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Received 28 JAN 1982
Answered
DEPT. OF MINES
REF. No. 271/82

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

SUMMARY OF WORK COMPLETED, IN PROGRESS AND PROPOSED FOR EL 5/63

VOL 1/9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheets : Burnie K55-03
Queenstown K55-05

COMMODITY/IES: Sn, W, Ag, Pb, Zn, Cu, Au

TEXT PAGES NO: 8

PLAN NOS: TAS-2-2311

TABLE NOS: Table 1

APPENDICES:

AUTHOR/S: G F Pigott

DATE: 19 January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

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COMSTAFF PROPRIETARY LIMITED

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

SUMMARY OF WORK COMPLETED, IN PROGRESS AND PROPOSED FOR EL 5/63

INTRODUCTION

In support of our application for renewal of Exploration Licence No 5/63 set out below is a summary of work undertaken and currently in progress for the six monthly period ending 30 December 1981. Details and results of specific surveys carried out in the various sections of the tenement are enclosed as separate volumes.

A summary of proposed exploration for 1982 along with the estimated expenditure is included, with each section of the EL described separately.

Plans showing work completed, in progress and proposed were submitted along with our application for renewal of the tenement, on 23 November 1981.

1. Work completed or in Progress

1.1. Section 1 Arthur River

The main drainage systems north east from Mount Bischoff have been prospected by geological mapping, sediment and heavy concentrate sampling. The Mount Bischoff Series - Crimson Creek contact zone has been traced into Deep Gully Creek, where porphyry dykes have also been mapped. Further mapping and prospecting continues in the Mount Bischoff Series to ascertain if dolomitic units exist, and to check for Sn mineralisation.

Details of work carried out to date in this area are enclosed in a report by C M Jones: Six monthly report on the Arthur River Area EL 5/63 Part 1.

1.2. Section 2 Ramsay

An evaluation of all data collected from work carried out around the old South Bischoff Tin Mine was completed. An integrated programme of geological mapping, ground magnetic surveying, soil and sediment sampling had been carried out over the established Grid CSB. Detailed investigations of the mine workings included geological mapping, channel sampling and mapping. Significant tin values have been found in a greisen vein system revealed in four adits and an old pit.

Details of the work carried out on this prospect are enclosed in a report by N P Green: Preliminary Report on the South Bischoff Mine area (CSB), EL 5/63 Part 2.

An evaluation of all geological data, geochemical results and geophysical responses over grid CAL was carried out. Coincident magnetic, electromagnetic and geochemical anomalies are associated with metasomatised calc silicate pelitic units within the Crimson Creek Formation. Diamond drilling is proposed to test the anomalies for economic Sn and WO_3 mineralisation.

Details of work carried out in this area are enclosed in a report by G F Pigott: Six Monthly Report on Grid CAL 5/63 Part 2.

Two diamond drill holes were completed on the Mount Ramsay (CAF) grid, a total of 384.3m. The core was logged, sampled and measured for magnetic susceptibility. Drill hole CAF 1 intersected banded skarn mineral assemblages from 109.15 to 282.13m, but CAF 2 passed into the Meredith Adamellite and did not intersect the skarn. No ore grade mineralisation was seen, but the skarn is distinctly anomalous in Sn, Cu, Fe, S, F, Bi and Au.

Grid CAF is being extended 600m to the south utilising lines at 60m spacing to follow the skarn zone along strike. Preparations are underway to diamond drill the main WO_3 anomaly in the skarn and to test a strong EM anomaly east of the main skarn outcrop. This EM anomaly is being checked with more refined equipment in order to estimate the dip and shape.

Pulse EM surveys are currently in progress on the southern grid extensions. Details of the work carried out in this area are enclosed in a report by G F Pigott: Six Monthly Report on Grid CAF EL 5/63 Part 1.

Grid CAM is being extended northwards to follow up the discovery of Success Creek Formation rock types in the area. Grid CAG has been auger sampled and geologically mapped. Ground magnetic surveys are underway on grids CAI and CAG and will be extended to cover the newly gridded portions of CAF and CAM.

Ground electromagnetic surveys are scheduled to be completed on grids CAI, CAM and CAG and checks run on CAE and CAL.

Details of this work, now currently in progress, are described in a report by N P Green: Six Monthly Report on Grids CAI and CAG EL 5/63 Part 2.

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1.3. Section 3 Mount Block - Sock Creek

An appraisal of the various exploration activities carried out in this section of the tenement was carried out. As a results recommendations were made as to which portions should be relinquished or retained. It is proposed to reduce the size of this section by 14.4 square kilometres, the area is shown on the attached plan (TAS-2-2311).

An integrated programme of geological mapping and sediment sampling is currently underway over the remaining (southern) part of the tenement.

Details of this work, currently in progress, are described in the enclosed report by B A Anderson: Six Monthly Report on the Mount Block - Sock Creek Area EL 5/63 Part 3.

1.4. Section 4 Chester - Pinnacles

Two diamond drill holes were completed on the East Chester (EAB) grid, a total of 525m. The core was logged and sampled. Drill hole EAB 1 was collared in porphyritic rhyolitic lavas and intersected a sequence of rhyolitic passing down into dacitic tuffs then mixed tuffites and shales, ending in andesitic lavas and minor tuffs. Distinctly anomalous values in Zn and Pb were recorded from pyritic, lithic, ash-lapilli dacitic tuff interbedded with carbonaceous shale, from sections of the tuffites and from pyritic lithic-crystal lapilli-ash andesitic tuff near the bottom of the hole. Drill hole EAB 2 was collared in mixed tuffites and carbonaceous shale with disseminated galena and sphalerite and passed down through porphyritic rhyodacitic lava into crystal dacitic tuff, ending in andesitic lavas and tuffs. As in EAB 1, distinctly anomalous value were recorded from the interbedded tuffites and shales, and from the dacitic tuff overlying the andesite.

Details of this work carried out over the past six months are enclosed in a report by G F Pigott: Six Monthly Report on the Chester - Pinnacles Area EL 5/63 Part 4.

1.5. Section 5 Huskisson

No work was carried out in this sector of the tenement.

1.6. Section 6 East Renison

The current phase of diamond drilling was completed at the Fenton - GAR Prospect with the drilling of RBE 32. Nine diamond drill holes, a total of 3399.4m, were completed during the current period. Results are summarised on the accompanying table.

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The drilling programme has been aimed at evaluating the Fenton'sVein Complex (Ag, Pb and Zn). A detailed examination of all data is currently underway. The in-ground geological reserves will be calculated so that future drilling can be planned if warranted.

Diamond drilling has also tested the quartz-carbonate-pyrrhotite-chalcopyrite veins associated with the cross cuttting talc-carbonate-serpentinite unit, and replacement sulphide mineralisation associated with sedimentary carbonate units: the mineralisation in these two targets includes Sn.

Auger sampling and ground magnetic surveys were completed over grid GAT which lies between Fentons Prospect and the western boundary of the tenement. A series of coincident geochemical and geophysical anomalies have been outlined which require testing by diamond drilling.

Diamond drilling has been carried out on ML 62M/75 which lies close to the southern boundary of the tenement. Cassiterite-sulphide mineralisation in hydrothermally altered conglomerate and gabbro with associated geophysical anomalies appears to extend northwards into EL 5/63.

Full details are enclosed in the accompanying report by S R Yardley: Stage Report on the Renison East Area EL 5/63 Part 6.

2. Proposed Exploration Programme 1982

2.1. Section 1 Arthur River

Target Sn

2.1.1. Continuation of the heavy concentrate and sediment sampling programme.

2.1.2. Geological mapping of the creeks, logging tracks and access roads.

2.1.3. Establishment of a grid over the Bischoff Series - Crimson Creek Formation contact zone north east of Mount Bischoff. This grid will be auger sampled, geologically mapped and geophysically surveyed.

2.1.4. Carry out an airborne aeromagnetic survey along the 'Magnet-Bischoff line' and extend it to the north east. This programme is designed to prospect for pyrrhotite replacement ore bodies similar to the mineralisation in the dolomitic beds at Bischoff.

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2.2. Section 2 Ramsay

Target Sn W (Cu Au)

2.2.1. Diamond Drilling of the Mount Ramsay skarn.

2.2.2. Diamond drilling of geophysical anomalies at CAL and CAF.

2.2.3. Establishment of grid extensions at South Bischoff concentrating on the granite-sediment contact zone. Auger sample and geologically map the lines.

2.2.4. Carry out stream sediment sampling and geological mapping in the south western and western section of the tenement.

2.2.5. Establishment of wide spaced grid lines over the Ramsay Group - Crimson Creek and Crimson Creek - Meredith Granite contacts. These lines will be auger sampled, geologically mapped and geophysically surveyed.

2.2.6. Geologically map the CAM grid extensions, auger sample and carry out ground magnetic and EM surveys.

2.2.7. Determine the prospectivity of the WOW/CAB area and diamond drill indicated targets.

2.2.8. Carry out an airborne magnetic survey over the southern portion of the tenement from the Meredith Granite in the west to the Dundas Group sediments in the east. This would cover the Ramsay Group and Crimson Creek Formation units and assist in the identification of prospective targets.

2.3. Section 3 Mount Block - Sock Creek

Target Pb, Zn, Ag, Cu and Au

2.3.1. Continuation of the sediment sampling and geological mapping programme.

2.3.2. Establish follow up grid lines where warranted. Geologically map and soil sample those lines and carry out IP surveys.

2.4. Section 4 Chester - Pinnacles

Target Pb, Zn, Ag, Cu and Au

2.4.1. Carry out a programme of sediment sampling and geological mapping over the eastern sector of the area.

...6

2.4.2. Establishment of grid extensions and closer spaced lines on grid EAB. These lines will be auger sampled and geologically mapped, while IP surveys will also be carried out.

2.4.3. Compilation of all geological geochemical and geophysical data from the tenement.

2.4.4. Establishment of follow up grid lines where warranted.

2.4.5. Diamond drill indicated targets.

2.5. Section 5 Huskisson

Target Sn

2.5.1. Evaluate all available data pertaining to the prospectivity of the area.

2.5.2. Carry out geological mapping of critical sections.

2.5.3. Report compilation and decision on future work (or relinquishment).

2.6. Section 6 East Renison

Target Sn, Pb, Zn and Ag

2.6.1. Diamond drill for replacement Sn-sulphide mineralisation in carbonate units and open structures.

2.6.2. Evaluation in-fill and/or deeper diamond drilling of the Fenton's Vein Complex.

2.6.3. Establishment of closer spaced infilling grid lines along the western sectors of grids GAT and GAP to better define the geophysical and geochemical anomalies in the area.

2.6.4. Diamond drill the indicated drill targets on grids GAT and GAP.

2.6.5. Re-evaluate the Input EM and aeromagnetics north of the Pieman River.

2.6.6. Carry out geological mapping and rock sampling, following the Fenton's Vein Complex, north of the Pieman River.

3. Proposed Budget January - December 1982

Arthur River	Section 1	$ 107 592
Ramsay	Section 2	379 053

...7

Mt Block - Sock Creek	Section 3	67 834
Chester - Pinnacles	Section 4	224 558
Huskisson	Section 5	7 149
East Renison	Section 6	626 551
TOTAL		$1 412 737
Contingency drilling budget		300 000
TOTAL		$1 712 737

for G F Pigott
Senior Geologist

Approved by

R J Kernick
Exploration Manager

GFP:AML

19 January 1982

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1. Summary of Work Completed in Progress and Proposed for EL 5/63 by G F Pigott

2. Six Monthly Report on the Arthur River Area EL 5/63 Part 1 by C M Jones

3. Preliminary Report on the South Bischoff Mine Area EL 5/63 Part 2 by N P Green

4. Six Monthly Report on Grid CAL EL 5/63 Part 2 by G F Pigott

5. Six Monthly Report on Grid CAF EL 5/63 Part 2 by G F Pigott

6. Six Monthly Report on Grids CAI and CAG EL 5/63 Part 2 by N P Green

7. Six Monthly Report on the Mt Block - Sock Creek Area EL 5/63 Part 3 by B E Anderson

8. Six Monthly Report on the Chester - Pinnacles Area EL 5/63 Part 4 by G F Pigott

9. Stage Report on the Renison East Area EL 5/63 Part 6 by S R Yardley

TABLE 1

EL 5/63 SECTION 6

1/7/81 - 31/12/81 SUMMARY OF DRILLING COMPLETED

Hole	Drilled Interval	dw	tw	% Sn	% Cu	% Pb	% Zn	ppm Ag
RBE 22	382.4 -383.9	0.5		0.08	0.5	0.01	0.04	22
	386.0 -388.0	2.0		0.06	0.03	0.25	1.18	17.5
	486.9 -487.85	0.95	0.7	0.22	0.23	0.05	0.33	10.9
RBE 23	397.0 -402.1	5.1			0.03	0.24	0.75	6.5
	442.1 -444.5	2.4	1.4	0.22	0.05	0.74	1.15	24.5
RBE 24	326.0 -326.50	0.5	0.38	0.04	0.01	0.55	3.30	9.5
	467.4 -468.0	1.4	1.26	0.02	0.007	0.38	1.42	17.0
RBE 25	222.90-225.10	2.2	1.68	0.03	0.2	3.42	2.13	132
	247.85-248.60	0.75	0.48	0.05	4.1	0.14	0.24	130
	268.80-272.05	3.25		1.14				
RBE 26	233.33-235.45	2.12	1.27		0.06	5.27	3.7	119
	269.35-271.05	1.7	1.46		0.06	0.62	2.14	65
	264.65-271.05	6.4		0.29				
RBE 27	392.05-393.13	1.08	0.88	0.02	0.07	1.01	3.25	48.5
	428.95-429.93	0.98	0.75	0.07	0.03	9.04	5.01	434
RBE 28	428.80-431.95	3.15		0.04		1.71	2.78	47
RBE 29	was completed at 394m)							
RBE 30	was completed at 209.4m) no analytical results							
RBE 31	was completed at 186.9m) available							
RBE 32	was completed at 520m)							

I, OSVALDO TIBURCIO FILOMENO FONSECA of 56 Partridge Crescent, Frankston in the State of Victoria, Accountant DO SOLEMNLY AND SINCERELY DECLARE AS FOLLOWS:-

1. That the details of work for the six months ending 31 December 1981 on Exploration Licence 5/63 are described in the accompanying report.

2. That in the six months ending 31 December 1981 Comstaff has expended $713 208 on work on Exploration Licence 5/63 and that this is further broken down into:

	$
(a) Field staff and associated costs	197 870
(b) Operating costs	95 304
(c) Tenement costs	5 768
(d) Specialist services	-
(e) Project management	53 844
(f) Drilling	341 316
(g) Contractors	-
(h) Capital expenditure	19 106
	$713 208

AND I MAKE this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of an Act of the Parliament of Victoria rendering persons making a false declaration punishable for wilful and corrupt perjury.

DECLARED AT Melbourne)
)
in the State of Victoria)
)
this 26th day of) O. Fonseca
)
January 1982)

Before me:

A Commissioner for taking Declarations and Affidavits under the Evidence Act 1958.

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5 cm

LEGEND

- AEM anomaly location
- Access road construction
- Grid lines cut
- Grid lines sampled
- Grid lines surveyed
- Stream sediment samples taken
- Geophysical survey
- Costeaning
- Geological mapping
- Drilling

AREA To be relinquished

EL 5/63 AREA 3

390 000 m E

380 000 m E

5 380 000 m N

COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 3
MT. BLOCK
PLAN SHOWING WORK COMPLETED
1/7/81 - 31/12/81

DRAWN	COMPILED	SCALE	
GEODRAFT	G.F.P. 21/11/81	1 : 50000	TAS/2/2311

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D of M | A.O. | C.O. | E.O.
Received 28 JAN 1982
Answered
DEPT. OF
REF. No. 771 82

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981 EL 5/63 SECTION 1 (ARTHUR RIVER)

VOL 2/9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheet : Burnie K55-03

COMMODITY/IES: Sn

TEXT PAGES NO: 4

PLAN NOS: See List of Plans

TABLE NOS:

APPENDICES: I

AUTHOR/S: C M Jones

DATE: 18 January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

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1.2. Geochemistry	1
2. Results Achieved	1
2.1. Geology	1
2.2. Geochemistry	3

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

EL 5/63 SECTION 1 (ARTHUR RIVER)

1. Work Completed

1.1. Geology

Work was carried out in this area, north of Waratah, from 4 November to 31 December 1981, in the last six monthly period.

During this time, many access and forestry tracks have been surveyed and geologically mapped, a total of 16 152m being completed. These roads are named Belmont Road, Wandle Road, Tree Road and Arthur River Road (refer maps).

Deep Gully Creek, and its two major tributaries, Belmont Creek and Robinson's Rivulet (refer maps) have also been surveyed and geologically mapped, over a total of 15 000m.

1.2. Geochemistry

Heavy concentrate samples have been taken every 200m along Deep Gully Creek, Belmont Creek and Robinson's Rivulet.

Samples from Deep Gully Creek were taken from 3 600m to 9 200m only, as the lower part of the stream had been previously sampled. This makes a total of 29 samples.

Belmont Creek and Robinson's Rivulet have had heavy concentrate samples taken along the whole lengths of the streams with a total of 30 samples (14 and 16 respectively).

All heavy concentrate samples have been sent to Amdel, Adelaide for analysis for base metals, tin and gold.

While mapping was being carried out, rock samples of some of the various lithologies were taken and sent to Analabs in Cooee for assay, and some to Central Mineralogical Services in Norwood, SA for thin section study.

2. Results Achieved

2.1. Geology

Lithologies probably belonging to the Bischoff Series (Success Creek Group) of rocks are found in the southern part of Deep Gully Creek only (refer maps). It is made up of carbonaceous shales and quartzitic sandstones and siltstones.

The black carbonaceous shales occur as the dominant outcrop in this area. They are sometimes very soft, well laminated and often have much pyrite mineralisation present. These shales are essentially unmetasomatised and are often sericitic, sometimes becoming highly micaceous. The small mica flakes are sometimes developed parallel to bedding planes, which may indicate low-grade metamorphism.

The shales are interbedded with much harder, pale to dark grey quartzitic sediments of varying grain sizes. These quartzites are more massive and thickly bedded and weakly metasomatised in most places. They appear to be moderately well sorted and contain minor amounts of muscovite. These sediments probably represent deposition under stable conditions and are thought to be Lower Cambrian in age.

The rest of the area that has been mapped exhibits lithologies that have been designated into the Cambrian Crimson Creek Formation. All the roads mapped in the area have outcrops of interbedded argillites, cherts, siltstones, lithic wackes and tuffaceous lithic wackes and siltstones.

The argillites are generally a mauve or red/brown colour, although there is much variation, including blue, grey brown and olive colours. They are generally moderately soft, very finely and highly fractured and sometimes show distinct bedding. They are partly silicified in places and may have very thin veins of re-crystallised quartz, forming a fine network through the rock. Where they become highly silicified, beds of chert are common. The cherts are very hard and usually distinctly bedded. They are generally grey or olive green in colour although again, much variation is shown. They also have quartz veins which can become quite thick (upto 5cm). Occasionally the cherts show distinct colour banding, parallel with the bedding planes.

The coarser grained siltstones and sandstones or lithic wackes are less common and are generally an olive or grey colour. They occur as discreet beds and are often micaceous, sometimes greatly so.

Tuffaceous lithic wackes and siltstones, however, are common. Theyhave been highly weathered to a soft, orange or yellow/brown clay, with the remnant lithic particles easily visible. They are also highly fractured and very micaceous in most places. Where they are less weathered, they are a purple or pale brown colour. They tend to be more massive and thickly bedded than the sediments described above.

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All these sediments are tightly folded, often on a very local scale. However, a detailed interpretation of the structures present is difficult due to the lack of outcrop on which to obtain suitable dips and strikes of the bedding planes.

In Deep Gully Creek and Robinson's Rivulet basic volcanic intrusives were also found. These intrusives proably occur as sills or lavas and are thought to be part of the Crimson Creek Formation and therefore formed during the same period. These basic rocks take the form of olivine basalts, pyroxene microgabbros and the occasional pegrhnite rocks. They are generally highly metasomatised and very altered, with 'chloritised' feldspar and 'serpentinised' olivine present. Some are slightly sericitic.

Igneous activity of a younger age has intruded some rocks into the Crimson Creek Formation.

The oldest intrusion (? Upper Cambrian) occurs at the southern end of Wandle Road North, and in Belmont Creek and the Western end of Belmont Road (refer maps). This is probably the same unit and is a very intensly sheared and altered serpentinite of gabbroic orgin. The shear surfaces are slicklensided, often with talc developed on them. The rock is dark green/grey, highly fractured and with many thin veins of fibrous 'asbestos', probably chrysotile.

The younger intrusions (? Devonian) are quartz porphyry dykes occurring in Deep Gully Creek at about the 6 100m mark (refer map). The quartz porphyry is sericitic and contains phenocrysts of muscovite and muscovitised biotite. This rock is probably associated with the Meredith granite and has close affinities with the quartz prophyry dykes at Mt Bischoff.

At the southern end of Deep Gully Creek porphyry there is the contact between the Crimson Creek sediments to the north and the Bischoff Series rocks to the south. This contact occurs in a zone about wherein the quartz porphyries appear. The geology here, therefore, is very similar to that at Mt Bischoff itself.

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2.2. Geochemistry

The assay results of all grab samples taken are given in Appendix I. All of the samples are from Deep Gully Creek only.

The results of the heavy concentrate samples are not yet available.

C M Jones
for Geologist

Approved by

R J Kernick
Exploration Manager

CMJ:AML

18 January 1982

APPENDIX I

		Method							
		AAS					XRF		
Sample No	Location	Ni	Cu	Zn	Mo	Pb	F	Sn	W
Z 0704	DGC 5490m	55	220	94	-	2	-	BDL	-
Z 0705	5747m	45	165	68	-	5		5	-
Z 0706	5776m	143	32	44	-	3	-	BDL	-
Z 0707	6160m	117	129	290	-	26	-	8	-
Z 0708	6131m	-	6	-	4.5	-	BDL	BDL	BDL
Z 0709	6160m	-	10	-	6.0	-	176	8	BDL
Z 0710	6812m	194	11	420	-	4	-	25	-
Z 0711	7058m	170	12	39	-	BDL	-	9	-
Z 0712	7295m	-	3	-	BDL	-	1858	15	BDL
Z 0713	7575m	51	27	70	-	16	-	6	-
Z 0714	7740m	57	3	38	-	22	-	3	-

BDL - Below Detectable Limit

- - Not Determined

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LIST OF PLANS

TAS-2-1039 - EL 5/63 AREA 1 GEOLOGICAL DATA 1:5 000

TAS-2-1040 - EL 5/63 AREA 1 GEOLOGICAL DATA 1:5 000

TAS-2-1075 - EL 5/63 AREA 1 GEOLOGICAL DATA 1:5 000

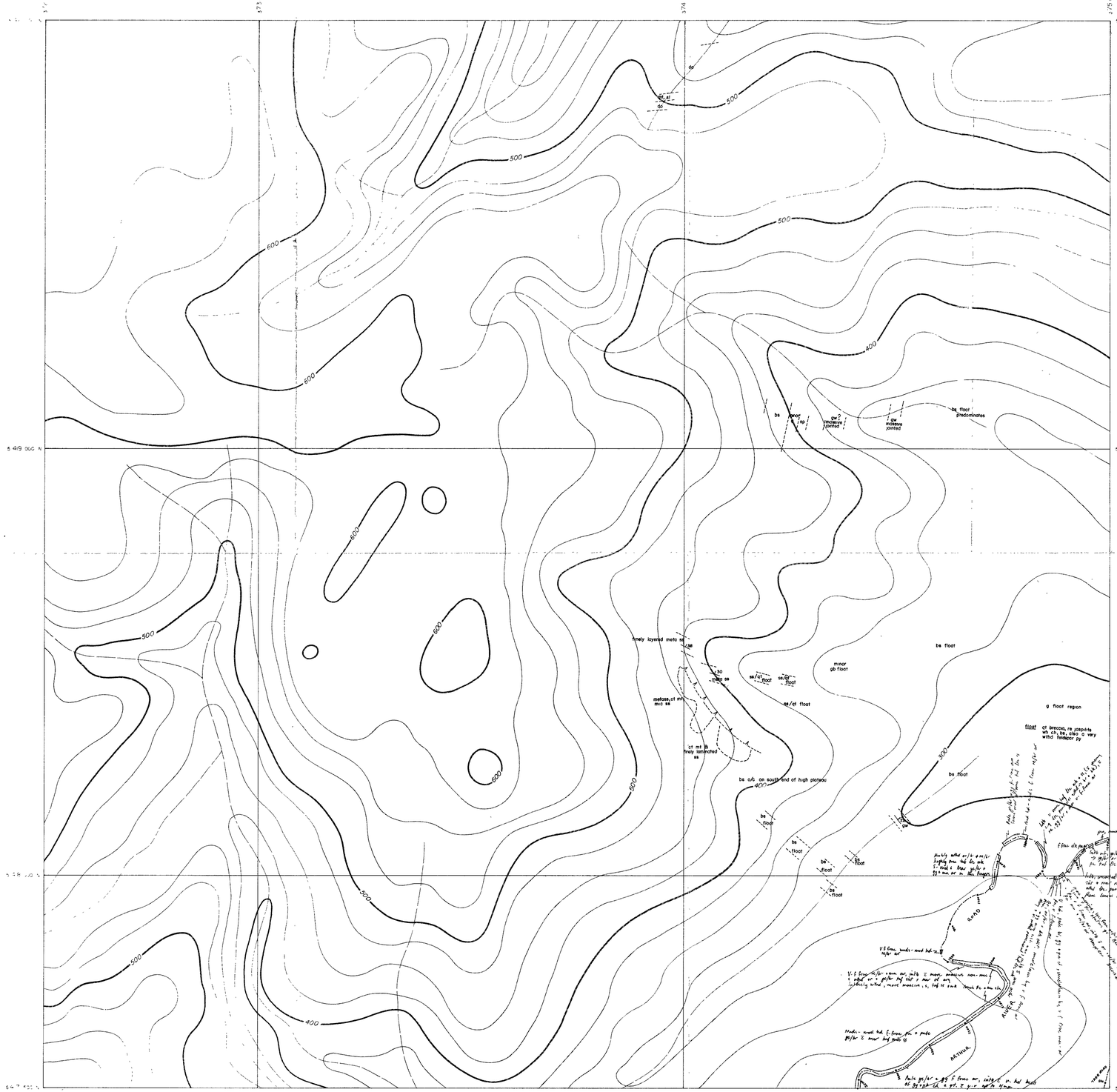
TAS-2-1078 - EL 5/63 AREA 1 GEOLOGICAL DATA 1:5 000

TAS-2-1079 - EL 5/63 AREA 1 GEOLOGICAL DATA 1:5 000

TAS-2-1080 - EL 5/63 AREA 1 GEOLOGICAL DATA 1:5 000

TAS-2-1081 - EL 5/63 AREA 1 GEOLOGICAL DATA 1:5 000

TAS-2-1114 - EL 5/63 AREA 1 GEOLOGICAL DATA 1:5 000



LEGEND FOR GEOLOGICAL SERIES

ar	Argillite	pyr	Rhyolitic porphyry & minor acid intrusives
sh	Shale	pyd	Dacitic porphyry & minor acid intrusives
md,sl	Mudstone, slate	an	Andesite
ss	Siltstone	bs	Basalt
ss qt ch	Sandstone, quartzite, chert	g	Granite
cg	Conglomerate	do	Dolerite
gw	Greywacke	gb	Gabbro
gw,cg	Greywacke conglomerate	px	Pyroxenite
dl	Dolomite	sp	Serpentinite
ls	Limestone	um	Undifferentiated ultramafics
ph	Phyllite	tu	Tuffs
sc	Schist	ag	Agglomerate
ge	Gneiss	gs	Gossan
ho,am	Hornfels, Amphibolite		

- Geological boundary
- Unconformity
- Anticline showing direction of plunge
- Syncline showing direction of plunge
- Plunge of minor anticline
- Plunge of minor syncline
- Overturned anticline
- Overturned syncline
- Fault, showing hade
- Shear zone
- Strike and dip of bedding
- Strike of vertical bedding
- Location of horizontal bedding
- Overturned bedding
- Generalised strike & dip undulating strata
- Strike and dip of jointing
- Strike of vertical jointing
- Location of horizontal jointing
- Strike and dip of foliation
- Strike of vertical foliation
- Location of horizontal foliation
- Strike and dip of cleavage
- Strike of vertical cleavage
- Location of horizontal cleavage
- Mineral occurrence - minor
- Major mineral occurrence with mine
- Mine shaft - operating, disused
- Mine tunnel portal
- Costean, pit or trench
- Trigonometrical station
- Road/track
- Railway - used/disused(or formation)
- Peg location
- Drillhole location
- Building
- Dam or lake
- Drainage
- Topographic contour line
- Fence
- Sample point
- Quarry/dump

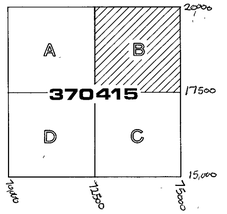
Mineralisation

Asb	Asbestos
Az	Azurite
By	Barytes
Cc	Chalcocite
Ch	Chalcopyrite
Fl	Fluorspar
G	Galena
Ml	Malachite
Mt	Magnetite
Py	Pyrite
Sp	Sphalerite
Sr	Sericite
St	Siderite

Mineral

Ag	Silver
As	Arsenic
Au	Gold
Ba	Barium
Cd	Cadmium
Cu	Copper
Hg	Mercury
Mn	Manganese
Mo	Molybdenum
Ni	Nickel
Os	Osmiridium
Pb	Lead
Sb	Antimony
Sn	Tin
W	Tungsten
Zn	Zinc

