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CRA EXPLORATION PTY.LIMITED.

ML's 59M/68 and 4M/74 - BALFOUR TASMANIA.

REPORT FOR THE YEAR ENDING 31ST DECEMBER, 1981.

Author: P.Heithersay (Geopeko)

Date: 31st March, 1982.

Submitted to: T.W.Dickson

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Department of Mines, Tasmania
Geopeko
CRAE Library
CRAE Hobart

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1. SUMMARY

Detailed investigations involving geological mapping, jacro bedrock sampling and geophysical surveys were carried out over the Balfour grid. Within the area of the South-Holloway option agreement (ML's 59M/68 and 4M/74) this work led to the development of two diamond drill holes designed to test the "Peters Ridge" line of coincident tin, tungsten, copper, lead and zinc geochemical anomalies.

The best intersections received from these holes were:-

DD81 BC4	35m - 38m	3 metres @ 0.51% Tin
(DDB 14 of Geopeko)	66m - 70m	4 metres @ 0.17% Tin
	113m - 116m	3 metres @ 0.18% Tin
	139m - 154m	15 metres @ 0.11% Tin

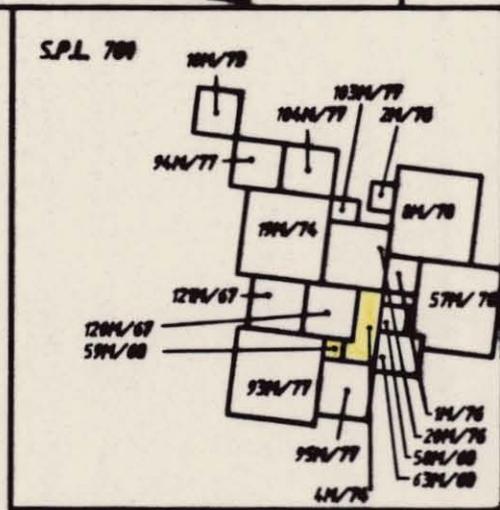
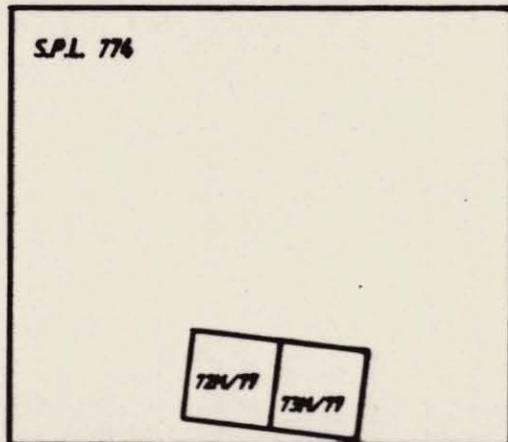
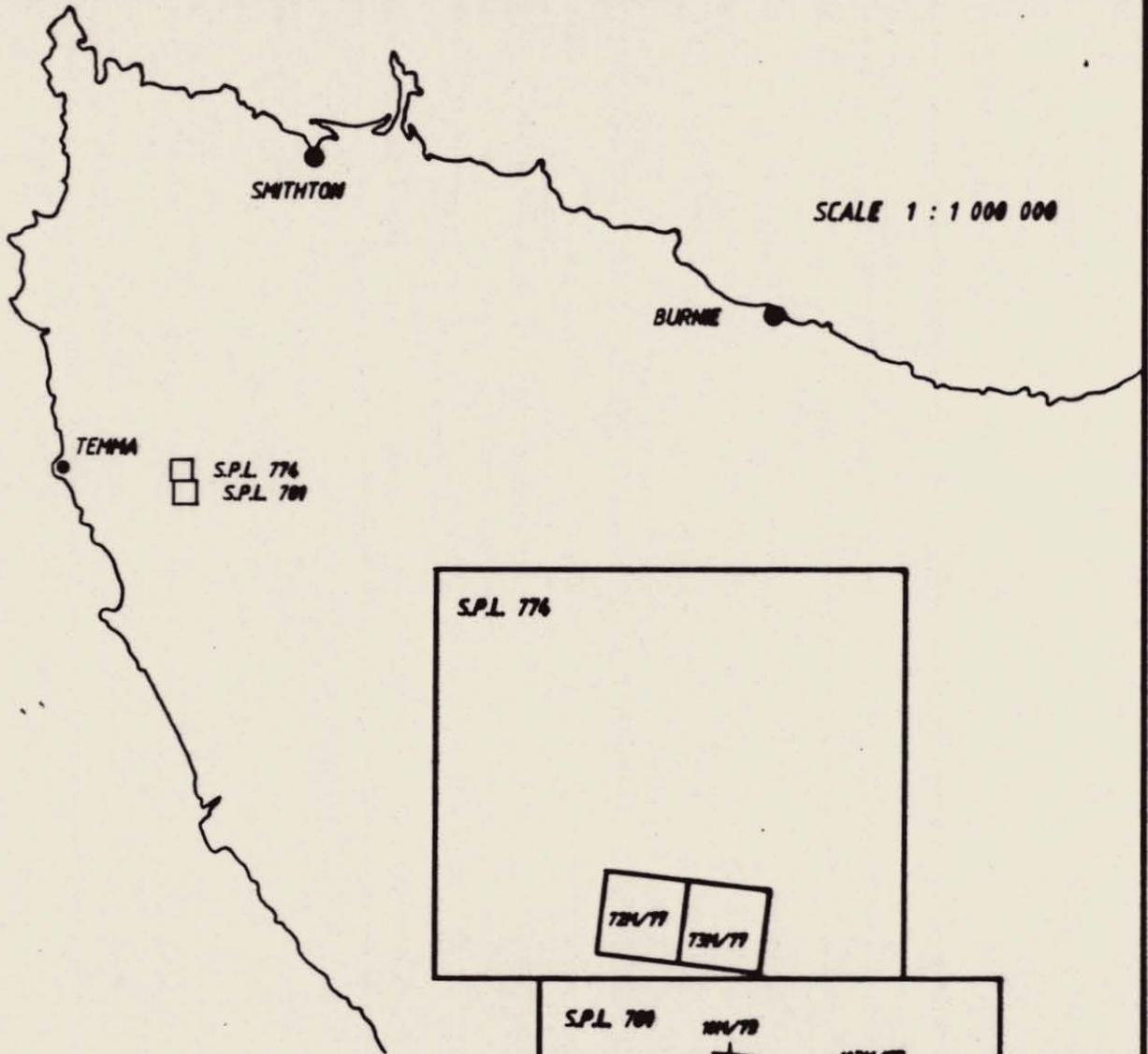
DD81 BC6	109m - 111m	2 metres @ 0.37% Tin
(DDB 16 of Geopeko)	188m - 189m	1 metre @ 0.14% Tin 0.71% WO ₃
	204m - 205m	1 metre @ 1.05% Tin 0.14% WO ₃
	231m - 233m	2 metres @ 0.36% Tin 0.18% WO ₃
	260m - 263m	3 metres @ 0.30% Tin 0.11% WO ₃

The model developed for the Balfour mineralisation suggests that the cassiterite - wolframite veining forms a sheeted vein system with a trend of approximately 300 degrees magnetic and dip of between 0 and 35 degrees west.

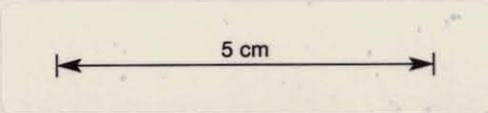
Individual veins intersected along "Peter's Ridge" contain significant cassiterite and in some cases wolframite, however the vein density was fairly low and future work on these leases will depend on the results of a diamond drill hole designed to test the northern continuation of the Peter's Ridge zone 200 metres north of 4M/74.

2. INTRODUCTION

This report covers work carried out on mineral leases 59M/68 and 4M/74 by J.Holloway and R.South for the period ending 31st December 1981. The South/Holloway option agreement was dated 20th March, 1981 and it is one of a number of farm in - joint venture agreements negotiated between CRA Exploration Pty.Limited and various other syndicates in the Balfour area.



SCALE 1 : 50 000



CRA EXPLORATION PTY. LIMITED

BALFOUR TENEMENTS

LOCALITY PLAN

Ref. SK55 - 3	
Scale AS SHOWN	Drawn R. T.
Author T. W. D.	Report No.
Date 16th Feb. 1982	Plan No. TASH 585

P.Laan & S.Caddy

MINING LEASE 73M/77

P.Laan & W.Baker (L. & B.Syndicate)

MINING LEASES 20M/76; 72M/77; 103M/77
104M/77; 8M/78; 57M/78

S.P.L.'s 774 and 781

M.Laan & N.R.Langsford (Balfour Agreement)

MINING LEASES 120M/67; 121M/67; 10M/73; 1M/73
2M/76; 93M/77; 94M/77; 95M/77

P.Laan, M.Laan, N.R.Langsford, W.Baker

MINING LEASE 19M/76

J.Holloway and R.South

MINING LEASE 59M/68; 4M/74

S.Tatlow (Agreement 1.)

MINING LEASE 63M/68

S.Tatlow (Agreement 2.)

MINING LEASE 58M/68

All the above agreements are part of the Rocky Cape Joint Venture between CRA Exploration and Geopeko.

The township of Balfour is situated approximately 16km inland from Temma Harbour and lies some 50km south of Smithton.

The programme of work carried out within ML's 59M/68 and 4M/74 includes.

- Geological mapping at both regional and 1:5000 scale
- I.P. Surveying - original data collected 1979 with fill in work carried out in December 1980
- A jacro auger bedrock geochemical sampling programme.
- Two diamond drill holes totalling 486 metres to test a major coincident tin-tungsten I.P. target along Peter's Ridge.

The I.P. survey was planned and interpreted by M.Flis and carried out by Geoterrex Ltd. The auger sampling and Jacro diamond drilling was carried out under contract by Geopeko Ltd. with geological supervision by P.Heithersay. The auger samples were prepared and the core split by Geopeko Ltd. All assays were by Analabs of Cooee, Tasmania.

3. CONCLUSIONS

Diamond drilling has adequately tested the coincident I.P. anomalous tin-tungsten zone along Peter's Ridge. Individual veins contain significant cassiterite but the vein density is low and the overall tenor is low grade and patchy.

Although high individual assays were obtained on the surface (up to 1.07% tin) the patchy zones of mineralisation and alteration intersected in the drilling clearly reflect the surface response.

4. RECOMMENDATIONS

No further work on these leases is warranted until an additional diamond drill hole is developed on the Peter's Ridge zone some 200 metres north of DD81 BC4. If encouraging results are obtained from this new hole, additional drilling will be carried out within 4M/74.

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5. GEOLOGY

5.1 Regional Geology (Refer Fig.1)

S.W.Careys (1981) photogeological study of the Rocky Cape E. 1/77 places the Balfour region within his Epsilon Group rocks. Epsilon Group is upper Proterozoic in age and is the most extensive Precambrian sequence delineated by his study. Where Epsilon Group runs into areas where field data are available the group correlates with the Balfour Slates and Interview Slates.

The structure of the Balfour region is dominated by north-north westerly trending faults which form within Careys 'Balfour-Redpa deep fault corridor'.

The style of folding in the region is a series of doubly plunging anticlines and synclines forming 'dome and basin' structures with fold axes trending NW-SE and E-W.

5.2 Prospect Geology (Refer Plan TASH 615)

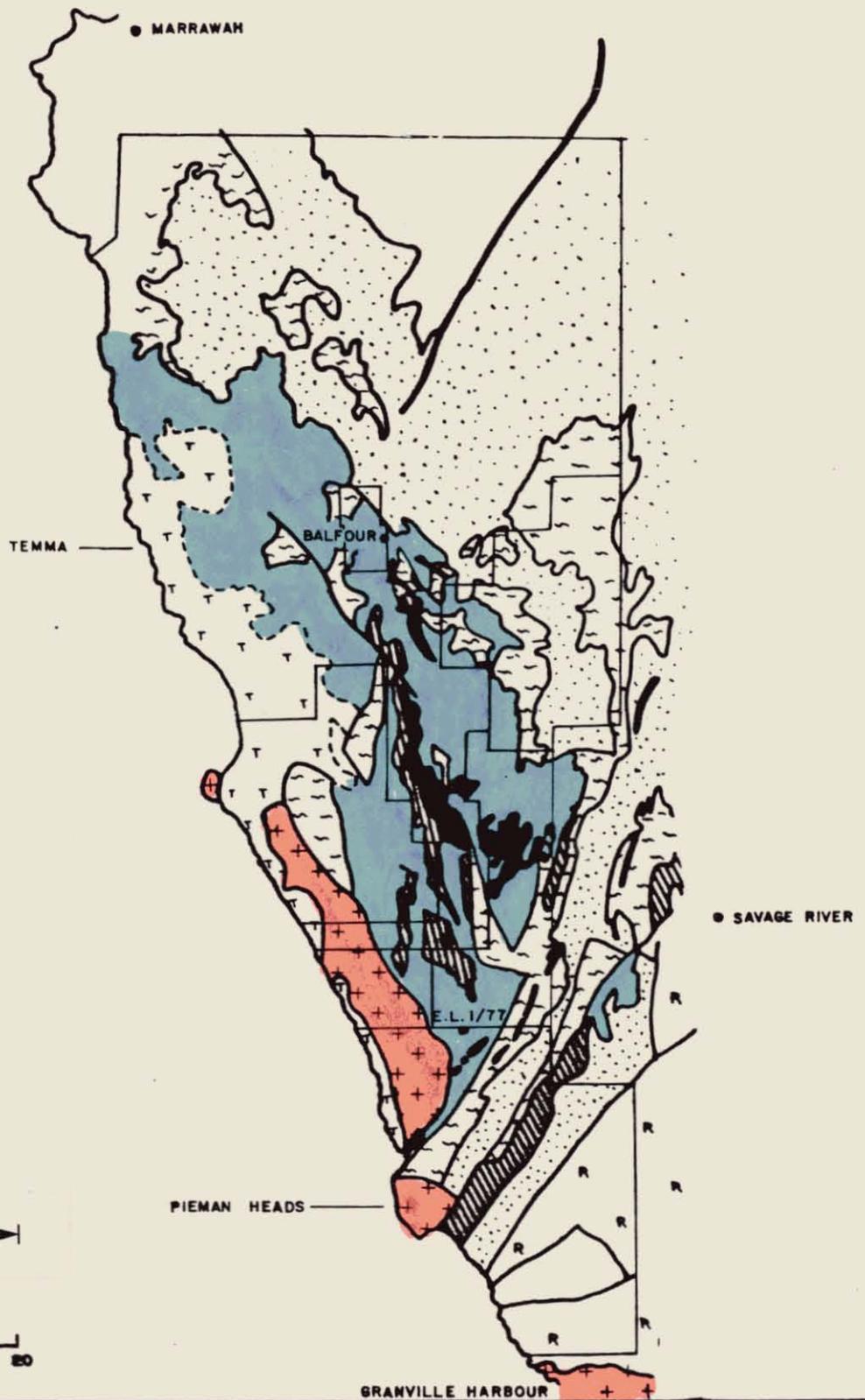
Methods

Grid extensions were mapped at 1:2500 scale using enlarged Lands Department aerial photos.

