PHOTO INTERPRETATION  
( CAREY 1981 ) 022

85-2328

Ref SK55 -3	
Scale 1 : 100 000	Drawn R. T.
Author J. A. W.	Report N° 13058
Date 16 - 1 - 1985	Plan N° TASH 2456

120

345 000 mE



5 420 000 mN

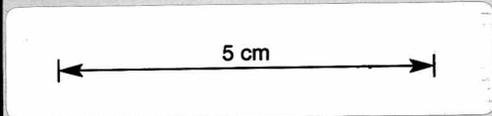
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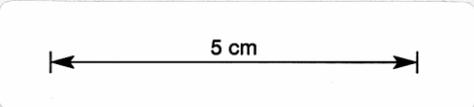
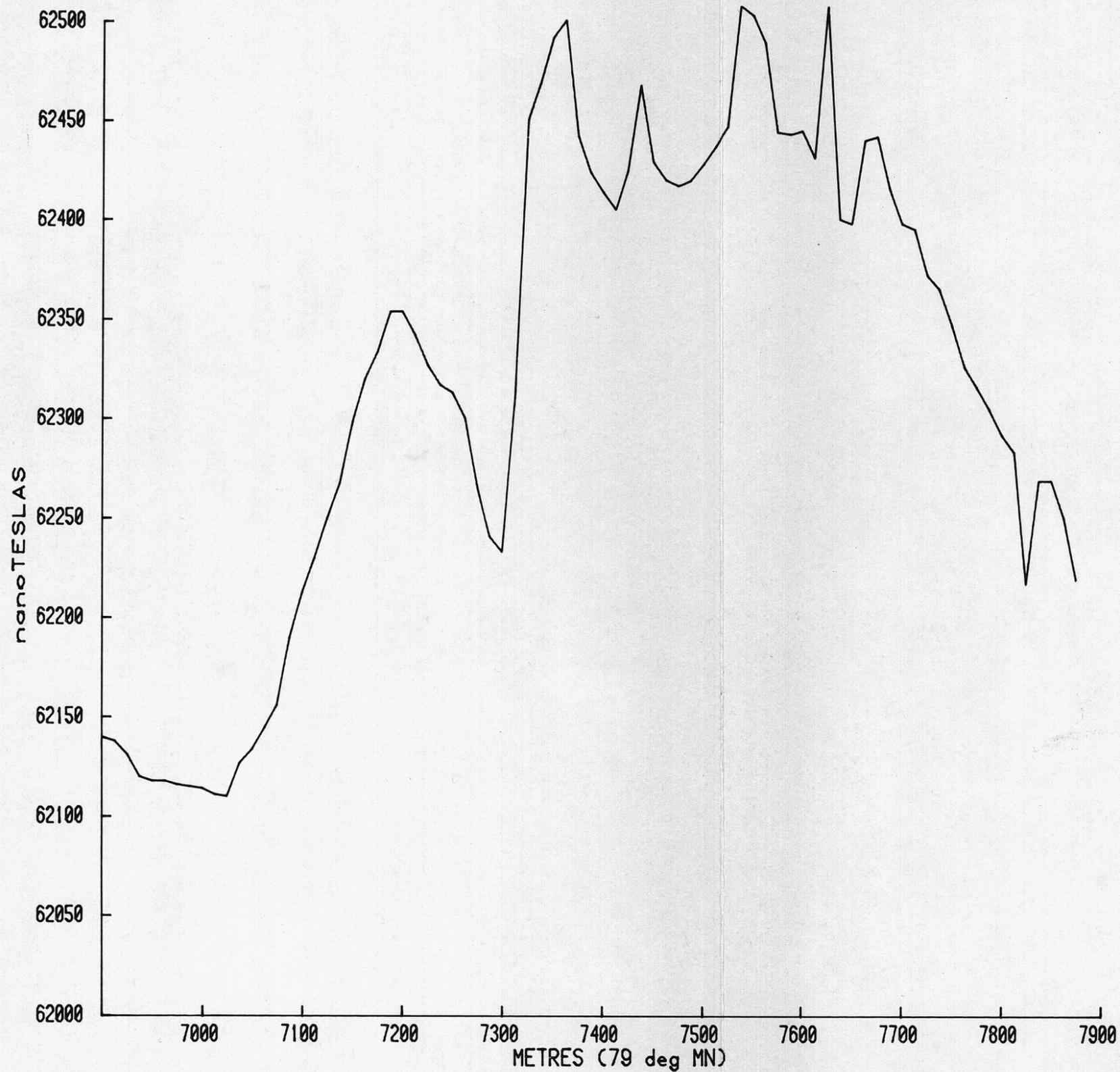
CRA EXPLORATION PTY. LIMITED