SHEET INDEX



5 cm

SCALE 1:5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited

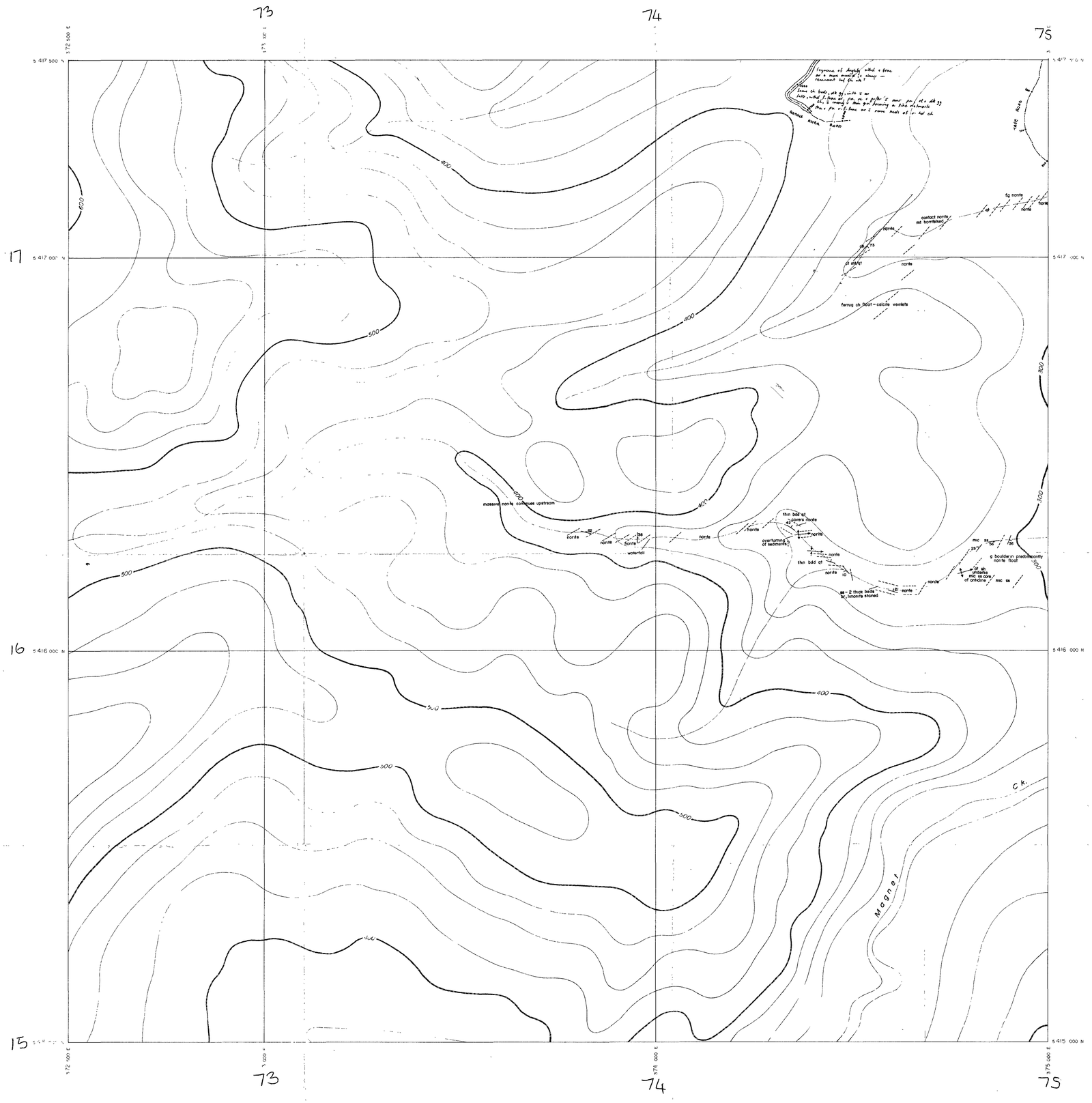
621690(V612) 839022

COMSTAFF PROPRIETARY LIMITED

370415-B

GEOLOGY 008

DRAWN	GEODRAFT
DATE	NOVEMBER 1977
COMPILED	VARIOUS
SCALE	1:5000
	TAS/2/1039



LEGEND FOR GEOLOGICAL SERIES

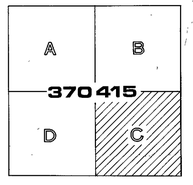
ar	Argillite	pyr	Rhyolitic porphyry & minor acid intrusives
sh	Shale	pyd	Dacitic porphyry & minor acid intrusives
md,sl	Mudstone, slate	an	Andesite
ss	Siltstone	bs	Basalt
ss$_{qt,ch}$	Sandstone, quartzite, chert	g	Granite
cg	Conglomerate	do	Dolerite
gw	Greywacke	gb	Gabbro
gw,cg	Greywacke conglomerate	px	Pyroxenite
dl	Dolomite	sp	Serpentinite
ls	Limestone	um	Undifferentiated ultramafics
ph	Phyllite	tu	Tuffs
sc	Schist	ag	Agglomerate
ge	Gneiss	gs	Gossan
ho,am	Hornfels, Amphibolite		

Geological boundary
Unconformity
Anticline showing direction of plunge
Syncline showing direction of plunge
Plunge of minor anticline
Plunge of minor syncline
Overturned anticline
Overturned syncline
Fault, showing hade
Shear zone
Strike and dip of bedding
Strike of vertical bedding
Location of horizontal bedding
Overturned bedding
Generalised strike & dip undulating strata
Strike and dip of jointing
Strike of vertical jointing
Location of horizontal jointing
Strike and dip of foliation
Strike of vertical foliation
Location of horizontal foliation
Strike and dip of cleavage
Strike of vertical cleavage
Location of horizontal cleavage
Mineral occurrence - minor
Major mineral occurrence with mine
Mine shaft – operating, disused
Mine tunnel portal
Costean, pit or trench
Trigonometrical station
Road/track
Railway - used/disused(or formation)
Peg location
Drillhole location
Building
Dam or lake
Drainage
Topographic contour line
Fence
Sample point
Quarry/dump

Mineralisation
Asb Asbestos
Az Azurite
By Barytes
Cc Chalcocite
Ch Chalcopyrite
Fl Fluorspar
G Galena
Ml Malachite
Mt Magnetite
Py Pyrite
Sp Sphalerite
Sr Sericite
St Siderite

Mineral
Ag Silver
As Arsenic
Au Gold
Ba Barium
Cd Cadmium
Cu Copper
Hg Mercury
Mn Manganese
Mo Molybdenum
Ni Nickel
Os Osmiridium
Pb Lead
Sb Antimony
Sn Tin
W Tungsten
Zn Zinc

SHEET INDEX



5 cm

SCALE 1 5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited

839023

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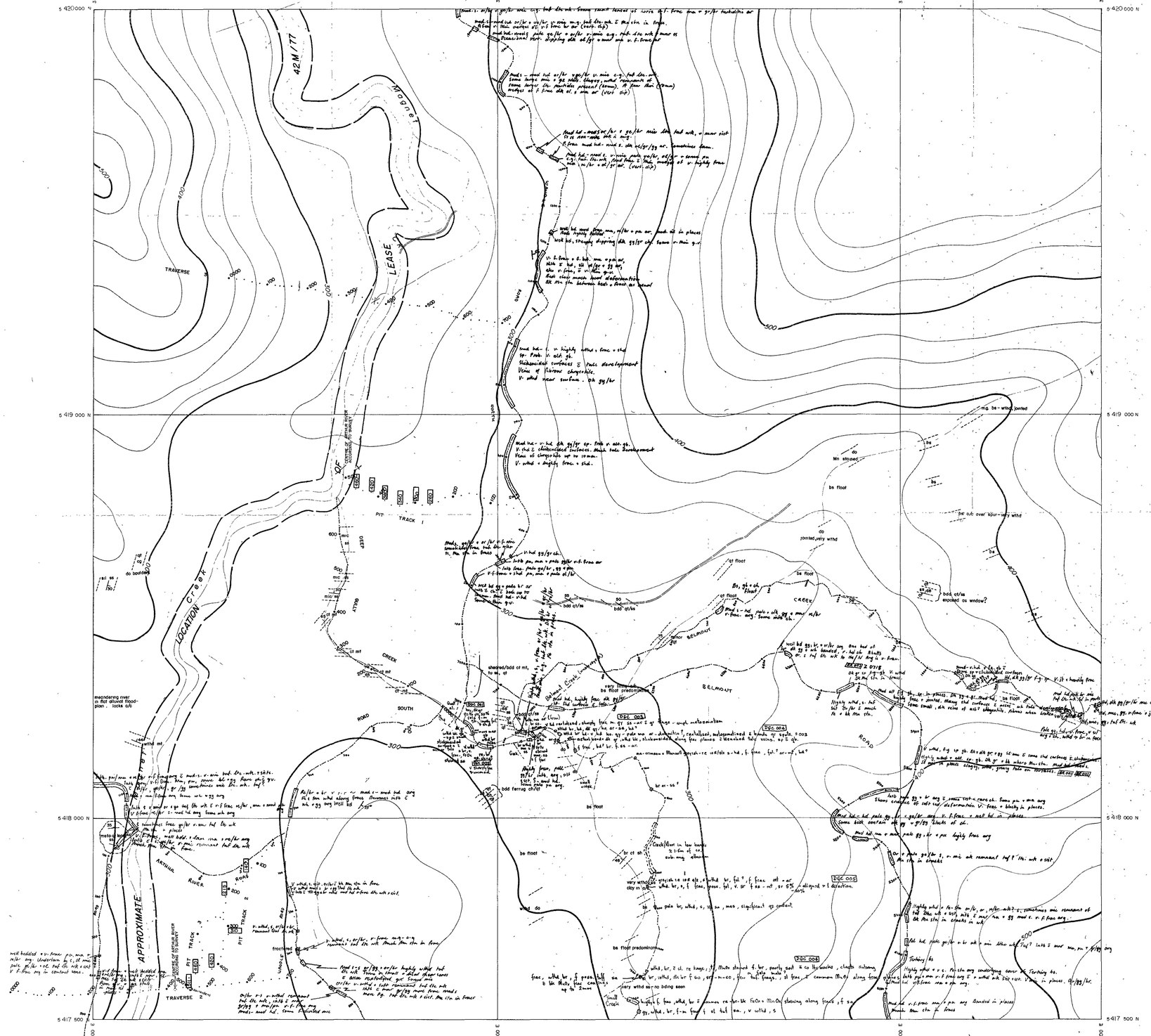
370415-C

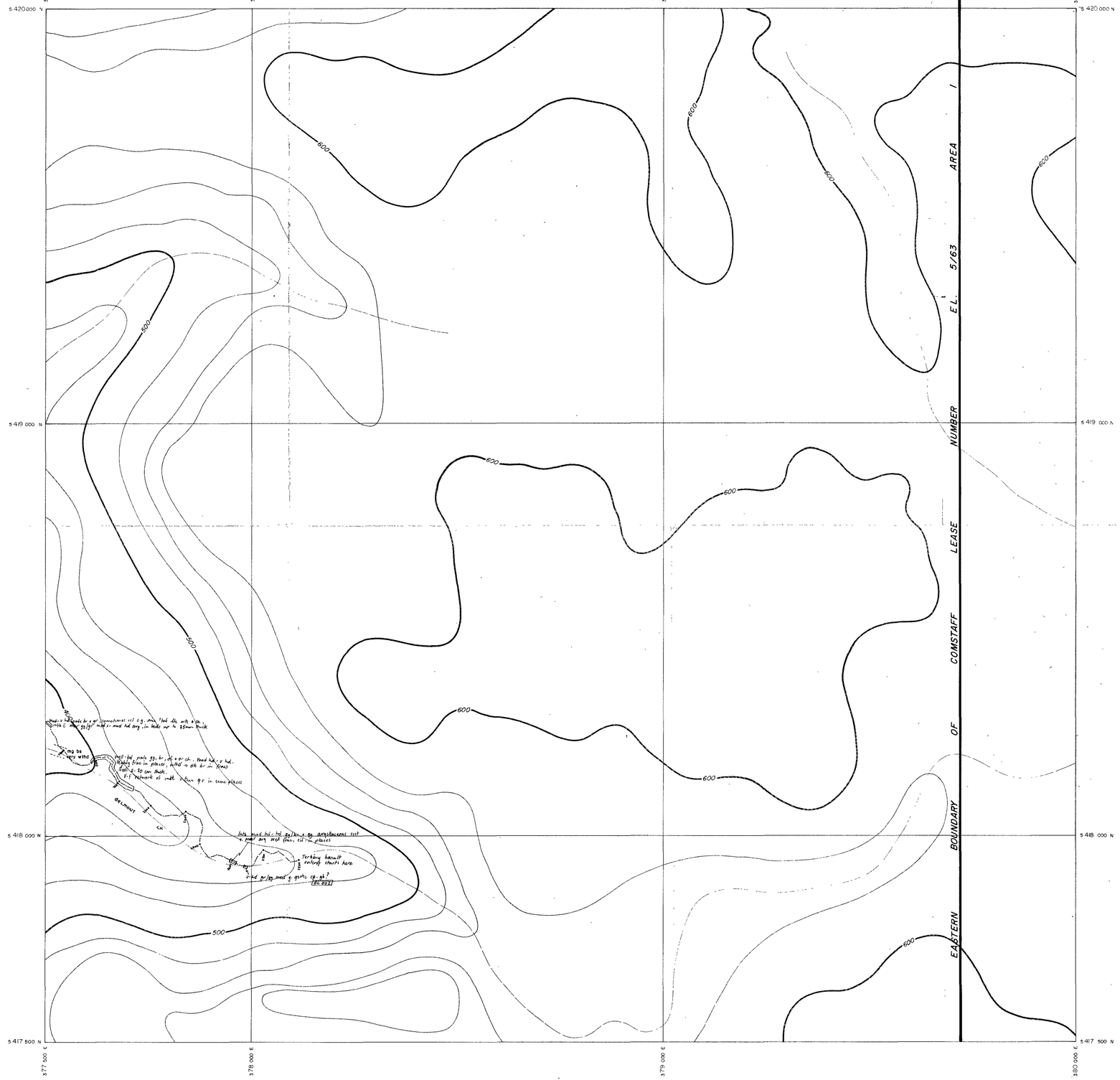
GEOLOGY

003

DRAWN	GEODRAFT
DATE	NOVEMBER 1977
COMPILED	VARIOUS
SCALE	1 5000
	TAS/2/1040


EASTERN BOUNDARY OF COMSTAFF LEASE NUMBER EL. 5/63 AREA 1
5 415 000 N
5 414 000 N
5 413 000 N
5 412 500 N
377 500 E
379 000 E
380 000 E
500
600
Basalt
Road
GULLY
DEEP
CREEK
Adit
Quarry
Dump
Rectangular pit - depth
Highly rotted (ma,rk) in places
Rectangular pit - depth
Highly rotted in places
Adit
Dump
Quarry
Adit
Dump
Quarry
Adit
Dump
Quarry


375 000 E
376 000 E
377 000 E
377 500 E
5 420 000 N
5 419 000 N
5 418 000 N
5 417 500 N
42M/17
Magnet
LEASE
TRAVERSE 3
TRAVERSE 2
TRAVERSE 1
PIT
TRACK 1
TRACK 2
TRACK 3
LOCATION
Creek
CREEK
ROAD
SOUTH
BELMONT
Belmont Creek (overflow)
APPROXIMATE
ARTHUR
RIVER
meandering river in flat alluvial flood-plain . locks o/b
centre of arthur river according to survey
DGC 001
DGC 002
DGC 003
DGC 004
DGC 005
DGC 006
mg. bs - wthd. jointed
Mn stained
bs float
be float
be o/c over spur - very wthd
jointed,very wthd
bdd ot/as exposed as window?
very limonitic be float predominate
be float predominate
Contact
Creek float in low banks
very wthd clay in creek
Creek
wthd
sheared/bdd ot mt, to sc, qt
bdd ferrug ch/st
bdd ot/as
bdd ot/as
bdd ot/as
qt float
qt float
qt float



LEGEND FOR GEOLOGICAL SERIES

ar	Argillite	pyr	Rhyolitic porphyry & minor acid intrusives
sh	Shale	pyd	Dacitic porphyry & minor acid intrusives
md,si	Mudstone, slate	an	Andesite
ss	Siltstone	bs	Basalt
sa,qz,ch	Sandstone, quartzite, chert	g	Granite
cg	Conglomerate	do	Dolerite
gw	Greywacke	gb	Gabbro
gw,cg	Greywacke conglomerate	px	Pyroxenite
dl	Dolomite	sp	Serpentinite
ls	Limestone	um	Undifferentiated ultramafics
ph	Phyllite	tu	Tuffs
sc	Schist	ag	Agglomerate
ge	Gneiss	gs	Gossan
ho,am	Hornfels, Amphibolite		

- Geological boundary
- Unconformity
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- Plunge of minor syncline
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- Overturned syncline
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- Location of horizontal bedding
- Overturned bedding
- Generalised strike & dip undulating strata
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- Location of horizontal jointing
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- Road/track
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- Peg location
- Drillhole location
- Building
- Dam or lake
- Drainage
- Topographic contour line
- Fence
- Sample point
- Quarry/dump

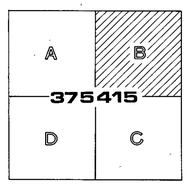
Mineralisation

Asb	Asbestos
Az	Azurite
By	Barytes
Cc	Chalcocite
Ch	Chalcopyrite
Fl	Fluorspar
G	Galena
Ml	Malachite
Mt	Magnetite
Py	Pyrite
Sp	Sphalerite
Sr	Sericite
St	Siderite

Mineral

Ag	Silver
As	Arsenic
Au	Gold
Ba	Barium
Cd	Cadmium
Cu	Copper
Hg	Mercury
Mn	Manganese
Mo	Molybdenum
Ni	Nickel
Os	Osmiridium
Pb	Lead
Sb	Antimony
Sn	Tin
W	Tungsten
Zn	Zinc

SHEET INDEX



5 cm

SCALE 1 5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited

82-1690(W)(2) 839026

COMSTAFF PROPRIETARY LIMITED

375415-B

GEOLOGY 4531

DRAWN	GEODRAFT
DATE	NOVEMBER 1977
COMPILED	VARIOUS
SCALE	1 : 5000
	TAS/2/1079



LEGEND FOR GEOLOGICAL SERIES

ar	Argillite	pyr	Rhyolitic porphyry & minor acid intrusives
sh	Shale	pyd	Dacitic porphyry & minor acid intrusives
md,sl	Mudstone, slate	an	Andesite
ss	Siltstone	bs	Basalt
ss$^{qz}_{ch}$	Sandstone, quartzite, chert	g	Granite
cg	Conglomerate	do	Dolerite
gw	Greywacke	gb	Gabbro
gw,cg	Greywacke conglomerate	px	Pyroxenite
dl	Dolomite	sp	Serpentinite
ls	Limestone	um	Undifferentiated ultramafics
ph	Phyllite	tu	Tuffs
sc	Schist	ag	Agglomerate
ge	Gneiss	gs	Gossan
ho,am	Hornfels, Amphibolite		

- Geological boundary
- Unconformity
- Anticline showing direction of plunge
- Syncline showing direction of plunge
- Plunge of minor anticline
- Plunge of minor syncline
- Overturned anticline
- Overturned syncline
- Fault, showing hade
- Shear zone
- Strike and dip of bedding
- Strike of vertical bedding
- Location of horizontal bedding
- Overturned bedding
- Generalised strike & dip undulating strata
- Strike and dip of jointing
- Strike of vertical jointing
- Location of horizontal jointing
- Strike and dip of foliation
- Strike of vertical foliation
- Location of horizontal foliation
- Strike and dip of cleavage
- Strike of vertical cleavage
- Location of horizontal cleavage
- Mineral occurrence - minor
- Major mineral occurrence with mine
- Mine shaft - operating, disused
- Mine tunnel portal
- Costean, pit or trench
- Trigonometrical station (MI BISCHOFF)
- Road/track
- Railway - used/disused(or formation)
- Peg location (+P32)
- Drillhole location (○825)
- Building
- Dam or lake
- Drainage
- Topographic contour line (250)
- Fence
- Sample point (+T 3806)
- Quarry/dump

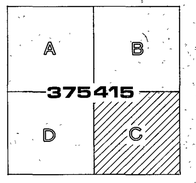
Mineralisation

Asb	Asbestos
Az	Azurite
By	Borytes
Cc	Chalcocite
Cb	Chalcopyrite
Fl	Fluorspar
G	Galena
Ml	Malachite
Mt	Magnetite
Py	Pyrite
Sp	Sphalerite
Sr	Sericite
St	Siderite

Mineral

Ag	Silver
As	Arsenic
Au	Gold
Ba	Barium
Cd	Cadmium
Cu	Copper
Hg	Mercury
Mn	Manganese
Mo	Molybdenum
Ni	Nickel
Os	Osmiridium
Pb	Lead
Sb	Antimony
Sn	Tin
W	Tungsten
Zn	Zinc

SHEET INDEX



5 cm

SCALE 1 : 5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited

839027

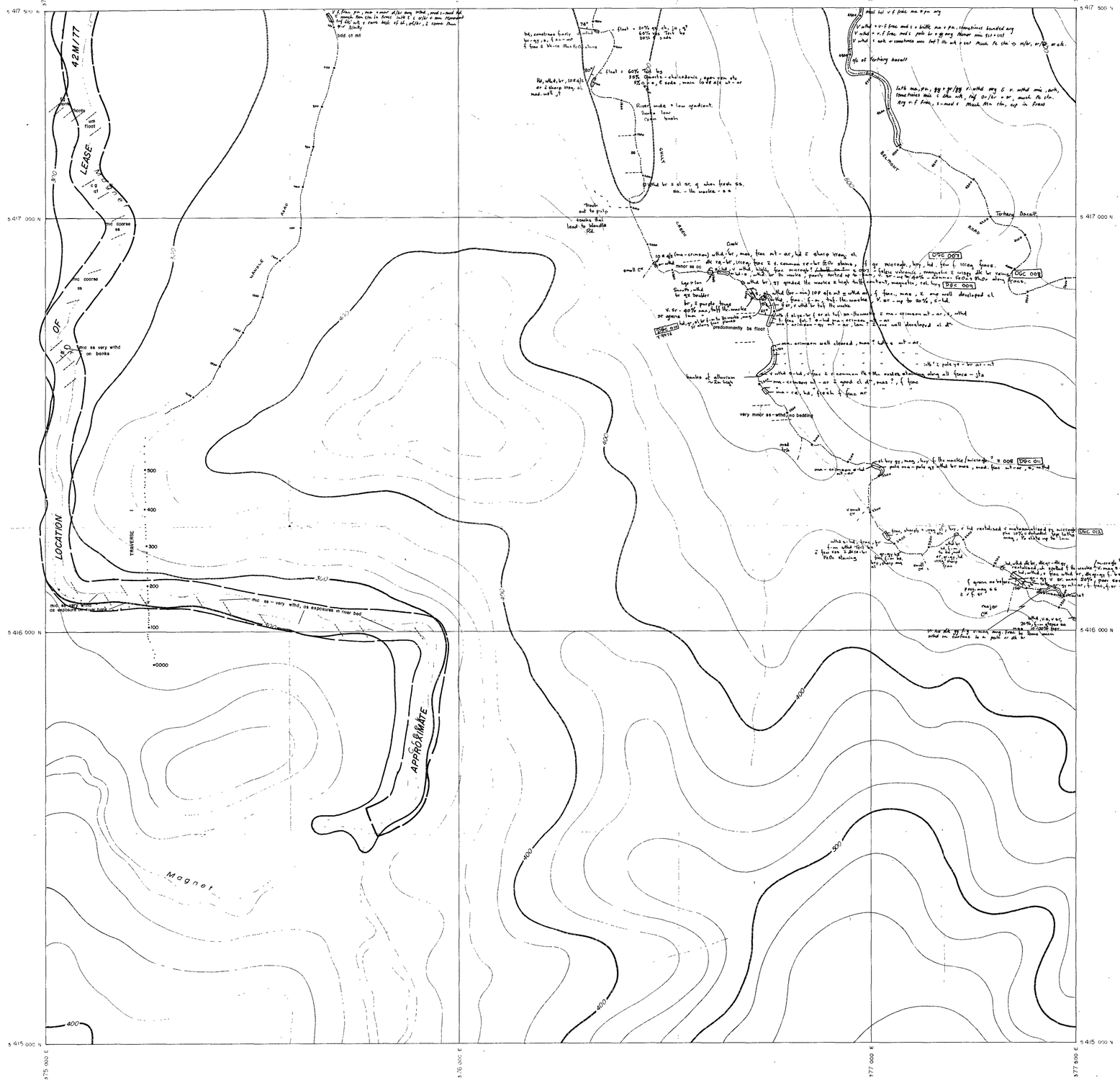
COMSTAFF PROPRIETARY LIMITED

375415-C

GEOLOGY

4532

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DATE	NOVEMBER 1977
COMPILED	VARIOUS
SCALE	1 : 5000
	TAS/2/1080

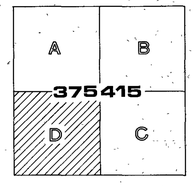


LEGEND FOR GEOLOGICAL SERIES

or	Argillite	pyr	Rhyolitic porphyry & minor acid intrusives
sh	Shale	pyd	Dacitic porphyry & minor acid intrusives
m ,sl	Mudstone, slate	an	Andesite
ss	Siltstone	bs	Basalt
ss,q,ch	Sandstone, quartzite, chert	g	Granite
cg	Conglomerate	do	Dolerite
gw	Greywacke	gb	Gabbro
gw,cg	Greywacke conglomerate	px	Pyroxenite
dl	Dolomite	sp	Serpentinite
ls	Limestone	um	Undifferentiated ultramafics
ph	Phyllite	tu	Tuffs
sc	Schist	ag	Agglomerate
ge	Gneiss	gs	Gossan
ho,am	Hornfels, Amphibolite		

	Geological boundary		Mineralisation
	Unconformity	Asb	Asbestos
	Anticline showing direction of plunge	Az	Azurite
	Syncline showing direction of plunge	By	Barytes
	Plunge of minor anticline	Cc	Chalcocite
	Plunge of minor syncline	Ch	Chalcopyrite
	Overturned anticline	Fl	Fluorspar
	Overturned syncline	G	Galena
	Fault, showing hade	Ml	Malachite
	Shear zone	Mt	Magnetite
	Strike and dip of bedding	Py	Pyrite
	Strike of vertical bedding	Sp	Sphalerite
	Location of horizontal bedding	Sr	Sericite
	Overturned, bedding	St	Siderite
	Generalised strike & dip undulating strata		
	Strike and dip of jointing		Mineral
	Strike of vertical jointing	Ag	Silver
	Location of horizontal jointing	As	Arsenic
	Strike and dip of foliation	Au	Gold
	Strike of vertical foliation	Ba	Barium
	Location of horizontal foliation	Cd	Cadmium
	Strike and dip of cleavage	Cu	Copper
	Strike of vertical cleavage	Hg	Mercury
	Location of horizontal cleavage	Mn	Manganese
+Cu	Mineral occurrence - minor	Mo	Molybdenum
Ps	Major mineral occurrence with mine	Ni	Nickel
	Mine shaft - operating, disused	Os	Osmiridium
	Mine funnel portal	Pb	Lead
	Costean, pit or trench	Sb	Antimony
Mt BISCHOFF	Trigonometrical station	Sn	Tin
	Road/track	W	Tungsten
	Railway - used/disused(or formation)	Zn	Zinc
+P32	Peg location		
○B25	Drillhole location		
	Building		
	Dam or lake		
	Drainage		
250	Topographic contour line		
	Fence		
+T 3806	Sample point		
	Quarry/dump		

SHEET INDEX



5 cm

SCALE 1:5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited

821690(Vol 2) 839028

COMSTAFF PROPRIETARY LIMITED

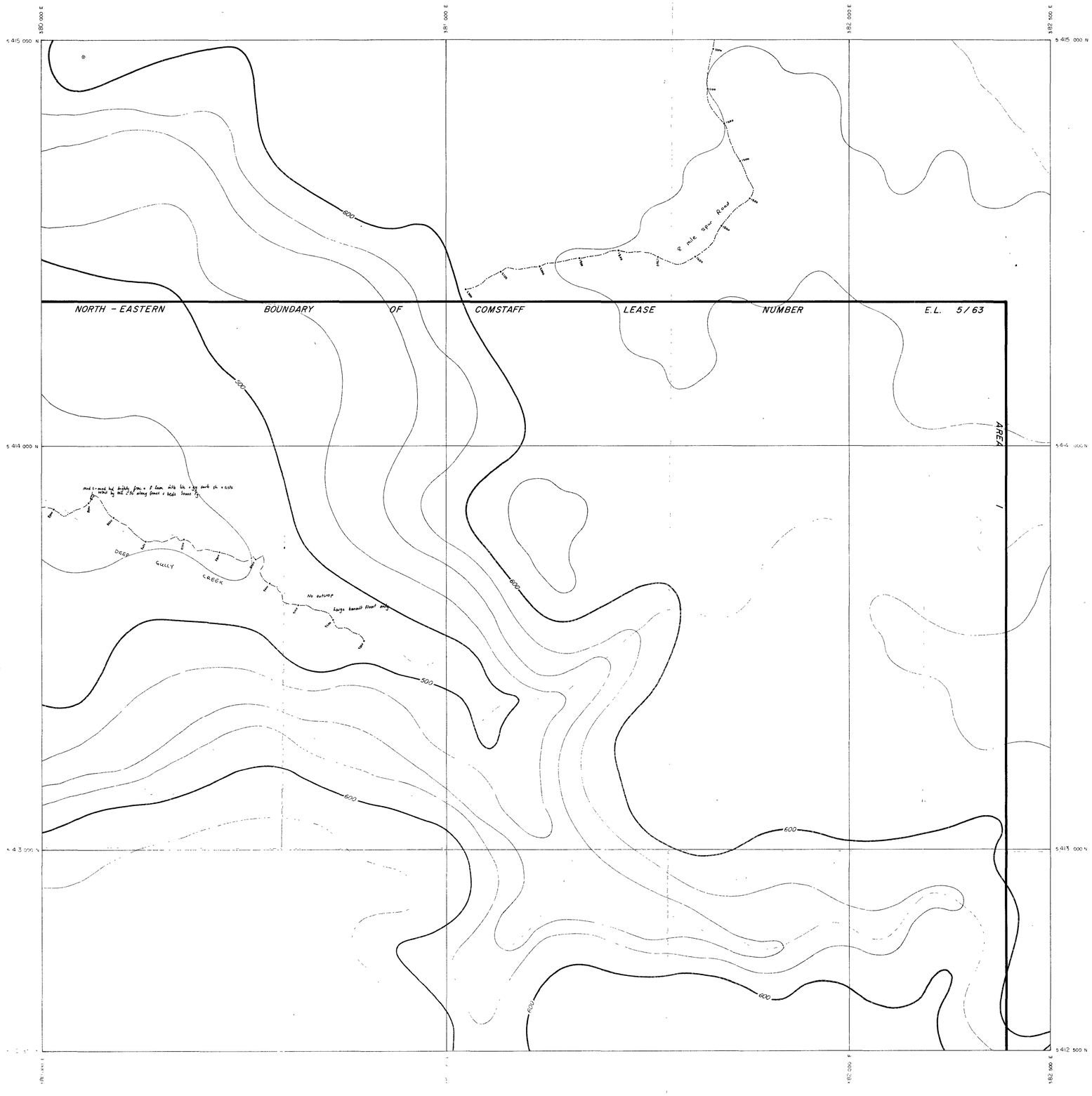
375415-D

GEOLOGY

4533

DRAWN	GEODRAFT
DATE	NOVEMBER 1977
COMPILED	VARIOUS
SCALE	1:5000

TAS/2/1081



LEGEND FOR GEOLOGICAL SERIES

ar	Argillite	pyr	Rhyolitic porphyry & minor acid intrusives
sh	Shale	pyd	Dacitic porphyry & minor acid intrusives
md,sl	Mudstone, slate	an	Andesite
ss	Siltstone	bs	Basalt
ss,cg,ch	Sandstone, quartzite, chert	g	Granite
cg	Conglomerate	do	Dolerite
gw	Greywacke	gb	Gabbro
gw,cg	Greywacke conglomerate	px	Pyroxenite
dl	Dolomite	sp	Serpentinite
ls	Limestone	um	Undifferentiated ultramafics
ph	Phyllite	tu	Tuffs
sc	Schist	ag	Agglomerate
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ho,am	Hornfels, Amphibolite		

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- Road/track
- Railway - used/disused(or formation)
- Peg location +P32
- Drillhole location ○B25
- Building
- Dam or lake
- Drainage
- Topographic contour line 250
- Fence
- Sample point +T 3806
- Quarry/dump

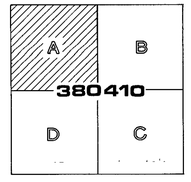
Mineralisation

Asb	Asbestos
Az	Azurite
By	Barytes
Cc	Chalcocite
Ch	Chalcopyrite
Fl	Fluorspar
G	Galena
Ml	Malachite
Mt	Magnetite
Py	Pyrite
Sp	Sphalerite
Sr	Sericite
St	Siderite

Mineral

Ag	Silver
As	Arsenic
Au	Gold
Ba	Barium
Cd	Cadmium
Cu	Copper
Hg	Mercury
Mn	Manganese
Mo	Molybdenum
Ni	Nickel
Os	Osmiridium
Pb	Lead
Sb	Antimony
Sn	Tin
W	Tungsten
Zn	Zinc

SHEET INDEX



5 cm

SCALE 1 : 5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited.