Stratigraphy

The Balfour stratigraphy is illustrated in figure 2. Facing criteria such as crossbedding and graded bedding established that the sequence youngs from west to east.

The rock sequences exhibit gradational contacts and mapping has illustrated the facies relationships between them. Hence they will be described as lithofacies.



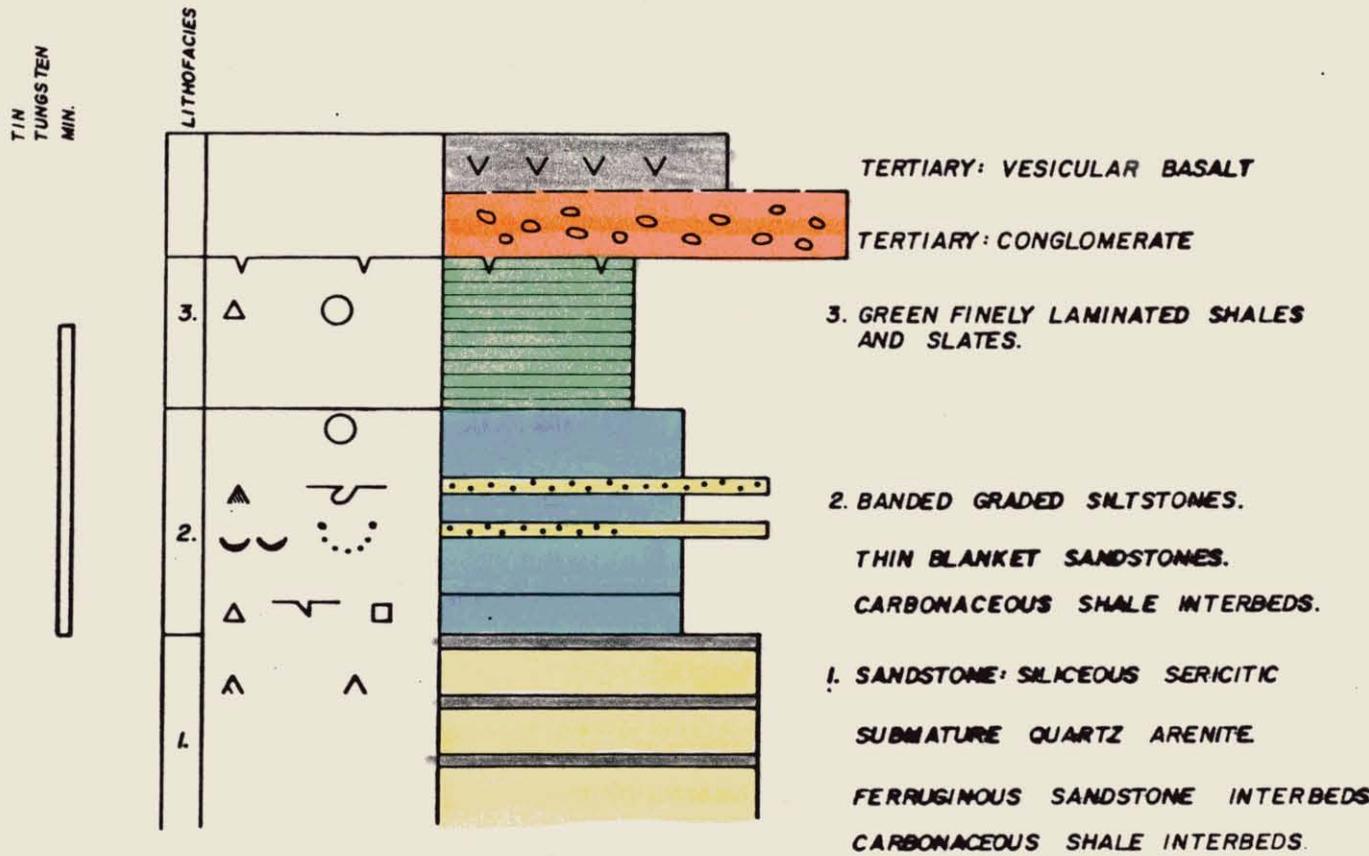
LEGEND:

- | | |
|-------------------------|-------------------------|
| Quaternary, Tertiary | Proterozoic Alpha Group |
| Eocambrian, Sigma Group | Rho Group |
| Proterozoic Phi Group | Devonian Granite |
| Epsilon Group | Eocambrian: Kappa Group |

GEOPEKO

ROCKY CAPE E.L. 1/77
 SUMMARY REGIONAL GEOLOGY
 LOCATION MAP
 FIG.1 TASH 680

STRATIGRAPHIC COLUMN - BALFOUR REGION



LEGEND:

- Wave Ripples
- Cross Lamination
- Mud Cracks
- Flaser Bedding
- Load Casts
- Possible Evaporite Casts
- Channel Scour And Fill
- Upwards Fining Grading
- Horizontal Lamination
- Syngenetic Pyrite

5 cm

TASH 681

FIGURE 2

Lithofacies 1:

Consists dominantly of fine sandstone: siliceous sericitic-submature quartz arenite. Carbonaceous black shales and brown ferruginous sandstones are interbedded in the sequence, Crossbedding, rip up shale clasts are common sedimentary features and bedding planes showing symmetric ripple marks are occasionally seen.

Lithofacies 2:

Consists dominantly of irregularly laminated and banded rock which is characterized by beds and laminae which grade from white fine grained sericitic sandstone to grey green or brown, chlorite or tourmaline rich, argillaceous siltstone. Sedimentary features include oversteepened cross-stratification, 'sandstone dikelets', load structures and scour and fill structures. Soft sediment deformation is ubiquitous. Interbedded in the lower part of the sequence are thin black shale interbeds which appear to be laterally extensive.

Further up in the sequence, are interbeds of silica and sericite rich quartz arenites. These form the backbones of the ridges in the area. They are individually quite thin, rarely exceeding 3 metres in thickness, but are laterally extensive.

This lithofacies has been termed Pyjama Siltstones by CRAE geologists. This is a general name applied to tourmaline bearing siltstones and quartzites commonly found in the Upper Precambrian of Western Tasmania.

This sequence hosts the tin and tungsten bearing veins of Specimen Hill and a similar rock type is present in the footwall of the massive pyrrhotite cassiterite lodes at Mt.Bischoff.

The sequence has undergone lower greenschist facies metamorphism and an incipient schistosity develops to varying degrees.

Tourmaline content varies throughout the 'Pyjama Siltstones' but is generally confined to the argillaceous layers. A tourmaline rich zone has been mapped on Specimen Hill (Porter 1979) which crosscuts bedding, suggesting epigenetic replacement. A syngenetic origin involving boron rich sediments has been suggested in the past. Petrographic evidence has given conflicting viewpoints. Drill hole data suggests however that tourmalinisation has preceeded veining, hence this zone could be viewed as an alteration zone associated with veining.

Rare thin beds of probable andesite has been noted in this lithofacies.

Lithofacies 3:

Lithofacies 2 grades both vertically and laterally into a monotonous, finely laminated, green, chloritic shale and slate sequence. Pyrite is common and is usually disseminated along bedding planes. This sequence hosts the Murray's Reward copper mineralisation and Tatlow's tin prospect.

Unconformably overlying this is a remnant Tertiary basalt flow on which the Balfour township is located. To the south remnant flat lying silicified Tertiary conglomerate beds can be seen.

Structure

The general lack of continuous marker beds has made structural interpretation difficult. However, the strata generally dip fairly steeply to the east. Southerly plunging flexures can be mapped on Specimen Hill and around the baseline on line 9100N. Plotting of cleavages developed on Specimen Hill reveals two distinct cleavages at approximately 335°/80E and 035/95E

This suggests that fold axes have developed with approximately 60° difference in trend. This would result in dome and basin structures, which ties in well with Carey's (1981) regional interpretation.

A structural problem which is apparent at Balfour is the difference in dip between Lithofacies 1 and 2. The sandstones of Lithofacies 1 form generally flat lying small scale domes and basins. As you proceed into Lithofacies 2, the dips become very steep. The contact between the two is gradational and no evidence for an unconformity or fault can be seen.

Strike slip faults are common displacing prominent sandstone/quartzite ridges.

The main quartz veins are generally between 1 to 10cm in thickness with a maximum thickness of 30cm. Two trends of veining are evident. The dominant trend is approximately 300°M while the subordinate trend is 235°M. The main concentration of veining which is exposed, occurs between 9600N and 9700N.

The veining exposed consists of massive white quartz containing varying amounts of cassiterite and rare wolframite. Bladed voids after wolframite are, however, commonly seen. Cassiterite occurs as small crystals in 'vughs' with blebs up to 5cm in diameter or as thin layers on margins of veins.

6. GEOCHEMICAL INVESTIGATIONS

During 1963-1964 BHP undertook exploration centred around the Specimen Hill mineralisation. Peat and gravel samples were taken and assayed for tin so as to define surface areas in which tin mineralisation appeared strongest. Small scattered areas of high tin content emerged mainly in the north west quadrant of the hill (Chestnut 1964).

1979 saw the establishment of 2.6km x 0.65km grid by the CRAE/Geopeko joint venture partners. A rock chip sampling programme over available outcrop was initiated, followed later by a Jacro auger sampling programme over areas of sparse outcrop, where magnetic and IP anomalies had been defined.

During 1980 a more comprehensive programme of Jacro bedrock sampling was completed. The first stage was completed during the period 25/4/80 to 10/6/80 and the lines selected on the following basis:

Auger holes were drilled to depths ranging from 0.5 to 3 metres using a Bombardier mounted Jacro auger. Particular care was taken to achieve a clean bedrock or if impractical, a 'C' horizon sample and to avoid contamination from alluvial and elluvial material at the tops of the holes. Where it was thought contamination would not be avoided, it was duly noted in the ledger sheets.

The samples were analysed for Tin, Tungsten, Copper, Lead, Zinc, Silver and Iron by A.A.S. The results, on CRA Exploration Geochemical Ledger Sheets, are given in Appendix 1 with geological description of the rock chips by Mr.A.McKay, Mr.N.R.Langsford and Mr.P.Heithersay.

6.1 Discussion of Results

Generally results were very encouraging with strong geochemical anomalies over Peters Ridge.

Tin Geochemistry

Refer Plan TASH 621

Values suggest that greater than 100 ppm should be regarded as a significant anomaly. Background values are concentrated in the 5 to 30 ppm range.

A complex three lobed anomaly occurs within 4M/78. The zone is 50 - 100 metres wide and extends right through 4M/78 from line 91N to 94 North. The anomaly lies close to the contact between green chloritic slates and "pyjama" rocks and has a peak value of 1.07% tin close to the north-west corner of the lease.

Tungsten Geochemistry

Refer Plan TASH 616

Anomalous values are considered to be greater than 20 parts per million against a background of 10 ppm. As the detection limit of XRF for tungsten is 10 ppm, anomalies of 20 ppm should be regarded with caution.

Two strong point highs of 60 and 640 parts per million occur in lease 59M/68 between lines 93 and 92N. A lower order (+40 parts per million) high extends across 4M/74 from lines 92N to 94N.

Copper Geochemistry

Refer Plan TASH 620

Results for the whole Balfour area suggest a background range of 2-15 parts per million with anomalous values in excess of 50 ppm.

A strong copper anomaly occurs in the north-west corner of the lease extending between lines 94W to 93 North. Peak value is 0.34% and the zone is coincident with the major tin anomalous zone.

Zinc Geochemistry

Refer Plan TASH 619

Visual estimation suggests a background value of around 50 parts per million. Samples in excess of 100 ppm are considered anomalous while approximately 3 per cent of the Balfour samples exceed 1000 ppm.

Within 4M/74 there is a strong zinc anomaly commencing in the north-west corner and roughly coinciding with the major tin anomaly. The zone is defined by the + 800 ppm contour with a peak value of 0.74% zinc.

Lead Geochemistry

Refer Plan TASH 618

Background values are in the order of 5 - 10 parts per million. Only one point source anomaly, on line 93N occurs within ML's 59M/68 and 4M/74.

Iron Geochemistry

Refer Plan TASH 617

A linear anomaly of +2% iron lies within 4M/74 but the most striking feature of the iron geochemistry is the sudden increase in iron background along the eastern boundary of 4M/74 along the Pyjama siltstone green shale contact.

7. GEOPHYSICS

In December 1980 I.P. work was carried out to extend the existing coverage over the interesting Peter's Ridge anomalous zone. The survey was carried out by Geoterrex using a 2.5 KVA transmitter and an IPR-7 receiver. A dipole-dipole configuration of 50 metres was used.

The results of the survey are appended in the form of chargeability/resistivity pseudosections. Line numbers refer to the Balfour grid.

Refer Plans TASH

Lines 92N, 93N and 94N

Lines 92N, 93N and 94N were done to see if anomalies found on lines 91N and 95N were continuous and, if they were causing the Dighem anomaly situated at approximately 10320E on line 94N.

Line 92N exhibits a "probable" grade anomaly centred on 10275mE on the chargeability pseudosection. This anomaly is the logical extension of the zone found previously on line 91N at 10200-10250mE, although it has strengthened in character, deepened and consolidated, indicating a more discrete source.

The resistivity pseudosection, however, is much more complex and may in fact indicate that this anomaly results from a disseminated rather than a massive source. A rock-type change is evident at approximately 10600mE. A geochem tin and zinc anomaly is coincident with this IP anomaly.

Line 93N indicates a continuation of the above anomaly although it has very much degenerated into a weak response probably due to low concentrations of pyrite. It is centred on 10325-10350mE.

Line 94N was designed to cover a "possible" Dighem anomaly occurring at approximately 10300mE, and appears to have been successful in detecting it. The IP anomaly occurs at 10375mE to 10400mE from surface to a depth of approximately 50 metres. The anomaly resides in a zone of generally depressed resistivity values, again possibly indicating a disseminated rather than massive source.

8. DIAMOND DRILLING RESULTS

Drill hole nomenclature varies between CRA Exploration and Geopeko. CRAE number the holes as they are drilled within the current exploration programme. That is hole DD81 BC4 is the fourth hole drilled by the CRAE-Geopeko Joint Venture. Geopeko on the other hand includes all previous drilling with their numbering system. (i.e. they include ten holes previously drilled by B.H.P.) so that their equivalent number for CRAE hole DD81 BC4 is DDB 14.