BOULDER RIVULET E.L. 61/83  
 AEROMAGNETIC CONTOUR MAP  
 ( TASMANIAN MINES DEPT )  
 ( WEST COAST SURVEY )

83-2328.

REF.	SK55 - 3	DRAWN	R.T.
SCALE	1 : 50.000	REPORT No.	13058
AUTHOR	J. W.	PLAN No.	TASh 2457
DATE	16 - 1 - 1985		



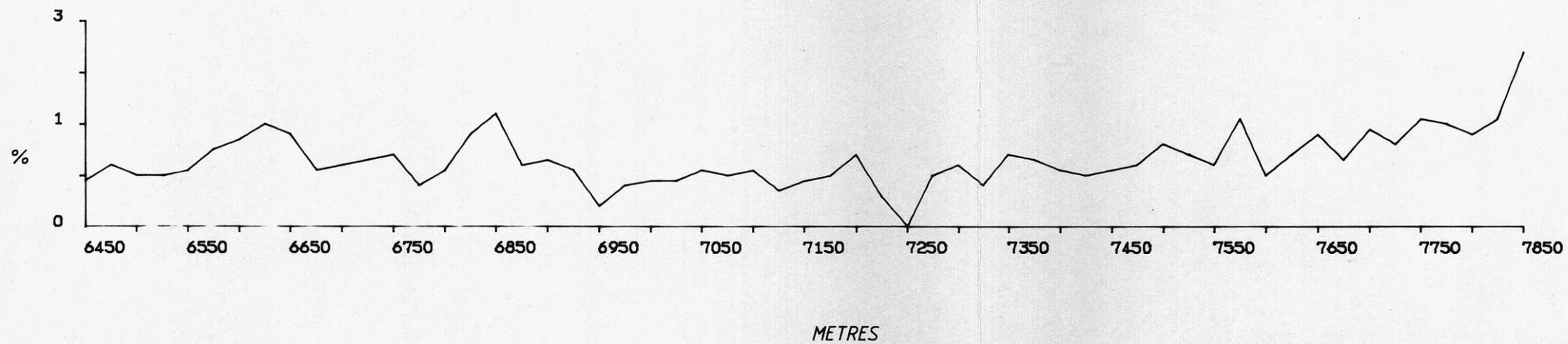
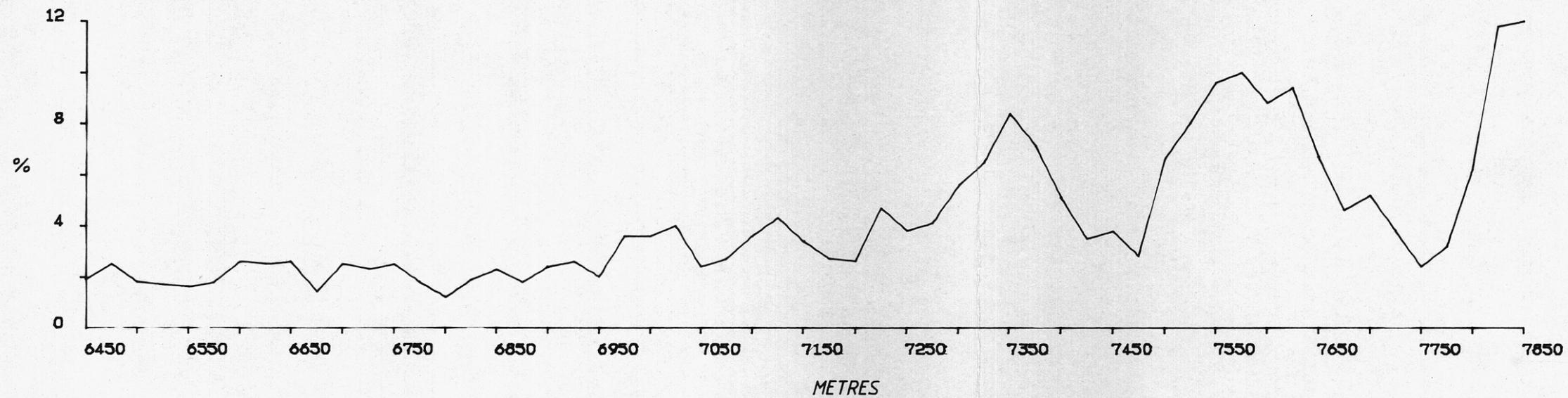