839029

COMSTAFF PROPRIETARY LIMITED

380410-A

GEOLOGY

4534

DRAWN	GEODRAFT
DATE	OCTOBER 1977
COMPILED	VARIOUS
SCALE	1 : 5000
	TAS/2/1114

000

839030

82-1690
319.

MICROFILMED

Dept. of Mines | A.O. | C.G. | E.O. | D.G.M.E.
Received 28 JAN 1982
Answered
DEPT. OF MINES
REF. No. 771/82

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

PRELIMINARY REPORT ON THE SOUTH BISCHOFF MINE AREA (CSB) IN EL 5/63 PART 2

VOL 3/9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: Burnie sheet S 55/3
Metric co-ordinate 539750N 372500E

COMMODITY/IES: Sn, W, Cu, Pb, Zn

TEXT PAGES NO: 32

PLAN NOS: See List of Plans

TABLE NOS: 1

APPENDICES: 2

AUTHOR/S: N P Green

DATE: 23rd June 1981

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

001

SUMMARY

Results from the 1979 regional stream sediment sampling programme showed that areas of some creeks draining east from the old South Bischoff Tin Mine were anomalous in Sn. It was decided to follow this area up in conjunction with the regional geological mapping programme during the 1980/81 summer field season. To facilitate access a five line grid (CSB) was cut at 240m line intervals between Johnson's Creek and Ramsay River centred over the Ramsay Road and the mine.

The grid was geologically mapped, auger soil sampled and magnetically surveyed. Major creeks in the area were geologically mapped and sediment sampled. Results confirm that areas of the creeks are highly anomalous in Sn.

Geological mapping has outlined two phases of Meredith Granite abutting Crimson Creek metasediments and metabasites. Areas of alteration include greisen dykes in the granite and intense propylitic alteration of the metasediments.

Geochemical soil sample results outline several areas of interest, the major ones being a zone marginal to Johnson's Creek from the mine northwards, and area in upper Aylett Creek near the non-granite contact and the northeast corner of the grid.

Channel sampling of four mine adits and a costean produced some economic concentrations of Sn as did a grab sample from the area.

A literature search of old Mines Department records shows that about 15 tons of alluvial tin was extracted from the creeks in the area and 21 tons (very approximate) from the mine at a grade between 1.90% and 3.09% Sn.

Intensive follow up work is recommended utilising a larger and closer spaced grid.

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Page No

SUMMARY

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5.4 Metamorphism and Alteration
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8.4 Geophysics
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LIST OF PLANS

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	2372	" " " " " "	Ni	1:2 500
	2599	" " " " " " treated statistically separately over granite/ non granite rocks	Cu	1:2 500
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PRELIMINARY REPORT ON THE SOUTH BISCHOFF MINE AREA (GRID CSB) IN EL 5/63 PART 2

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1. INTRODUCTION

This report covers the work carried out in the area of the old South Bischoff Tin Mine, during the 1980/81 summer field season.

Following a regional stream sediment sampling programme in 1979 (Pigott, 1980) and regional geological mapping in 1980 it was felt that this area warranted investigation. To this end five, 240m spaced EW grid lines were utilised along with Creek prospecting and investigations of the mine itself.

Results of a literature search of Mines Department records in Hobart along with more modern work are presented under previous work. The 1980/81 programme is summarised, followed by sections on the geological, geochemical and geophysical results.

Recommendations and work proposals conclude the report.

2. LOCATION AND ACCESS (Plans TAS/2/1586 and 2590)

The South Bischoff area lies between Johnson's Creek to the west, a tributary of the Wilson River, and the Ramsay River to the east some 11km southwest of Waratah. It is in the northwest portion of EL 5/63 Part 2.

A four wheel drive track (Ramsay Road) leaves the Waratah-Savage River Highway approximately 8km southwest of Waratah and bisects grid CSB 4.7km south of the Highway. The immediate mine area is reached via a well graded walking track (Blundstone Track) which leaves the Ramsay Road at the 4800m mark. It can also be reached via the overgrown South Bischoff walking track which leaves the Waratah-Savage River Highway approximately 9km from Waratah.

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3. PREVIOUS WORK

Records of the old South Bischoff Mine and surrounding alluvial areas are variable from excellent to being incorrect. The information is presented in chronological sequence.

The prospect according to Reid (1923) was discovered by W & E Pryde in 1914. However, it was not until 1916 that the local Mines Inspector notes, in his annual report, "the newly discovered district".

A small syndicate based in Burnie was formed and with capital from 120, £10 shares erected a 3-head stamping battery. A trial crushing over two Wilfley tables evidently produced satisfactory results. During 1917 the mine produced 11.9 tons of tin concentrate and preparations were made to build a new concentrating plant. However after spending £3,000 the work was discontinued for unexplained reasons.

No mention of the mine or environs could be found between 1917 and 1920.

However in 1920 the Waratah Tin Sluicing Co took out properties to the north and south of the mine area on Johnson's Creek. The company also secured a 12 month option of purchase over the mine itself. This company proceeded with hydraulic sluicing operations in its lower Johnson's Creek area. Finucane and Blake (1933) report that approximately four tons of cassiterite were produced from a tenth of the potential alluvial ground between 1920 and 1924.

In 1921 (Inspector of Mines Report, 1921) or 1922 (Reid, 1923) the Waratah Tin Sluicing Co exercised its option over the mine. During 1921 the company drove a crosscut 360 feet (110m) and crushed 21 tonss of 'dirt' yielding 1 ton of tin concentrate at an assay of 65% Sn (ie a grade of 3.09%).

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In early 1922, A McIntosh Reid, a government geologist, visited the mine and produced a relatively comprehensive report. He notes three 'openings on the ore body', two adits and an open cut. Samples he took were reported thus;

Location	Width of Lode	Sn%
309' (94m) into No 2 Adit (Adit B)	1'9" (53cm)	3.04
326' (99m) " " " "	3'2" (96cm)	5.03
336' (102m) " " " "	6'0" (183cm)	1.31
Rise from No 2 Adit (Adit B)	3'6" (106cm)	3.92
No 1 Adit (Adit C), 100'(30m) from entrance	4'10"(147cm)	0.84
South of Open Cut	3'6" (106cm)	0.62
Hanging-wall of lode at surface	7'0" (213cm)	0.20
North of slope on hanging wall	7'0" (213cm)	0.74
(Author's Averages)	4'7" (140cm)	1.96

As the lode was being worked in No 2 Adit (Adit B) he was able to give an excellent description of it. Relevant extracts from his description:- (with metric equivalents)

"The ore is contained in a lenticular body of micaceous material encased in medium-grained granite porphyry".

"The average course is 10 degrees west of north and the dip is westerly at 65^{o}"

"On the footwall is a 2-inch (5cm) band of gossanous kaolin, which is succeeded by a 12-inch (30cm) band of light bluish-green tourmaline with blebs and veinlets of pyrite and the bulk of the cassiterite. Chalcopyrite and its alteration product malachite are prominent. Succeeding thin band quartz-free kaolin 8-18 inches (20-46cm) wide occurs. The tin bearing rock remaining on the hanging wall is a fine grained granite consisting essentially of quartz and felspar with minute scale of secondary muscovite"

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"The ore-body is only 45 feet (13.7cm) long. It apparently pitches north at an angle of 70 degrees"

"The other ore-bodies referred to have not been developed. One near the old mill is rich but the shoot is short"

This short shoot was probably investigated using the main costean sampled in the 1980/81 programme.

Later in 1922 the local Mines Inspector notes that the Waratah Tin Sluicing Co erected a 9 head battery and crushing was commenced on September 13th. From then to the end of the year 4 tons 14 cwt of tin was 'won'.

However during 1923 only 2.03 tons were produced and work was run down until, in the latter part of year, only a few tributers were working in the area.

Production fell further in 1924 to 1.38 tons and finally at the end of 1924 the Waratah Tin Sluicing Co dropped the leases.

Between 1925 and 1928, Pryde, Palmer and other prospectors worked the alluvium in the creeks around the area and produced 6.4 tons of metallic tin.

It appears that between 1928 and 1932 the prospectors moved further south into the Parson's Hood-Wilson River area.

However in late 1932 when Finucane and Blake visited the South Bischoff area, Webb and Pryde had just taken out the Johnson's Creek leases and had installed a sluicing nozzle and hydraulic elevator. Their report gives a very good description of the alluvium and the work being carried out. They concluded that 15-16 chain (302-322m) of the 20 chain (402m) alluvial area had yet to be worked, and of the $4\frac{1}{2}$ chain (90m) worked, 6 tons of tin concentrate had been produced.

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In a summary Finucane and Blake also included alluvial production from Palmer and Aylett Creeks.

	tons	cwt
Johnson's Creek		
Section 10995/M (Webb & Pryde and (Waratah Tin Sluicing Co)	6	0
Section 7214/M - Nth of 10995 (Waratah Tin Sluicing Co)	1	10
Section 7245/M - Nth of 7214 (Waratah Tin Sluicing Co)	0	4
Palmer Creek		
Main Branch	5	6
Aylett Creek	1	18
Total	14	18

Thus the total production of alluvial tin from the creeks around the South Bischoff Mine was in the vicinity of 15 tons, compared to - 21 tons from the mine. It must be remembered that these figures can only be approximate.

Finucane goes on to note that the old Bischoff mine was 'worked out' as were most of the creeks adjoining it.

The last mention of the South Bischoff area was in 1934 when W R Pryde won 1.5 tons of stream tin from Johnson's Creek.

Q.J. Henderson visited the area in 1933 and 1935 but his reports offer no new data and rely heavily on previous reports.

Jack and Groves (1965) report that they examined the area in 1964, however some of their facts are inaccurate and what are not, were probably gleaned from previous reports.

During 1979, Comstaff Pty Ltd stream sediment sampled the creeks draining the South Bischoff Mine area to the east, as part of its regional 1979 programme (Pigott, 1980). They were found to be anomalous in tin (Plan TAS/2/2032). The construction of the Ramsay Road during this time along the old Mt Ramsay pack trail from Wombat Flat considerably improved access to the area.

4. WORK COMPLETED

4.1 Geological

All CSB grid lines and major creeks in the area were geologically mapped. The three adits and main costean of the South Bischoff Mine were also mapped as far as safety precautions and reasonably fresh outcrop allowed. Rock samples were taken from most traverses for either petrological description and/or geochemical analysis.

4.2 Geochemical Surveys

Stream sediment samples were collected from the active stream channels of the major creeks draining the CSB grid area. Owing to doubts concerning the amount of organic detritus in many of the samples and the sedimentation characteristics of cassiterite, some large volume samples from each creek were panned to give enhanced Sn values.

C horizon auger soil samples were collected at 20m spacings along the CSB grid lines. Graphically deduced statistics were utilised to identify anomalous populations of Cu, Pb, Zn, Ni, Sn and As values.

TABLE 1

AGE	NAME	UNIT	THICKNESS	LITHOLOGIES
Quarternary		Alluvium	0 - 10 m	Boulder and cobble gravel, sand
Tertiary		Basalt	0 - 25	Alkali olivine basalt; basal gravel, sand.
			unconformity	
Upper Devonian to Lower Carboniferous		Meredith Granite		
			intrusive	
Lower Cambrian	Crimson Creek Formation	Greywacke Sequence	800 - 1200+ m	Basic to intermediate volcaniclastic greywacke, tuff, siltstone; argillite; pelite (possibly dolomitic); chert; conglomerate; minor basic sills, dykes lavas.
			unconformity	
Upper Proterozoic	Ramsay Group	Sandstone/Shale Sequence	800+ m	Carbonaceous sandstone, phyllite and shale; micaceous sandstone, siltstone; conglomerate; breccia; carbonate.

From Pigott, 1980.

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The four adits of the South Bischoff Mine were channel sampled along one wall, and where possible a constant height above the floor. The main costean was also channel sampled, but on this occasion, in vertical channels down the north wall at three metre intervals. A pit at the end of the costean was also horizontally channel sampled.

4.3 Geophysical Surveys

A ground magnetic survey was carried out over CSB grid utilising a Geometrics back pack mounted proton precession magnetometer.

4.4 Statistics

Geological Mapping	13,830m
Petrological Descriptions	15
Rock geochemical analyses	157
Stream sediment geochemical analyses	82
Soil geochemical analyses	305
Grid lines cut	6,200m
Walking tracks cut	800m

5. GEOLOGY

5.1 General

The rock units encountered in the South Bischoff area are similar to those in the rest of the Ramsay area and summarised in Table 1. (from Pigott, 1980). Geological plans provided in this report are the detailed geological fact map (Plan TAS/2/2366), an interpretation map (Plan TAS/2/2375) and a plan summarising the geology of the mine adits and main costean (Plan TAS/2/2606). Interpretative geology is also included on the profiles of each CSB grid line (Plans TAS/2/2584 - 2588)

and each major creek (Plans TAS/2/2610 - 2612). Petrological reports are appended in Appendix I and rock geochemical analyses in Appendix II. For locations of samples consult Plans TAS/2/2366 and TAS/2/2606.

5.2 Lithological Units

5.2.1 Crimson Creek Metasediments

Rock types included in this unit are the typical tuffaceous greywackes-feldspathic sandstones, labile pelites-siltstones, hornfels, tuffs and minor chert. This assemblage is consistent with the Crimson Creek Formation mapped to the south and are probably the oldest rocks in the area. The rocks are often finely bedded and some show disturbance by turbiditic flows. These features are often masked in handspecimen by the low grade metamorphic and ubiquitous metasomatic effects associated with the nearby Meredith granite. Most of the clastic sediments are magnetic to some degree owing to the presence of detrital magnetite, minor secondary magnetite and rarely, disseminated pyrrhotite.

5.2.2 Crimson Creek Metabasites

Rock types included in this unit are micro gabbros and dolerites. Taking into account the variable metasomatic and low grade metamorphic effects the dividing line between the rock types is very fine. These effects are uralitisation, some saussuritisation and mild hornfelsing as results of deuteric alteration and the proximity to the Meredith Granite.

Both rock types are variably porphyritic, having phenocrysts up to 2.5mm of labradorite and/or pyroxene in the case of the micro-gabbros. A fortunately selected rock specimen from the Ramsay River, when sectioned showed a dolerite intruding a Crimson Creek hornfels, with a brecciated contact. Although this implies that the metabasites are younger, geological mapping to the south (Pigott, 1980) suggests these rocks are consistent with the Crimson Creek Formation.

5.2.3 Meredith Granite

This unit which occupies over half the area investigated is interpreted as a composite intrusive complex which was intruded in the Late Devonian. (Stockley, 1972) The ratio of potassic feldspar to plagioclase feldspar varies around the critical dividing value between granites and adamellites in many rocks. Thus Stockley (1972) notes the rock types as "even-grained grey granite/ adamellite and porphyritic granite/adamellite'. For simplicity, the two major types mapped at CSB were a coarse - equigranular biotite granite and a porphyritic micro-biotite granite. Stockley (1972) describes a non-porphyritic core and a marginal porphyritic phase, whereas at CSB the non-porphyritic phase is marginal. This may suggest that the porphyritic micro-biotite granite which hosts the mineralisation at the South Bischoff Mine may be a unique separated plug or some type of separated embayment. However both phases do include areas of altered granite and/or dykes of greisen and aplite.

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Coarse - equigranular biotite granite

This marginal, contact phase varies slightly and may be found to be medium grained, slightly disequigranular or have up to 5% of fine indistinguishable matrix material.

An average composition is;

Quartz	- 30%, average grain size	5mm
Feldspar	- 59%, " " "	8mm
Biotite	- 11%, " " "	3mm

Clots of black, prismatic tourmaline-schorl, sometimes as poorly formed rosettes and fine quartz-tourmaline veins are sometimes present. However there are no significant concentrations.

In Aylett Creek a large (> 1.5m) subrounded talus block contained a well rounded xenolith of a biotite microgranite. This is the only trace of the Microgranite described by Pigott (1980) in his Interim Report on the Ramsay Area (EL 5/63 Part 2).

Only one out of five samples of this rock type contained Sn and thus may be described as a normal Sn poor phase.

Porphyritic micro-biotite granite

This rock type was relatively consistent both texturally and mineralogically, average contents are;

Phenocryst content	10%
Total biotite content	28%

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Feldspar phenocrysts		65%	average	14mm
Quartz	"	28%	"	5mm
Biotite	"	7%	"	3mm

This rock type hosts the mineralised greisen dykes at the South Bischoff Mine. Geochemical analyses indicate that this is a stanniferous granite phase.

5.2.4 Tertiary Basalt

The extent of Tertiary Basalt cover is considerably less than anticipated especially over the north of the grid. The only outcrop seen was in the Ramsay River between 1020 and 1100m, where it formed sets of rapids. The basalt is fine-medium crystalline, dark grey, hard, heavy, with distinct dark green translucent olivine phenocrysts and sometimes magnetic. It is locally amygdaloidal with amygdales up to 7mm, averaging 1mm, green-probably chlorite-zeolite margins and inner white quartz core. Tertiary basalt float is very common throughout the length of the Ramsay River examined, much of which is sparsely vesicular. The source of the float is inferred to be an extensive cover to the east of the river.

5.2.5 Tertiary Basin Fill Material

This unit occurs sporadically in the lower reaches of Palmer Creek and is made up of poorly compacted, finely and subhorizontally bedded, clean quartz sandstones, siltstones and mudstones. Up to 7% conspicuous black unconsolidated carbonaceous material, still readily recognisable as twigs, etc occurs, usually in association with the mudstones.

The unit is inferred to be a shallow infilling of small topographic lows in the Tertiary, possibly Quaternary. Recent alluvium, mostly in the form of quartz and quartz-tourmaline covers this fill material to a depth of two metres in places. It is only where the prospectors in the 1920s have turned over lower portions of Palmer Creek that this unit is exposed.

5.3 Structure

Little structural information could be gleaned from the area as soil profiles are well developed and the creeks, although moderately incised are choked with alluvium.

The area along with the bulk of the north western Ramsay area lies on the western limb of a major anticline, which has been intruded by the Meredith Granite.

Limited data from the CSB area indicate that the strike of the Crimson Creek rocks is north-northwest and dip shallowly to the west. It appears that the emplacement of the granite may have dragged the country rocks up resulting in dips to the east near the contact.

The structural relationship between the two phases of granite remains unclear as at no place was the contact examined in outcrop. The fact that the porphyritic phase is usually the marginal phase, but at CSB is not and that it hosts one of the few tin lodes in the Meredith complex may imply that it has a unique paragenesis.

Faulting is inferred between grid lines 5720N and 5480N to explain the dramatic changes in lithologies seen on the eastern portion of the grid.

5.4 Metamorphism and Alteration

5.4.1 Crimson Creek Formation

The metamorphic marginal hornfelsing of the Cambrian Crimson Creek sediments and basic intrusives is usually low grade. The effects differ as to what lithology is being altered. Biotite is usually present along with recrystallisation effects, however higher grade indicator minerals such as cordierite are rarely developed. There appears to be no marked increase in grade as the contact is approached.

Metasomatic alteration effects are pervasive throughout the Cambrian rocks examined. Uralitisation, saussuritisation and sericitisation are common. Resultant products such as fibrous actinolite and tremolite are often encountered and can be seen in hand-specimen.

Outcropping in the lower reaches of Palmer Creek and a minor tributary of the Ramsay River to the north are what are designated altered Cambrian rocks on the interpretive geological map, Plan TAS/2/2375. The outcrop is made up of very soft pale blue-pale grey-green highly clay altered material. This material contains a green mineral, possibly epidote or chlorite, quartz and pyrite (up to 10%) and common fine ferruginous veinlets. This assemblage has probably been formed by intense hydrothermal-propylitic alteration of the Cambrian rocks. Although the nearby granite is an obvious source of the requisite hydrothermal fluids, the relationship is not clear and more work is required to delineate it.

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More work should also be carried out to trace the almost pure sideritic float found in the same minor tributary of the Ramsay. It is noted that minor sideritic veining occurs in the sediments to the north in the Ramsay River.

5.4.2 Meredith Granite

Dykes and pneumatolytically altered granite occur in both phases of the granite along with relatively common fine quartz, quartz-tourmaline veins and rare disseminated or clotty black tourmaline-schorl.

The few aplite dykes mapped, although strictly not an alteration phase themselves, appear to have been slightly altered. Clay alteration of the feldspar is only partly developed, but in some cases the rocks have undergone dynamic strain causing alignment of grains to give a sheared appearance.

The quartz-mica or greisen dykes which appear to reach their greatest concentration in the mine area are alteration phases of both granite types.

The major area of greisenisation in Aylett Creek exhibits good pseudomorphous textures after the coarse - equigranular biotite granite. The area covers at least twenty metres of the creek bed. The rocks are typically heavy, coarse grained, green-grey, with an average content of 50% quartz and 50% chloritised hydromuscovite. Minor associated minerals are black tourmaline-schorl, usually as veins or clots, zircon and secondary leucoxene. Although muscovite and tourmaline both contain fluorine, 0.02-2.95 wt % and 0.07 - 1.27 wt % (Bailey, 1976), enrichment is not apparent.

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The greisens found in the porphyritic micro-biotite granite/adamellite also contain 'relict textural features representing an altered porphyritic microgranitoid'. (Appendix I).

The dykes mapped in the adits and costean (Plan TAS/2/2606) varied from two metres to a few millimetres. Reid (1923) notes a maximum of 2.13 metres. The larger dykes have an average strike of 332^{o} (Mag) and dip of 63^{o} west. This strike is consistent with greisens found in Johnson's Creek to the northwest. The rocks are fine grained with quartz the only surviving phenocryst mineral, heavy and green-grey. The dominant minerals are quartz and muscovite. Tourmaline is again present as disseminated grains and/or veins with quartz and mica. Chlorite is often associated with the mica and also occurs with quartz as veins. Minor minerals include leucoxene-rutile, zircon and allanite. No cassiterite was identified in any of the samples. The greisen dykes, although possessing a well defined foot wall were not well defined at the hanging wall. Reid's, 1923, description of the lode could not be confirmed but must be taken as an accurate appraisal, since he was present, while mining of the lode was being carried out. Small widths of kaolinisation were encountered containing malachite and quartz, however the relationship to the greisen areas was unclear.

Separate subhorizontal, bivaricating, white, streaky kaolinite veins were common in parts of the adits, averaging 20mm. The granite in these areas is also slightly kaolinised, the orthoclase phenocrysts being preferentially altered.

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6. GEOCHEMISTRY

6.1 Stream Sediment Geochemistry

6.1.1 General

Two sampling techniques were utilised. The first followed normal stream sediment sampling procedure at 100m intervals and sieved to obtain -20 and -80 mesh fractions.

The second technique (Sn, W, Ta) at 200m intervals arose following problems of insufficient samples, mainly caused by a high organic content in some samples and the doubts of a representative sample from an ordinary stream sediment sample. Especially considering, Sn would not be equally distributed through the sediment. Hence the initial heavy concentrate sampling technique was used. The constant partially sieved volume of one fifth of a cubic foot ensured an adequate initial sample and panning down ensured the loss of the organic material. It was also hoped to use a portion of the residues for normal heavy concentrate analysis. However this has now proved impracticable and separate samples for heavy concentrate analysis will have to be taken in the forthcoming programme. The XRF method was used to analyse for Sn, W and Ta, and the AAS method for Ni, Cu, Pb, Zn and As.

The results are presented in plan form on the 1:5000 scale base sheets, TAS/2/2614 and 2616 and TAS/2/2615 and 2617. The generalised plan showing anomalous Sn stream sediment geochemistry (Plan TAS/2/2032) from Pigott, 1980, is included for comparison. A compilation of all results from 1979-1981 is not possible owing to different analysis methods and the problem of sample locations of the old work.

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Results are also presented as stacked geochemical profiles for individual creeks along with interpretive geology on the topographic profile included. (Plans TAS/2/2610 - TAS/2/2612) For simplicity, enhanced W and Ta results were often excluded from the profiles and plans as these elements were not detected in the samples.

The limited number of samples precluded a meaningful statistical treatment so examination of the creek profiles along with limited reference to some 1979 results (Pigott, 1980) were used to identify anomalous samples.

6.1.2 Palmer Creek (Plan TAS/2/2612)

The majority of Sn results are anomalous, the pattern however is erratic, as would be expected as the values reflect trap sites, potential source areas and early century prospecting and mining.

Four distinctly anomalous peaks are delineated by the first method, however the enhanced values indicate one well developed peak (0.455% -20, 0.625% -80) at 800m. Acknowledging the possible problem of 200m sample intervals the two peaks in the lower reach of Palmer Creek are probably due to alluvial concentration in the topographic low. The upper peak may be explained by contamination from diggings and tailings from Adit A which are adjacent to the Creek. The relationship between the two different size fractions is generally symmetrical and doesn't indicate that a source is being approached by offset fine and coarse fraction peaks.

The Pb creek section outlines an anomalous peak at 700m immediately downstream of the major Sn anomaly. The values over the non granitic part of the creek base reflect a higher background and the two peaks are considered minor.

The Zn creek section shows very good correlation with the rock units.

The W, Cu, Ni and As creek sections are unremarkable.

6.1.3 Johnson's Creek (Plan, TAS/2/2611)

This creek was extensively worked in the early part of the century (see Section 3), especially between - 5500m and 6000m. Dams, sluicing nozzles, pipes and iron tracks are still in evidence. However their appears to be no contamination from this ironmongery, but Sn values downstream of 5500m will reflect contamination from the South Bischoff Mine.

The Sn creek section reflects the contamination, however the separated anomaly around 4700m indicated by both methods may imply a source. There appears to be little enhancement in values over the greisen areas mapped between 5000m and 5400m.

The W values reflect probable contamination from the mine area.

Zn and As values appear to indicate anomalous responses over the greisen outcrop and contamination from the mine.

6.1.4 Aylett Creek (Plan TAS/2/2610)

The headwaters of this creek contributed the highest Sn value of 1080 ppm (colorimetric analysis) in the 1979 survey. It again realised very high values in the current programme using the now standard XRF analysis technique.

The creek section for Sn shows two very well developed peaks. The first shows differentiation by the size of the Sn containing grains, the finer fraction being more abundant downstream. It appears that a very good source is present in the vicinity of 500m. This is the area of the unusual granite-sediment contact. The second peak at the top of the creek is very sharp and appears to be over Cambrian metasediments. A source is indicated nearby as there is little flowing water, hence concentration in a trap site by gravity settling would be minimal.

Pb and Zn and to some extent As responses show close correlation with possible sources at around 300m and 600m. Both these areas correspond to outcrop of altered granite and the latter also to a granite-sediment contact zone.

Cu and Ni creek sections show no anomalies. The first Sn and Pb-Zn anomalies and possibly the second Sn anomaly may indicate a source in the roof of the granite. As the roof is exposed by the incising Aylett Creek the elements are introduced into the creek. This area requires intensive follow up work utilising closer spaced grid lines, especially to the north of the present grid.

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6.2 Soil Geochemistry

The C-horizon auger soil samples from grid CSB at 20m intervals were analysed for Cu, Pb, Zn, Ni and As by the AAS method and for Sn by the XRF method.

The results are presented in three different ways:-

i) Profiles on grid line sections (Plans TAS/2/2584 - 2588)

ii) Contoured anomalous populations plans (TAS/2/2367 - 2371)

iii) Contoured anomalous populations treated separately over granite and non-granite areas. (Plans TAS/2/2599 - 2604)

The last treatment was used because subtle anomalies over either rock type were being swamped by high background values over the other. For example, a subtle Zn anomaly over a granite area would be lost by the much higher average background population over the non-granite rocks. The standard treatment is included for comparison.

Anomalous populations were identified by using frequency histograms and cumulative frequency graphs.

6.2.1 Sn (Plans TAS/2/2603 and 2370)

The split treatment outlines a dominant north-south trend over the granite area with a strong zone in the northwestern corner, picked out by both plans. This zone is open to the north and if it reflects a continuation of the mine greisens, it must be considered highly prospective.

Other areas of interest are the two point high on L 5240N, 4880E-4900E and the zone on L 5960N near Aylett Creek. The sparse outcrop mapped in the latter area shows an appreciable increase in tourmalinisation. Both areas require further work especially the latter as it is in the region of high stream sediment results.

Soil samples taken adjacent to various creeks, including the Ramsay River indicate Sn concentrations, probably due to secondary water borne concentration.

Anomalous results from the northeast corner of the grid are significant, as they are reasonably consistent with the area of highly altered Cambrian rocks. More work is needed to examine the relationship between these geochemical highs and altered rocks found in the area. Insertion of grid lines between those pre-existing lines should satisfactorily test the areal extent of the anomalies.

6.2.2 Pb (Plans TAS/2/2368 and 2600)

Pb values over the granite, like Sn exhibit a north-south zoning. One zone marginal to Johnson's Creek (includes the South Bischoff Mine) and one down Aylett Creek. This pattern displayed by both Pb and Sn suggests that north-south fractures may have controlled the concentration of these elements.

A one station high on L 5240N at 4780E may be significant as it occurs near the high Sn response at 4880E.

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Pb responses over the non-granite rocks are sporadic, but again an area in the northeast portion of the grid requires definition and explanation by further work.

6.2.3 Cu (Plans TAS/2/2367 and 2599)

The Cu results when statistically analysed together illustrate very well the need for split treatment. The values over the granite areas are uniformly lower than the others and effectively lower the anomalous population threshold. Hence fairly extensive areas over the non-granite areas become anomalous. When treated separately these areas largely vanish into a normal population distribution.

Sporadic anomalous samples appear to form little pattern.

6.2.4 Zn (Plans TAS/2/2369 and 2601)

Zn results over the granite rocks respond as all do to the mine area and three areas that are almost marginal to the delineated tin area in Aylett Creek. Small responses on L 5240N also appear to be marginal to a Sn high and partly coincident with a Pb anomaly.

A strong zone marginal to the Ramsay River is indicated by both treatments. Apart from L 5960N these samples come from low lying swampy areas adjacent to the river and would imply sources to the west or from further upstream unconnected with the CSB area.

The spot high on L 5000N at 5200E is coincident with a Cu high, but its proximity to the Ramsay Road gives rise to suspicions of contamination. If not this anomaly could be easily tested by a short costean off the road.

6.2.5 As (Plans TAS/2/2371 and 2604)

Although absolute values are not high, two main zones are indicated. The area between the granite - non granite contact and Aylett Creek again responds as does the zone in the northeastern part of the grid. The latter zone on this occasion extends south for two grid lines, more or less corresponding to the northern portions of Cambrian metasediments and may indicate higher background values.