Both numbers are referred to in this report.

8.1 DD81 BC4 (DDB 14 of Geopeko)

This diamond drill hole was designed to test the best part of the Peter's Ridge line of coincident Tin, Tungsten, Copper, Lead, Zinc anomalies. Specifically it was targetted under a tin geochemical anomaly which recorded 1.07% Sn and a fairly well defined broad chargeable IP response.

Rock samples taken over the target zone at the surface exhibited visible disseminated sulphides and returned anomalous assays in Tin, Tungsten, Copper and Zinc. A further aim of this hole was to test the interface between Lithofacies 2 and Lithofacies 3.

This contact appears coincident with the eastern linear geochemical anomalies. The thinking was, that the contact may have formed a physical or chemical barrier to advancing mineralising fluids. As a consequence, the contact may have formed a suitable locus for mineralisation.

The diamond drill hole was drilled to a depth of 211.4m. The detailed geological and geochemical summary section is shown on figure 14.

A summary log of lithotypes is as follows:

0 - 35.5m	Finely laminated green chloritic shale.
35.5 - 81m	Variably altered zone. Alternating beds of yellow green fissile shale, white sericitized siltstone and dark brown-grey silicified and tourmalinised siltstone. A number of quartz, pyrite, siderite, arsenopyrite cassiterite veins are included in this interval.
81 - 111.6m	Finely laminated banded siltstone.
116.6 - 129m	Altered zone. Alternating beds of white sericitized siltstone and brown silicified tourmalinised siltstone. No veining. Pyrite infilling abundant microfractures.
129 - 151.6m	Altered zone. Very tourmalinised silicified siltstone. Microfractures common throughout. Pyrite infilling fractures.
151.6 - 156.9m	Intensely brecciated carbonaceous shale. Broken vein material common. Scheelite noted.
156.9 - 211.4	Dominantly chloritic, silicified finely laminated siltstone.

The two altered zones encompass the most mineralised zones. Visible cassiterite was contained in veins within these zone. Petrography suggests that some tin mineralisation is contained within the alteration assemblage in minerals such as hydrocassiterite.

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The spread of geochemical values over these zones would tend to support this.

Vein mineralogy consists of quartz, pyrite, arsenopyrite, chalcopyrite, sphalerite, siderite, with cassiterite and lesser wolframite. Fluorite and scheelite are also evident in the deeper veins.

The best intersections were as follows:

35m	-	38m	3m at 0.51%Sn	
66m	-	70m	4m at 0.166%Sn	
113m	-	116m	3m at 0.18%Sn	
139m	-	154m	15m at 0.11%Sn	0.075%WO ₃

The results suggest that the geochemical anomaly may be caused by the surface expression of the second alteration zone. The Lithofacies 2/Lithofacies 3 interface does appear to be a locus of mineralisation, although economic grades were not intersected. The IP chargeable zone can be explained by pyrite in veins and disseminations within the altered zones.

8.2 DD81 BC 6 (DDB 16 of Geopeko)

DDB 16 was designed to test the following features at depth.

1. A chargeable zone between 10,255 and 10,275E which was thought to reflect concentrations of sulphides formed in cleavages microfractures and veins.
2. The westerly dipping lodes located near Tatlows shaft. These 'lodes' consist of arsenopyrite, chalcopyrite, sphalerite with significant wolframite. At least 2 lodes are visible and are 40-50cm in thickness.
3. Two moderate tin geochemical anomalies as well as a significant tungsten anomaly.
4. The lithological boundary between Lithofacies 2 and 3.

The hole was drilled to a depth of 274.55m. The detailed geological log is appended.

A summary of lithologies is as follows:

0	-	23m	Altered? chloritic siltstone. Pyrite rich in part.
23	-	150.6m	Banded, finely laminated siltstone. Variably silicified graded bedding, cross stratification common. Wavy lenticular laminae is very common. Approximately 3-5% pyrite disseminated throughout, concentrated in the sandy layers.
150.6	-	171m	Green grey to black siltstone. Very silicified and pyrite rich zone between 159.3m - 159.7m.
171	-	274.55	Green to grey finely laminated chloritic shales and slates.

Veining occurs mainly around the banded siltstone/green shale interface and in the green shale sequence. Their mineralogy is similar to those intersected in DD81 BC 4. Fluorite is again conspicuous and empirically the veins at depth appear to be richer in cassiterite than any of the veins intersected at shallower depths.

Alteration effects associated with veining are minimal within the green shales. This is reflected by the discrete highs in the Tin and Tungsten geochemical profiles.

The best intersections were as follows:

109m	-	111m	2m at	0.375% Sn	0.04% WO ₃
188m	-	189m	1m at	0.140% Sn	0.71% WO ₃
204m	-	205m	1m at	1.05% Sn	0.14% WO ₃
231m	-	233m	2m at	0.36% Sn	0.18% WO ₃
260m	-	263m	3m at	0.30% Sn	0.11% WO ₃

The results of this hole indicated the following:

1. A suitable zone of chargeable material was not intersected.
2. The tin, tungsten anomalies could be explained by a few rich cassiterite and wolframite bearing veins.

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3. The Lithofacies 1/Lithofacies 2 interface exhibited some degree of silicification. However, the level of alteration seen in DD81 BC4 was not apparent here.
4. The outcropping wolframite lodes may have been intersected at 206 - 207m. The veins intersected, were dissimilar however, in that, their wolframite, siderite and arsenopyrite contents were not as high.

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10. KEYWORDS .

Tin, Tungsten, veins, Drill-Diamond, Geochem-rock, soil, Geology,
Geophysics, Mag. I.P.

Locality: Burnie 1:250 000 Sheet SK55-3

11. LIST OF PLANS

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12. LIST OF APPENDICES

- Appendix 1. Geochemical Ledger Sheets.
- Appendix 2. Diamond Drill Logs.

APPENDIX 1

GEOCHEMICAL LEDGER SHEETS

C.H.A. EXPLORATION GEOCHEMICAL SAMPLE DGER

Tenement name S.P.L 781 No. 819359 - 819376 Sample numbers 805025 Collected by P.H. Sheet no. 37
 Area / Prospect RALFOUR Date APRIL 1980
 Map / Photo reference 805025 Analysed by A.L.S. DPO no. _____

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn Fe	Au	Sn	W			
		o/c sample type ***																		
		Depth	s sample type ****															Horizon		
9359	S	0.4					C		40	15	40	1		1.22		65	20	1000E	Black siltstone	
360	"	2					"		25	10	25	1		1.20		5	10	10025E	" "	
361	"	2					"		2	10	10	<1		0.20		685	70	10050E	Pyjama siltstone, quartzite	
362	"	2					"		25	25	65	<1		1.44		5	10	10075E	" "	
363	"	1					"		15	15	10	<1		0.88		20	10	10100E	" "	
364	"	0.6					"		10	10	35	<1		0.76		170	10	10125E	" " Alluvial workings	
365	"	2					"		55	40	250	<1		1.92		10	<10	10150E	" " " "	
366	"	2					"		60	40	220	<1		0.76		195	60	10175E	" " "	
367	"	hand auger					"		5	10	60	4		0.20		90	30	10200E	" " contaminated	
368	"	2					"		2	10	40	2		0.10		695	20	10225E	" "	
369	"	1.3					"		5	10	10	1		0.10		265	10	10250E	contaminated sample	
																		10275E	NOT SAMPLED	
																		10300E	" "	
																		10325E	" "	
319 370	S	2					C		2	10	10	<1		0.12		105	20	10350E	Quartzite	
371	"	2					"		110	30	0.16%	<1		1.60		135	20	10375E	Pyjama siltstone	
372	"	0.4					"		50	50	150	<1		1.36		10	<10	10400E	" " along strike from see	
373	"	1.2					"		20	115	20	5		0.78		575	10	10425E	" "	
374	"	2.7					"		5	10	10	<1		0.48		140	20	10450E	Qtzite pyjama siltstone	
375	"	2					"		10	20	20	<1		1.28		25	<10	10475E	" " "	
																		10500E	NOT SAMPLED	
																		10525E	" "	
319 376	S	1					C		10	10	25	<1		2.36		50	20	10550E	Qtzite, probably contaminated TOP OF PETERS RIDGE	

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

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*** Outcrop sample ty. gs = grab sample rc = rock chip (state interval & length) cs = channel sample (st ength)

**** Soil sample type auger hole or pit depth m A, B or C horizon

Tenement name S.P.L. 781

No. ... Sample numbers 819377 - 819389

Collected by P.H.

Sheet no. 38

Area / Prospect BALEFOUR

Date April 1980

Map / Photo reference

805026

Analysed by A.L.S.

DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn Fe	Au	Sn	W			
		o/c sample type ***																		
		Depth	s sample type ****															Horizon		
319377	S	1.5					C		2	10	10	<1		0.12		225	20		10575E	White qtzite
378	"	1.6					"		35	10	25	<1		2.32		80	<10		10600E	Green grey siltstone
379	"	1.7					"		2	10	45	<1		2.16		20	<10		10625E	Green shale
380	"	0.6					"		5	10	25	<1		1.88		5	<10		10650E	Green grey shale
381	"	1.5					"		5	15	60	<1		4.08		<5	<10		10675E	Tailings dump green shale
382	"	1.4					"		<2	10	45	<1		3.36		<5	<10		10700E	" " " "
383	"	2					"		30	10	50	<1		3.20		10	<10		10725E	" " " "
384	"	2					"		50	15	50	<1		3.52		5	<10		10750E	" " " "
385	"	1.6					"		15	20	70	<1		2.96		<5	<10		10775E	Near tailings l. green shale.
386	"	2					"		20	20	50	1		6.00		5	<10		10800E	Dark to light green shale
																			10825E	NOT SAMPLED.
387	"	2					C		20	10	30	<1		2.64		<5	<10		10850E	Grey shale qtzite top of M.R. Ridge
388	"	2					"		20	30	25	<1		1.64		5	<10		10875E	Grey siltstone qtzite
389	"	2					"		5	15	10	<1		0.10		<5	<10		10900E	White clay

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 *** Outcrop sample ty: gs = grab sample rc = rock chip (state interval & length) cs = channel sample (st length)
 **** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGGER

Tenement name SPL 781 No. 819493 - 819503 Sample numbers 819493 - 819503 Collected by N.R.L. Sheet no. 48
 Area / Prospect W.F.R.R. Date MAY 1980
 Map / Photo reference 805028 Analysed by A.L.S. DPO no. 020

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn Fe	Au	Sn	W			
		o/c sample type ***																		
		Depth	s sample type ****																	
319493	S	0.6						45	25	150	4			3.68		35	<10	10550 E	0-0.3m peat 0.3-0.6m light grey siltstone	
494	"	0.6						2	5	30	1			1.40		30	<10	10525 E	0-0.3m peat 0.3-0.6m light grey siltst.	
495	"	0.6						2	5	60	1			4.56		20	<10	10500 E	0-0.3m peat 0.3-0.6m yellow clay	
496	"	1						10	5	45	1			4.72		30	<10	10475 E	0-0.6m peat 0.6-1m yellow siltstone	
497	"	1.2						5	15	55	1			3.36		10	<10	10450 E	0-0.5m peat 0.5-1.2m yellow siltstone	
498	"	1.0						30	20	160	1			4.00		5	<10	10425 E	0-0.6m peat 0.6-1m grey siltstone	
499	"	1.2						<2	15	65	1			3.56		5	<10	10400 E	0-0.6m peat 0.6-1.2m yellow siltstone	
500	"	1						25	10	115	1			3.60		45	<10	10375 E	0-0.3m peat 0.3-1m green grey siltstone	
501	"	1						<2	<5	2	1			0.14		295	40	10350 E	0-0.5m peat 0.5-1m red brown siltstone	
502	"	1						<2	5	15	1			0.46		30	<10	10325 E	0-0.5m peat 0.5-1m brown-green siltstone	
503	"	1.8						<2	15	5	1			0.16		120	50	10300 E	0-1m peat 1-1.8m brown grey siltstone	

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 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGGER

element name..... S.P.L. 781 No. Sample numbers 819504 - 819513 Collected by N.R.L. Sheet no. 49
 area / Prospect..... BALEOUR Date MAY 1980
 map / Photo reference..... 805029 Analysed by A.L.S. DPO no.....

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations		
		ss	oc	f	wi	al	co		ca	pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn			W	-
		o/c sample type ***							Fe													
		Depth s sample type ****																				
1504	S	1.2	(m)						<2	15	2	1		400 ppm		520	30		92N	10275E	0-0.5m peat 0.5-1.2m white siltite + qtzite	
505	"	2m							5	10	50	1		2.29		10	10			10250E	0-1m peat 1-2m green siltstone	
506	"	1							2	5	5	1		200 ppm			20			10225E	(Road) 0-0.5m peat 0.5m-1m brown siltstone	
507	"	1							<2	<5	5	1		90 ppm		225	20			10200E	0-0.3m peat 0.3-1m white siltite + qtzite	
508	"	0.8							<2	<5	5	1		0.10		435	30			10175E	0-0.5m peat + rubble 0.5-0.8m white siltite + qtzite	
509	"	1							<2	<5	110	1		1.92		10	<10			10125E, 10150E Omitted 10100E	0-0.3m peat 0.3-1m green siltstone	
510	"	0.8							85	10	125	1		2.68		35	<10			10075E	0-0.3m peat 0.3-0.8m kahki siltstone	
511	"	0.6							<2	10	20	2		0.92		50	<10			10050E	(On road) 0-0.3m peat 0.3-0.6m green siltstone	
512	"	1							2	5	25	1		1.26		10	<10			10025E	0-0.3m peat 0.3-1m yellow brown siltstone	
513	"	1							<2	<5	2	1		440 ppm		20	20			10000E	0-0.3m peat + rubble 0.3-1m brown siltstone	

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 ** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 *** Soil sample type auger hole or pit depth m A, B or C horizon

U.R.A. EXPLORATION - GEOCHEMICAL SAMPLE LEDGER

Tenement name S.P.L 781
 Area / Prospect WALFOUR
 Map / Photo reference

No. Sample numbers 819513 - 819524 Collected by N.R.L.

Sheet no. 50
 Date MAY 1980
 DPO no.