237024

CRA EXPLORATION PTY. LIMITED

BOULDER RIVULET E.L. 61/83	
STRIKE 024	
GROUND MAGNETIC TRAVERSE	
<del>85-2329</del>	
Ref	SK55 - 3
Scale	AS SHOWN
Author	T.v.S.
Date	11 - 1 - 1985
Drawn	T.v.S.
Report N°	13058
Plan N°	TASH 2452

BOULDER RIVULET STRIKE ANOMALY EM



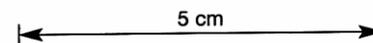
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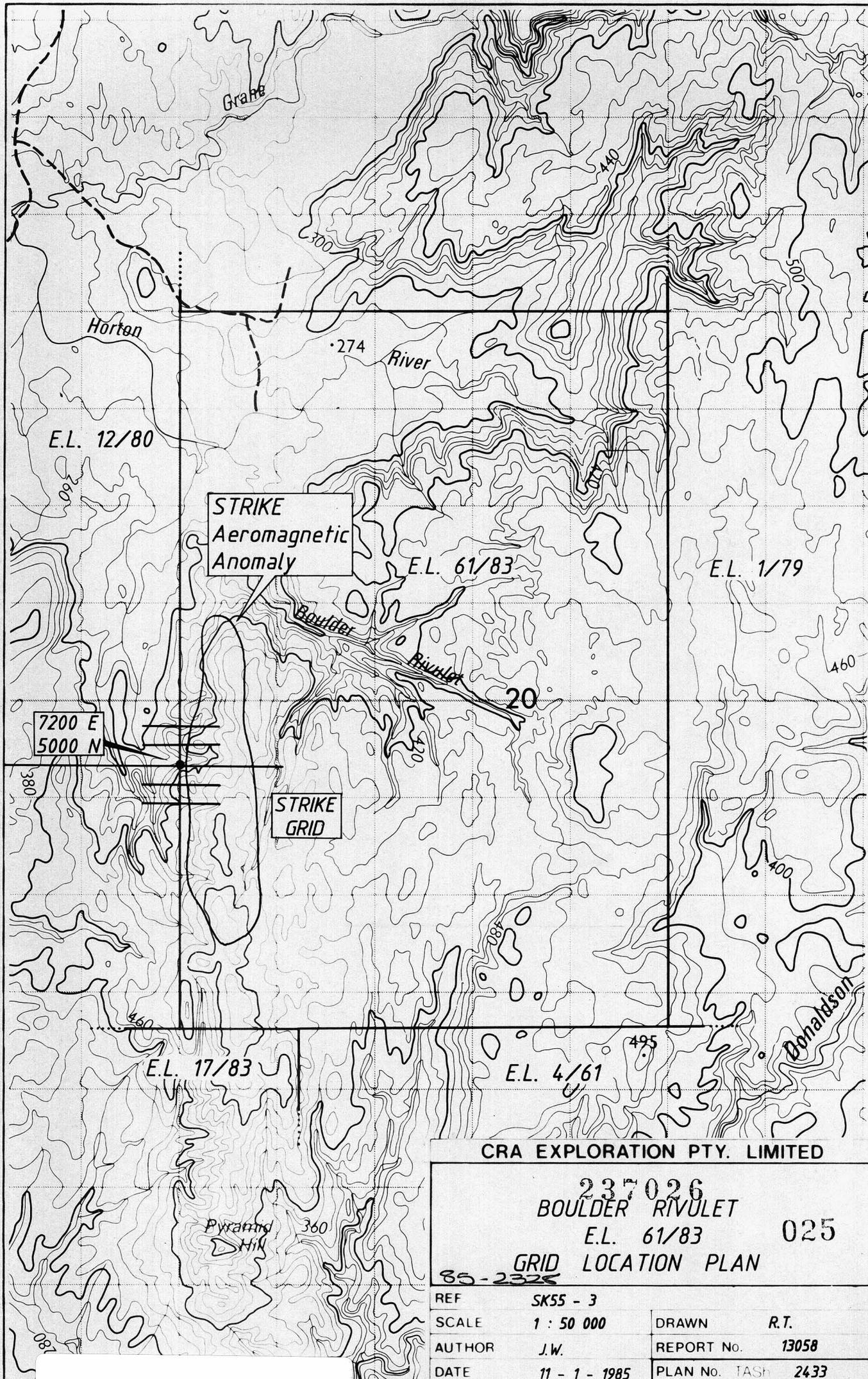
CRA EXPLORATION PTY. LIMITED