The response over the mine area is minimal and the ability of As as a Sn trace must be viewed with caution in this area.

6.2.6 Ni (Plans TAS/2/2372 and 2602)

The responses on L 5960N near Aylett Creek like Zn appear to be marginal to the Sn-Pb anomalies. The Zn-Cu point high on L 4000N at 5200E again responds. Other responses are sporadic and probably not very significant.

6.3 Rock Geochemistry

Rock sample assay results are appended as Appendix II. For sample locations consult Plan TAS/2/2366.

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6.3.1 Granites

Sixteen samples of the porphyritic micro-biotite granite were assayed along with six samples of the coarse - equigranular biotite granite.

By inspection and by Bailey's (Bailey, 1975) triangular diagram the porphyritic granite is a stanniferous granite whereas the other is a 'normal' granite.

However no economic concentrations of metals were found in these samples away from the mine area. Results were erratic and by in large showed little correlation with the soil geochemistry.

However the samples from Titian Creek could be significant as they are the only ones to contain W, the upper sample contains anomalous Sn, Pb and F and the only stream sediment sample from the entire area to contain Ta came from Titian Creek.

6.3.2 Altered Granite Rocks

The greisens of the CSB area were relatively well sampled and generally showed concentration of all elements. The notable exceptions to this are Cu and W, and in the adit channel samples, F. An antipathetic relationship between Cu and Pb is apparent and the standard Sn : Li : F relationship is not apparent. Although many of the samples contain high concentrations of various elements, none are of economic grade apart from T8268 which contains 0.47% W.

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Unfortunately this value was not repeated in the pit channel samples from whence T8268 came. This lack of reproducibility coupled with that found in some of the adit samples highlights the erratic nature of the element concentrations in the greisens.

The aplitic dykes sampled showed limited element concentration. The aplite dyke sampled in Palmer Creek at 865m would not appear to be the source of the significant stream sediment anomaly indicated to be in the vicinity.

Miscellaneous samples from the mine area provide the best values of the CSB area. The first, a ferruginous, malachite stained, quartz-kaolinite vein from Adit B at 61.0m shows enrichment in Sn, Cu, Pb, Zn, As, Ag, Mo and Bi and loss of F and Li. The F (147ppm) and Bi (835ppm) values being particularly remarkable. This loss of F and enrichment of Bi is again reflected in another sample. This second sample, of loose talus, taken from the area adjacent to the main costean contains remarkably high concentrations of Sn (10.5%), Cu (3.0%) and Zn (24.0%).

6.3.3 Channel Sampling of Adits and Costean (Plans TAS/2/2607 - 2609)

The adits were horizontally channel sampled at approximately 1.5m above the adit floors. Care was taken to sample as close as possible to this height and to ensure the channel was continuous and of equal dimensions. However it became apparent after geological investigations that samples were being taken subparallel to the strike, hence vertical channel samples were taken in the main costean.

Adit A was sampled along the southwest wall at 2m intervals and produced no anomalous samples of note. This short adit (20.6m) is some distance from the true mine workings and was probably put in for exploration purposes.

Adit B was sampled at four metre intervals along the southwest wall. It corresponds to Reid's (Reid, 1923) No 2 Adit, is the longest surveyed (> 80m) and produced the best results. At best however the relationship between the various element concentrations would be described as erratic.

The Sn results do broadly correspond with the occurrence of greisen dykes. The weathered, slightly altered porphyritic micro-biotite granite/adamellite however does not appear to be significantly Sn enriched around the dykes.

Apart from the high Sn results, some of economic proportions (max 1.9%), the high Bi between 32m and 40m (av. 1325ppm) is worthy of note. Minor concentrations of Pb between 48m and 56m (av. 1095ppm) and W, between 60m and 64m (380ppm) are also of interest. F, Zn and Li results remain remarkably constant, F low, and Li and Zn moderately enhanced.

Adit C, sampled at four metre intervals along the northeastern wall contained similar values to those in Adit B. However Sn was only moderately enhanced in the last two samples, 28-36m (av. 2755ppm). This Adit like Adit B did continue past the stoped area, but was considered unsafe.

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The channel samples from Adit D were taken from the northeastern wall at four metre intervals and contained few element concentrations of note. No enhancement of values attended the concentration of Kaolinite veining in the granite.

The Main Costean was sampled in vertical channels from the floor to ground surface at three metre intervals. It furnished some high Sn values (max 0.91%), however they are again erratic, probably reflecting sporadic concentrations within the greisen dykes. This may indicate intermittent remobilisation of fluids within the greisen dykes. W is also enhanced in some samples, especially towards the southern end of the costean. Pit three at the northern end of the costean was the source of rock grab sample T8268 which contained 0.47% W. Hence the pit was channel sampled. Horizontal sampling was utilised at a depth of 1.3m down the 1.9m deep pit. No high W results were recorded but one sample carried significant Sn. (1500ppm).

6.3.4 Cambrian Rocks

Rock samples taken from these lithologies indicate few anomalous concentrations of elements. Two samples SB004 and SB008 from the northeast corner of the grid show a slight concentration in Cu and Cu-Zn-Pb-Sn respectively.

Immediately to the south on L 5720N the propylitically altered rocks show significant enrichment in F and Li which may further imply the effects of granite derived fluids.

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Some of the samples from Aylett Creek where the granite is being unroofed show some anomalous element concentrations. Samples AL 013, 014 and 017 contain more Sn than others and 014 + 017 also show some W enhancement. AL 007 is also interesting, as it contains the highest amount of Li (345ppm) found throughout the area. It also contains - 0.5% Pb and anomalous Zn (940ppm).

6.4 Miscellaneous Geochemistry

Five samples of silt and sand sized material were taken from the flat area approximately 33m below the old three head battery. For location (Plan TAS/2/2366) and results consult Appendix II.

The samples were equally spaced over the area and taken at depths below one metre using a hand auger. All samples contained anomalous Sn, W and Bi. The average Sn content was 0.34%. If one accepts an average mined grade of 3.09%, then the recovery was about 90%. Even though the Sn was probably as its oxide, cassiterite and not complexed in sulphides the recovery was still very good.

7. GEOPHYSICS

The only geophysics carried out over CSB grid was a ground magnetic survey, using a portable proton precession magnetometer. Base station readings were repeated approximately every 600m and times taken about every ten minutes. Readings were averaged, then corrected for diurnal variation and are presented as a contoured plan of the total magnetic field (Plan TAS/2/2374) and in grid line profiles, (Plan TAS/2/2584-2588).

All lines show a gentle uniform gradient over both granite types, slowly decreasing toward the contact with non-granitic rocks. There is no response over the contact between the two granite types. The mine area however is picked up by a subtle negative anomaly.

Over the contact on non-granitic rocks the readings begin to fluctuate erratically. This 'spiky' profile is typical of that over the Crimson Creek Formation. This is owing to the fact that the metasediments typically contain significant amounts of detrital magnetite and commonly attract a hand magnet. The metabasites contain magnetite as a primary constituent.

On three lines; 5240N, 5720N and 5960N, two small peaks occur at relatively constant distances apart, similar distances from the granite contact and have like magnitudes. These responses strike parallel with the country rock. The responses especially on L 5240N appear reminiscent of a conformable, flat-shallowly dipping body to the west. As metabasites are interpreted to underly the area of the anomaly on two of the three lines are close to the area of the third, a metabasic intrusive sill could explain the response.

The contoured total magnetic field plan delineates a broad negative anomaly over lower Palmer Creek in the area of the altered sediments. This may suggest a considerable thickness of altered sediments and/or granitic rock relatively close to surface.

8. RECOMMENDATIONS AND WORK PROPOSALS

Extensive follow up work is highly recommended over the CSB area and to the north. Once completed and interpreted, drilling programmes will probably then be proposed.

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8.1 Gridding (Plan TAS/2/2594)

It is proposed to cut new grid lines at 80m intervals to fill in the existing CSB grid north of L 5240N with two new lines between two existing ones. Only one line would be cut 80m south of L 5240N in order to close the soil geochemical anomalies between Titian Creek and the Ramsay Road.

Extension of the grid to the north with four 80m spaced grid lines should close the significant soil geochemical anomalies, minor geophysical anomaly and assist exploration of the prospective headwaters of Aylett Creek.

It is proposed to extend grid lines 5240N, 5480N, 5720N, 5960N and new grid line 6200N, 300m westwards. These extensions would enable investigation of the hitherto unexplored western bank of Johnson's Creek which the greisen dykes of the South Bischoff Mine and Johnson's Creek strike toward. It has also been assumed that the sources of the considerable stream sediment anomalies are to be found on the east side of the Johnson's Creek as in the case of the mine. It is possible that sources from the west bank have been masked by contamination from the mine and past alluvial mining effects.

All new grid lines would be geologically mapped, C-horizon soil sampled and traversed with a magnetometer.

Total: New grid lines 14,450, samples 750.

8.2 Creeks

The small tributary of the Ramsay River on L 5720N would be surveyed, stream sediment sampled and geologically mapped. This would provide information on the anomalous northeast area of the grid and may explain the presence of almost pure carbonate rocks and further delineate the propylitically altered areas.

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Further heavy concentrate samples should be taken in order to compare individual trap sites in all creeks containing anomalous Sn values.

Total: Map and Survey 600m, samples 33.

8.3 South Bischoff Mine Area

Detailed channel sampling should be carried out across well developed greisen dykes in order to try and understand the zonation of elements within the dykes.

Shallow trenching between Adit D and L 5760N should be investigated in detail to try and delineate possible greisenised areas to the north.

Total: Map and Survey 200m, samples 50.

8.4 Geophysics

In addition to surveying the total magnetic field over the entire grid, it is felt a gravity survey of the entire grid would also be of considerable use.

Tischendorf, (1973) notes; 'The most reliable data are, however obtained by the application of gravity measurements, which provide information on the position of the granite contact.' The 'contact' referred to here is in respect to sub plutons. Hence the sense of the granite contacts should be able to be determined and any sub-plutons detected.

8.5 Statistical Summary

Grid Cutting	14,450m
Survey (Tape & Compass)	15,250m
Geological Mapping	15,250m
Gravity & Magnetic Surveys	20,450m ea
Total Samples	800

for N P Green
Geologist

Approved by

R J Kernick
Exploration Manager

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APPENDIX I

PETROLOGICAL REPORTS

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Mt. Bischoff Road
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8th January, 1981

REPORT CMS 80/11/41

YOUR REFERENCE:	Letter dated 13.11.1980
DATE RECEIVED:	18th November, 1980
SAMPLE NOS.:	A 1, S 002, S 008, P 007, P 010
SUBMITTED BY:	N.P. Green
WORK REQUESTED:	Petrology

H.W. Fander, M. Sc.

041

REPORT CMS 80/11/41

Petrological Descriptions

A 1

South Bischoff Mine

Adit A @ 0·8m

(T.S. 34910)
This is a quartz-mica rock or greisen and, on the basis of vague relict textural features, represents an altered porphyritic microgranitoid ("quartz porphyry").

The rock consists largely of granular quartz (mean 500 μ) weakly stained with muscovite inclusions and with frequent interspersed aggregates of fine-grained, random to crudely rosette (subradiating) muscovite with subordinate, closely associated chloritised mica (i.e. biotite or phlogopite). Sparse relict phenocrystal quartz grains are present and mica aggregates are partly recognisable as semi-pseudomorphous after medium-grained, granitic-textured feldspar.

The area sectioned is transected by a 3-7 mm wide vein of dark, colour-variable (generally green) schorl with discontinuous core zones and marginal selvedges of quartz. This feature includes fine-grained muscovite and chlorite, typically closely intergrown with tourmaline and vaguely pseudomorphous after "biotite", and minor traces of metamict ?allanite.

An adjacent parallel 750 μ - 3 mm wide quartz-chlorite vein evidently postdates the tourmaline-quartz-mica vein, although the two do not intersect. Thus, the alteration pattern could be summarised as quartz-muscovite-biotite(-tourmaline-allanite) followed by a retrogressive quartz-chlorite(-muscovite) phase.

S 002

Ramsay River 020m (upstream)

(T.S. 34911)
This rock can be classified as a uralitised and mildly hornfelsed biotite microgabbro. It consists essentially of thoroughly saussuritised/partly albitised plagioclase laths and slightly subordinate uralitic actinolite. The relict fabric is subophitic ("doleritic") and medium-grained (mean 100-150 μ). Relict primary magnetite is evenly disseminated throughout, along with minor traces of apatite. Fine-grained pyrite disseminations, clots and crude films are present and appear, in part, to be secondary after pyrrhotite.

Actinolite is largely semi-pseudomorphous after lath-like to subophitic pyroxene, but locally pseudomorphs sparse accessory biotite flakes. The alteration is thus retrograde with respect to pyroxene, but prograde with respect to biotite. General features are consistent with deuteric saussuritisation/uralitisation and a mild contact-metamorphic overprint.

S 008

Ramsay River
267m
(upstream)

(T.S. 34912)
This rock is a brecciated and thoroughly metasomatised labile pelite. Alteration is marked to the extent that primary mineralogy is largely obscure, although conspicuous fine silt-sized relict clastic opaques are consistent with a pelitic tuffaceous greywacke or ash with analogies to those of the Crimson Creek formation.

The rock consists of extremely fine-grained tremolite-actinolite with sparse, closely intergrown, poorly defined quartzofeldspathic material. A submillimetric to microscale relict sedimentary banding is evident in the bulk of angular to subangular, poorly sorted (150 μ - 2 cm+) breccia clasts and this enhances the metasomatised sediment aspects.

An early phase of albite-quartz veining is evident, with the feldspar now pervasively and thoroughly sericitised. Later veins of tremolite-actinolite with accessory quartz are pervasive and grade into breccia-healings of similar mineralogy. Minor late crosscutting chlorite veinlets occur sporadically. The rock is incipiently mineralised with occasional microscopic particles and spongy clots of pyrite associated with the actinolitic veins and segregations.

P 007

Palmer Creek
280m

(T.S. 34913)
This is a mildly hornfelsed and extensively metasomatised tuffaceous greywacke with affinities to S 008, but psammitic rather than pelitic.

The rock is faintly bedded and poorly sorted in the silt to medium sand range. Recognisable clastic components comprise microcrystalline felsic intermediate lava clasts, feldspar grains, minor quartz and chert-metaquartzite clasts, and abundant silt-sized opaques. Grainshapes are generally angular. The matrix is silt-sized clastic material, but poorly defined optically.

The matrix and, to a lesser (but marked) degree, the framework are pervaded by extremely fine-grained tremolite with subordinate, closely intergrown orange-brown Ti-biotite. Sporadic clots of essentially massive micagive the rock a weakly spotted appearance, and represent preferentially biotitised clasts, possibly ferromag silicate grains (e.g. amphibole). Relict quartzofeldspathic material is weakly recrystallized in response to marginal hornfelsing, but metasomatism is the main alteration feature. This rock isincipiently mineralised with thinly disseminated microscopic clots of Fe-sulphide (?pyrrhotite).

P 010

(T.S. 34914)

This is a uralitised microgabbro with affinities to S 002. In contrast, this rock is strongly porphyritic with frequent uralite semi-pseudomorphed pyroxene and subordinate saussuritised/albitised plagioclase phenocrysts sized up to 2.5 mm diameter.

Palmer Creek 485m

These features are embedded in an altered groundmass of partly albitised labradorite microlaths, subordinate uralitised subophitic pyroxene and pervasive, extremely fine, subacicular tremolite-actinolite. Relict primary magnetite is conspicuous throughout. Clots of pyrrhotite (to 2 mm, typically < 500 μ) are locally associated with the altered pyroxene phenocrysts.

Pale titaniferous phlogopite is a minor accessory alteration phase. The uralitic amphibole is a yellowish actinolite, optically similar to that in S 008. Hornfelsing recrystallization effects are evident, but are not marked.

D. Cowan, B. Sc.

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18th March, 1981

REPORT CMS 81/2/3

YOUR REFERENCE:	Letter dated 1.2.1981
DATE RECEIVED:	2nd February, 1981
SAMPLE NOS.:	12 Samples
SUBMITTED BY:	N.P. Green
WORK REQUESTED:	Petrology

H.W. Fander, M. Sc.

REPORT CMS 81/2/3

Twelve rock samples were received for thin-section preparation and petrological examination; K-stain and carbonate-stain tests were carried out, where applicable, on the offcuts, and the results were incorporated in the brief descriptions in the accompanying table.

Summary

This suite includes fresh and altered igneous rocks, sediments and metasediments. Several rocks contain evidence of metasomatism.

The igneous rocks include a fresh biotite granite (A 5), two greisenised granites (B 1, AL 006), two altered dolerites (S 018 intruding hornfels, SB 010) and two metasomatised tuffs (SB 004, SB 006?).

The only sediment (i.e. not metamorphosed or metasomatised) is a siderite rock (S 015) which appears of primary deposition (with the usual diagenesis).

The metasediments are hornfelses and a metasomatised chert/?tuff sequence; in some rocks both metamorphism and metasomatismhave occurred, in that order.

No cassiterite was detected. Pyrrhotite was noted in S 019.

H.W. Fander, M. Sc.

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Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
A 5 S[th] B. Mine adit A - 19.6m (T.S. 35830)	Biotite Granite. About 40 % orthoclase, 35 % quartz, both anhedral; 15 % partly sericitised oligoclase as small laths, 10 % stubby biotite flakes.	Coarse, verging on medium-grained, intrusive fabric. Homogeneous.	Accessory zircon, apatite needles, magnetite crystals.	Biotite is fresh except for very incipient chloritisation. Rock quite fresh. ?Minor intrusive.
B 1 adit B - 30m	Greisen. Shapeless interlocking patches of stressed quartz and aggregates of small muscovite flakes; a few tourmaline crystals.	Relict igneous fabric; pseudomorphous textures after feldspars, biotite.	Scattered, unaltered orthoclase. Fe-staining. Fine leucoxene-rutile.	Originally a biotite granite (in br sense). No cassiterite detected. Tourmaline is replacive.
S 014 Emsay River 1480m	Biotite-Magnetite Hornfels. Mostly microgranular uniform magnetite, biotite, quartz, feldspar; zones, lenses, bands of the same minerals, but coarser.	Coarser bodies seem to be recrystallized material; otherwise very fine-grained.	Plagioclase occurs in coarser bodies; thin siderite veinlets.	Contact-metamorphosed fine sediment, fairly featureless; appreciably magnetic.
S 015 Emsay River 1595m (Fit)	Siderite Rock. Almost entirely siderite, as uniform, brown, interlocking patches, with scattered silt-size quartz grains.	Uniform, featureless, medium-grained fabric. Average grainsize = 0.2 mm.	A few larger, fractured quartz grains.	Apeears to be primary siderite, diagenetically recrystallized, but otherwise unaltered.
S 018 Emsay River 1780m	Dolerite/Hornfels. Mainly completely altered dolerite (amphibole, argillised plagioclase) intruding fine quartz-diopside-tremolite-magnetite hornfels.	Dolerite fabric well-preserved. Contact is brecciated.	Veins and patches of fibrous actinolite at contact and in hornfels.	Dolerite is younger, but completely uralitised, saussuritised. Hornfels may be correlatable with S 014, but higher grade.
S 019 Emsay River 1840m	Metasomatised Chert/?Tuff. Chert bands with microgranular diopside, and bands of ?tuff replaced by diopside. Many diopside/sulphide veins.	Original banding preserved. Relict textures in ?tuff.	Fine pyrrhotite and pyrite, and ?MnO_2, throughout.	Originally a layered rock, with cher impure chert, possible tuff, all metasomatised to varying degrees.
AL 006 Tylett CK 355m	Greisen. Coarse, strongly stressed quartz patches, large aggregates of muscovite flakes or sericite flakes (replacing feldspar), chloritised biotite.	Very coarse, granitic fabric, with good pseudomorphous textures.	Accessory zircon. Secondary leucoxene in altered biotite.	Low-temperature greisening; replaciv hydromuscovite (sericite) and fine chlorite; no cassiterite seen.
AL 015 Tylett CK 790m	Biotite Hornfels. Mostly finely-granular quartz intergrown with dark Ti-biotite, K-feldspar; wedges/lenses of coarser quartz-biotite.	Coarser portions have relict clastic textures, otherwise uniform, fine-grained.	A few small granular tourmaline patches. Scattered magnetite.	Bands of finer/coarser material, coarser-grained wedges/lenses, are pre-metamorphic. Poss-ible relict turbidite fabric.
AL 017 Tylett CK 835m	Micaceous Quartzite. Angular to subangular quartz grains, sericitised feldspar fragments; interstitial random sericite and altered biotite.	Moderately/poorly-sorted clastic grains. Faintly bedded; medium-fine-grained.	A few tourmaline patches. Pervasively ferruginised.	Originally an argillaceous, feld-spathic sandstone, pervasively sericitised, weakly biotitised (low-grade contact-metamorphism).

[redacted] Central Mineralogical Services

Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
SB 004 CSB Grid 5960 N | 5465E	Metasomatised ?Tuff. Small fragments of quartz, plagioclase, chert, trachyte-andesite; abundant oxide opaques (?ilmenite); tremolite needles, phlogopite.	Fine/medium-grained, moderately-sorted/ sized, bedded.	Ultrafine magnetite present as well as ilmenite.	Metasomatism has obscured details, but rock appears similar to Crimson Creek subaqueous tuffs.
SB 006 CSB Grid 5960N | 5423E	Metasomatised ?Tuff. Consists of porphyroblasts of cordierite, embedded fibrous-radiating tremolite, fine magnetite andquartz; quartz and plagioclase fragments.	Vague relict clastic textures and faint bedding. Medium-grained.	Phlogopite in quartz veinlets and in rock.	Contact-metamorphosed and meta-somatised rock, resembling SB 004 rather than S 014. Magnetic.
SB 010 (T.S. 35841) 5960N | 5160E	Metasomatised Dolerite. A few labradorite phenocrysts, partly replaced by actinolite, in a random mass of labradorite laths, poikiloblastic hornblende.	Relict medium-grained igneous (doleritic) fabric preserved.	Thin ilmenite plates throughout.	Rock not simply uralitised, but als metasomatised to some extent. Could be related to S 018.

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South Bischoff Grid

Location	Distance	Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
Line: 5960 N	4635 E	BLD	585	37	15	1450	22	1	BLD	BLD	BLD	BLD	coarse grain granite.	SB: 001
	4865 E	BLD	180	6	12	1122	25	1	BLD	2·0	BLD	BLD	c.g. granite	002
	4890 E	BLD	105	3	2	286	4	1	BLD	3·0	BLD	BLD	c.g. granite	003
	5465 E	BLD	800	8	144	634	24	1	0·5	BLD	BLD	BLD	fine, slightly magnetic hornfelsed tuf. sandstone	004
	5323 E	30	300	620	275	608	5	28	2·5	0·5	BLD	BLD	weathered, limonitic micaceous gossan?	008
	5160 E (F)	BLD	275	31	169	770	9	·6	BLD	6·0	BLD	BLD	f-medium crystalline porphyritic basalt.	010
Line: 5720 N	4220 E (F)	80	47	595	225	2074	19	3	BLD	2·5	BLD	10	greisen with quartz-tourmaline veins	012
	4235 E	BLD	85	17	30	1426	29	1	BLD	2·0	BLD	BLD	py. microadamellite	013
	5400 E	BLD	52	22	235	2938	44	BLD	BLD	0·5	BLD	BLD	propylitically altered rock	014
	5315 E	10	135	149	115	714	15	35	BLD	4·5	BLD	BLD	f. bedded. deformed pelite.	017
	5300 E	15	205	22	121	1250	14	12	BLD	1·0	BLD	BLD	m-c.g. xaln mcr. gabbro	018

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR South Bischoff Grid

ASSAYED BY Analabs FROM Line 5960 N TO 5720 N DATE /5/81 PAGE 1 OF 8

839079

South Bischoff Grid

Location	Distance	Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
Line: 5480N	5368E	BLD	130	14	65	1146	14	5	BLD	BLD	BLD	BLD	porphyritic Cambrian basalt?	SB020
	5260E	10	110	22	81	666	9	9	BLD	BLD	BLD	BLD	fine, crystalline bs amphibolite tuff	021
	4345E	120	7	9	31	1114	36	4	BLD	1·0	BLD	BLD	py microadamellite	023
	4885E	15	4	6	14	651	26	2	BLD	0·5	BLD	BLD	coarse grain granite.	024
Line: 5240N	5240E	70	109	1	54	969	10	·2	BLD	BLD	BLD	BLD	hornfelsed py. f. mcr. gabbro	025
	4630E	25	4	2	33	934	38	1	BLD	0·5	BLD	BLD	py mcr. ad (fresh)	026
Line: 5000N	5520E	10	24	BLD	57	565	16	1	BLD	2·0	BLD	BLD	f-medium bs tu	028
	5496E	6	21	BLD	50	550	18	1	BLD	2·0	BLD	BLD	ho bs tu (magnetic)	029
	5424E	10	8	BLD	48	469	51	BLD	BLD	1·5	BLD	BLD	ho mcr. gb	030
	5410E	10	35	BLD	108	338	N/L	1	BLD	1·5	BLD	BLD	slightly ho bedded argillite & f. siltstone	031
	5095E	BLD	3	5	15	464	11	BLD	BLD	1·5	BLD	BLD	c.g. granite	032
	4810E	BLD	2	2	16	535	21	1	BLD	2·0	BLD	BLD	c.g. granite	033

839080

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR South Bischoff Grid

ASSAYED BY Analabs FROM Line 5480N TO Line 5000N DATE /5/81 PAGE 2 OF 8

South Bischoff Creeks

Location	Distance	Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
Johnson's Creek	4938 m	95	7	360	270	1138	7	BLD	BLD	2·0	BLD	BLD	quartz porphyritic greisen	Jon 001
	4440m	BLD	28	30	50	136	28	1	BLD	0·5	BLD	BLD	fresh py microadamellite	002
	5075m	30	10	53	49	2090	10	1	BLD	1·0	BLD	BLD	kaolinised grs.	003
	5220m	150	9	40	52	2946	9	1	BLD	2·0	BLD	BLD	coarse qz grs.	004
	5300m	BLD	8	27	20	1162	8	2	BLD	2·5	BLD	BLD	fresh py mcr.ad	005
	5375m	65	21	88	920	1722	21	1	BLD	1·5	BLD	BLD	grs with black tourmaline.	006
	5760m	5	3	11	73	617	28	1	BLD	2·5	BLD	BLD	weathered py mcr.ad	007
	6220m	30	2	31	65	600	19	BLD	BLD	2·0	BLD	BLD	py mcr.ad	008
					FROM 4938m TO 6220m									
Fred Nurk Creek	010m	70	15	615	54	1930	7	2	BLD	1·5	BLD	BLD	wthd qz py sericitic aplite	FN001
	117m	BLD	11	64	65	682	18	14	BLD	3·5	BLD	BLD	wthd limonitic py mcr.ad	FN002
					FROM 010m TO 117m									
Titian Creek	023m	BLD	8	11	45	1346	46	2	BLD	2·0	BLD	20	py mcr.ad	TI 001
	040m	20	11	515	17	2258	30	3	BLD	4·5	BLD	15	wthd py. mcr.ad	TI 002
					FROM 023m TO 040m									
													839081	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR South Bischoff Creeks

ASSAYED BY Analabs FROM - TO - DATE /5/81 PAGE 3 OF 8

[redacted] Creek

Location	Distance	Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
Aylett Creek	(F) 075 m	BLD	4	19	13	58	5	3	BLD	1·0	BLD	BLD	aplite with black tourmaline	AL001
	335m	35	20	385	2350	3258	12	1	5·0	2·5	15	BLD	coarse quartz greisen	003
	335 m	BLD	11	33	2350	278	37	1	BLD	5·5	BLD	BLD	c. qz grs?	004
	350m	35	9	560	1750	2082	106	1	3·0	3·0	10	BLD	c. qz grs with to	005
	358m	120	5	44	240	1514	43	1	BLD	2·0	BLD	10	c. qz grs ć to	006
	450m	BLD	78	4950	940	356	345	2	BLD	BLD	BLD	BLD	wthd, lim, sericitic f. sandstone-siltstone	007
	590m	BLD	7	65	50	271	72	2	BLD	1·5	BLD	BLD	biotite poor, micro.granite	008
	599m	10	74	340	685	2	15	2	BLD	0·5	BLD	BLD	wthd mcr.g	009
	620m	BLD	21	71	88	12	28	7	BLD	BLD	BLD	BLD	fine-medium tuffaceous sa ć qz	010
	665m	BLD	5	101	97	140	52	3	BLD	7·0	BLD	BLD	micaceous altered ss.	012
	675m	80	10	93	115	1490	10	5	BLD	1·0	BLD	60	Wthd. interbedded m.g sa & ss	013
	710m	110	90	45	255	286	37	3	BLD	BLD	BLD	BLD	wthd. bedded. hy sr. very f. sa	014
	790m	BLD	41	76	115	850	32	3	BLD	0·5	BLD	BLD	turbiditic, bi hornfelsed ss & f. sa; alt ⇒ qz. bi & potassium feldspar	015
	803m	BLD	71	88	185	317	84	3	BLD	0·5	BLD	BLD	turbiditic, bi ho ss & c. bd. m. grey sa; alt ⇒ qz, bi & K feldspar	016
	835m	80	29	131	425	882	55	4	BLD	0·5	BLD	15	sericitised & weakly biotised. argillaceous m-f fels sa	017
													839082	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR Aylett Creek

ASSAYED BY Analabs FROM 075 m TO 835m DATE /5/81 PAGE 4 OF 8

Location	Distance	Sn	W	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	Description	SAMPLE NUMBER
Palmer Creek	90m	7	BLD	100	5	160			9				soft, wthd. intensely clay altered gr-gy rock?	P001
	166m	10	BLD	325	25	90			19				soft blue gy clay alt, pyritic tuff?	004
	220m	8	BLD	15	80	25			4				f. bd s. fels, quartzose sericitic sa.	006
	560m	6	BLD	3	8	14	819	38	8·4	BLD	1·0	1	c.g sl wthd ad	012
	785m	15	25	6	14	29	1117	14	8·6	0·1	3·0	8	wthd c.g ad & 2° bk to patches	014
	865m	10	BLD	13	85	36	158	6	8	0·4	1·0	BLD	f-m xaln, shd? ap	015
	1040m	20	BLD	7	13	37	1033	38	2·8	BLD	BLD	BLD	wthd porph ap.	016
	1235m	8	BLD	3	9	15	345	8	1·0	BLD	BLD	BLD	Semi porph mcr.ad.	P017
					FROM 90m TO 1235m									
Ramsay River	1480m	25	BLD	15	45	120			2	BLD			hvy. ho dk gy ss; v mag syndepositionally deformed	S014
	/Trib 1595m	BLD	BLD	160	45	345			2	1·0			hvy, re.xtal.ised frac dm pelite?	015
	1840m	10	BLD	195	20	120			2	BLD			f. bd sil. s.s - pl & Py-qz -Pb vns	S019
					FROM 1480m to 1840m									
Blundstone Track	340m	10	BLD	3	7	30	1007	42	5·0	BLD	1·0	BLD	Hd fresh porph mcr.ad	BT 1
	470m	5	BLD	2	7	59	957	19	2·2	BLD	1·5	BLD	Hd fresh porph mcr.ad	BT 2
					FROM 340 TO 470m								839083	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR South Bischoff

ASSAYED BY Analabs FROM - TO - DATE Jan/81 PAGE 5 OF 8

Location	Distance	Sn	W	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	Description	SAMPLE NUMBER
South Bischoff Adit A	0·8m	150	BLD	22	102	245	877	11	4·2	0·1	1·9	3	Finely tourmalinised quartz; microadamellite & greisen vein	A1
	2·2m	120	10	10	20	280	937	26	4·4	0·2	BLD	4	wthd to.ised grs vn	2
	8·6m	9	BLD	3	8	31	1017	22	2·8	0·1	2·0	BLD	porph: biotite mcr.ad	3
	16·6m	250	10	4	48	195	937	31	5·6	BLD	0·5	BLD	finely to.ised wthd porph mcr.ad	4
	19·6m	4	BLD	3	8	29	1027	26	3·0	BLD	2·0	BLD	hard fresh porph mcr.ad	A5
					FROM 0·8 to 19·6m								FOR Adit A	
South Bischoff Adit B	3·0m	50	BLD	30	245	134	1123	20	4·4	BLD	1·0	11	hd, wthd qz-chlorite-mica	B1
	13·0m	40	BLD	26	205	65	1098	11	3·4	0·3	0·5	10	slightly hd, heavy, white mica? Aplite?	2
	18·0m	120	BLD	36	159	76	680	15	4·8	BLD	0·5	4	sl hd, hvy porph (qz) Aplite	3
	22·0m	400	BLD	75	810	85	723	15	4·6	0·2	1·0	6	sl hd, hvy, wthd porph (qz) Aplite	4
	61·0m	1600	BLD	1·25%	385	3·5%	147	9	15	28·0	27·0	835	Intensely clay alt. vn of co. qz & kaol, MnO_2, malachite.	B5
					FROM 3·0m to 61·0m								FOR Adit B	
South Bischoff Adit C	13·0m	220	BLD	105	29	255	733	27	5·0	0·4	0·5	4	wthd qz, porph micaceous f. dis, to.ised-mica. rock-gra?	C1
	28·0m	110	BLD	53	200	310	1178	13	4·4	0·3	BLD	2	wthd chl-to-qz-mica porph grs.	C2
					FROM 13·0 to 28·0m								FOR Adit C	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR Adits A, B & C

ASSAYED BY Analabs FROM - TO - DATE Jan/81 PAGE 6 OF 8

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South Bischoff

Location	Distance		Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
Adit D	000m		BLD	2	1	59	763	38	BLD	BLD	2·0	BLD	BLD	porphyritic (fresh) microadamellite	D001
	028m		330	5	18	232	132	29	BLD	BLD	2·0	BLD	BLD	greisen vein	002
	044m		130	109	58	220	482	27	BLD	BLD	2·0	BLD	BLD	grs vn	D003
						FROM 0m TO 44m								FOR ADIT D	
Mine Workings:	Stamper Waste Dump. (Auger)	Ni 15	4700	131	111	440	488	16	13	1·6	6·0	56	52	silty sand alluvium	ST 01
		14	3350	175	100	570	546	25	10	1·1	7·5	46	60	silty sand al.	02
		14	1750	61	67	205	353	12	4	0·6	3·0	23	15	silty sand al.	03
		13	3150	96	81	340	514	16	7	1·1	4·0	35	40	silty sand al.	04
		14	4300	142	108	615	475	14	8	1·5	4·5	53	43	silty sand al.	ST 05

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** South Bischoff.