805030

Analysed by A.L.S.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn Fe	Au	Sn	W			
		oc	o/c sample type ***																		
		f	s sample type ****																		
319514	S		1	(m)					<2	5	20	1			680 ppm		745	40		10025E	near old shaft 0-0.3m peat 0.3-1m grey green siltstone
515	"		1						15	15	15	1			0.54		0.24%	60		10050E	0-0.3m peat 0.3m-1m grey green siltstone
516	"		1						5	5	20	1			1.42		165	20		10075E	(Road) 0-0.3m peat 0.3-1m yellow siltstone
517	"		1						5	5	50	1			0.26		20	10		10100E	0-0.3m peat 0.3-1m grey siltstone
518	"		1						<2	<5	30	1			440 ppm		20	10		10125E	0-0.3m peat 0.3m-1m white siltite
519	"		1						<2	<5	30	1			400 ppm		355	10		10150E	as above
520	"		1.2						<2	15	35	<1			0.14		30	10		10175E	0-0.3m peat 0.3-1.2m brown siltstone
521	"		1.4						2	15	70	1			1.79		40	10		10200E	0-0.3m peat 0.3-1.4m yellow brown siltstone
522	"		1.4						5	10	95	<1			2.60		10	10		10225E	0-0.3m peat 0.3-1.4m yellow brown siltstone
523	"		0.5						15	10	290	1			3.48		5	<10		10275E	(road) 0-0.5m green siltstone
524	"		1						2	10	90	1			3.28		10	20		10300E	0-0.5m peat 0.5-1m green siltstone

* 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

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**** Soil sample type auger hole or pit depth m A, B or C horizon

APPENDIX 11

DIAMOND DRILL LOGS

DD 81 BC 4
DD 81 BC 6

2.4. LOG OF BALFOUR DDB 14 ROCKY CAPE E.L. 1/77
 0081 BC 4

Proposed: P. Heithersay

Depth: 200m

Location: Southern end Peter's Ridge

Collar coordinates: 9387N 10425E

Collar inclination -55°

Purpose of the hole: To test a coincident Sn, W, Cu, Pb, Zn, "c" horizon geochemical anomaly with an accompanying I.P. anomaly

Final Depth: 210.4m

Summary Result: The hole intersected banded siltstones and chloritic, silicified finely laminated siltstones. Two zones of alteration encompassing mineralised veins were encountered. The best intersections of mineralization were as follows:

66-70m	4m at 0.16% Sn	
139-154m	15m at 0.11% Sn	0.075% WO ₃
35 - 38m	3m at 0.51% Sn	
113-116m	3m at 0.18% Sn	

DRILLING DETAILS

Rig: Warman Scout

Driller: G. Steel

Commenced: 12/6/81

Completed: 23/7/81

Drilling Conditions: Poor. Drill rods became stuck at 168m due to unstable ground conditions. Recovery however, was about 95%.

M (m)	ANGLE CORE AXIS		BEDROCK DESCRIPTION	Alteration	MINERALIZATION			Fracturing	Sample No.	From (m)	To (m)	Rec (m)	ASSAYS							
	B ₀	B ₁			P ₁	Carbon	Sulfur						Sn	W	Cu	Pb	Zn	Fe	As	Ag
40.50			Greenish-grey sandstone. Silicified in part						933232	40	41	1	250	X	215	40	135	33	1000	0.6
41.00			Grey siliceous sandstone. Laminated. Dendritic pyrite. Pyrite disseminated along bedding planes.	Thermal sulfur					239	41	42	1	410	X	205	40	160	25	1000	0.6
			At 41.3 Quartz veins pyrite or arsenopyrite var. 0.2m thick 25cm						240	42	43	1	40	X	50	10	810	1.2	28	0.4
			At 41.5 Quartz veins pyrite, arsenopyrite, cassiterite 0.25m thick						241	43	44	1	200	45	145	10	235	1.6	35	0.5
43.50			LIGHT GREEN calcareous sandstone. Bands of grey silicified sandstone and chert layers. Some graded bedding with disrupted bedding.						242	44	45	1	580	30	235	25	1000	2.3	13	0.7
			At 43.5 Quartz veins pyrite, arsenopyrite, cassiterite 0.25m thick						243	45	46	1	180	35	110	15	360	2.1	94	0.5
			At 43.5 Quartz veins pyrite, arsenopyrite, cassiterite 0.25m thick						244	46	47	1	150	X	135	20	1100	3.0	6	0.4
48.25			Green yellow siliceous sandstone. Disseminated pyrite.	Heavy sulfidation					245	47	48	1	310	X	160	10	640	2.3	94	0.4
52.30	60°		Green yellow siliceous sandstone. Disseminated pyrite. Silicified.	Sulfidation					246	48	49	1	100	X	115	15	320	3.1	450	0.5
			Green yellow siliceous sandstone. Thin nodules of pyrite with sphalerite. Thin dark layers define presulfidation bedding. Chert in part. At 50.4 - 5m Quartz, pyrite, arsenopyrite var.						247	49	50	1	140	55	150	10	225	1.8	23	0.5
			50.4m quartz, pyrite, arsenopyrite var. 5cm thick						248	50	51	1	300	X	300	20	160	2.2	1000	1.0
54.30			Green calcareous sandstone. Interfingering and disrupted bedding. Silicified in part. At 50.4 - 5m Quartz, pyrite, arsenopyrite var.						249	51	52	1	100	X	85	X	60	1.7	100	0.3
			50.4m quartz, pyrite, arsenopyrite var. 5cm thick						250	52	53	1	55	X	45	X	510	1.7	67	0.3
56.00			Green calcareous sandstone. Interfingering and disrupted bedding. Silicified in part. Chertic and laminated in part.	Sulfidation					251	53	54	1	160	X	150	10	500	1.3	1000	0.4
			Green calcareous sandstone. Interfingering and disrupted bedding. Silicified in part. Chertic and laminated in part.						252	54	55	1	410	X	155	5	2050	2.2	29	0.5
58.90			Green calcareous sandstone. Very fissile with a waxy luster.	Retromorphic					253	55	56	1	220	40	155	10	1000	3.1	8	0.4
58.95			Grey brown sandstone. Thin cracks and fractures unfilled with pyrite.	Brown yellow alteration					254	56	57	1	75	X	30	30	160	2.1	30	0.5
60.65			Silicified grey sandstone. Dendritic pyrite and fine grained.	Sulfidation					255	57	58	1	1150	80	600	25	990	5.4	11	1.1
			At 60.65 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						256	58	59	1	350	60	195	25	1650	3.1	95	0.7
65.50			Brown yellow sandstone. Silicified in part. Colouring due to oxidation of pyrite.						257	59	60	1	430	55	175	145	5000	2.2	16	2.3
			At 65.5 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						258	60	61	1	450	75	145	140	2050	1.9	1000	2.5
			At 65.5 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						259	61	62	1	210	80	300	80	1300	2.4	1100	1.4
67.00			Silicified sandstone. Brown vein material containing cassiterite, arsenopyrite, pyrite, sphalerite with quartz material.	Sulfidation					260	62	63	1	100	30	110	1010	2500	1.5	51	1.5
			At 67.0 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						261	63	64	1	350	35	305	40	3650	3.1	1000	1.8
			At 67.0 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						262	64	65	1	250	X	135	25	1150	1.8	91	1.2
			At 67.0 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						263	65	66	0.7	30	X	10	15	75	1.4	11	0.3
78.30			Broken cherty interbeds. Graded bedding. He. with bedding laminae. Finely laminated in part with chert rich patches. Syngenetic pyrite blebs throughout.						264	66	67	0.5	1300	45	115	35	4050	2.0	12	0.5
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						265	67	68	0.4	1950	45	520	30	2450	4.1	1000	0.4
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						266	68	69	0.3	1100	35	360	45	7200	7.9	1000	0.9
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						267	69	70	0.8	2300	70	1160	405	9250	3.7	1000	0.5
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						268	70	71	0.9	40	30	240	55	1460	1.6	1000	1.0
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						269	71	72	1	55	40	30	20	140	3.0	91	0.2
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						270	72	73	1	600	120	330	45	820	4.2	1000	0.6
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						271	73	74	1	460	X	145	20	1200	1.1	1000	0.5
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						272	74	75	1	10	X	60	25	170	2.7	11	0.2
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						273	75	76	1	690	130	250	45	485	3.0	80	1.3
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						274	76	77	1	65	X	40	10	205	2.3	43	0.3
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						275	77	78	1	80	X	55	20	1400	2.0	3	0.4
			At 78.3 - 5m Quartz, pyrite, arsenopyrite, cassiterite, sphalerite, quartz						276	78	79	1	45	X	40	20	545	2.5	1	0.4

805035

H (m)	ANGLE CORE AXIS	GEOLOGICAL DESCRIPTION	Alteration	MINERALISATION				Fracturing	Sample No.	From (m)	To (m)	Rec (m)	ASSAYS (Lab ANALYSIS CODE Tasmanian)							
				PY	CHL	ALB	HA						SN	W	CU	PB	ZN	FE	AS	AG
91.00		VARIABLY CRAGGIC FINELY Banded SLTSTONE with disseminated pyrite. Fine grained sphalerite along microfractures							923 277	79	80	1	30	40	125	55	8700	2.1	4	11
91.60		FINELY LAMINATED Banded SLTSTONE laminae irregular to wavy and slightly offset by incipient cleavage. Pyrite and sphalerite occurs as blebs and along cleavage planes. Minor silicification and barmitisation.							278	80	81	1	30	X	55	40	640	2.1	X	0.5
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							279	81	82	1	15	X	30	15	55	2.1	1	0.1
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							280	82	83	1	25	X	45	20	115	2.1	F	0.4
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							281	83	84	1	290	X	135	35	1760	2.5	B	0.5
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							282	84	85	1	270	X	115	20	1750	2.6	11	0.6
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							283	85	86	1	500	X	580	85	700	2.9	100	1.8
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							284	86	87	0.9	620	35	385	25	7750	3.1	84	0.7
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							285	87	88	1	1000	100	360	10	8150	3.5	14	0.5
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							286	88	89	1	110	40	120	20	4200	2.7	9	0.5
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							287	89	90	1	390	55	160	25	900	2.6	11	0.4
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							288	90	91	1	45	X	40	20	130	2.5	24	0.1
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							289	91	92	1	430	X	1150	65	250	3.1	100	2.0
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							290	92	93	1	180	35	210	25	445	2.7	140	0.7
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							291	93	94	1	200	X	295	45	790	3.5	100	2.4
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							292	94	95	1	30	X	40	15	65	2.15		2
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							293	95	96	1	100	X	60	25	780	2.5		X
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							294	96	97	0.8	680	100	65	10	8700	2.7		2
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							295	97	98	1	140	30	60	15	2350	2.6		5
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							296	98	99	1	75	X	50	20	330	1.55		1
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							297	99	100	1	110	20	145	10	960	2.7		2
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							298	100	101	1	85	X	90	10	505	2.8		5
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							299	101	102	1	90	X	50	10	150	2.35		1
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							300	102	103	0.8	85	X	40	5	750	2.15		7
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							923 101	103	104	0.6	220	X	70	10	2250	1.9		1
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							102	104	105	1	100	20	95	5	215	2.3		5
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							103	105	106	1	95	20	55	X	430	2.28		4
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							104	106	107	1	130	X	900	45	220	3.65		5.2
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							105	107	108	1	580	25	250	5	7050	3.15		7
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							106	108	109	1	220	20	100	5	910	2.5		8
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							107	109	110	1	30	X	20	X	60	2.0		1
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							108	110	111	1	45	20	15	X	65	1.9		X
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							109	111	112	1	20	20	55	25	110	2.8		4
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							110	112	113	1	370	50	90	20	6250	3.45		6
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							111	113	114	1	400	60	60	10	2150	2.2		4
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							112	114	115	1	2950	240	410	50	2050	3.1		12
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							113	115	116	1	350	140	340	35	520	4.5		10
		Thinly bedded sandstone siltstone, distorted laminae. At 92.8-93.0m Thin plagioclase quartz, pyrite, sphalerite veins. Sphalerite is conspicuous. Very fine pyrite clots are associated (50s.m)							114	116	117	1	120		80					3

805036

GEORPEKO TASMANIA DRILL LOG

Prospect *BALFOUR* Hole no. *DDB 14* 20

m	ANGLE TO CORE AXIS		GEOLOGICAL DESCRIPTION	Alteration	MINERALISATION				Fracturing	Sample No.	From (m)	To (m)	Nec (m)	ASSAYS (LOB ANALYSIS CORRE TASMANIA)							
	S ₀	S ₁			PT	Quartz	Albite	Pyrite						SN	W	CU	PI	Zn	Fe	As	Ag
12			Coarse siliceous beds a loc. that with fine lamination within each bed. Irregular bedding contacts.							933154	157	158		25	25	30	96.20	90	200	65	1
13	20	35								155	158	159		40	25	35	165.45	115	3.1	50	X
14			Coarse siliceous finely laminated siliceous. Varies from fairly laminated to fairly massive and homogeneous. Mineral microfractures throughout containing pyrite. Spreading deformation in parts with pyrite remaining deformation TS 111b	Oxidation Silicification						156	159	160.65		91	19	65	310	1400	255	10	0.9
15										157	160.45	161		8	4	15	255	80	2.6	7	0.4
16										158	161	162		28	5	20	50	190	2.2	10	0.5
17										159	162	163		52	7	30	55	115	1.25	6	0.5
18										160	163	164		11	6	25	35	30	1.25	3	0.3
19										161	164	165		14	5	10	35	55	2.9	6	0.4
20										162	165	166		51	6	50	25	155	3.15	1	0.4
21										163	166	167		212	7	195	50	1000	6.35	17	0.7
22										164	167	168		64	8	35	50	45	1.35	11	0.5
23										165	168	169		193	X	25	60	215	15	100	0.9
24										166	169	170		25	X	40	65	65	1.65	11	0.5
25										167	170	171		392	4	220	110	215	2.65	1	1.7
26										168	171	172		281	6	110	30	155	2.65	95	0.4
27			Coarse sandstone. Homogeneous and massive.							169	172	173		60	5	40	30	65	2.1	160	0.3
28			Well silicified sandstone. Concentrations of pyrite, sphalerite at 173.5, 174.7, 175.2 TS 2477. Coarse fine grained detrital matrix. Siderite pellets. Variable texture.							170	173	174		276	23	100	55	2700	1.85	1400	0.7
29			Coarse sandstone. Irregular bedding. Spaced deformation. Silicified in part. Disseminated pyrite. Variable laminae thickness. Pyrite along microfractures.							171	174	175		38	X	50	55	1100	1.75	13	0.6
30			At 192.17. Barren quartz. 3m thick.							172	175	176		967	13	135	95	505	3.7	94	0.9
31			At 191.60. Quartz, pyrite, sphalerite. Minor alteration around.							173	176	177		50	4	25	45	240	2.0	4	0.2
32			var. 30° N.							174	177	178		39	8	25	35	265	2.95	4	0.2
33			200.99 Disseminated sphalerite in white sandy layer.							175	178	179		20	X	15	40	60	1.6	3	0.3
34										176	179	180		13	X	25	85	35	2.7	6	0.4
35										177	180	181		14	X	15	105	50	2.15	2	0.3
36										178	181	182		131	6	50	35	130	2.3	4	0.3
37										179	182	183		76	8	145	145	260	2.95	1000	2.1
38										180	181	184		14	X	10	40	40	1.8	19	0.1
39										181	184	185		44	X	45	30	240	2.65	8	0.2
40										182	185	186		96	5	80	20	85	3.9	6	0.2
41										183	186	187		29	X	20	35	30	2.5	5	0.2
42										184	187	188		22	X	15	25	30	2.4	9	0.1
43										185	188	189		13	X	2	20	35	2.6	2	0.1
44										186	189	190		23	5	20	90	130	2.4	6	0.1
45										187	190	191		18	X	15	55	65	2.8	2	0.1
46										188	191	192		101	5	60	30	130	3.4	22	0.4
47										189	192	193		16	3	10	30	65	2.5	2	0.4
48										190	193	194		14	X	10	40	55	2.5	1	0.5
49										191	194	195		11	A	25	30	55	2.1	0.3	0.2

805038

D.D. Core from Balfour, Tasmania

Five drill core specimens and prepared thin-sections were received for petrographic examination; they are described below.