BOULDER RIVULET E.L. 61/83  
 STRIKE ANOMALY  
 GENIE RPOFILES  
 6450mE - 7850mE 023

85-2328

REF.	SK55 - 3		
SCALE	1 : 5000	DRAWN	T.v.S.
AUTHOR	T.v.S.	REPORT No.	13058
DATE	11 - 1 - '85	PLAN No.	TASh 2451





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237026  
BOULDER RIVULET

E.L. 61/83

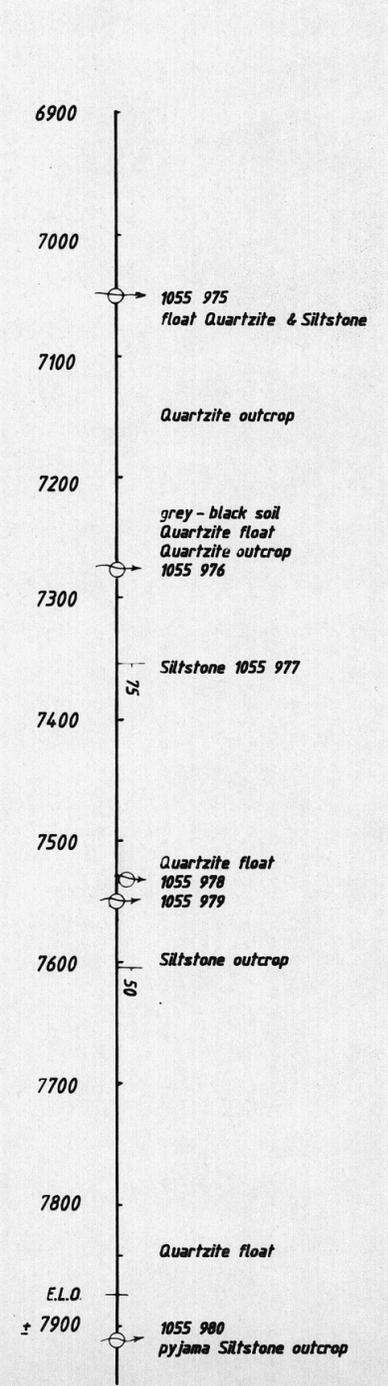
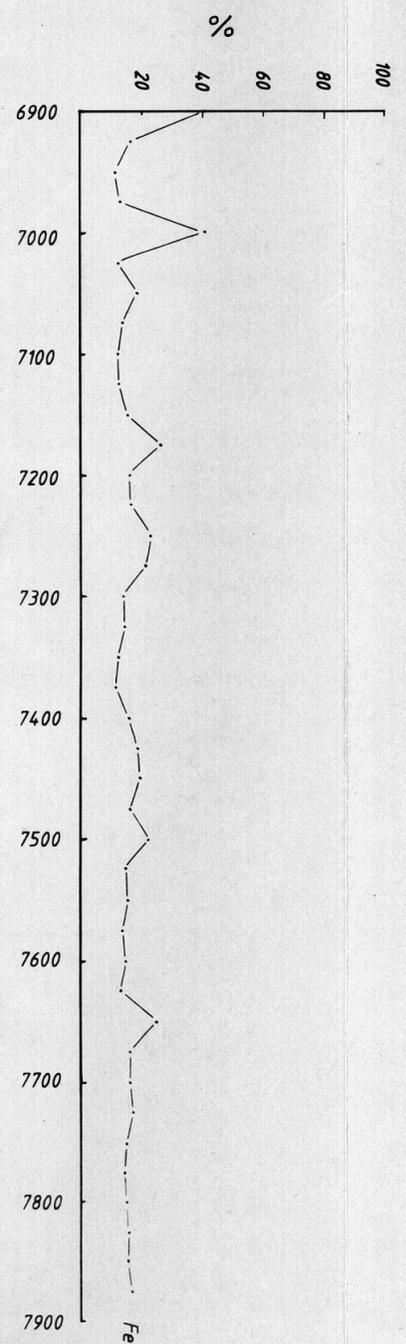
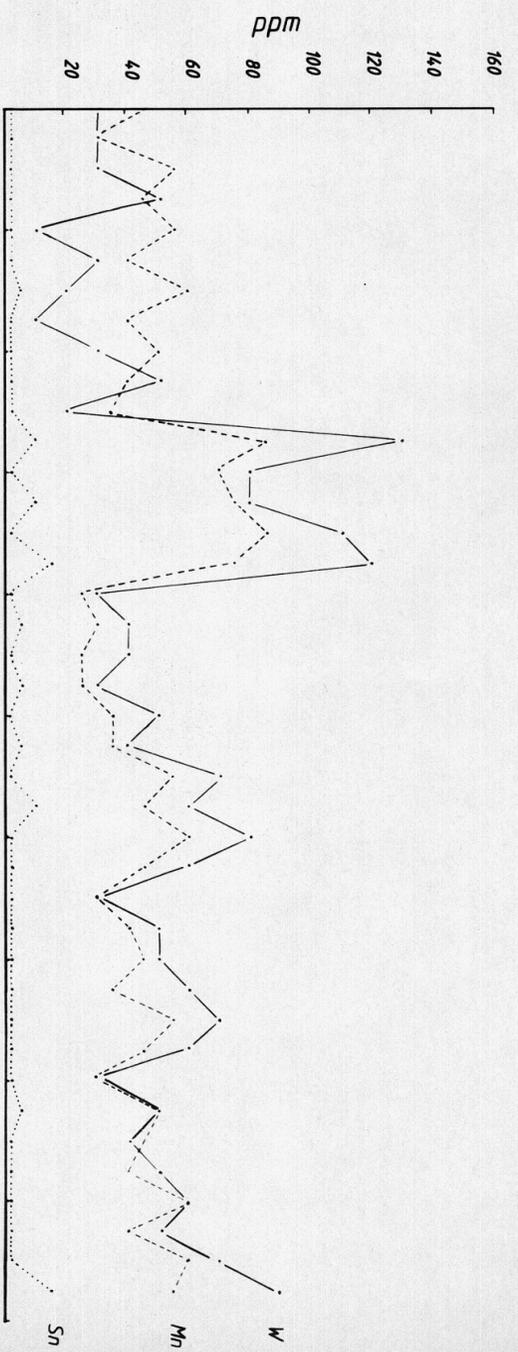
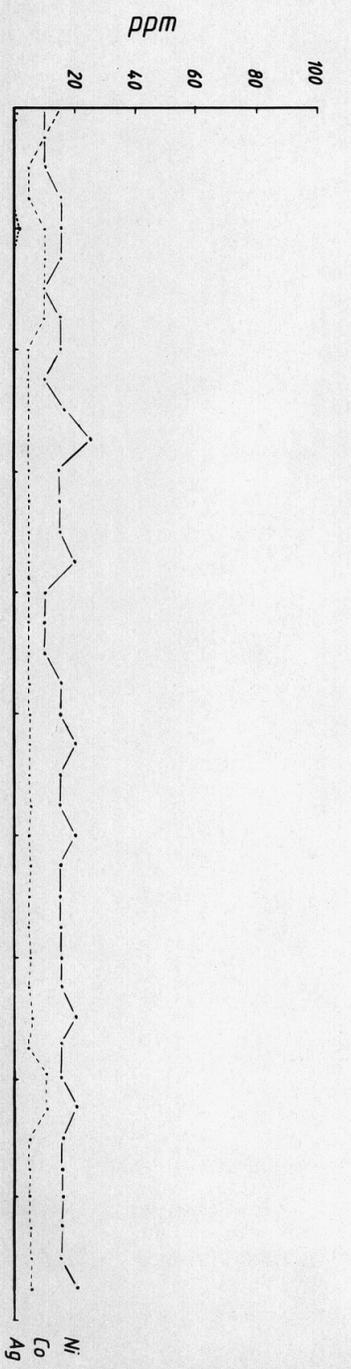
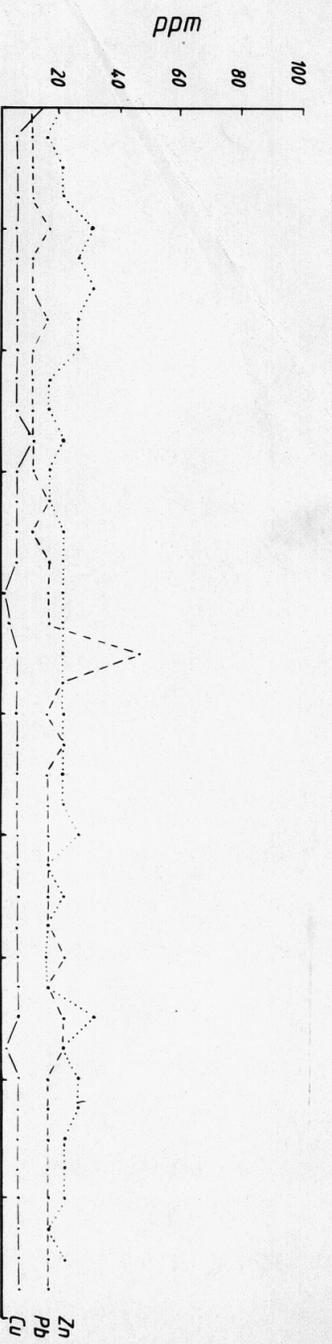
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GRID LOCATION PLAN

85-2328

REF	SK55 - 3	DRAWN	R.T.
SCALE	1 : 50 000	REPORT No.	13058
AUTHOR	J.W.	PLAN No.	TASH 2433
DATE	11 - 1 - 1985		

5 cm



CRA EXPLORATION PTY. LIMITED	
BOULDER RIVULET E.L. 61/83	
SOIL GEOCHEM. PROFILES	
STRIKE AEROMAGNETIC ANOMALY	
LINE 5000mN 026	
Ref: SK55 - 3	Drawn: R.T.
Scale: 1 : 5000	Report No. 13058
Author: J.W.	Plan No. TASH 2450
Date: 11 - 1 - 1985	

237027