ASSAYED BY Analabs FROM - TO - DATE /5/81 PAGE 7 OF 8

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Location	Distance	Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
Mine Workings:	Pit Grab Samples	40	12	109	67	N/S	20	260	BLD	1·0	5	10	Altered green quartz -tourmaline rock	Pt 001
		50	28	55	189	N/S	79	900	BLD	2·5	BLD	10	alt gr qz-to rock	Pt 002
Mine Workings	(float)	10·5%	3·0%	1010	24·0%	40	51	140	2·6	20·0	320	BLD	Heavily mineralised heavy rock: Bornite? Cassiterite?, Sphalerite?,	T9924
Grab samples from Mine Area (April 1980)	Dump	80	7					3·0		2·5		BLD	alt gr qz -to rock	T8266
	Haulage Way	85	73					1·6		2·0		10	alt gr qz · to rock	T8267
	Pit	15	19					1·4		5·0		4700	alt gr qz · to rock	T8268

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** South Bischoff

ASSAYED BY Analabs FROM - TO - DATE -/-/- PAGE 8 OF 8

839086

Location	Distance	Sn			Pb	Zn	F	Li	As	Ag	Mo	Bi	Description	SAMPLE NUMBER
South Bischoff Adit A	0 to 2.6m	30	BLD	13	79	225	789	27	7	BLD	1.0	BLD	Wthd br-or porph mcr. ad & thin grs vns + rare thin kaol vns.	CSA I
	2.6 to 4.6m	25	BLD	61	255	205	721	30	3.8	BLD	1.0	4	Wthd br-or porph mcr. ad & thin grs vns + rare thin kaol vns	2
	4.6 to 6.6m	7	BLD	10	16	85	804	34	8.4	BLD	0.5	BLD	Wthd br-or porph mcr. ad & thin grs vns + rare thin kaol vns	3
	6.6 to 8.6m	7	BLD	12	10	36	695	23	3.0	BLD	1.5	6	Wthd br-or porph mcr. ad & thin grs vns + rare thin kaol vns	4
	8.6 to 10.6m	10	BLD	13	14	51	620	31	10	BLD	1.0	BLD	Wthd br-or porph mcr. ad & thin grs vns + rare thin kaol vns	5
	10.6 to 12.6m	4	10	6	12	43	583	33	3.2	BLD	0.5	BLD	Wthd br-or porph mcr. ad & thin grs vns + rare thin kaol vns	6
	12.6 to 14.6m	65	BLD	8	32	102	486	33	9	BLD	1.0	BLD	Wthd br-or porph mcr. ad & thin grs vns + rare thin kaol vns	7
	14.6 to 16.6m	15	BLD	6	31	86	435	29	5.2	BLD	0.5	BLD	Wthd br-or porph mcr. ad & thin grs vns + rare thin kaol vns	8
	16.6 to 18.6m	15	15	9	22	65	708	22	12	BLD	1.0	BLD	Hard fresh porph mcr. ad	9
	18.6 to 20.6m	4	BLD	9	10	30	897	21	2.8	BLD	3.0	8	hd fresh porph mcr. ad	10
	20.6m End of Adit	8	BLD	5	8	28	1117	23	9.6	BLD	4	7	hd fresh porph mcr. ad	CSA II

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COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR Adit A

ASSAYED BY Analabs FROM 0 TO 20.6m DATE Jan/81 PAGE 1 OF 6

839088

Location	Distance	Sn	W	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	Description	SAMPLE NUMBER
South Bischoff: Adit B	-8m to -4m	30	BLD	22	98	260	439	31	20	0·5	2·0	21	Weathered brown-red, porphyritic microadamellite.	CSB 1
	-4m to 0m	35	BLD	30	265	330	711	37	4·4	0·1	2·0	20	Wthd br-red porph mcr. ad	2
	0m to 4m	55	BLD	42	175	250	696	42	5·6	0·2	2·0	32	weathered porphyritic microadamellite with greisen veins.	3
	4m to 8m	Sample		not	Located.								Hard porphyritic microadamellite with greisen veins.	4
	8m to 12m	1·9%	40	61	225	180	52	25	8·2	1·0	17·0	210	Wthd porph mcr.ad & grs vns.	5
	12m to 16m	4200	30	67	121	255	550	.19	13	0·4	10·0	55	wthd porph mcr.ad & grs vns	6
	16m to 20m	95	BLD	52	73	108	723	19	7	0·1	2·0	44	wthd porph mcr.ad	7
	20m to 24m	1500	BLD	87	195	210	650	30	14	1·3	5·0	72	wthd porph mcr.ad & thin grs vns.	8
	24m to 28m	2650	BLD	85	205	240	460	24	15	0·2	5·0	36	Wthd porph mcr.ad & thin grs vns	9
	28m to 32m	6900	30	230	650	390	621	45	34	2·5	13·0	305	wthd porph mcr.ad & thin grs vns	10
	32m to 36m	8700	BLD	129	820	195	773	23	60	2·4	36·0	1600	wthd porph mcr.ad & thin grs vns	11
	36m to 40m	4800	30	130	230	510	635	40	19	2·7	17·0	1050	wthd porph mcr.ad & thin grs vns	12
	40m to 44m	960	30	138	655	385	733	51	20	1·4	12·0	405	wthd porph mcr.ad & thin grs vns	13
	44m to 48m	290	BLD	109	495	355	733	26	13	0·8	5·0	90	wthd porph mcr.ad & thin grs vns	14
	48m to 52m	100	BLD	128	1160	345	808	32	13	1·0	2·0	22	wthd porph mcr.ad & thin grs vns	15
	52m to 56m	70	BLD	83	1030	280	883	30	11	0·5	3·5	12	wthd porph mcr.ad & thin grs vns.	CSB16

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR Adit B

ASSAYED BY Analabs FROM -8m TO 56m DATE 4/8/81 PAGE 2 OF 6

839089

Location	Distance	Sn	W	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	Description	SAMPLE NUMBER
South Bischoff Adit B	56 to 60m	260	40	133	485	320	500	41	48	3·8	17·0	71	wthd porph mcr.ad & thin grs vns + thin kaolinite vns.	CSB 17
	60 to 64m	690	380	147	345	340	535	59	36	3·5	35·0	65	wthd porph mcr.ad & thin grs, kaol + malachite vns.	18
	64 to 68m	25	BLD	33	28	290	621	32	3·2	0·6	BLD	5	wthd porph. mcr.ad	19
	68 to 72m	25	BLD	33	23	265	617	35	2·4	0·4	BLD	BLD	wthd porph mcr.ad & thin kaol vns	20
	72 to 76m	120	30	72	48	375	511	29	2·0	0·4	BLD	BLD	wthd porph mcr.ad	21
	76 to 80m	15	50	57	45	310	505	.27	4·8	0·4	1·0	BLD	wthd porph mcr.ad	CSB 22
					FROM 56m to 80m								FOR Adit B	
South Bischoff Adit C	0 to 4m	60	BLD	51	30	315	665	26	6·0	0·1	1·0	4	wthd brown-orange porph mcr.ad	CSC 1
	4 to 8m	40	BLD	35	46	350	713	32	9·8	BLD	0·5	2	wthd br-or porph mcr.ad & thin grs vns	2
	8 to 12m	55	BLD	39	41	315	621	33	5·6	BLD	0·5	3	wthd br-or porph mcr.ad & thin grs vns	3
	12 to 16m	95	BLD	28	46	225	650	29	6·2	BLD	BLD	3	wthd br-or porph mcr.ad & thin grs vns	4
	16 to 20m	10	BLD	40	24	290	614	33	3·8	BLD	BLD	5	wthd br-or porph mcr.ad & thin grs + Kaol vns.	5
	20 to 24m	10	BLD	36	29	295	743	37	3·0	BLD	BLD	BLD	wthd br-or porph mcr.ad & thin grs + Kaol vns	6
	24 to 28m	30	BLD	66	32	335	547	28	3·4	BLD	BLD	BLD	wthd br-or porph mcr-ad & thin grs + kaol vns	7
	28 to 32m	4550	BLD	124	79	310	580	26	42	0·1	6·0	15	wthd br-or porph mcr-ad & thin grs + kaol vns	8
	32 to 36m	960	BLD	76	101	385	511	24	8·0	0·1	5·0	BLD	wthd br-or porph mcr-ad & thin grs + kaol vns	CSC 9

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR Adit C

ASSAYED BY Analabs FROM 0 TO 36m DATE 4/9/81 PAGE 3 OF 6

839090

Location	Distance	Ni	Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
South Bischoff Adit D	0-4m	15	55	14	35	190	920	19	4	BLD	4·0	BLD	BLD	Soft, weathered porphyritic microgranite & green greisen veining	CSD
	4-8m	17	100	89	335	330	602	17	BLD	BLD	12·5	29	10	s, wthd, py, mcr.g & gr grs veining.	
	8-12m	17	55	22	110	220	537	27	1	0·1	1·5	1	BLD	s, wthd, py, mcr.g & common white kaolin veins.	
	12-16m	16	5	11	40	120	727	28	BLD	0·2	1·5	BLD	BLD	s, wthd, py, mcr.g & common wh kaol vns	
	16-20m	15	20	18	25	122	602	19	6	BLD	1·5	BLD	BLD	s, wthd, py, mcr.g & common wh kaol vns	
	20-24m	17	15	33	24	148	708	22	5	BLD	2·0	BLD	10	s, wthd, py, mcr.g & common wh kaol vns	
	24-28m	16	55	17	44	200	658	15	7	0·1	4·0	1	10	s, wthd, py, mcr.g & common wh kaol vns.	
	28-32m	15	95	10	80	275	451	15	5	BLD	4·0	1	10	s, wthd, py, mcr.g & 20% phenocrysts & partly exposed grs dyke.	
	32-36m	17	40	15	65	173	782	21	4	BLD	1·5	2	BLD	s, wthd, py, mcr.g & 20% phc & partly exp grs dyke	
	36-40m	19	35	93	56	118	890	17	5	BLD	2·0	BLD	10	s, wthd, py, mcr.g & 20% phc & partly exp grs dyke	
	40-44m	18	50	158	128	94	860	13	9	BLD	2·0	BLD	BLD	s, wthd & spheroidal wthd very hard grey, py mcr.g & partly exp grs dyke	
	End of Adit	17	10	122	77	116	740	26	5	BLD	4·5	BLD	BLD	s, wthd & sph wthd, v hd, gy py mcr.g & partly exp grs dyke.	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR Adit D

ASSAYED BY Analabs FROM 0 TO 44m DATE 15/8/81 PAGE 4 OF 6

839091

Location	Distance	Ni	Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
South Bischoff Trench Samples	00m	18	1850	17	68	176	602	20	3	BLD	3·0	BLD	15	Medium crystalline sugary green greisen	
	03m	13	90	16	180	56	1060	13	5	BLD	1·0	BLD	15	weathered porphyritic microgranite & 20cm gr grs vein.	
	06m	17	1000	33	122	118	860	16	10	BLD	6·0	8	40	wthd py mcr.g & 20 cm gr grs vn	
	09m	19	9100	44	24	132	694	19	26	BLD	11	31	30	wthd. altered soft py. mcr.g ; limonitic at base.	
	12m	18	65	49	118	184	782	20	22	BLD	4·0	22	10	hard gr grs vn, top 40 cm; base of wthd s. py mcr.g	
	15m	17	35	39	235	154	960	25	23	BLD	2·0	13	BLD	Top 1m: wthg gr-grey s. quartz-feldspathic - gr mica, alt py mcr.g. Base: hd gr grs vn	
	18m	14	130	24	1050	64	1060	12	12	BLD	2·5	7	10	hd, gr. translucent mic, rock & gr. tourmaline vns	
	21m	15	4900	103	1550	120	789	24	35	BLD	15·5	14	105	hd.gr grs dyke & fine dark gr to vns.	
	24m	14	390	20	300	82	930	16	9	BLD	2·0	2	20	hd, pale gr-gy mic qz-to grs.	
	27m	18	1600	30	200	188	597	52	21	BLD	13	12	75	hd. fractured gr grs & qz phenocrysts - average 7mm.	
	30m	18	5300	33	420	177	754	16	15	BLD	7·5	6	90	hd, gr-dk gr mic qz grs.	
	33m	15	150	18	250	98	890	26	6	BLD	2·0	2	20	hd. pale gy-gr mic qz grs & sugary texture	
	36m	21	310	51	184	260	523	20	8	BLD	2·0	1	38	hd. pale gy-gr mic qz grs & sugary txt.	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR Trench Sample

ASSAYED BY Analabs FROM 0 TO 36m DATE /5/81 PAGE 5 OF 6

839092

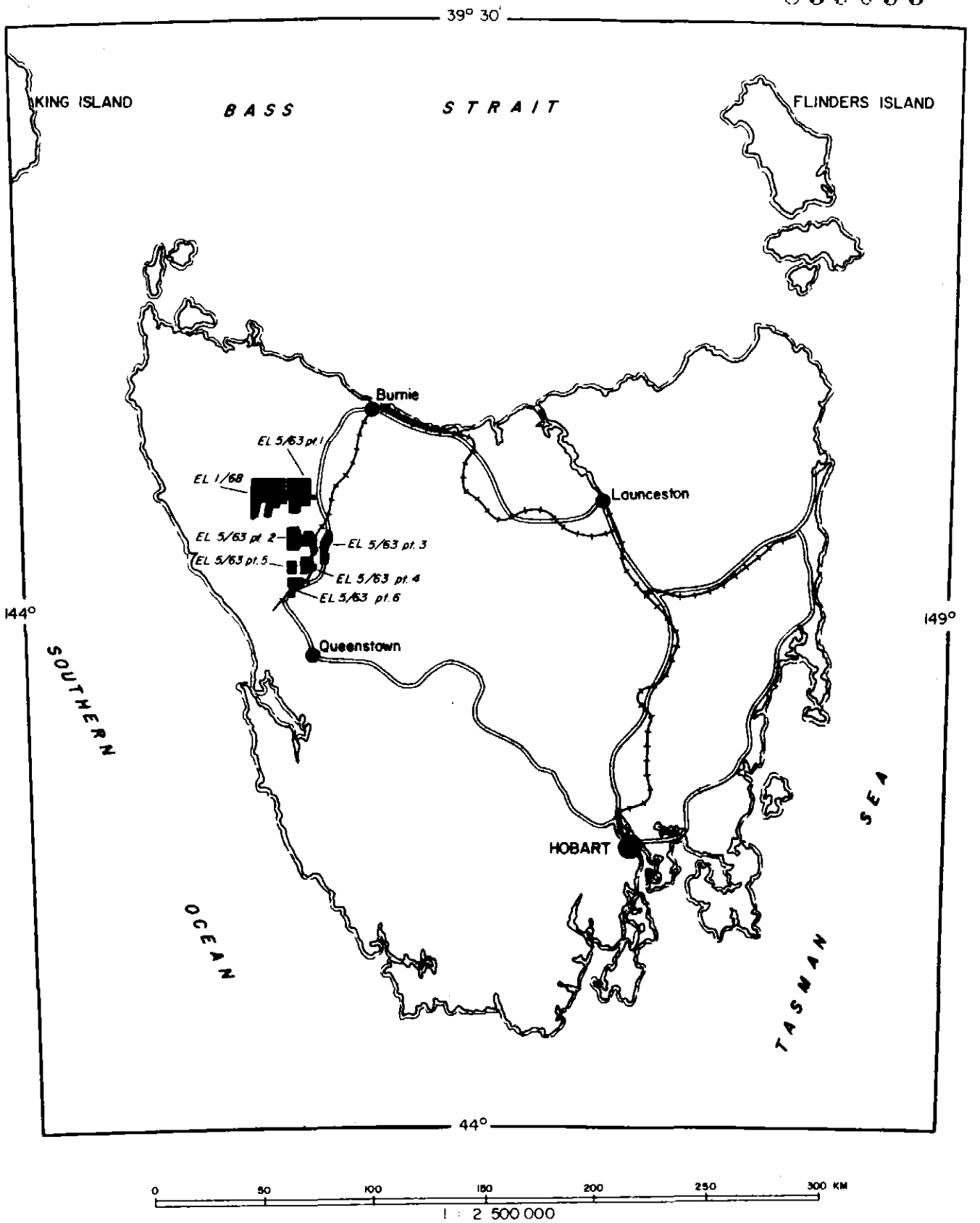
Location		Ni	Sn	Cu	Pb	Zn	F	Li	As	Ag	Mo	Bi	W	Description	SAMPLE NUMBER
South Bischoff Pit Samples	Side 1	15	30	24	27	112	860	21	2	BLD	2·5	4	10	altered quartz - tourmaline rock with brown weathered porphyritic microgranite	
	Side 2	18	30	18	33	107	782	21	1	BLD	3·0	4	10		
	Side 3	18	1500	25	74	192	890	22	4	BLD	5·0	8	20		
	Side 4	20	150	20	31	175	930	31	3	BLD	4·5	13	10		

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR Pit Samples

ASSAYED BY Analabs FROM Side 1 TO Side 4 DATE /5/81 PAGE 6 OF 6

062

839093



Major roads

Major railways

Burnie Major towns

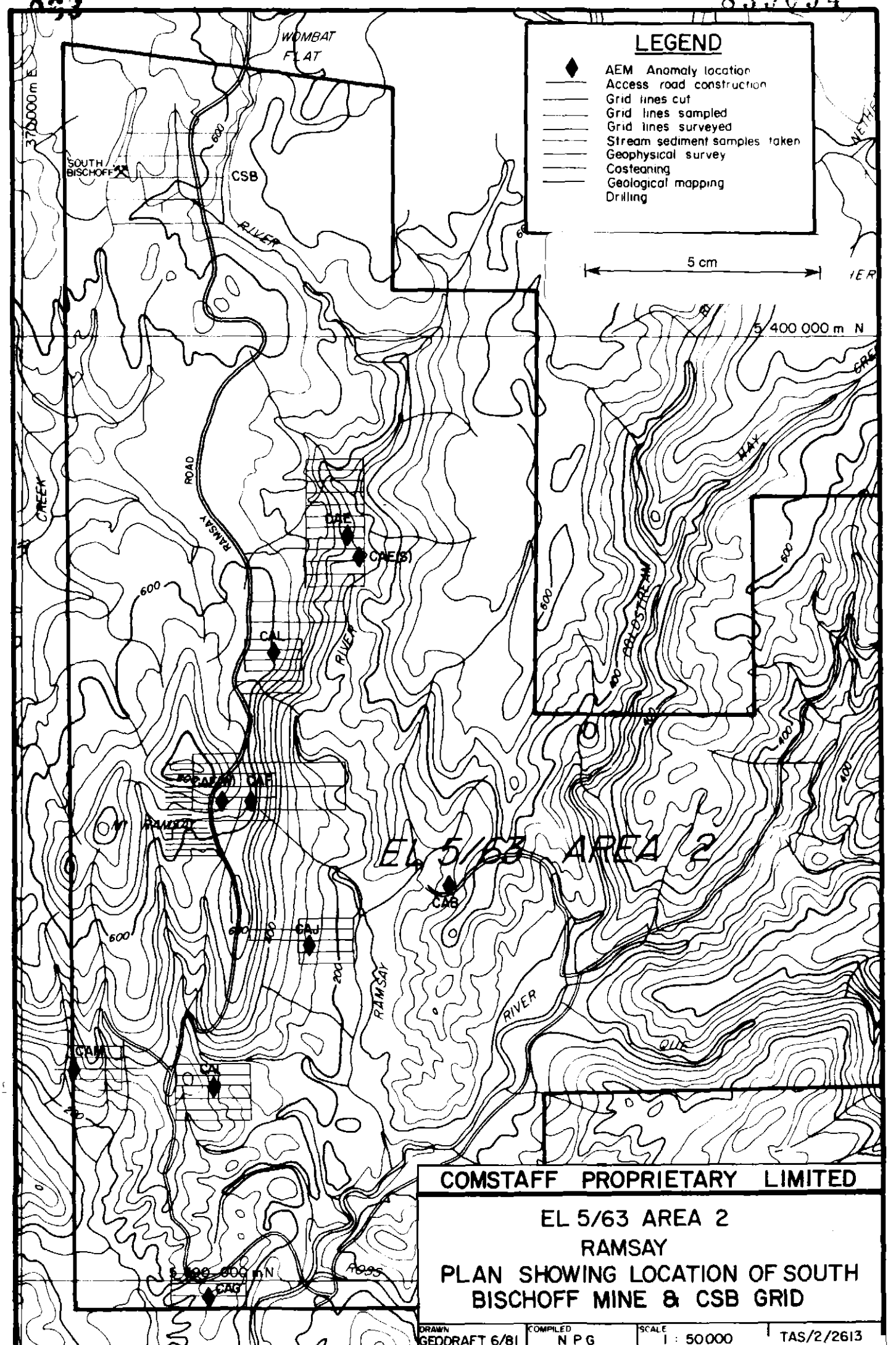
Comstaff lease areas

5 cm

COMSTAFF PROPRIETARY LIMITED

LOCATION OF COMSTAFF LEASES IN TASMANIA

DRAWN	COMPILED	SCALE	
GEODRAFT 7/78		1 : 2 500 000	TAS/2/1586



COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 2
RAMSAY
PLAN SHOWING LOCATION OF SOUTH BISCHOFF MINE & CSB GRID

DRAWN	COMPILED	SCALE	
GEODRAFT 6/81	N P G	1 : 50000	TAS/2/2613

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

DETAILED GEOLOGICAL PLAN

88-1690 Vol 3

COMPILED	N P G
DRAWN	N P G
DATE	21/1/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2366

964

88-0095

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

5 cm

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

AL 016

AL 005 (c/s)

AL 012

AL 010

AL 008

AL 013

AL 014

AL 007

AL 005

AL 002

AL 001

SB 001

SB 002

SB 003

SB 004 T/s

SB 005

SB 006

SB 007

SB 008

SB 009

SB 010 T/s

SB 011

SB 012

SB 013

SB 014

SB 015

SB 016

SB 017

SB 018

SB 019

SB 020

SB 021

SB 022

SB 023

SB 024

SB 025

SB 026

SB 027

SB 028

SB 029

SB 030

SB 031

SB 032

SB 033

JON 001

JON 002

JON 003

JON 004

JON 005

JON 006

JON 007

JON 008

FN 001

FN 002

P001

P002

P003

P004

P005

P006

P007

P008

P009

P010

P011

P012

P013

P014

P015

P016

S 012

S 013

S 014

S 015

S 016

S 017

S 018

S 019

S 020

S 021

S 022

S 023

S 024

S 025

S 026

S 027

S 028

S 029

S 030

S 031

S

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

CREEK

ROAD

RIVER

BLUESTONE

FRED

NURK

PALMER

TITLER

ATLEET

RAMSAY

ALMER

JOHNSON

py

g

ms

Tba

dr

acr

Tbf

GEOLOGICAL LEGEND

Tbf	Tertiary basin fill material
Tba	Tertiary basalt (locally amygdaloidal)
g	Coarse ~ equigranular biotite granite
py	Porphyritic micro-biotite granite/adamellite
	Altered granitoids (greisen, aplite)
dr	Basic intrusives - metabasites (dolerites, microgabbros)
ms	Metasediments (hornfels, tuffaceous sandstone, tuff & chert)
acr	Altered Cambrian rocks

geological boundary

geological boundary - inferred

f——f fault

25° strike and dip of bedding

strike direction

839096

5 cm

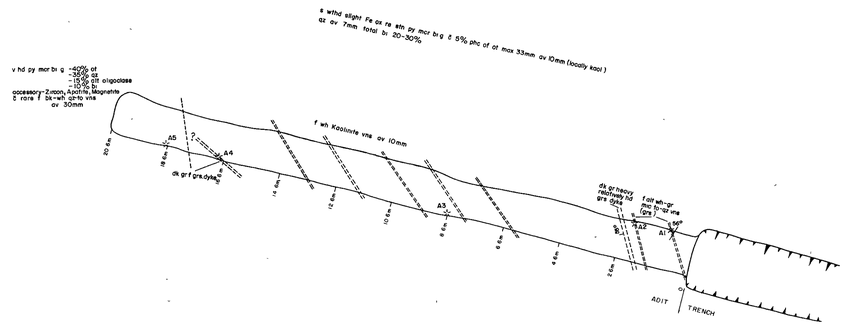
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 066

GEOLOGICAL INTERPRETATION

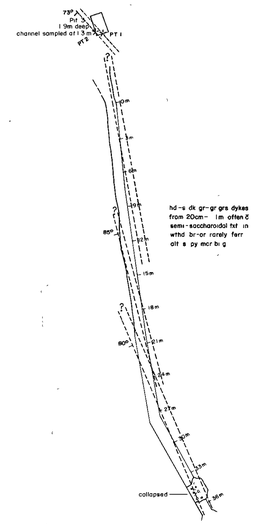
COMPILED	N P G
DRAWN	GEODRAFT
DATE	23/5/81
AMENDED	
SCALE	1 2500
PLAN No	TAS/2/2375

83-1690 Vol 3



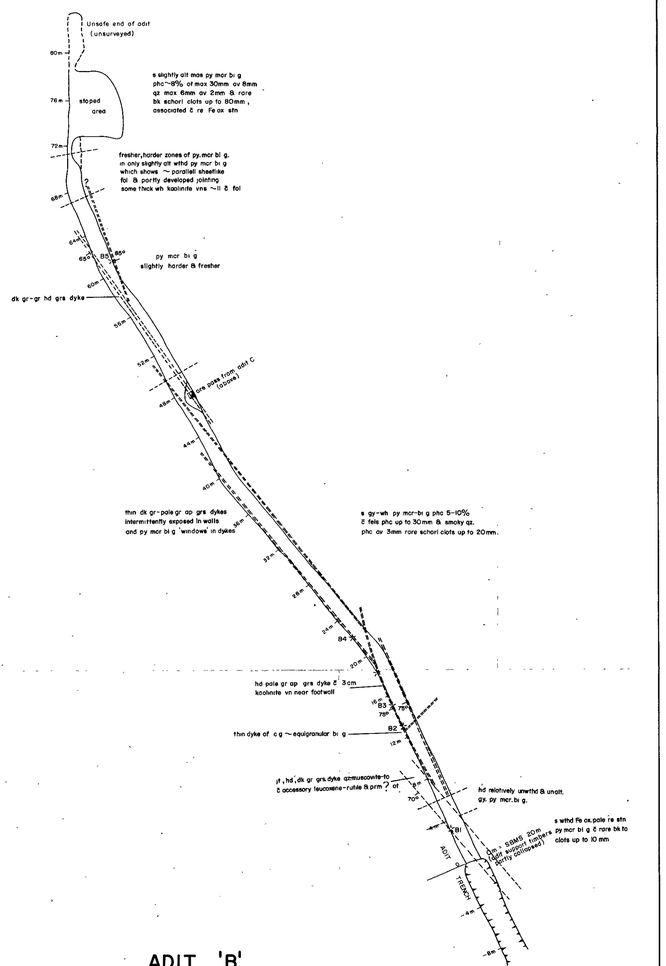
ADIT 'A'

SCALE - 1 100



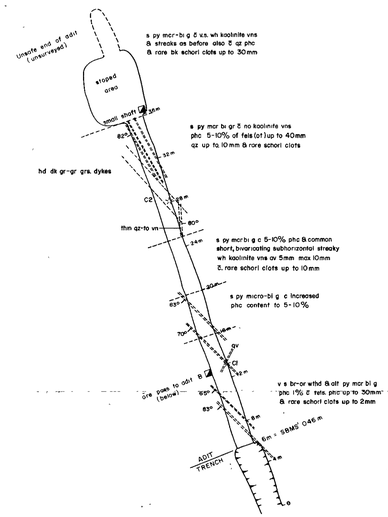
MAIN COSTEAN

SCALE - 1 250



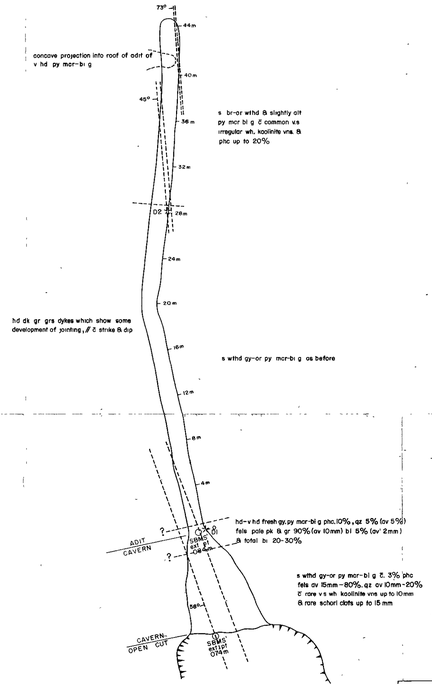
ADIT 'B'