KR 7866 DDB 14/96.3 m

This is a micaceous metaquartzite which is veined, mineralised and partly metasomatised; the original rock was a fine-grained argillaceous sandstone.

The host rock consists of small (average 0.1 - 0.2 mm) stressed, interlocking quartz grains, with interstitial muscovite and pale phlogopite; the rock shows strong preferred orientation and much of the quartz is recrystallized, but some relict clastic textures are recognisable. There are scattered heavy-mineral grains (zircon, sphene, tourmaline).

Small, irregular siderite patches and sphalerite grains occur sporadically throughout the rock, and there are crosscutting veins consisting of siderite with quartz, sphalerite and minor pyrite/pyrrhotite; these veins are flanked by broader zones of siderite, and the whole assemblage has extensively replaced the host rock minerals.

KR 7869 DDB 14/125.9 m

This is an indurated silty argillite, i.e. composed dominantly of recrystallized clays; it is weakly mineralised and carbonated.

The major mineral is fine matted illite-sericite, with scattered silt-sized angular quartz grains which are mostly fairly scarce, but some bands are more silty and quartzose. Isolated clastic muscovite flakes occur sporadically, and there are whitish leucoxene grains in the silty layers.

Small, diffuse, cloudy siderite patches have formed throughout, and are probably epigenetic, postdating induration; some are brown due to partial oxidation. Minor traces of sphalerite are also seen, along crosscutting microfractures, inferring an epigenetic relationship with the host.

KR 7874 DDB 14/140.75 m

This is a mineralised, metasomatised metaquartzite which originated as a fine sandstone or orthoquartzite.

The rock consists of small (0.1 mm) interlocking quartz grains, with relict clastic textures detectable in places, and fine interstitial sericite (hydromuscovite) as well as small dravite tourmaline crystals; there are numerous irregular, dendritic patches of siderite, often intergrown with

tourmaline, but probably of younger formation, with associated sulphides. These include sphalerite, pyrite/pyrrhotite (i.e. pyrrhotite altered to pyrite), and traces of chalcopyrite; all are clearly of epigenetic formation.

The evidence thus suggests that the original sediment was first sericitised and tourmalinised, then pervaded by siderite and sulphides. No cassiterite was detected with any certainty.

KR 7875 DDB 14/143 m

This mineralised, micaceous metaquartzite resembles KR 7866 and KR 7874; it carries traces of fine, poorly-defined cassiterite.

The rock is composed of small (0.1 mm) interlocking quartz grains with relict clastic textures, and interstitial fine flakes of pale phlogopite and of hydromuscovite, with scattered small dravite crystals. Irregular small patches of siderite and pyrite have formed throughout, and are replacive, as in the other rocks. There are evidently two generations of pyrite, as there are scattered euhedral crystals which have been fractured and veined by quartz, siderite and pyrite.

Cassiterite occurs as isolated, cloudy, poorly-defined grains up to 80 μ in size and is thought to be related to the earlier phase of sericite-tourmaline deposition.

KR 7879 DDB 14/203.4 m

This micaceous metaquartzite is an argillaceous siltstone which has undergone very mild metamorphism.

The rock consists of small splintery and angular grains of quartz and feldspar, and detrital muscovite, evenly distributed in a matrix of fine matted sericite flakes and with dispersed chlorite. There are detrital heavy-mineral grains and authigenic tourmaline. Layers of chlorite-rich silt occur, suggesting that the chlorite was essentially sedimentary, though now recrystallized. Small white opaque leucoxene grains are conspicuous. There are occasional crosscutting quartz veinlets carrying siderite and traces of sphalerite, but no cassiterite was detected.

The most severely altered section is represented by KR 7874 and KR 7875, but the style is not particularly conducive to deposition of good cassiterite, as it is thought that it is too low-grade (low energy). Sn may be present in forms which are difficult to recognise (e.g. "hydrocassiterite") in this style of mineralisation.

H.W. Fander, M. Sc.

2.6

LOG OF BALFOUR DDB 16

ROCKY CAPE E.L. 1/77

Proposed: P. Heithersay

Depth: 300m

Location: South of Specimen Hill

Collar coordinates: 9200N 10100E

Collar inclination: 45^o

Collar azimuth: 047^o

Purpose of the hole: To test the southern end of the "Peter's Ridge" line of Sn, W geochemical anomalies, together with an I.P. anomaly. Similarly outcropping wolframite lodes were to be tested at depth.

Final depth: 274.55m

Summary Results: The hole intersected a sequence of banded, finely laminated siltstone, followed by green chloritic shale. Veining intersected gave narrow subeconomic Sn, W values.

DRILLING DETAILS

Rig: Warman Scout

Driller: G. Steel

Commenced: 25/8/81

Completed: 25/9/81

Drilling Conditions: Wedging of the core due to drilling only slightly oblique to cleavage caused deflection and flattening of the drill hole. The final inclination of the hole was 18° with the final azimuth at 073° M. Recovery overall was about 95%.

ZEPHERUS TASMANIA DRILL LOG

Prospect BALFOUR Hole no. ZDB 16 143

DEPTH (m)		ANGLE TO CORE AXIS		GEOLOGICAL DESCRIPTION	ALTERATION	MINERALIZATION			Fracturing	Sample No	Ficn (m)	To (m)	Rec (m)	ASSAYS									
		S ₀	S ₁			py	hematite	chalc						Co	Ni	Cu	Pb	Zn	Fe	As	Hg	U	Mn
33				Poros white siltstone. Lamination evident.						933696	0	5	5	25	15	55	80	385	25	15	1	1	20
										933697	5	6	1	25	15	5	20	425	15	17	X	X	1
35				Very earthy black siltstone	Chertic?					698	6	7	1	40	35	210	115	1150	21	550	0.1	6	8
38		30°		laminated, banded grey to green porous siltstone. Green bands very chertic. Alteration?						699	7	8	1	45	X	25	20	1040	15	70	X	6	0.5
										700	2	9	0.8	15	10	245	120	300	115	80	0.8	X	0.5
										701	4	10	1	45	10	260	85	200	2.8	27	12	X	0.5
43				White puggy clay - altered shale	Sericite?	✓				702	10	11	1	15	10	185	65	30	300	55	2.3	X	1.0
				Green chlorite siliceous graded siltstone. Pyrite at base						703	11	12	1	55	15	130	135	76	445	56	0.5	X	1.5
47				Graying to white porous siltstone						704	12	13	1	15	20	15	40	365	2.30	67	X	X	1.0
49				Homogeneous grey green siltstone. Lamination evident in part. Minor sulphides.						705	13	14	1	55	15	170	60	415	1.70	18	13	X	1.0
										706	14	15	1	85	10	220	50	600	3.25	30	1.3	2	0.5
										707	15	16	1	45	20	25	15	705	3.20	22	10.1	X	1.5
										708	16	17	1	20	30	10	5	570	3.20	8	X	X	X
										709	17	18	1	45	10	5	5	30	2.15	16	X	X	1.5
										710	18	20	1										
35				Fine laminated banded grey to white siltstone. Disrupted bedding and some laminae. Pyrite in basal white sandy layers.		✓				711	20	22	1										
										712	22	24	1										
										713	24	26	2										
										714	26	28	2										
										715	28	30	2										
										716	30	32	2										
										717	32	34	2										
										718	34	36	2										
49		30°		Graded white to grey banded siltstone. Fine laminae within beds. Pyrite formed along cleavages. Concretion, scar and fill. Minor sandstone dikes. Siltstone generally etched and slumped.		✓				719	36	37	1	25	10	75	5	110	2.25	5	X	X	X
										720	37	38	1	95	15	65	5	145	2.15	240	X	X	X
										721	38	39	1	20	X	25	5	10	8.55	17	0.1	X	1.5
										722	39	40	1	20	X	25	X	65	3.55	4	X	X	X

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GEOPEKO TASHMANIA DRILL LOG

Prospect BALFOUR Hole no. DD4 b

Sheet 4 of 6
046

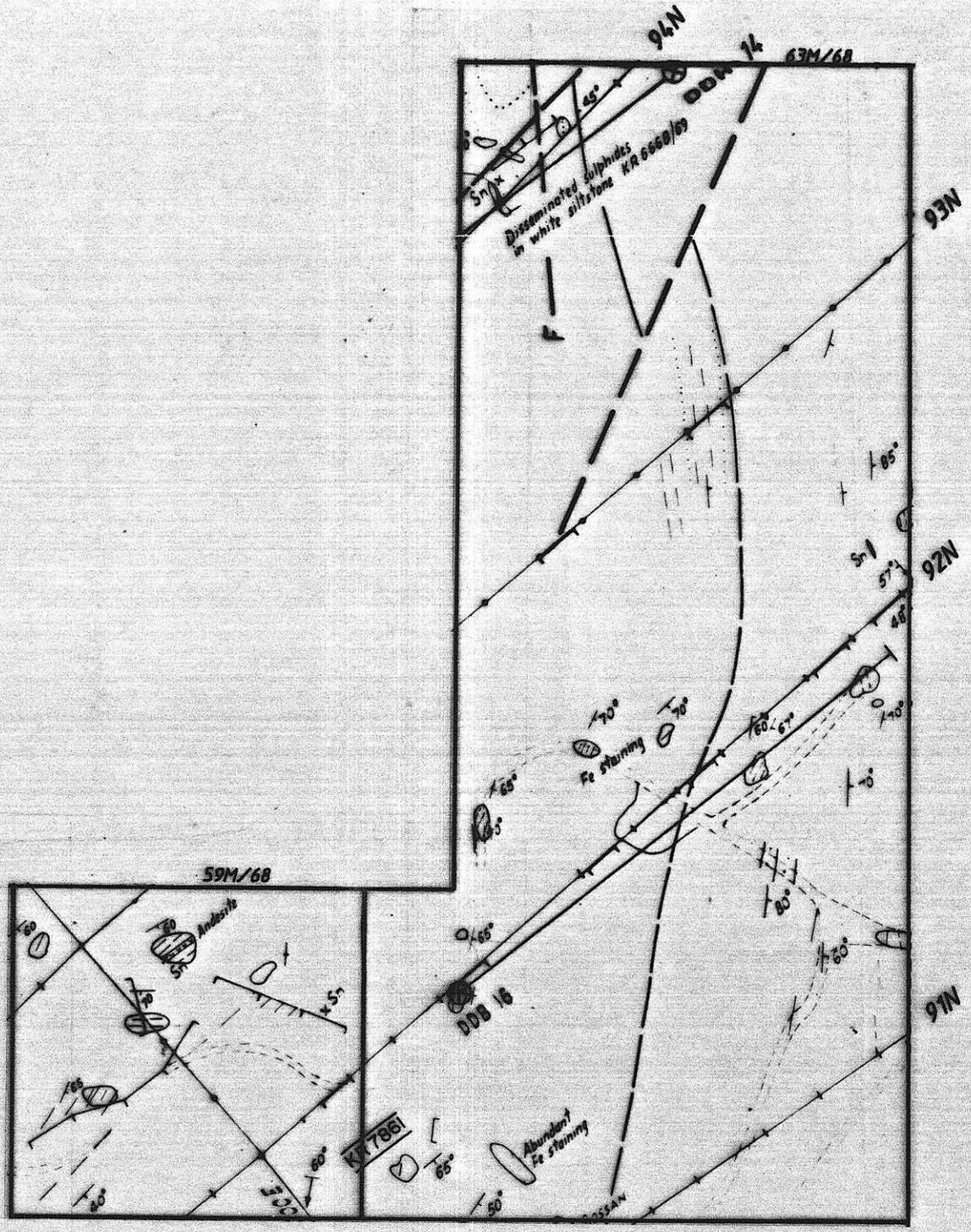
DEPTH (m)		ANGLE TO CORE AXIS	GEOLOGICAL DESCRIPTION	Alteration	MINERALISATION			Fracturing	Sample no	From (m)	To (m)	Rec (m)	ASSAYS									
from	to				0°	5°	or						combined	undefined	Si	Al	Ca	Fe	Zn	Pb	Cu	Ag
121.2	134.75		Graded sandstone/siltstone Banded dark grey to white. Sandstone clasts deformed by slippage along bedding planes. Disseminated pyrite, pyrite blebs. Minor semi pervasive fractures in part.					933 780	118	119	L	15	15	25	X	80	195	23	0.2	X	1	
								781	119	120	L	30	30	20	5	135	240	4	0.2	X	1	
								782	120	121	L	260	25	20	8	300	225	82	0.1	X	1	
								783	121	122	L	15	55	10	X	30	285	5	0.2	X	1	
								784	122	123	L	20	10	20	X	50	295	5	0.2	X	1	
								785	123	124	L	20	30	15	X	55	280	6	X	X	1	
								786	124	125	L	40	20	20	X	105	315	4	0.2	X	1	
								787	125	126	L	40	140	20	X	70	215	5	0.1	X	1	
								788	126	127.50	L	20	60	5	X	40	230	7	0.1	X	1	
								789	127.50	128	0.60	25	45	15	X	35	250	4	0.1	X	1	
								790	128	129	L	20	45	20	X	35	265	11	0.2	X	0	
								933 501	129	130	L	10	50	15	20	40	217	9	0.2	X	1	
								502	130	131	L	35	30	25	25	140	247	10	0.2	X	2	
								503	131	132	L	260	50	75	25	165	23	39	0.2	X	2	
								504	132	133	L	20	15	15	23	75	26	6	0.2	X	1	
								505	133	134	L	40	50	30	40	120	29	32	0.2	X	1	
134.75			Gradual change to more silified finely banded siltstone - very irregularly distributed - Minor veinlets < 3mm. At 139.9m Disjunct quartz veinlets. Pyrite replacing sediment over 200 zone. Specks of calcite evident. Laminae offset by cleavage.					506	134	135	L	55	45	X	25	90	215	6	0.1	X	15	
								507	135	136	L	20	55	35	30	70	21	100	0.2	X	16	
								508	136	137	L	110	20	95	65	120	2.2	250	0.2	X	16	
								509	137	138	L	35	10	30	30	80	195	4	0.1	X	24	
								510	138	139	L	20	20	35	50	65	2.2	3	0.1	X	15	
		0°						511	139	140	L	210	150	430	55	95	375	1000	11	12	26	
								512	140	141	L	85	50	60	30	500	175	15	0.2	X	X	
								513	141	142	L	55	20	65	85	148	200	11	0.5	X	15	
								514	142	143	L	90	50	20	55	375	285	8	0.5	X	15	
								515	143	145	1.4	200	270	165	45	460	235	560	0.5	10	26	
								516	145	146	L	130	310	130	25	75	225	620	0.1	8	10	
								517	146	147	L	140	35	20	35	450	475	6500	0.6	24	X	
								518	147	148	0.7	510	55	160	35	375	245	130	0.7	16	0.5	
								519	148	149.3	L	140	25	160	25	75	175	23	0.7	4	15	
								520	149.3	150	0	80	15	55	25	760	155	4	0.2	X	16	
								521	150	151.15	0.65	430	130	315	125	670	34	2700	0.7	14	31	
								522	151.15	152	0.85	840	150	225	35	525	175	2500	0.6	10	20	
		0°	At 151.75 2mm cement 0.5cm thick TS1600 bed dipping. Quartz, calcite, pyrite, consistent.					523	152	153	L	40	15	30	25	60	200	300	0.3	4	10	
								524	153	154	L	80	10	25	25	160	245	760	0.3	X	15	
								525	154	155	L	260	15	85	25	315	25	23	0.2	X	15	
								526	155	156	L	100	10	10	10	10	10	10	10	10	10	

805047

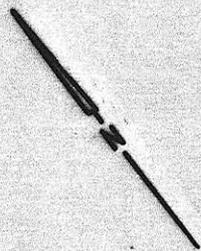
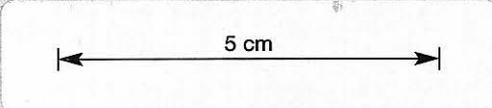
GEOPEKO TASMANIA DRILL LOG Prospect Balfour Hole no. 0203

805048

DEPTH (m)		CORRECTION	ANGLE TO CORE AXIS		GEOLOGICAL DESCRIPTION	Alteration	MINERALISATION			Fracturing	Sample No	From (m)	To (m)	Rec (m)	ASSAYS									
From	To		LOG	S ₀			S ₁	Pt	Cu						Fe	Zn	Sn	N	Cu	Pb	Zn	Fe	Ag	Au
156.6	174.35				Grey green to grey massive to slightly laminated siltstone Disseminated pyrite and pyrrhotite throughout ~3% horizons ~ 0.5cm thickness						911	157	158	1	200	20	140	95	615	155	16	42	0	
											524	158	159	L	660	45	240	40	245	73	05	10	10	
											530	159	160	L	1550	2250	1320	145	150	78	51	102	10	
											531	160	161	L	55	X	80	20	50	26	X	2	X	
					Vein 159-161 4cm thick. Quartz, pyrite, chalcopyrite, arsenic, wolframite sphaerulic siderite ~90° to LCA.						532	161	162	L	85	20	50	25	25	25	01	6	10	
					Zone between 159-159.7 very silicified with disseminated pyrite, chalcopyrite along bedding planes	Silicification					533	162	163	L	65	X	65	20	65	26	X	2	0	
					163.35 Quartz, pyrite, arsenopyrite vein 10cm thick ~ 30° LCA						534	163	164	L	110	X	60	25	80	308	02	X	X	
											535	164	165	L	90	X	100	5	45	185	1	03	X	
											536	165	166	L	260	X	170	10	40	23	1	02	X	
											537	166	167	L	25	X	15	5	100	435	11	01	X	
											538	167	168	L	15	X	25	5	110	535	11	X	X	
											539	168	169	L	15	X	20	5	50	44	12	01	X	
											540	169	170	L	35	X	30	20	25	385	4	01	X	
											541	170	171	L	20	X	25	20	120	44	02	03	X	
											542	171	172	L	40	X	15	10	120	52	2	02	X	
											543	172	173	L	9	X	35	20	100	52	8	02	X	
											544	173	174	L	15	X	60	5	75	36	100	02	10	
											545	174	175	L	75	X	100	5	200	35	1000	02	6	
											546	175	176	L	25	X	20	X	95	465	160	02	X	
											547	176	177	L	15	X	20	X	115	465	9	02	X	
											548	177	178	L	510	20	185	5	185	545	1000	01	10	
											549	178	179	L	220	10	105	10	805	425	650	03	2	
											550	179	180	L	15	X	10	55	65	360	16	04	X	
											551	180	181	L	10	X	10	15	60	36	9	04	2	
											552	181	182	L	20	X	10	15	100	655	5	03	2	
											553	182	183	L	25	X	60	15	240	445	12	03	X	
											554	183	184	L	15	X	10	5	25	34	11	03	X	
											555	184	185	L	260	10	45	10	55	385	130	41	X	
											556	185	186	L	70	10	60	X	60	325	91	03	10	
											557	186	187	L	150	X	20	5	270	325	11	04	X	
											558	187	188	L	10	X	10	15	70	36	9	03	X	
					188-189 Vein 4cm thick. Quartz, arsenic, wolframite pyrite, carbonate. 30° LCA Pipping east. Minor unassociated silicification						559	188	189	L	1400	0-561	245	5	25	64	150	05	6	
											560	189	190	L	15	X	10	X	75	40	26	02	X	
											561	190	191	L	9	X	20	5	80	42	15	03	X	
											562	191	192	L	50	X	25	5	150	40	180	03	X	
											563	192	193	L	65	X	25	20	20	40	40	04	X	
					189-191 Vein 2cm thick. Quartz, pyrite, carbonate, arsenopyrite						564	193	194	L	8	X	20	15	90	345	15	X	X	
											565	194	195	L	1	X	10	15	100	400	10	04	X	



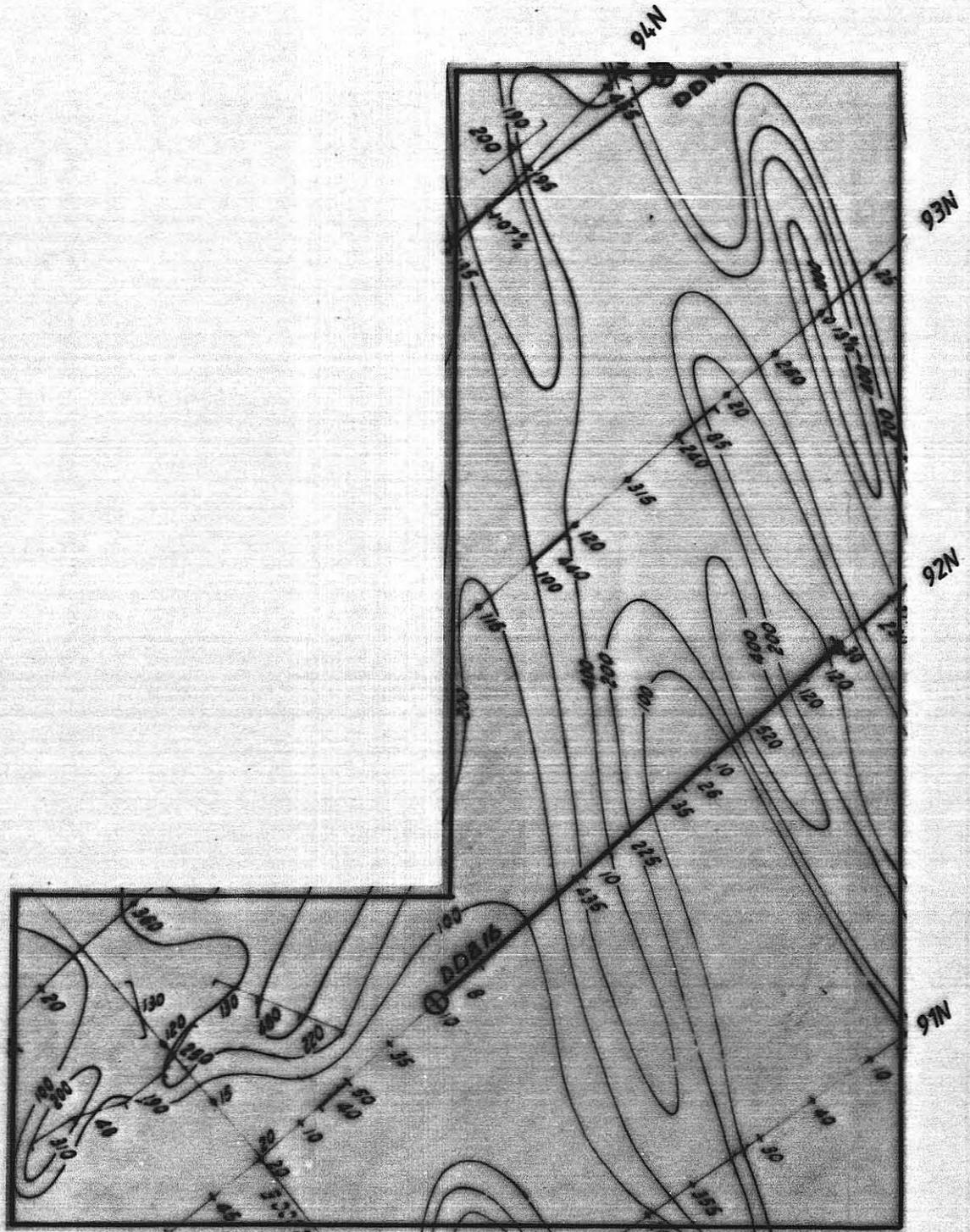
BASE LINE 1000 E



CRA EXPLORATION PTY LIMITED	
BALFOUR AREA HOLLOWAY - SOUTH OPTION GEOLOGY PLAN	
REF	SK55-3
SCALE	1 : 2500
AUTHOR	T.W.D
DATE	FEB '02
DRAWN	R.T
REPORT	
	PLAN No TASH 615

5 cm

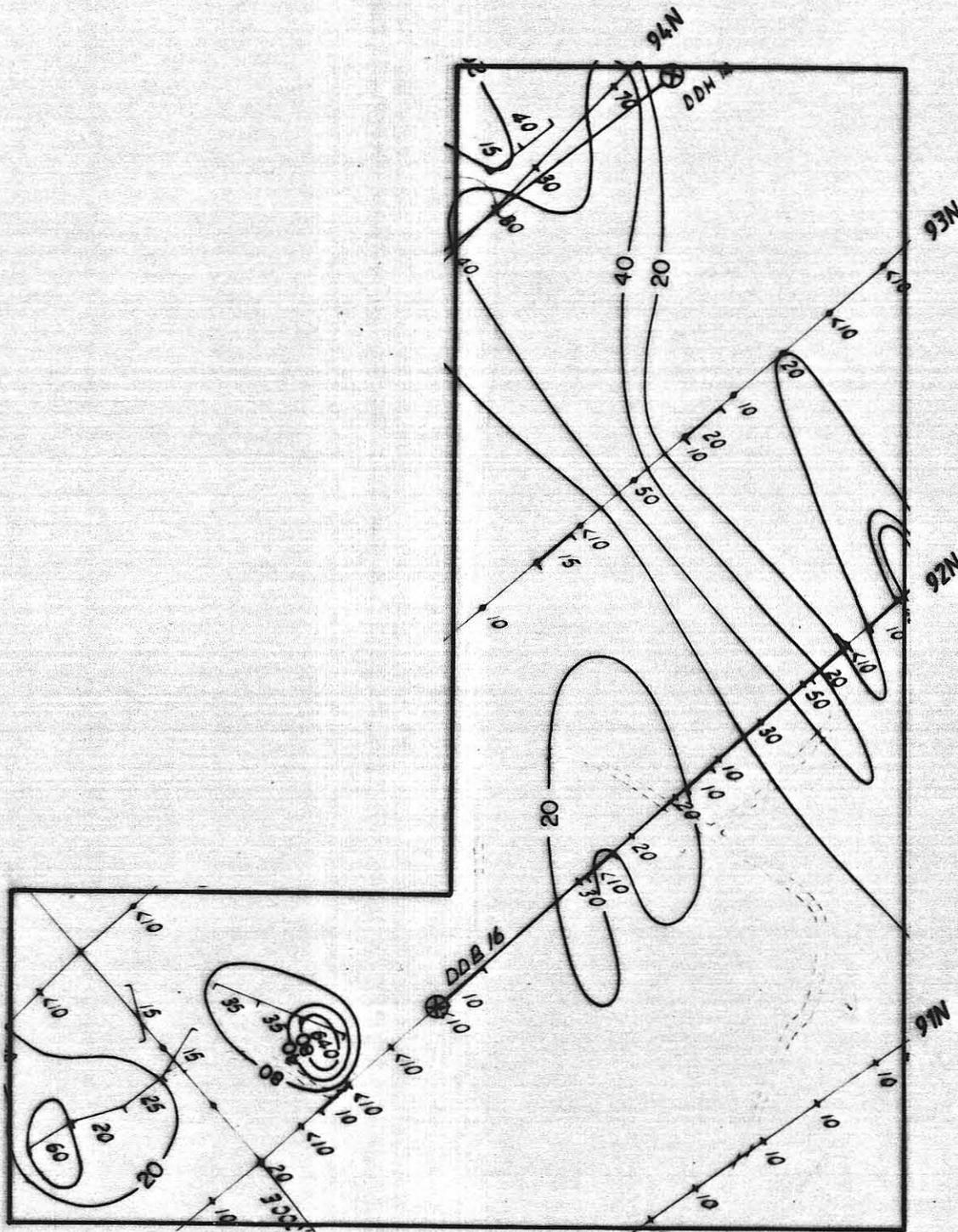
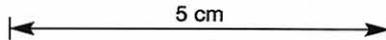
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BASE LINE 1000E