SCALE- 1 : 250



ADIT 'C'

SCALE - 1 : 250



ADIT 'D'

SCALE - 1 : 250

MN

FOR LOCATION OF THESE ADITS AND COSTEAN, SEE PLAN TAS/2/2365

☆ = ROCK SAMPLE LOCATION

839097

5 cm

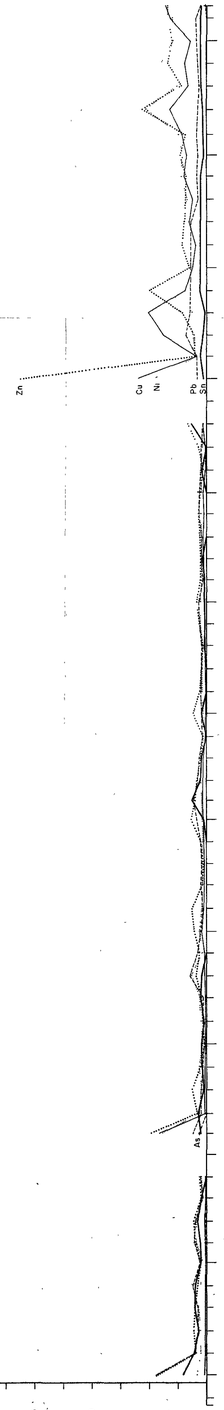
COMSTAFF PROPRIETARY LIMITED

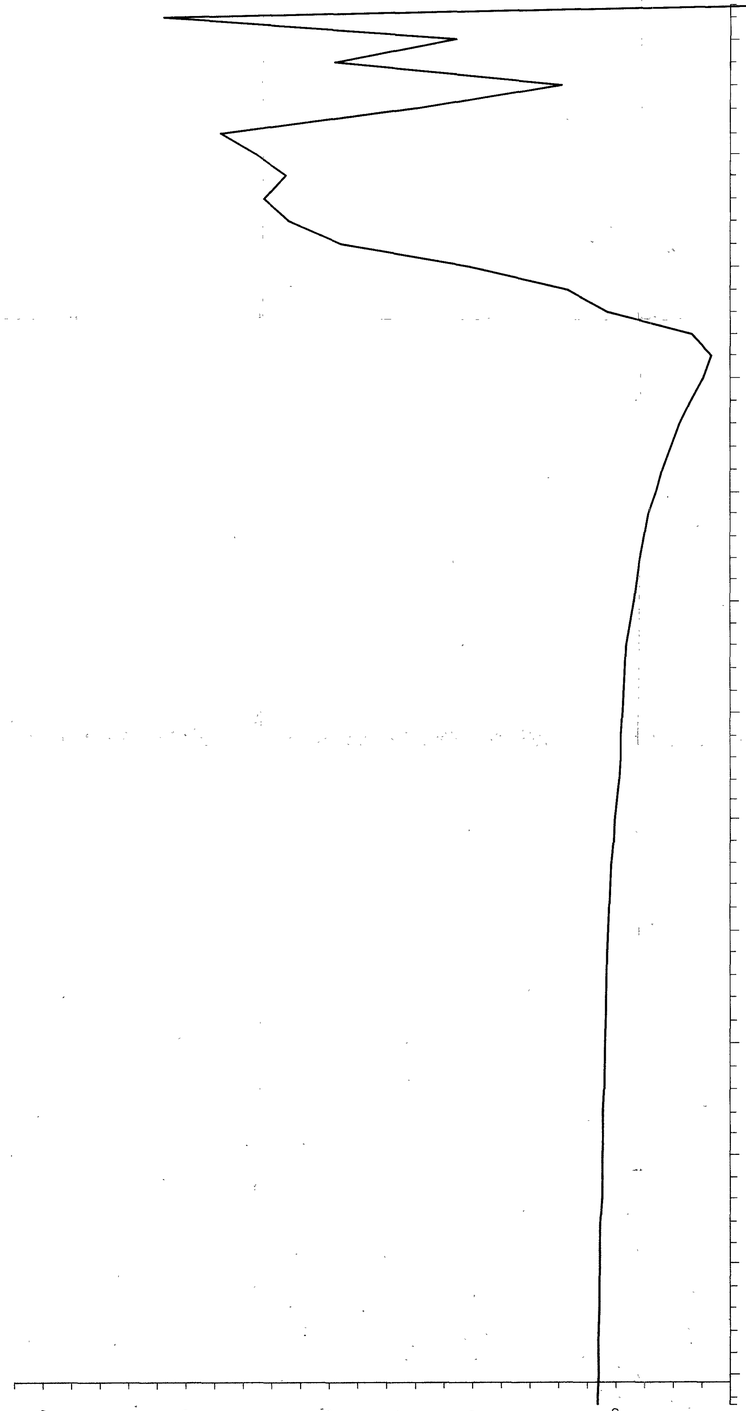
RAMSAY GRID - CSB
SOUTH BISCHOFF MINE AREA, PLAN OF ADITS A, B, C, D & MAIN COSTEAN
DETAILED GEOLOGICAL PLAN

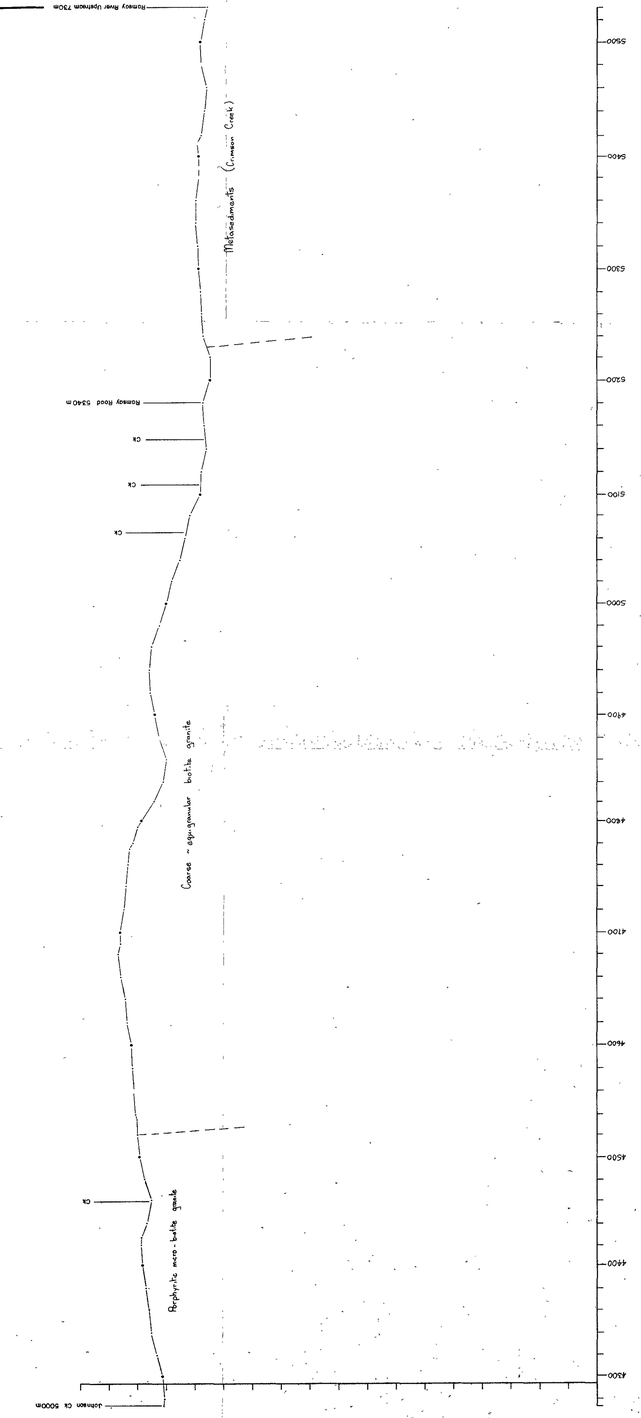
COMPILED	N P G.
DRAWN	GEODRAFT
DATE	29/5/81
AMENDED	
SCALE	AS SHOWN
PLAN No	TAS/2/2606

365

82-1650 Vol 3







5 cm

839098

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

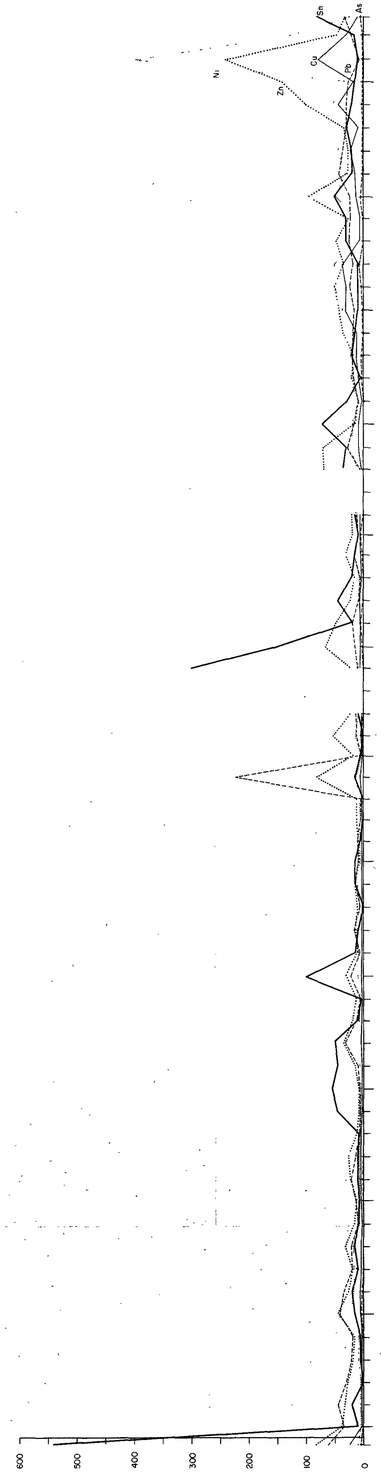
LINE 5000N PROFILES

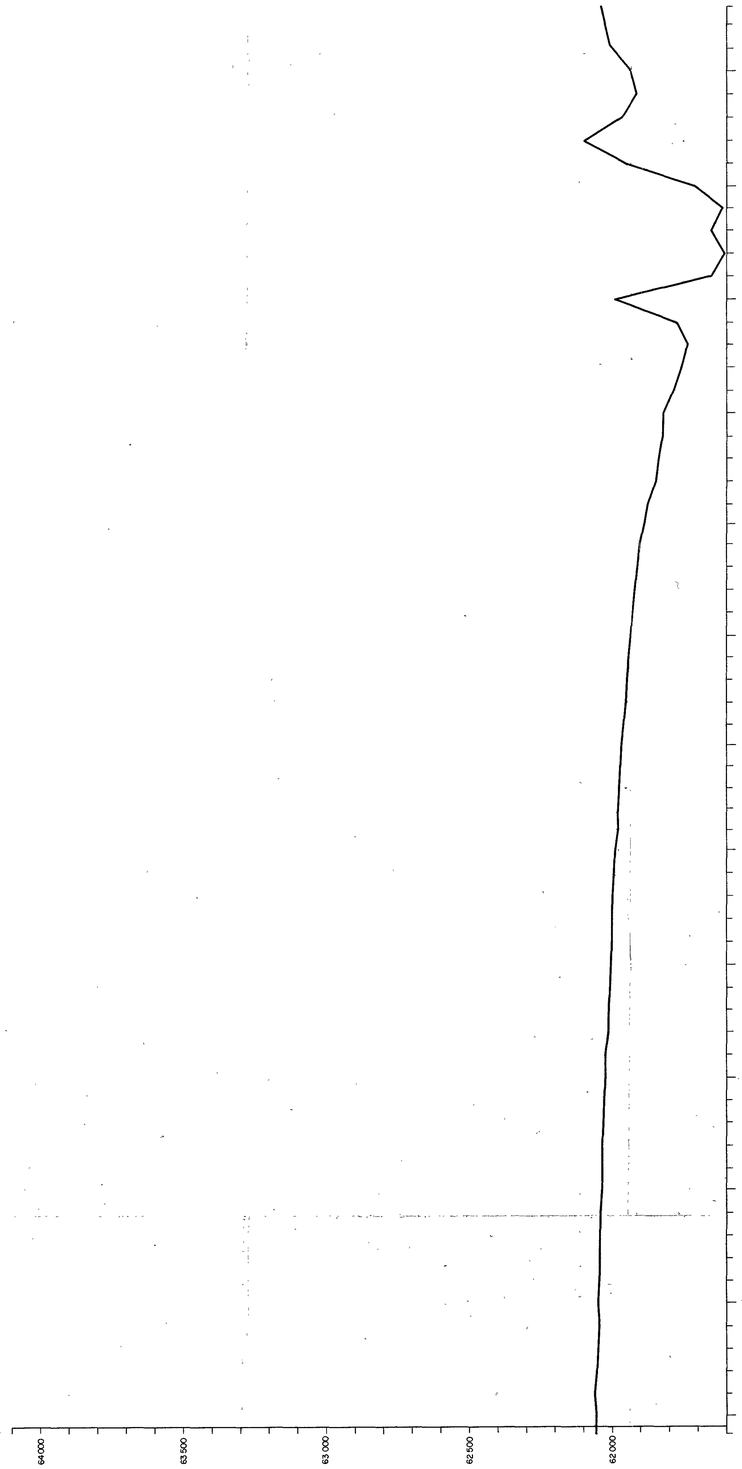
TOPO, MAG, E.M., GEOCHEM, GEOLOGY

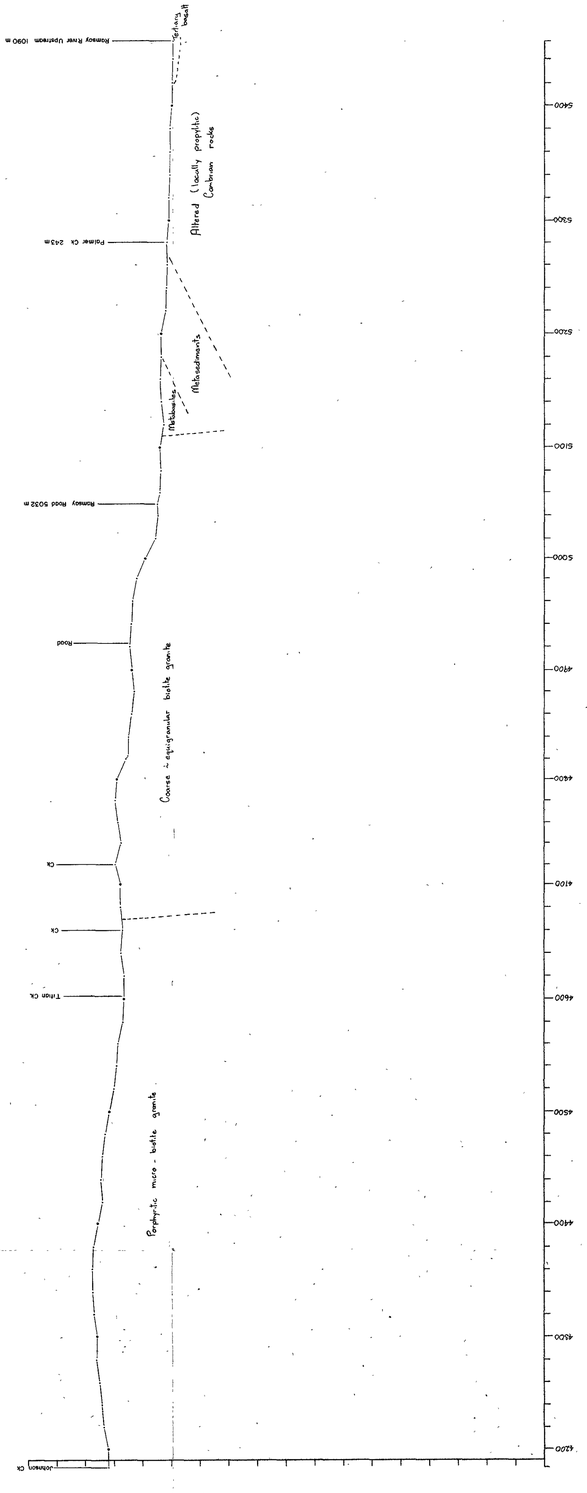
4542

COMPILED	N.P.G. & GEODRAFT
DRAWN	DATE 19/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2584

82-1690 Vol 3







839099

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

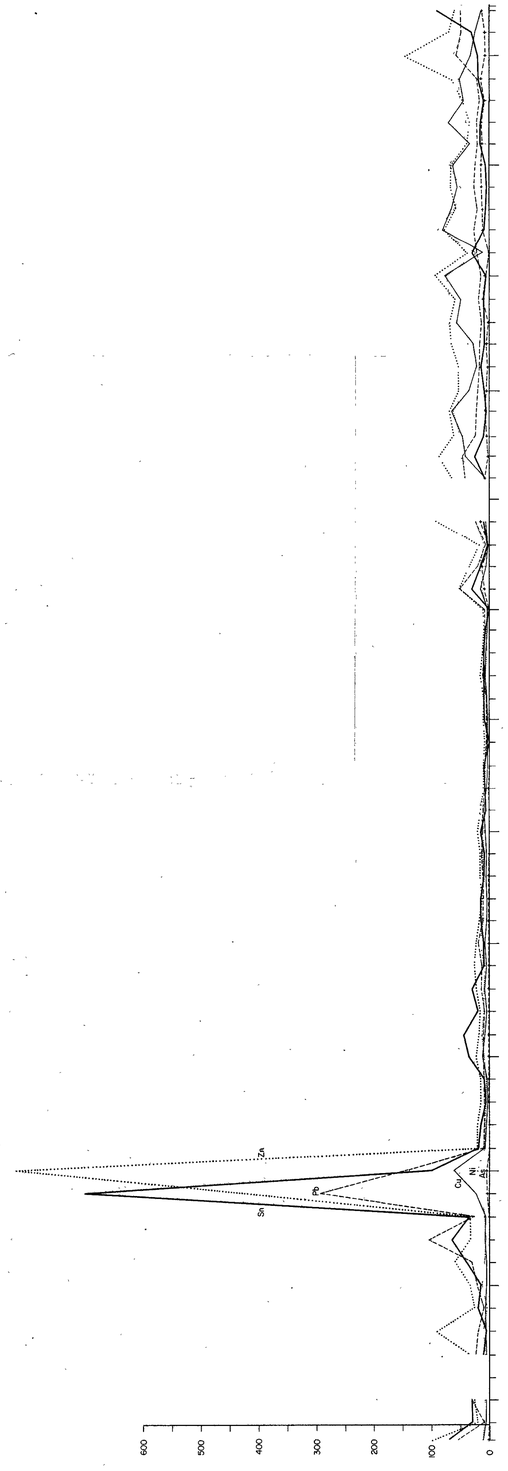
LINE 5240 N PROFILES

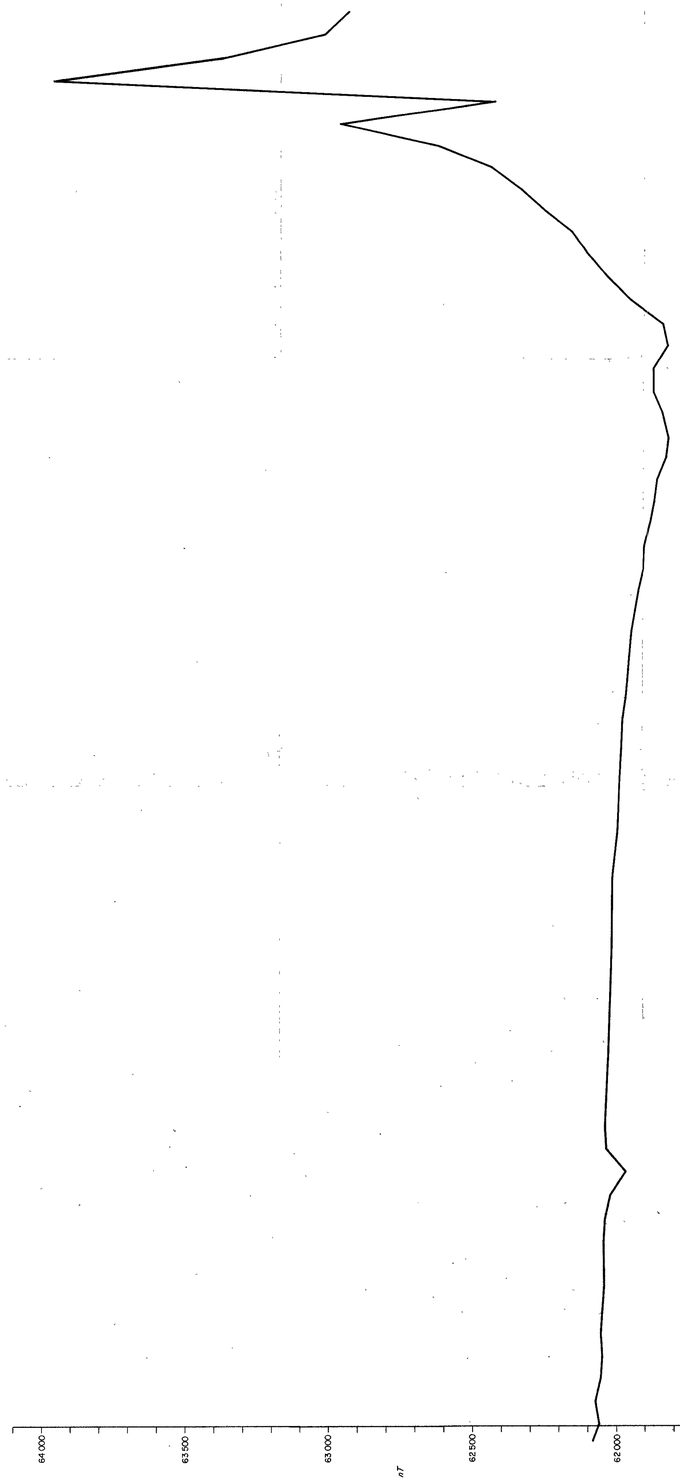
TOPO, MAG, E.M., GEOCHEM, GEOLOGY

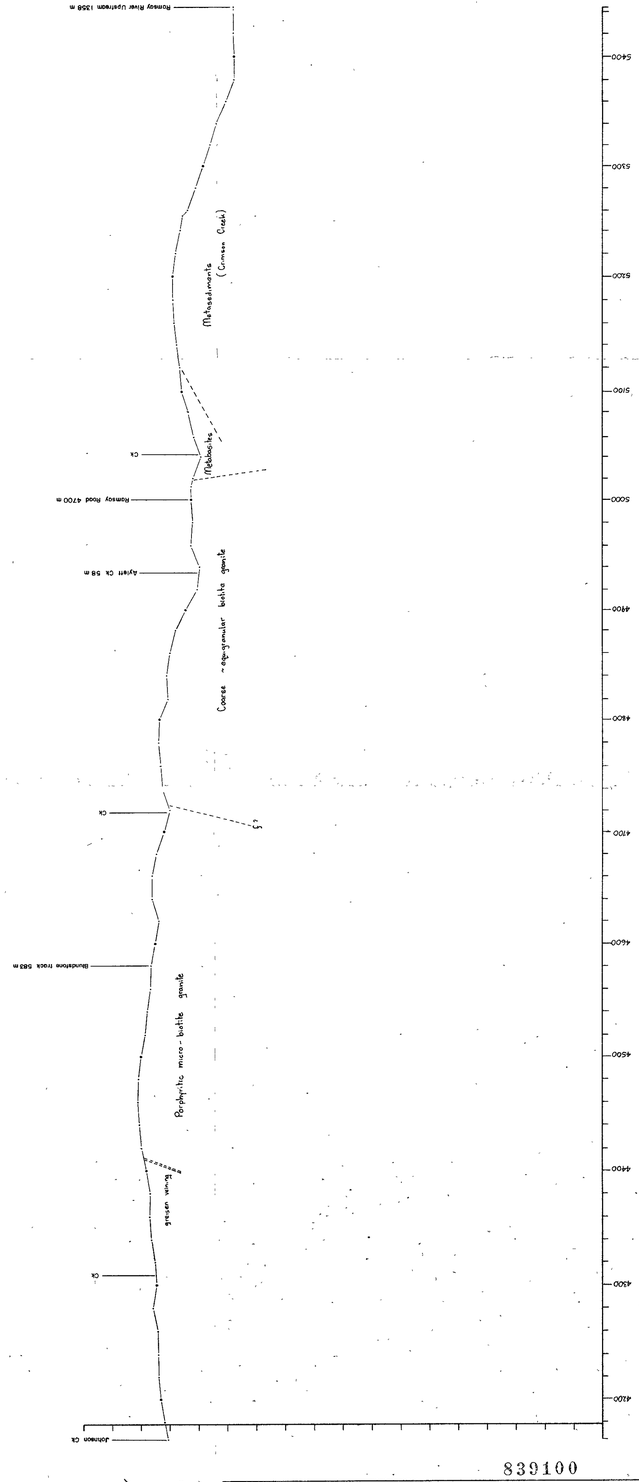
4543

82-1690 Vol 3

COMPILED	N.P.G & GEODRAFT
DRAWN	DATE 19/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2585







839100

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

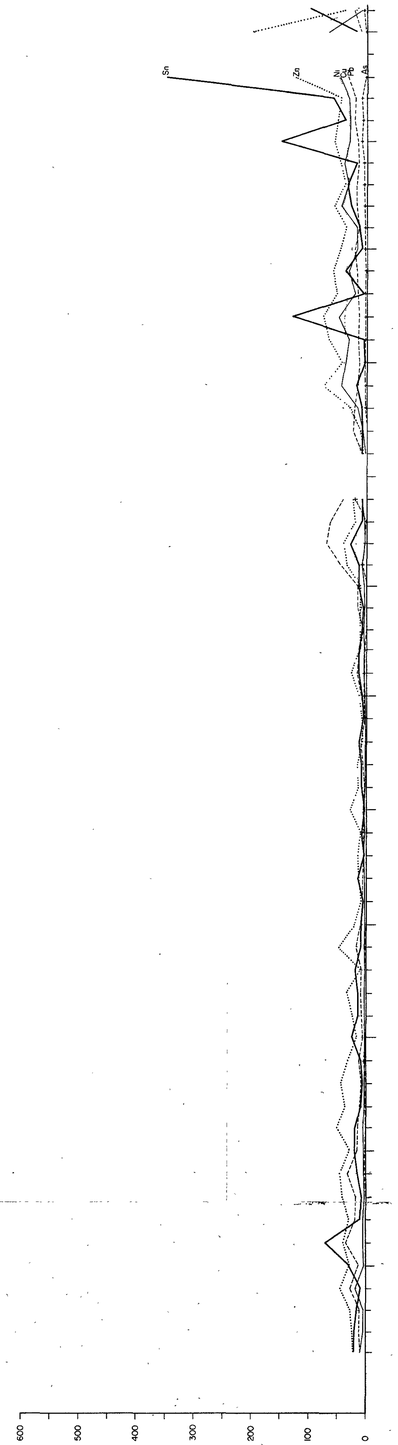
4544

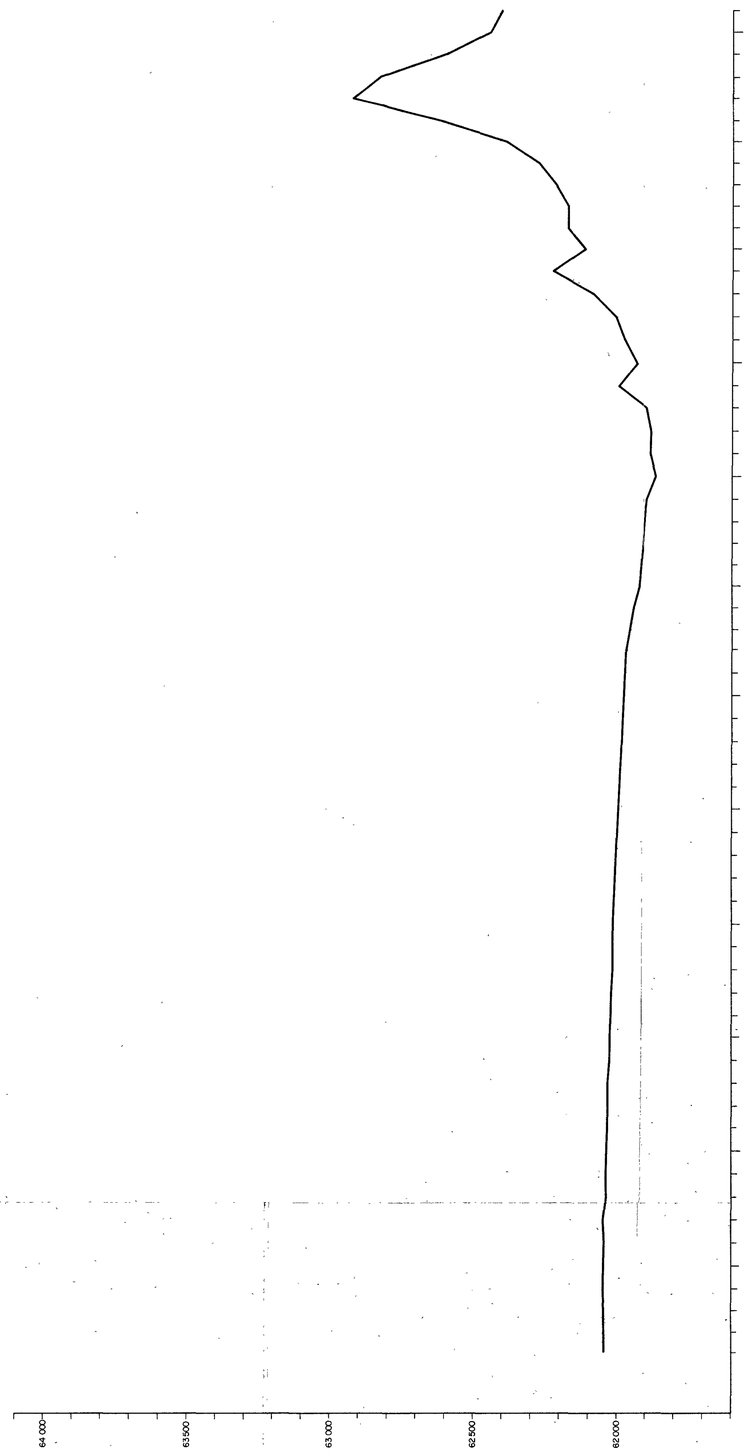
LINE 5480 N PROFILES

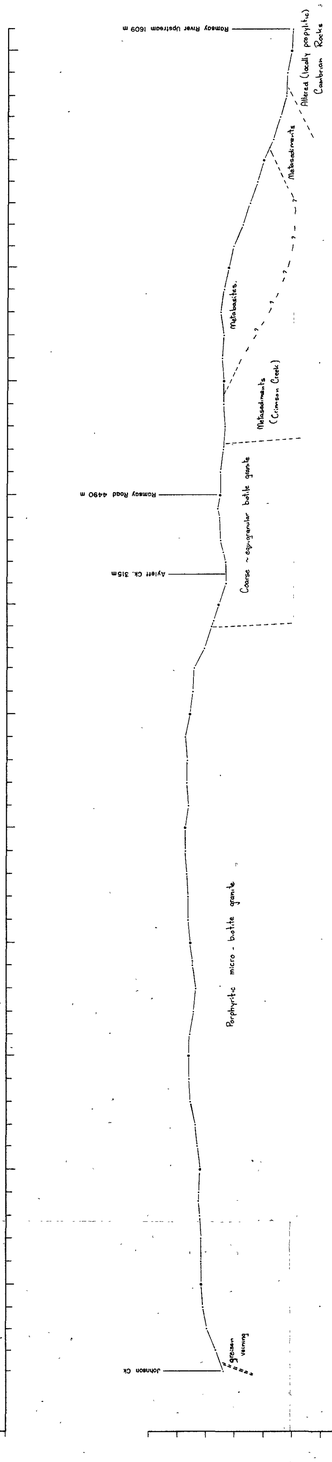
TOPO, MAG, E.M., GEOCHEM, GEOLOGY

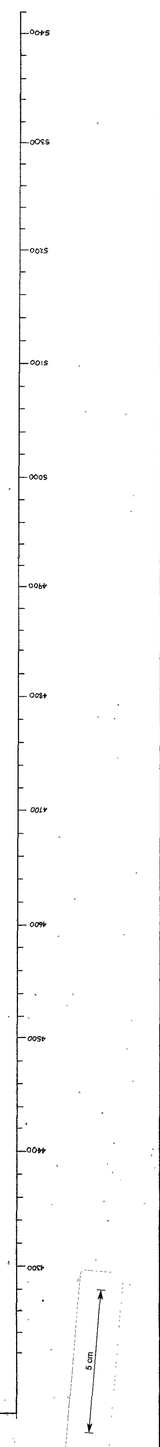
82-1690 Vol 3

COMPILED	N.P.G. & GEODRAFT
DRAWN	DATE 19/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2586