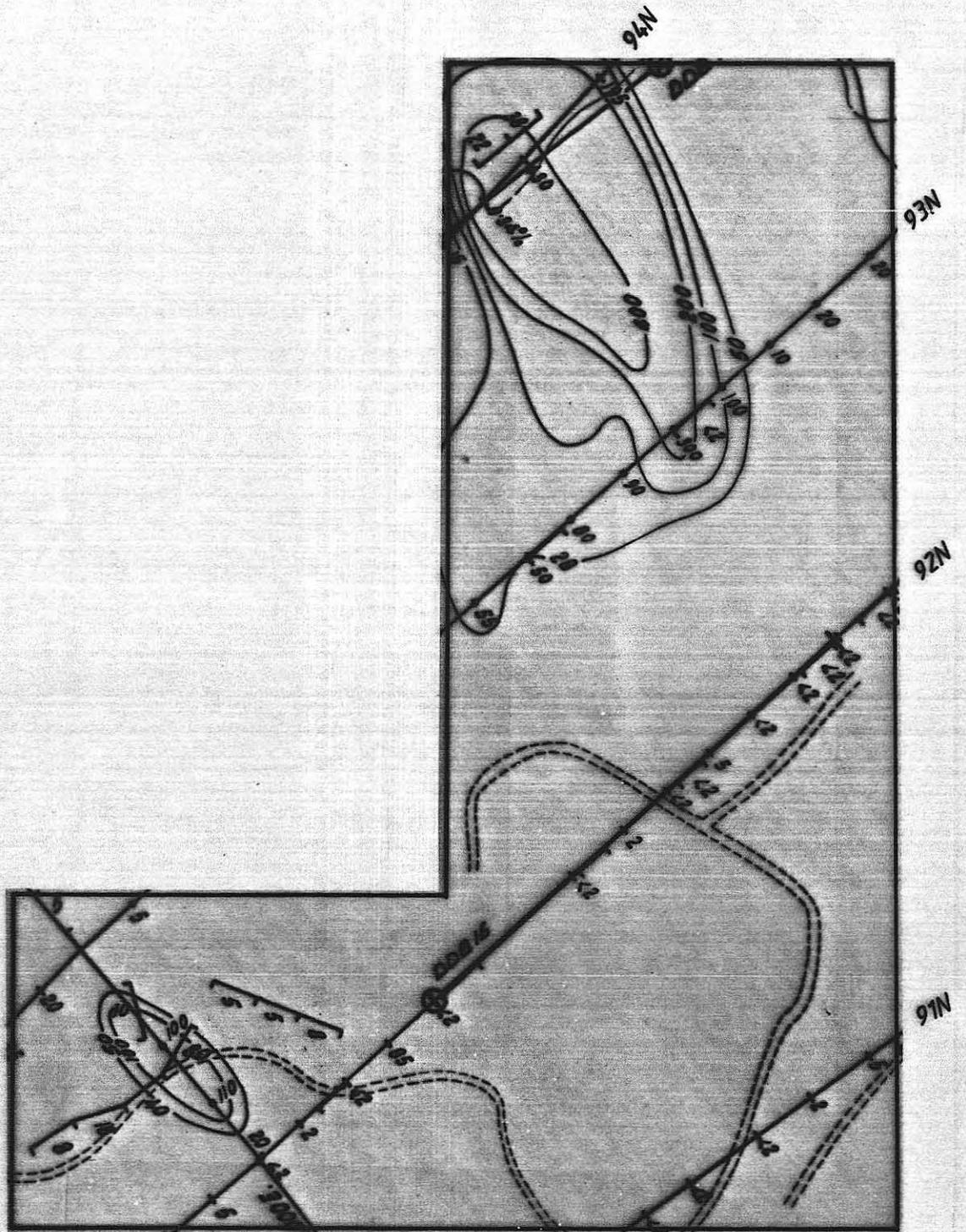


CRA EXPLORATION PTY LIMITED	
BALFOUR AREA HOLLOWAY - SOUTH OPTION Sn GEOCHEMISTRY	
REF. SK55-3	
SCALE 1 : 2500	DRAWN R.T
AUTHOR T.M.D	REPORT
DATE FEB '82	PLAN No TASH 621



CRA EXPLORATION PTY LIMITED	
BALFOUR AREA HOLLOWAY - SOUTH OPTION W GEOCHEMISTRY	
REF. SK55-3	
SCALE 1 : 2500	DRAWN R.T
AUTHOR T.W.D	REPORT
DATE FEB '82	PLAN No TASH 616

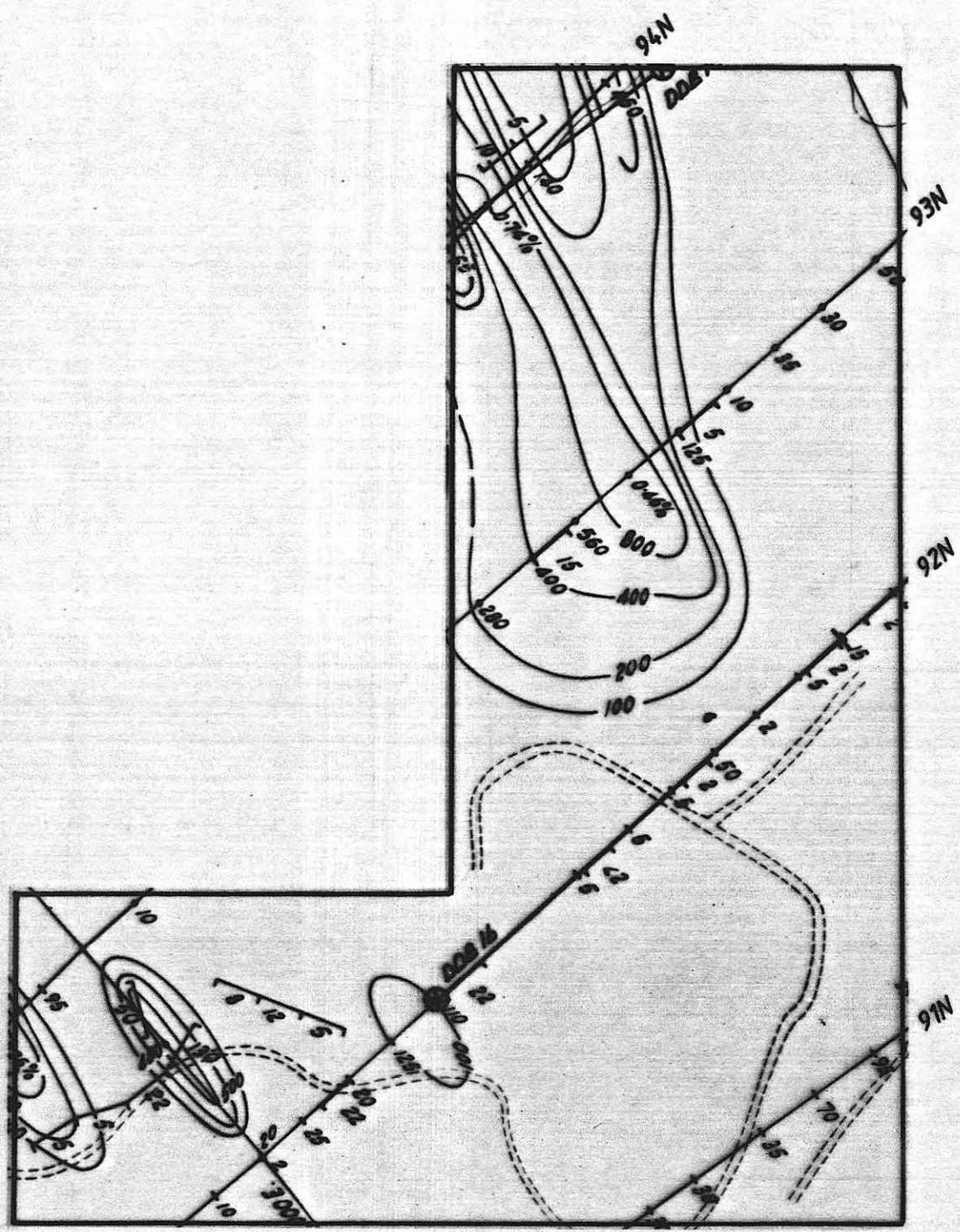
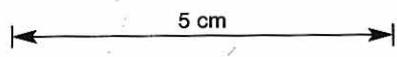
5 cm



BASE LINE 1000E



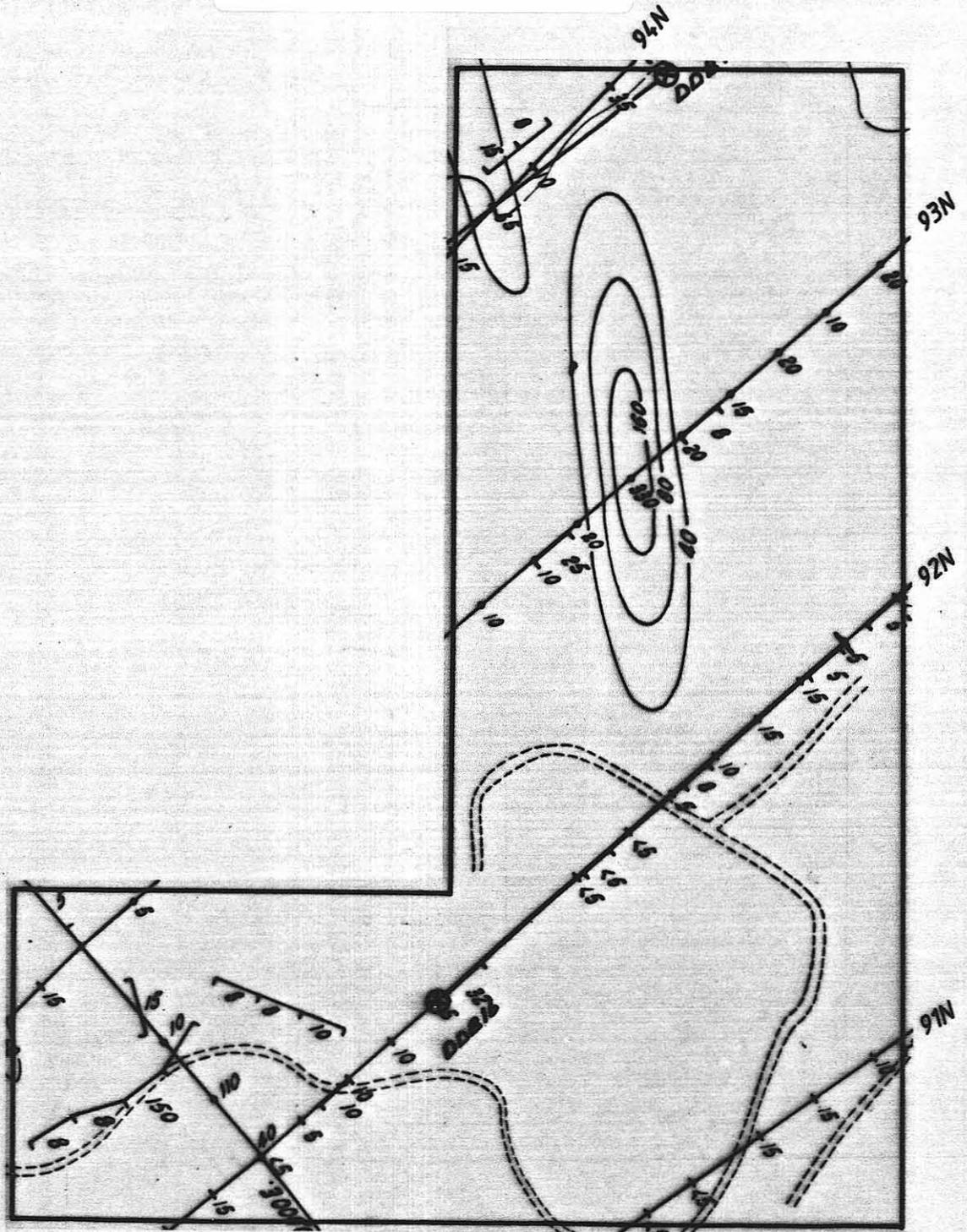
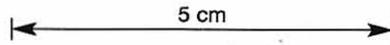
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BALFOUR AREA HOLLOWAY - SOUTH OPTION Cu GEOCHEMISTRY	
REF.	SK35-3
SCALE	1 : 2500
AUTHOR	T.W.D
DATE	FEB '82
DRAWN	R.T
REPORT	
PLAN No	TASH 620



BASE LINE 1000E



CRA EXPLORATION PTY LIMITED	
BALFOUR AREA HOLLOWAY - SOUTH OPTION Zn GEOCHEMISTRY	
REF. SK35-3	
SCALE 1 : 2500	DRAWN RT
AUTHOR T.W.D	REPORT
DATE FEB '82	PLAN No TASH619