839101

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

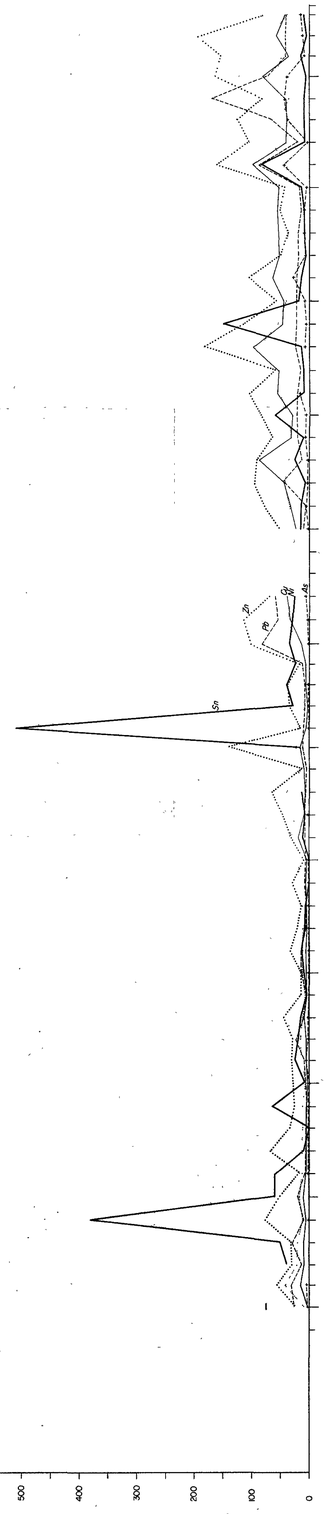
LINE 5720 N PROFILES

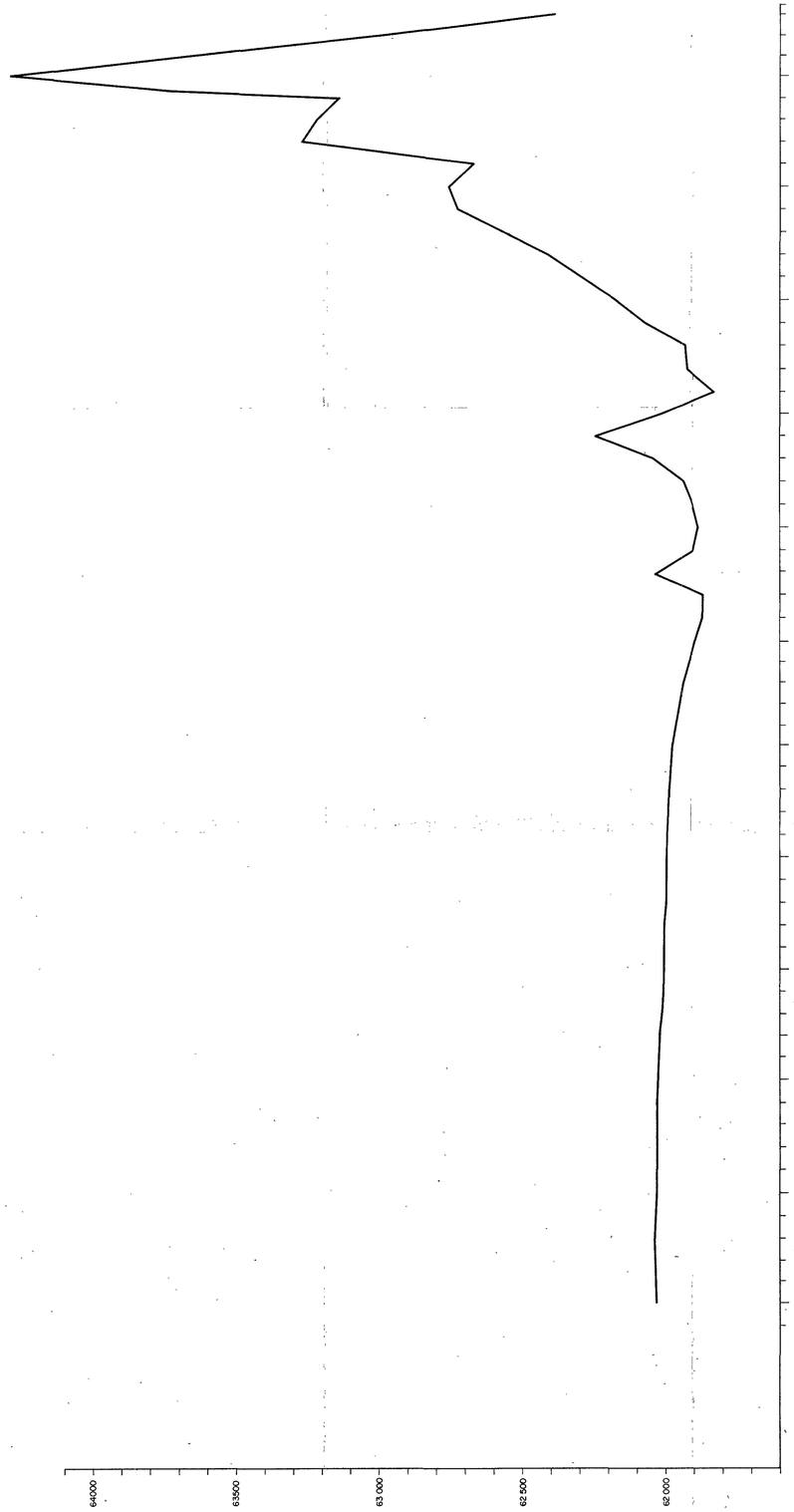
TOPO , MAG , E.M., GEOCHEM , GEOLOGY

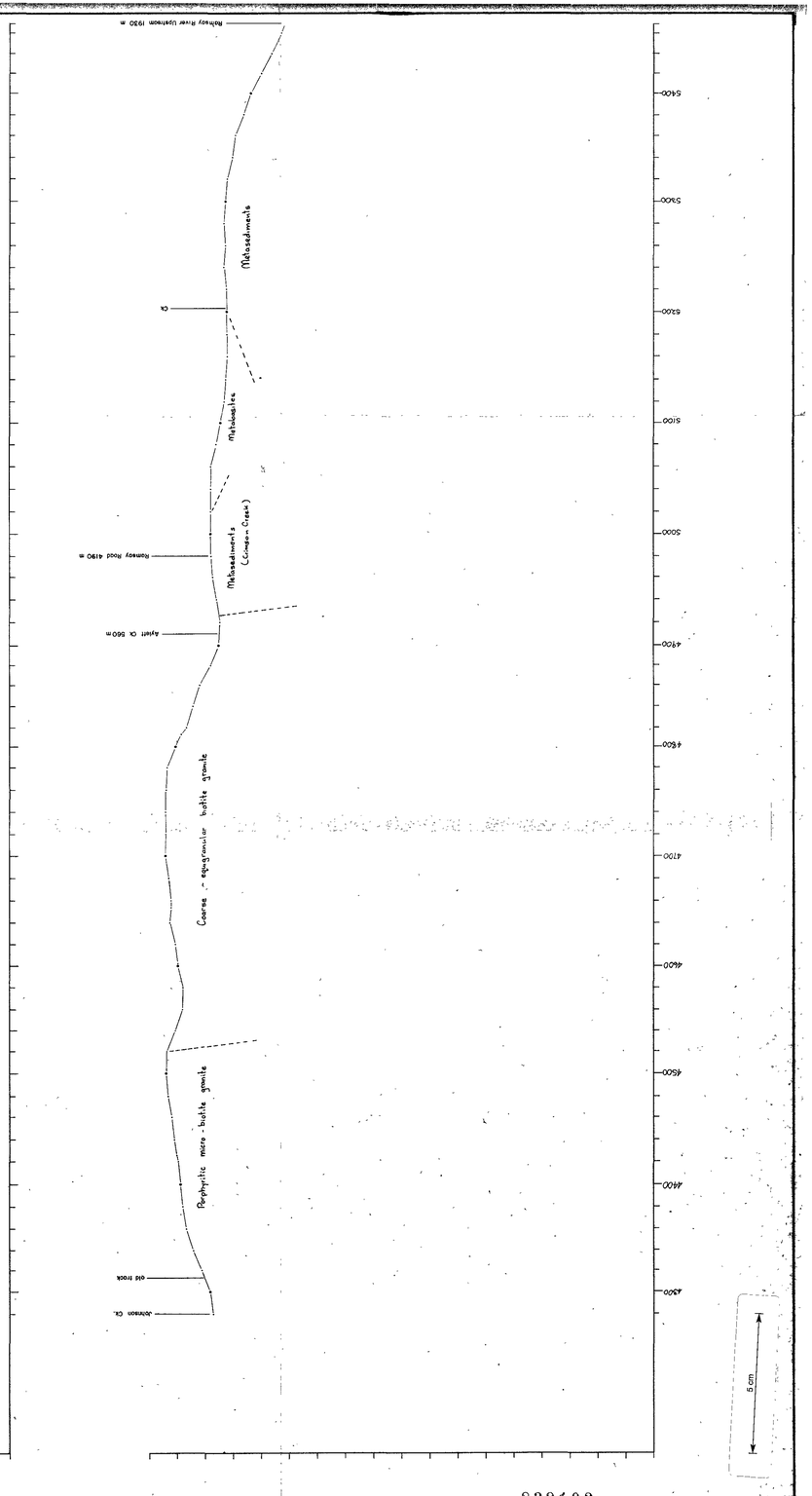
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8a-1690 Vol 3

COMPILED	N.P.G. & GEODRAFT
DRAWN	DATE 19/5/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2587







839102

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4546

LINE 5960 N PROFILES

TOPO , MAG , E.M. , GEOCHEM , GEOLOGY

82-1690 Vol 3

COMPILED	N P G & GEODRAFT
DRAWN	DATE 19/5/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2588

839103

ppm

As 9 8 7 6 5 4 3 2 1 0

Ni 40 35 30 25 20 15 10 5 0

Cu 20 15 10 5 0

Zn 90 80 70 60 50 40 30 20 10 0

Pb 100 90 80 70 60 50 40 30 20 10 0

W 100 80 60 40 20 0

MESH SIZE
-20#
-80#

Sn (ENHANCED) 6000 5000 4000 3000 2000 1000 0

Sn 2500 1000 900 800 700 600 500 400 300 200 0

1200
1100
1000
900
800
700
600
500
400
300
200
100
0

Porphyritic micro - biotite granite / adamellite

Jun Porphyritic aplite dyke

Aplite Dyke

Coarse - equigranular biotite granites

Cambrian Basic Intrusives

Metasediments

Highly altered Cambrian Rocks

5 cm

TOPOGRAPHY & GEOLOGY

COMSTAFF PROPRIETARY LIMITED

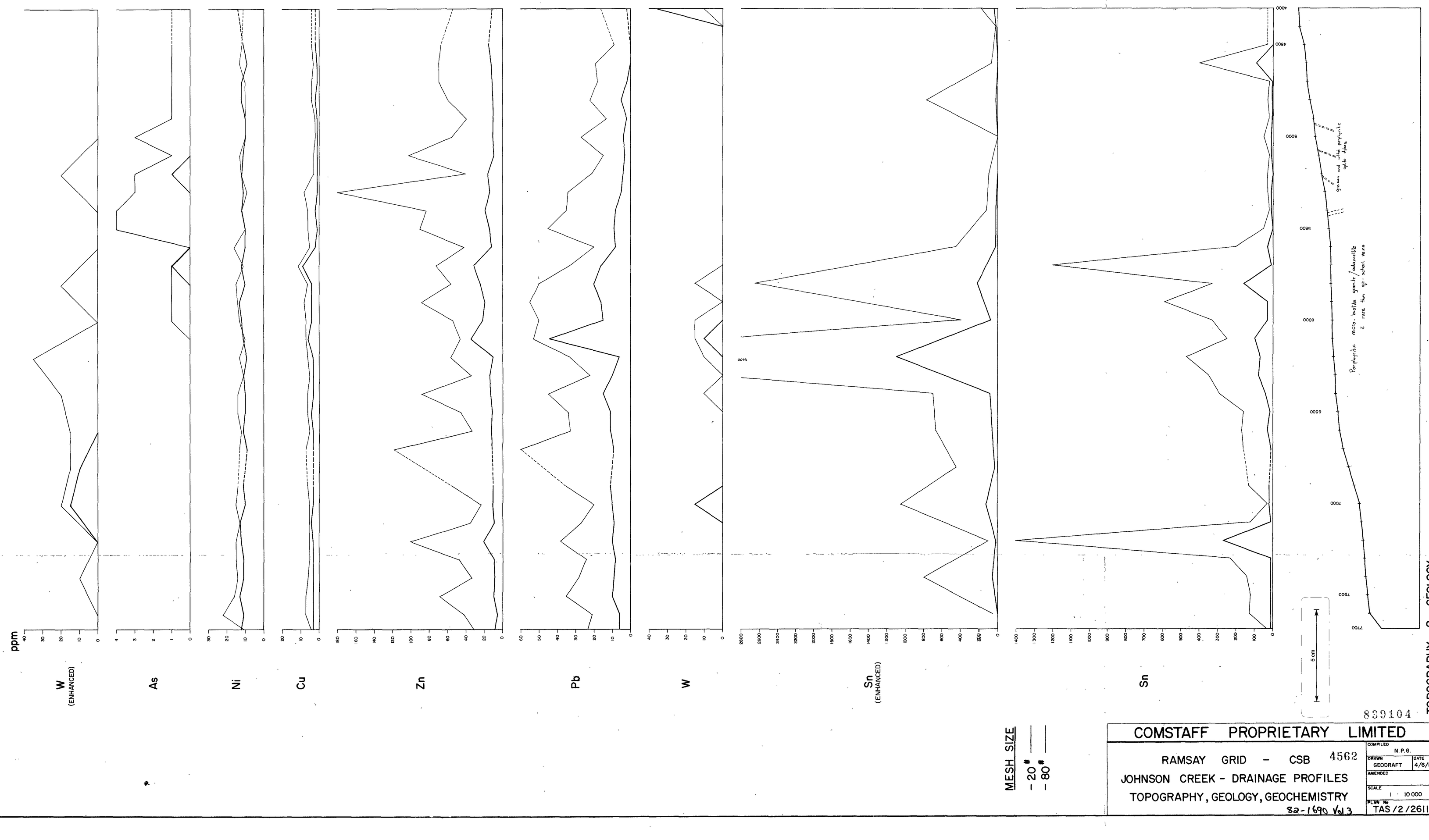
RAMSAY GRID - CSB 4563

PALMER CREEK - DRAINAGE PROFILES

TOPOGRAPHY, GEOLOGY, GEOCHEMISTRY

8a-1690 Vol 3

COMPILED N P G
DRAWN GEODRAFT DATE 5/6/8
AMENDED
SCALE 1 : 2500
PLAN No TAS/2/2612



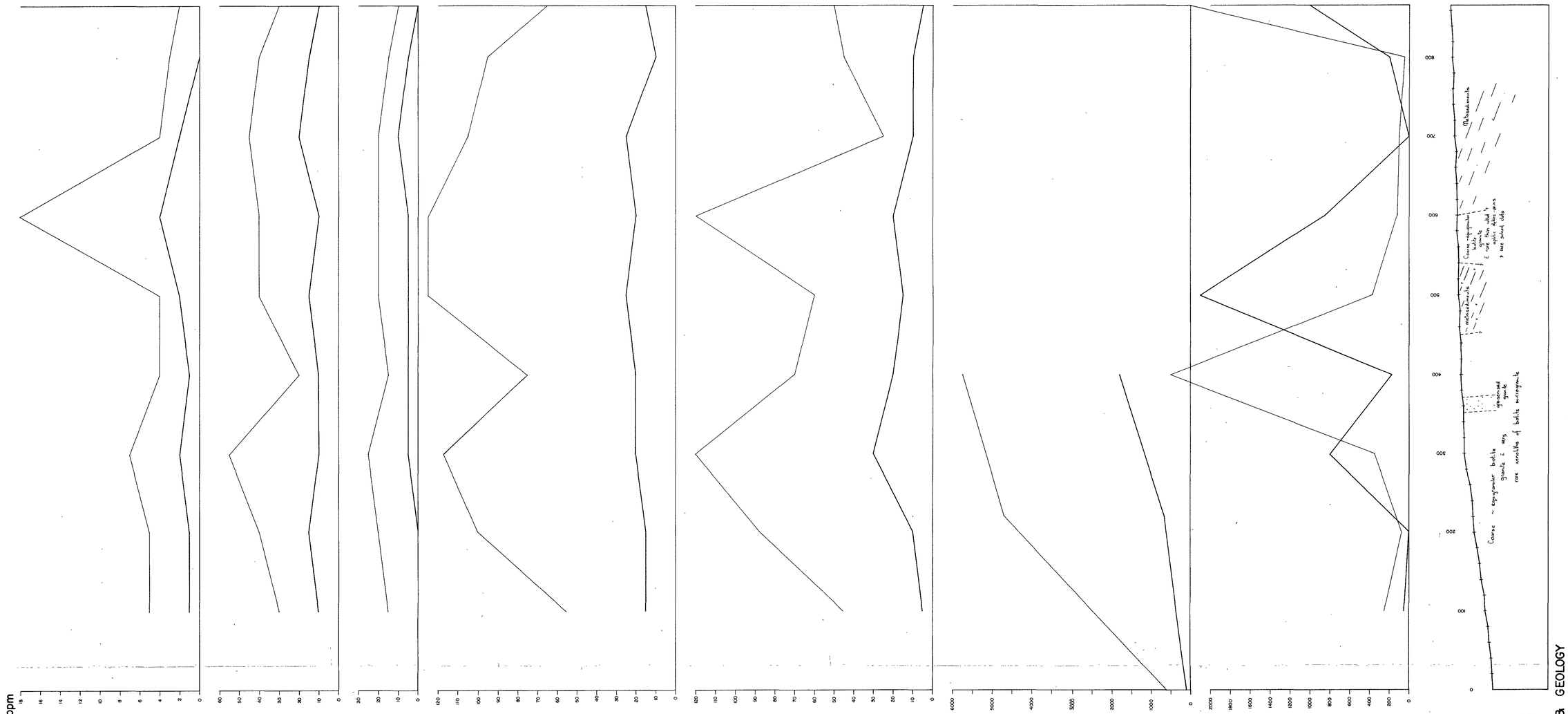
MESH SIZE
- 20 #
- 80 #

839104

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4562
JOHNSON CREEK - DRAINAGE PROFILES
TOPOGRAPHY, GEOLOGY, GEOCHEMISTRY
82-1690 Vol 3

COMPILED	N.P.G.
DRAWN	GEODRAFT
DATE	4/6/81
AMENDED	
SCALE	1 : 10 000
PLAN No	TAS/2/2611



839105

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4561

AYLETT CREEK - DRAINAGE PROFILES

TOPOGRAPHY, GEOLOGY, GEOCHEMISTRY

8a-1690 Vol3

COMPILED	N. P. G
DRAWN	GEODRAFT
DATE	4/6/8
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2610

370 000 E
371 000 E
372 000 E
372 500 E
5 405 000 N
5 404 000 N
5 403 000 N
5 402 500 N

700
600
600
600

35 | 180
10 | T
45
35
BLD | T

Sn | Sn (enhanced)
W | As

Sample Screen Size -80#

SHEET INDEX

A | B
370400
D | C

5 cm

SCALE 1 5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited

E39106

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4557

GEOCHEMICAL STREAM SEDIMENT SAMPLING

RESULTS FOR Sn/W/As in ppm

DRAWN	GEODRAFT
DATE	15/6/81
COMPILED	N P G
SCALE	1 5000
	TAS/2/2614

8a-1690 Vol 3

370 000 E
371 000 E
372 000 E
372 500 E
5 405 000 N
5 404 000 N
5 403 000 N
5 402 500 N

700
600
600
600

4 | 16
54 | 11

4 | 18
67 | 12

Cu | Pb
Zn | Ni

Sample Screen Size -80#

SHEET INDEX

A	B
370400	
D	C

5 cm

SCALE 1 5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited

839107

COMSTAFF PROPRIETARY LIMITED

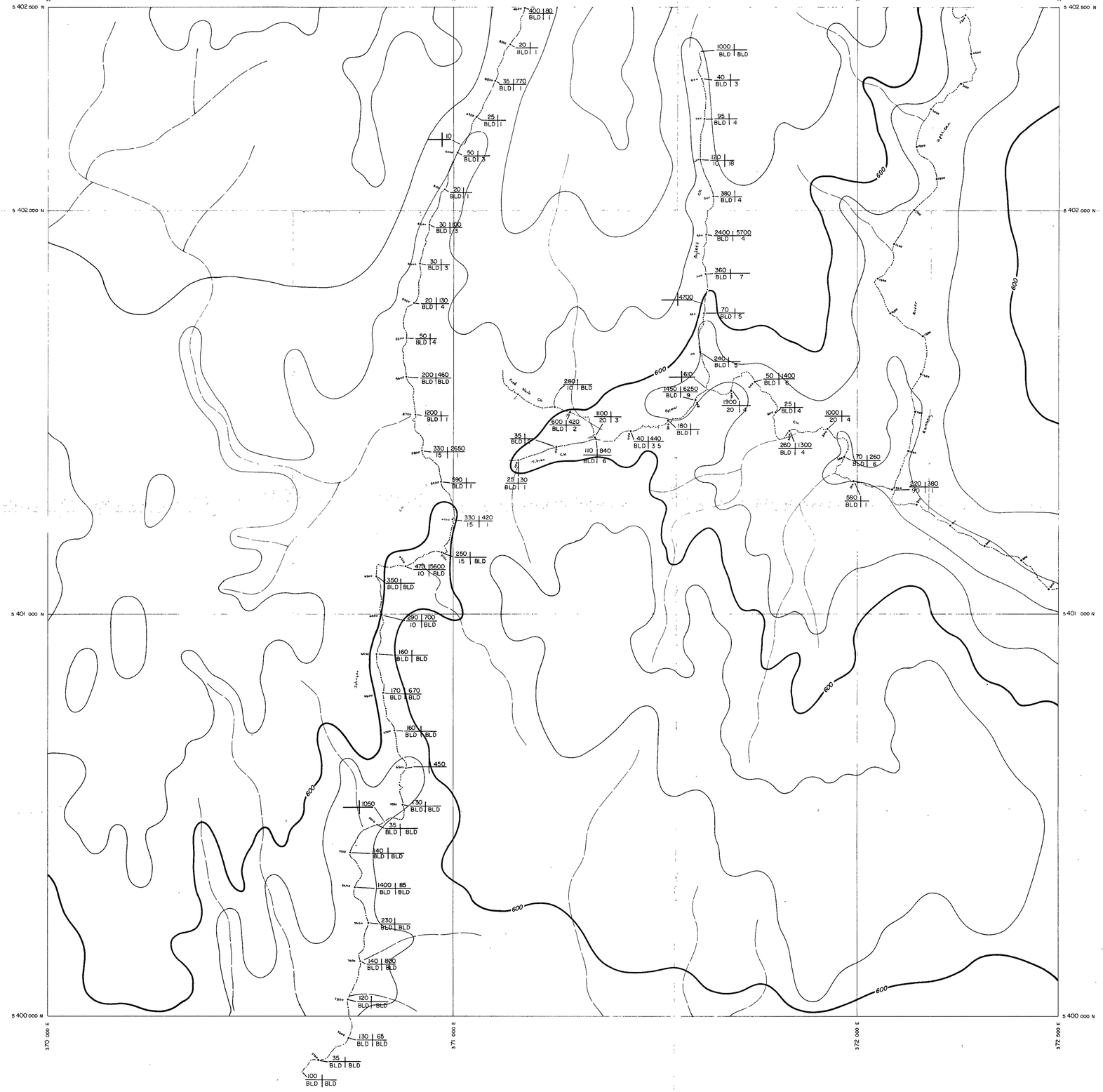
RAMSAY GRID - CSB 4559

GEOCHEMICAL STREAM SEDIMENT SAMPLING

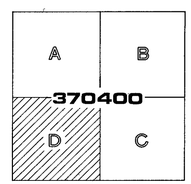
RESULTS FOR Cu/Pb/Zn/Ni in ppm

8a-1690 1613

DRAWN	GEODRAFT
DATE	15/6/81
COMPILED	N P G
SCALE	1 5000
	TAS/2/2616



SHEET INDEX



5 cm

SCALE 1 5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited.