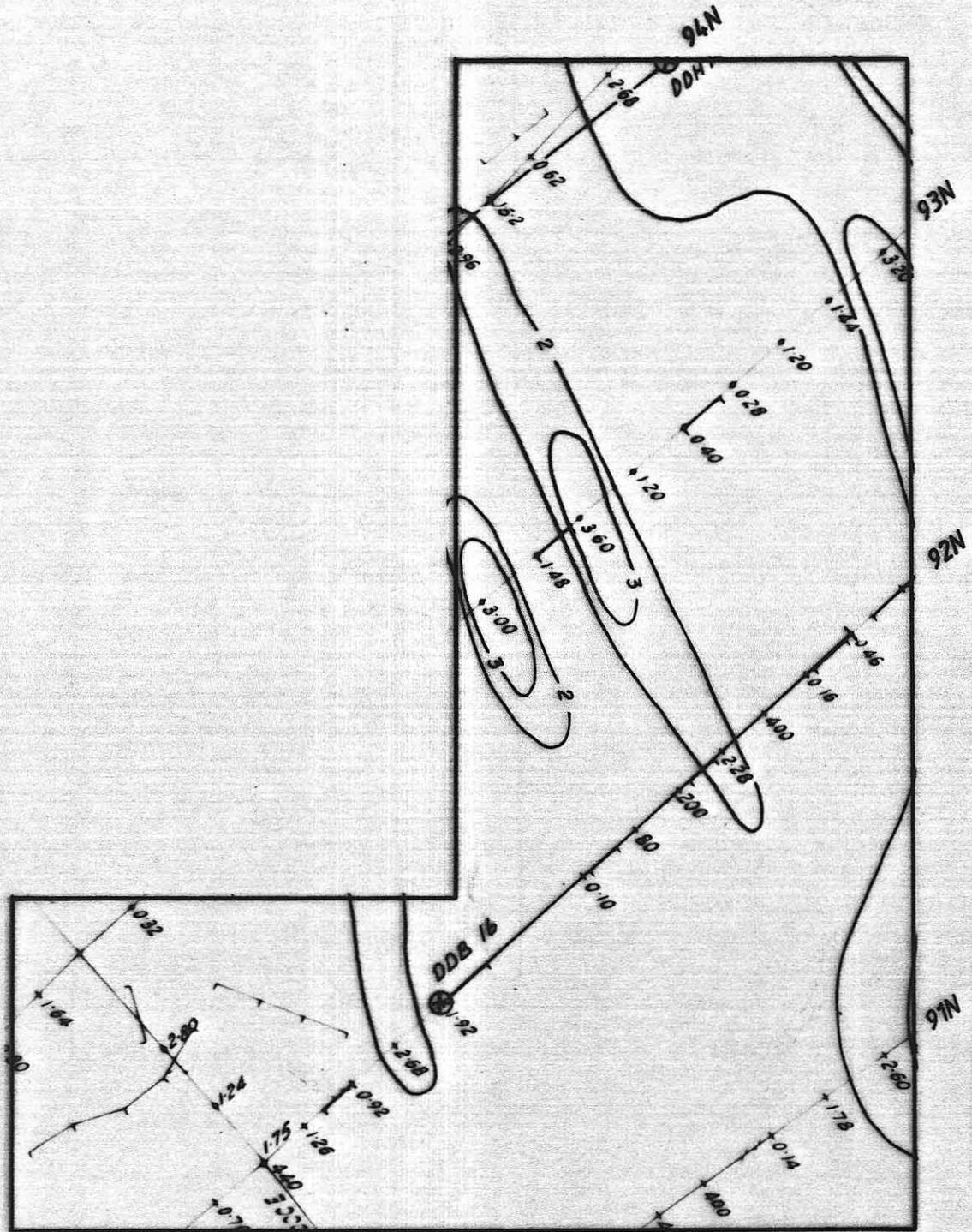
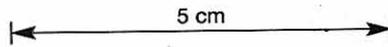
BASE LINE 1000E



CRA EXPLORATION PTY LIMITED

**BALFOUR AREA
HOLLOWAY - SOUTH OPTION
Pb GEOCHEMISTRY**

REF.	SK55-3	DRAWN	R.T
SCALE	1 : 2500	AUTHOR	T.W.D
AUTHOR	T.W.D	REPORT	
DATE	FEB '82	PLAN No	TASH 618



CRA EXPLORATION PTY LIMITED

**BALFOUR AREA
HOLLOWAY - SOUTH OPTION
Fe GEOCHEMISTRY**

REF.	SK55-3	
SCALE	1 : 2500	DRAWN R.T
AUTHOR	T.W.D	REPORT
DATE	FEB '02	PLAN No TASH 617

10,250E

10,300E

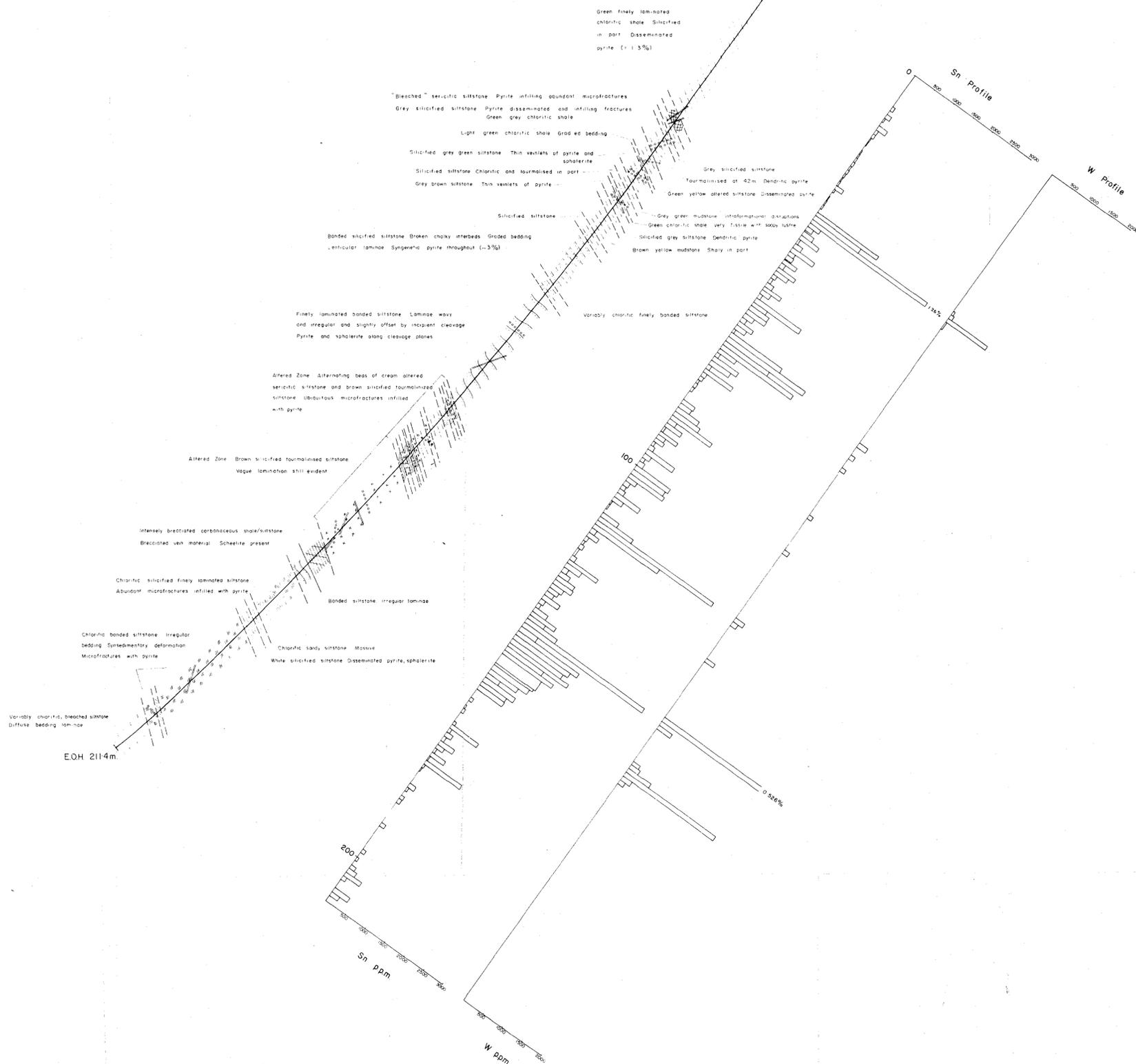
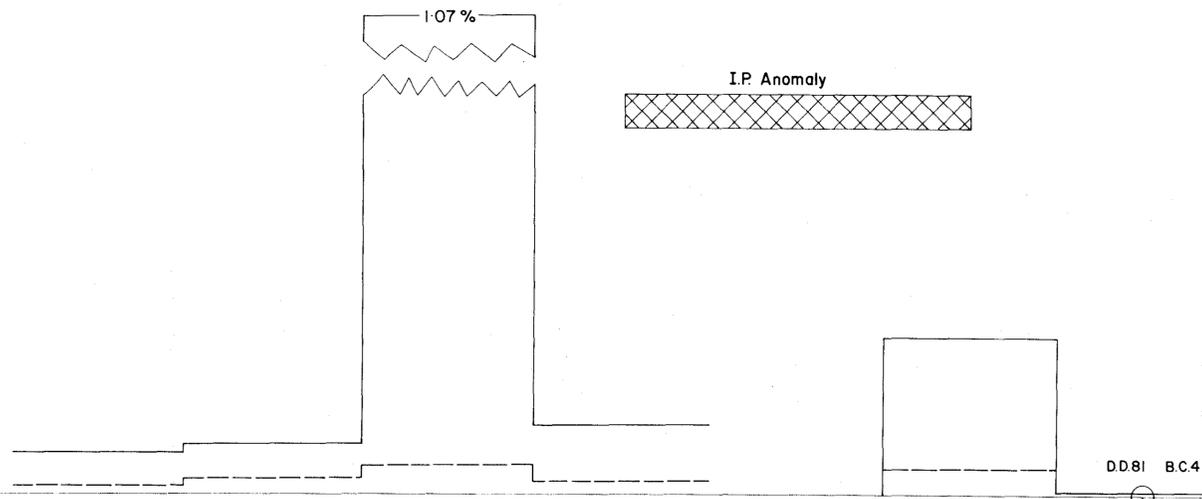
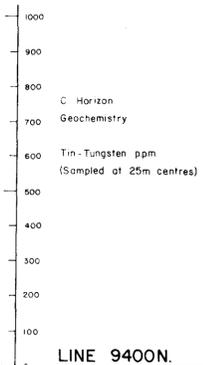
10,350E

10,400E

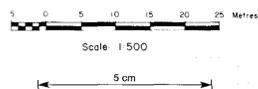
10,450E

LEGEND

— Tin
- - - Tungsten



805060



LEGEND

— Vein >1cm thickness, showing orientation.
 - - - Vein >1cm thickness, indeterminate orientation.
 - - - Geological boundary, sharp; gradational.

Balfour DD814 (DD81-BC4)

Co-ordinates 9,387N, 10,425E

Azimuth 227° Mag

Declination 55°

Commenced 12-6-'81

Completed 27-7-'81

Depth 211.4m

CRA EXPLORATION PTY. LIMITED

CRAE/GEOPEKO JV. BALFOUR GRID

PROFILE OF DD814 (D.D.81-BC4)

GEOLOGY, GEOCHEMISTRY

053

Geologist: P.S.H.

Scale: 1:500

Report No: 13

Drawn: T.G.D.S.

Date: Dec. 1981

TASH 584

10,100E

10,150E

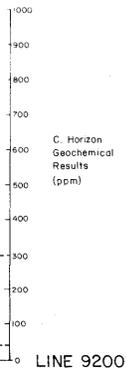
10,200E

10,250E

10,300E

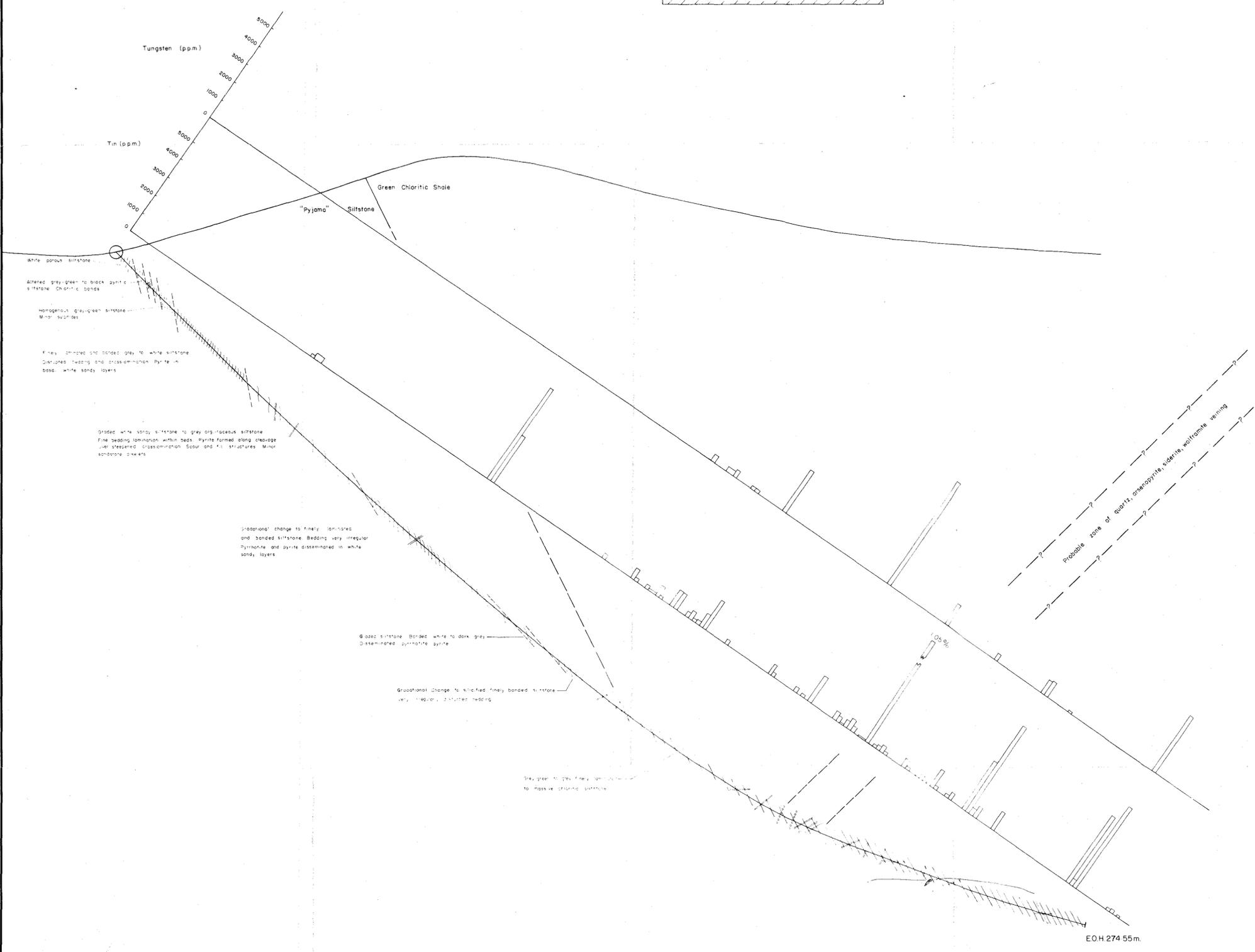
10,350E

1:500
1:1000

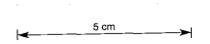
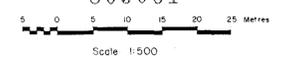


LINE 9200N.

CHARGEABLE ZONE



805061



82-1730R

CRA EXPLORATION PTY. LIMITED

CRAE/GEOPEKO J.V. BALFOUR GRID

PROFILE OF (DD 81 BC 6)
GEOLOGY, GEOCHEMISTRY 060

LEGEND

— Vein >1cm thickness, showing orientation.

----- Vein >1cm thickness, indeterminate orientation.

--- Geological boundary, sharp; gradational.

Balfour DDB16

Co-ordinates 9,200N 10,100E

Azimuth 047° Mag

Declination 45°

Commenced 25-8-'81

Completed 25-9-'81

Depth 274.55m

Geologist: P.S.H. Scale: 1:500 Report No: 15

Drawn: T.G.D.S. Date: Dec. 1981 TASH 685