839108

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4558

GEOCHEMICAL STREAM SEDIMENT SAMPLING

RESULTS FOR Sn/W/As in ppm

82-1690 V613

DRAWN	GEODRAFT
DATE	15/6/81
COMPILED	N.P.G
SCALE	1 : 5000
	TAS/2/2615

370 000 E
371 000 E
372 000 E
372 500 E
5 402 500 N
5 402 000 N
5 401 000 N
5 400 000 N

600

Cu | Pb
Zn | Ni

Sample Screen Size - 80 #

SHEET INDEX

A	B
D	C

370400

5 cm

SCALE 1 5000

100 0 100 200 300 400 METRES

Contour Interval 25 Metres

Drawn by Kemp Drafting from material supplied by Australian Anglo American Limited

839109

COMSTAFF PROPRIETARY LIMITED

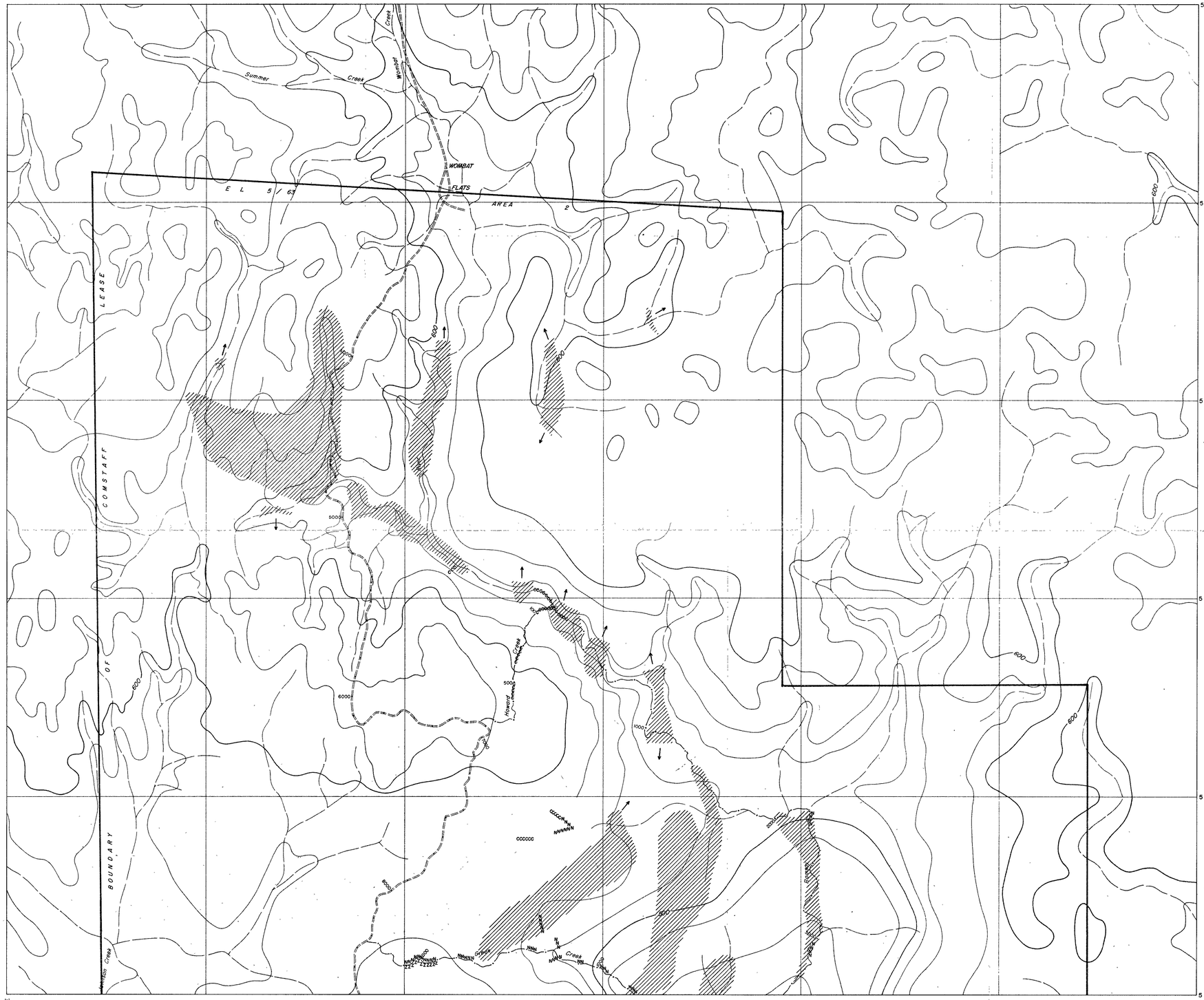
RAMSAY GRID - CSB 4530

GEOCHEMICAL STREAM SEDIMENT SAMPLING

RESULTS FOR Cu/Pb/Zn/Ni in ppm

DRAWN	GEODRAFT
DATE	15/6/81
COMPILED	N P G
SCALE	1 5000
	TAS/2/2617

82-1690 Vol 3



FOR LEGEND SEE PLAN TAS/2/2033

5 cm

TAS/2/2032
TAS/2/2033
TAS/2/2034

TN

SHEET INDEX

839110

COMSTAFF PROPRIETARY LIMITED

RAMSAY AREA - CAA 4535

LOCATION OF GEOCHEMICAL ANOMALIES AS KNOWN FEBRUARY 1980

COMPILED	G F P
DRAWN	GEODRAFT
DATE	6/2/80
AMENDED	21/4/80
SCALE	1 10 000
PLAN No	TAS/2/2032

8a - 1690 Vol 3

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

BLUNDSTONE

FRED

NUNN

CREEK

ELMER

TRUCK

CREEK

TITAN

CREEK

JOHNSON

CREEK

RILEY

CREEK

RAMSAY

CREEK

PALMER

CREEK

RAMSAY

839111

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4536 4636

GEOCHEMICAL GRID AUGER SAMPLING

COPPER RESULTS in ppm

5 cm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	21/1/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2367

83-1690 Vol 3

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

839112

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

GEOCHEMICAL GRID AUGER SAMPLING

LEAD RESULTS in ppm

4537

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	21/1/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2368

B2-1690 Vol 3

5 402 000 m N

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

5 401 000 m N

371 000 m E

372 000 m E

CREEK

ROAD

RIVER

JOHNSON

BLUNDSTONE

PRED

RUNK

PALMER

TEUCK

TITIAN

RAMSAY

839113

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4538

GEOCHEMICAL GRID AUGER SAMPLING

ZINC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	21/1/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2369

82-1690 WH 3

5 402 000 m N

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

5 401 000 m N

371 000 m E

372 000 m E

839114

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4539

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

82-1690 Vol 3

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	21/1/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2370

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5560 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

839115

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4540

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	21/1/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2371

8a-1690 Vol 3

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

JOHNSON CREEK

WILLINGSTONE CREEK

FRED NUNN CREEK

PALMER CREEK

TRUCK CREEK

FITTIAN CREEK

RIVER

RAMSAY CREEK

839116

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4541

GEOCHEMICAL GRID AUGER SAMPLING

NICKEL RESULTS in ppm

83-1690 Vol 3

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	21/1/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2372

5 402 000 m N

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

5 401 000 m N

371 000 m E

372 000 m E

BLUNDSTONE

FRED HUNK CREEK

PALMER

TRUCK CREEK

TITAN CREEK

JOHNSON CREEK

KELLETT RIVER

RAMSAY CREEK

GRANITE

NON-GRANITE

APPROXIMATE CONTACT

NOTE - CONTOUR VALUES in ppm

839117

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4547

COPPER CONTOUR PLAN SHOWING SEPARATE STATISTICAL SUMMARIES FOR AUGER GEOCHEMISTRY FOR GRANITIC AND NON-GRANITIC AREAS

COMPILED	N P G
DRAWN	GEODRAFT
DATE	28/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2599

8d-1690 Vol 3

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5720 N

L 5480 N

L 5240 N

L 5000 N

CREEK

ROAD

TRACK

RIVER

PALMER

FIXED

JOHNSON

SPITTIAN

LIMESTONE

GRANITE

NON-GRANITE

APPROXIMATE CONTACT

NOTE CONTOUR VALUES in ppm

839118

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4548

LEAD CONTOUR PLAN SHOWING SEPARATE STATISTICAL SUMMARIES FOR AUGER GEOCHEMISTRY FOR GRANITIC AND NON-GRANITIC AREAS

COMPILED	N P G
DRAWN	GEODRAFT
DATE	28/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2600

82-1690 Vol3

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

CREEK

ROAD

RIVER

FRED

WARK

PALMER

JOHNSON

ATLEET

RAMSAY

GRANITE
NON-GRANITE

APPROXIMATE CONTACT

NOTE - CONTOUR VALUES in ppm

839119

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4549

ZINC CONTOUR PLAN SHOWING SEPARATE STATISTICAL SUMMARIES FOR AUGER GEOCHEMISTRY FOR GRANITIC AND NON-GRANITIC AREAS

COMPILED	N P G
DRAWN	GEODRAFT
DATE	28/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2601

82-1090 Vol 3

5 402 000 m N

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

5 401 000 m N

371 000 m E

372 000 m E

BLUNDSTONE

FRED RUN

CREEK

JOHNSON

TRUCK

PALMER

RAMSAY

AYLETT

ROAD

RIVER

GRANITE

NON-GRANITE

APPROXIMATE CONTACT

NOTE :- CONTOUR VALUES in ppm

839120

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4550

NICKEL CONTOUR PLAN SHOWING SEPARATE STATISTICAL SUMMARIES FOR AUGER GEOCHEMISTRY FOR GRANITIC AND NON-GRANITIC AREAS

52-1690 VW 3

COMPILED	N P G
DRAWN	GEODRAFT
DATE	28/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2602

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

GRANITE
NON-GRANITE

APPROXIMATE CONTACT

NOTE CONTOUR VALUES in ppm

839121

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID – CSB 4551

TIN CONTOUR PLAN SHOWING SEPARATE STATISTICAL SUMMARIES FOR AUGER GEOCHEMISTRY FOR GRANITIC AND NON-GRANITIC AREAS

82-1590 Vol 3

COMPILED	N P G
DRAWN	GEODRAFT
DATE	28/5/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2603

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5560 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

NOTE :- CONTOUR VALUES in ppm

839122

5 cm

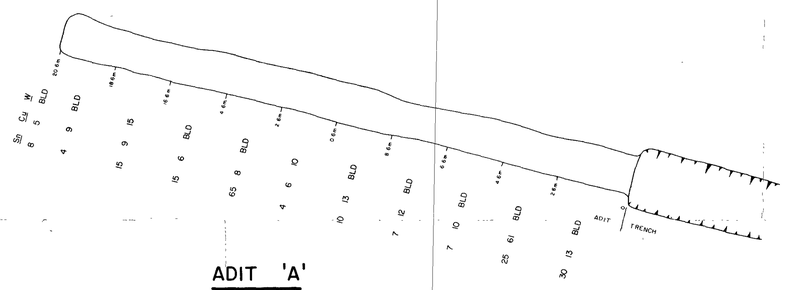
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4552

ARSENIC CONTOUR PLAN SHOWING SEPARATE STATISTICAL SUMMARIES FOR AUGER GEOCHEMISTRY FOR GRANITIC AND NON-GRANITIC AREAS

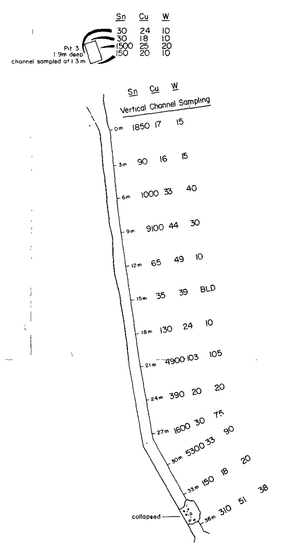
Sa-1690 Vol 3

COMPILED	N P G
DRAWN	GEODRAFT
DATE	28/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2604



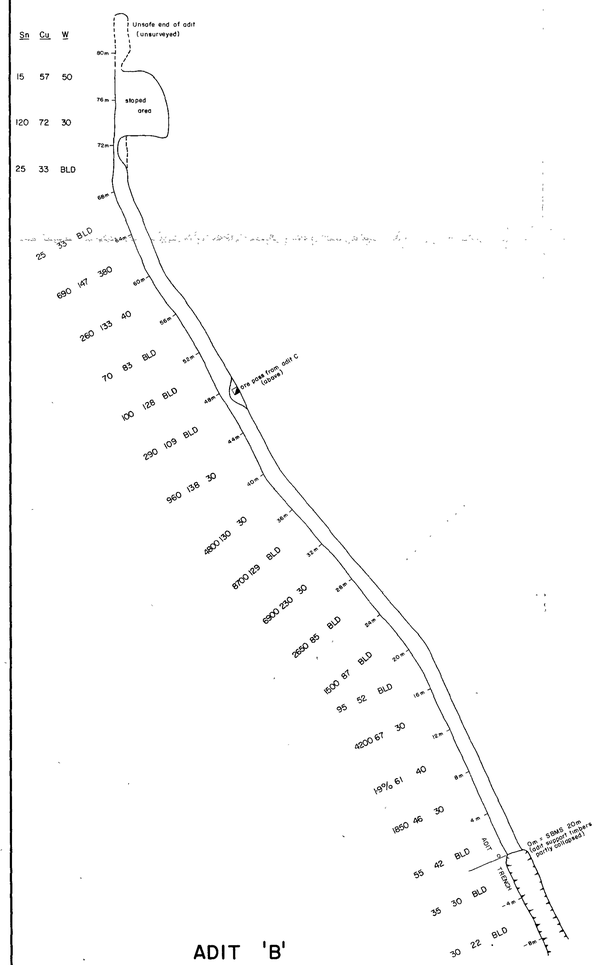
ADIT 'A'

SCALE - 1 100



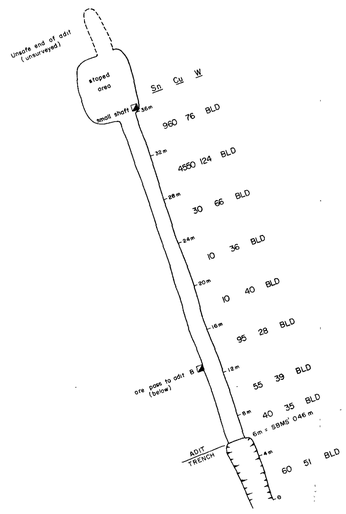
MAIN COSTEAN

SCALE - 1 250



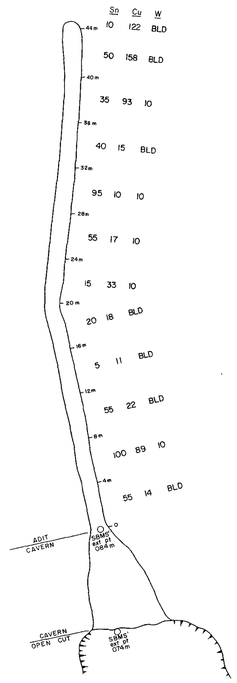
ADIT 'B'

SCALE- 1 : 250



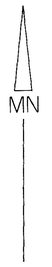
ADIT 'C'

SCALE - 1 250



ADIT 'D'

SCALE - 1 . 250



FOR LOCATION OF THESE ADITS AND COSTEAN, SEE PLAN TAS/2/2365

839123

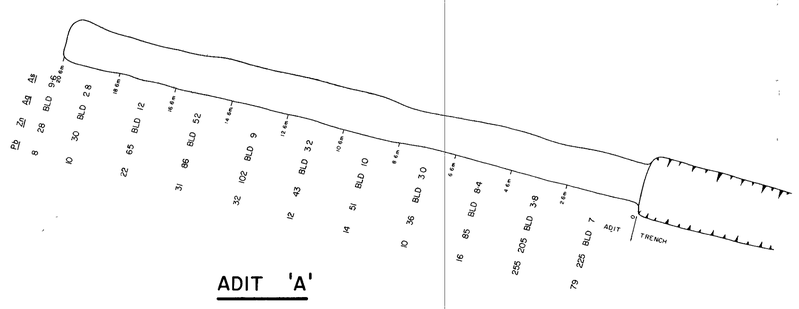
5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4553
SOUTH BISCHOFF MINE AREA, PLAN OF ADITS A,B,C,D & MAIN COSTEAN GEOCHEM. SAMPLE RESULTS FOR Sn,Cu,W

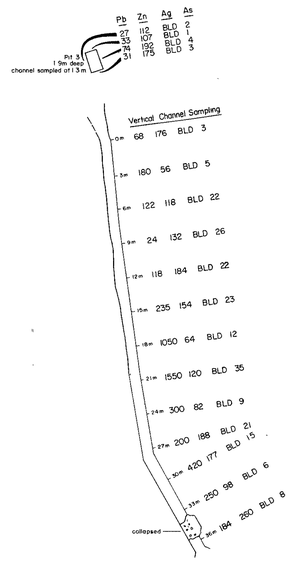
83-1690 Vol 3

COMPILED	N P G
DRAWN	GEODRAFT
DATE	29/5/81
AMENDED	
SCALE	AS SHOWN
PLAN No.	TAS/2/2607



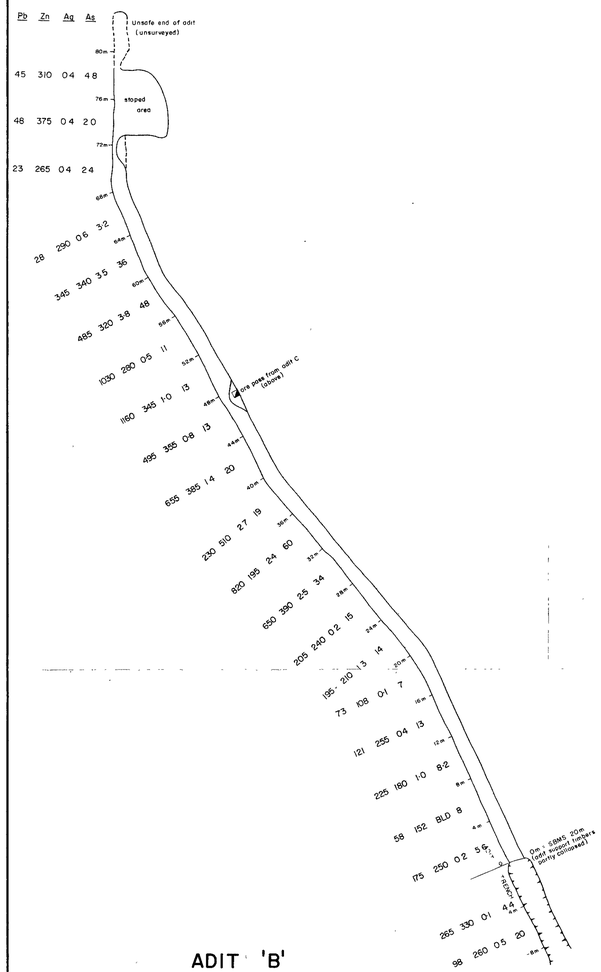
ADIT 'A'

SCALE - 1 100



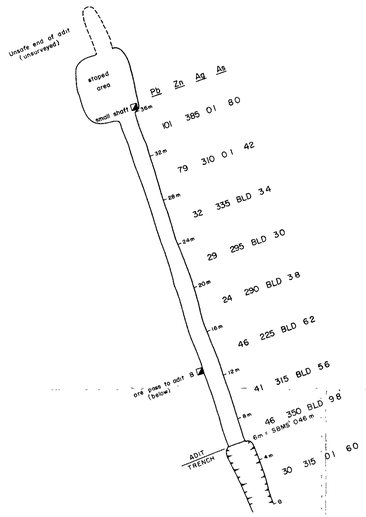
MAIN COSTEAN

SCALE - 1 250



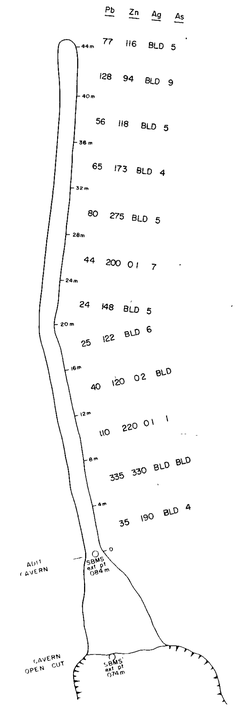
ADIT 'B'

SCALE- 1 250



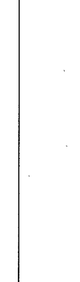
ADIT 'C'

SCALE - 1 250



ADIT 'D'

SCALE - 1 250



FOR LOCATION OF THESE ADITS AND COSTEAN, SEE PLAN TAS/2/2365

839124

5 cm

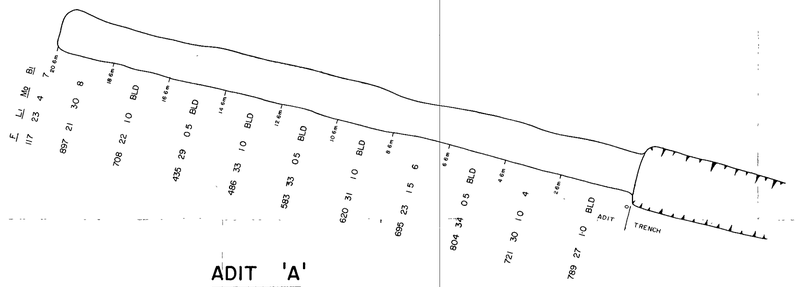
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4554

SOUTH BISCHOFF MINE AREA, PLAN OF ADITS A, B, C, D & MAIN COSTEAN GEOCHEM. SAMPLE RESULTS FOR Pb, Zn, Ag, As.

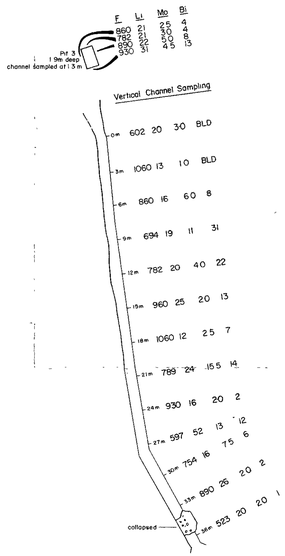
82-1690 Vol 3

COMPILED	N P G
DRAWN	GEODRAFT
DATE	29/5/81
AMENDED	
SCALE	AS SHOWN
PLAN No	TAS/2/2608



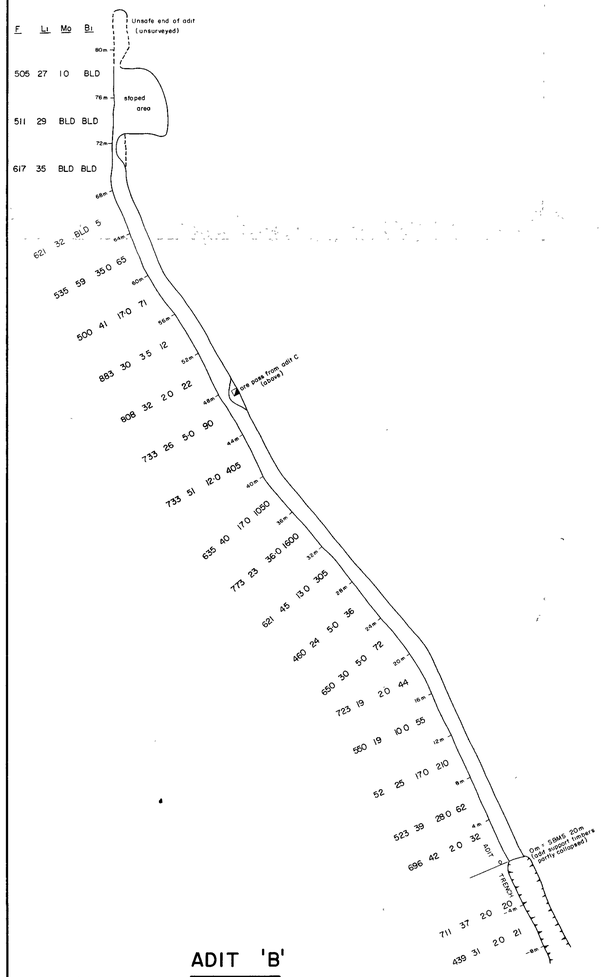
ADIT 'A'

SCALE - 1 100



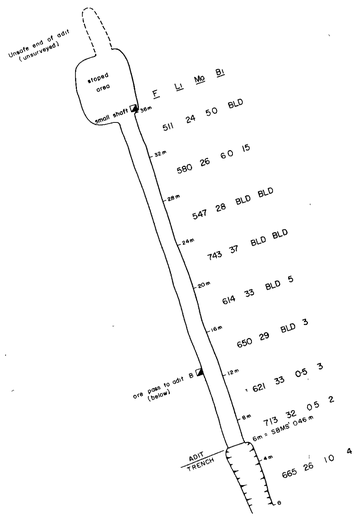
MAIN COSTEAN

SCALE - 1 250



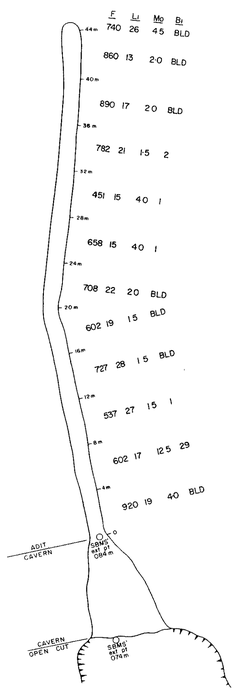
ADIT 'B'

SCALE- 1 250



ADIT 'C'

SCALE - 1 250



ADIT 'D'

SCALE - 1 250

FOR LOCATION OF THESE ADITS AND COSTEAN, SEE PLAN TAS/2/2365

839125

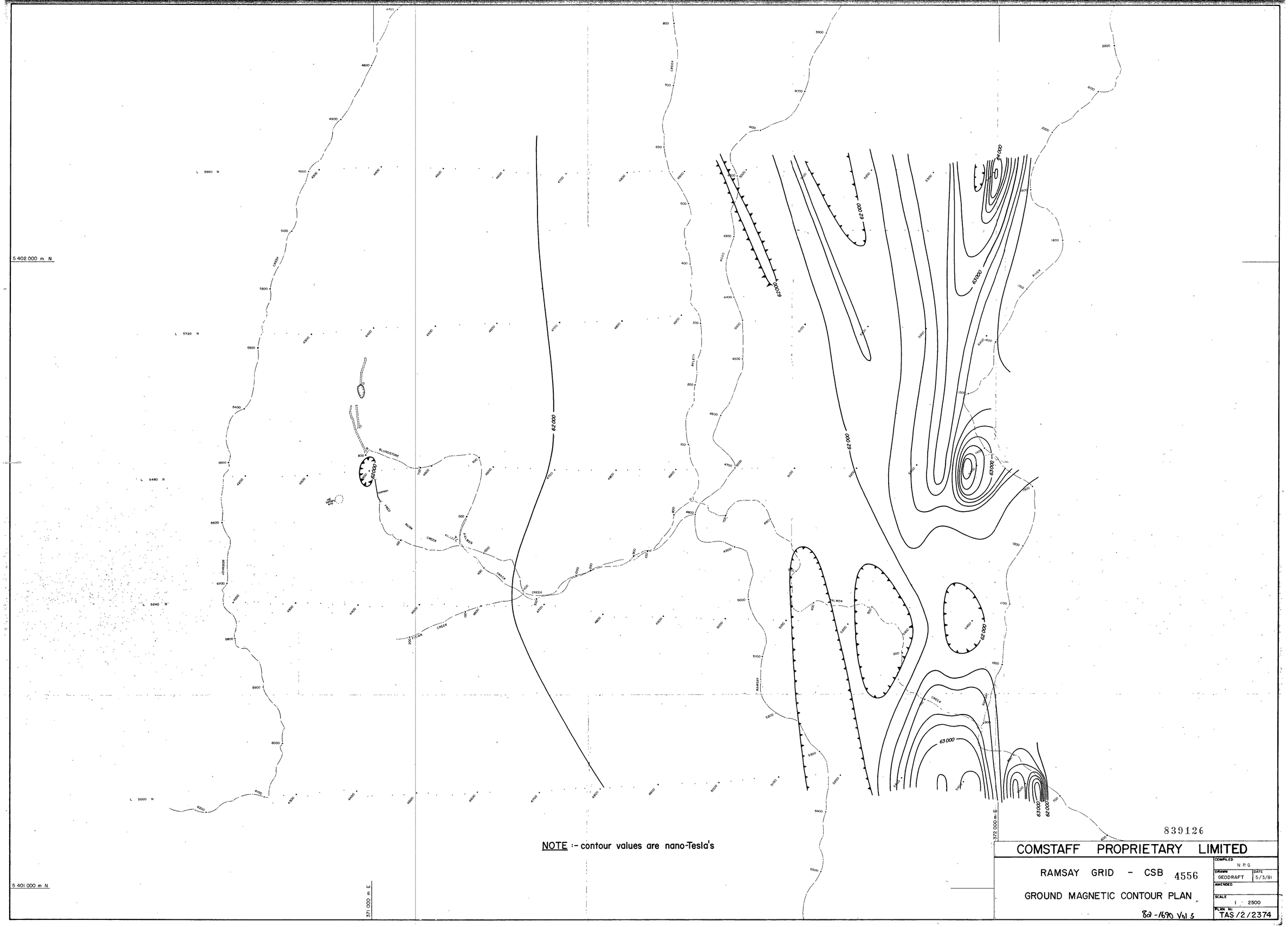
5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4555
SOUTH BISCHOFF MINE AREA, PLAN OF
ADITS A, B, C, D & MAIN COSTEAN
GEOCHEM. SAMPLE RESULTS FOR F, Li, Mo, Bi.

52-1690 Vol 3

COMPILED	N.P.G.
DRAWN	GEODRAFT
DATE	29/5/81
AMENDED	
SCALE	AS SHOWN
PLAN No	TAS/2/2609



839126

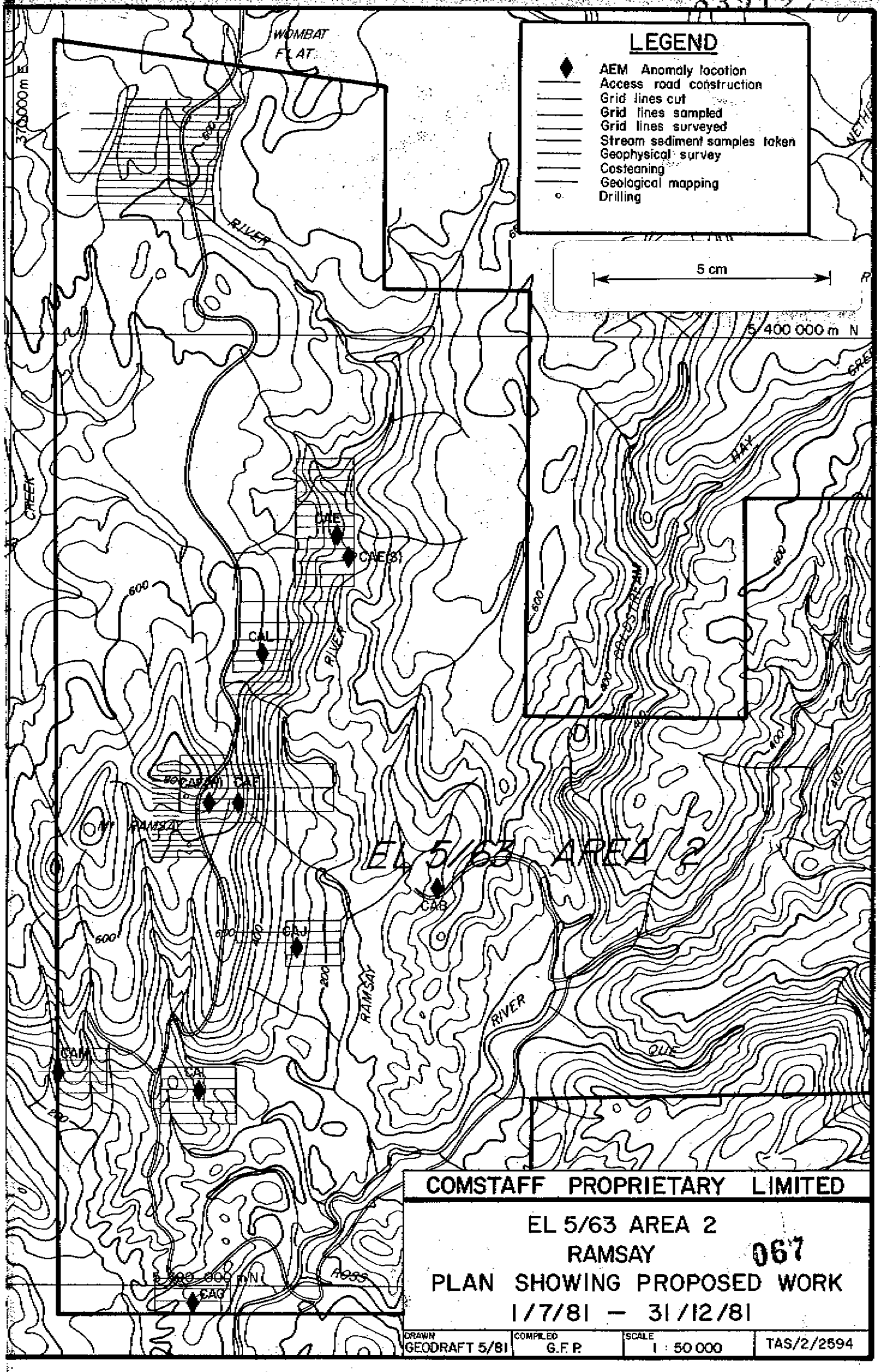
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 4556

GROUND MAGNETIC CONTOUR PLAN

82-1690 Vol 3

COMPILED	N.P.G
DRAWN	GEODRAFT
DATE	5/3/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2374



COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 2

RAMSAY 067

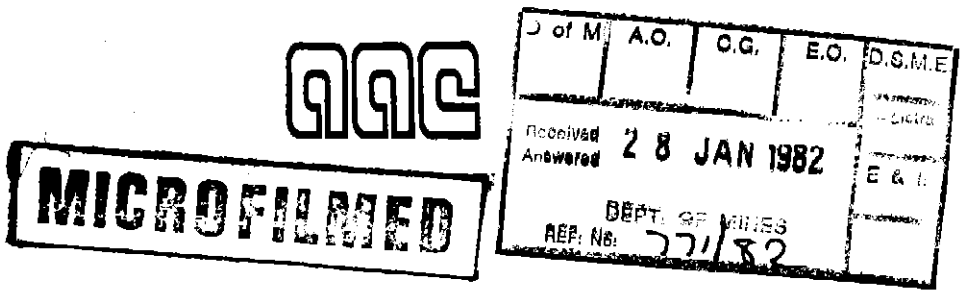
PLAN SHOWING PROPOSED WORK

1/7/81 – 31/12/81

DRAWN	COMPILED	SCALE	
GEODRAFT 5/81	G.F.P.	1 : 50 000	TAS/2/2594

82-1690
4/9
000

839128



PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

INTERIM REPORT ON GRID CAL

EL 5/63 VOL 4 /9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250,000 Sheet : Burnie K55-03

COMMODITY/IES: Sn, W, Cu, Pb, Zn

TEXT PAGES NO: 6

PLAN NOS: See attached list

TABLE NOS:

APPENDICES: 1 - Geophysics

AUTHOR/S: G F Pigott

DATE: 19th January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

839129

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COMSTAFF PROPRIETARY LIMITED

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT

OF MINES FOR THE PERIOD ENDED

30 DECEMBER 1981

INTERIM REPORT ON GRID CAL

EL 5/63 PART 2

1. Geology

1.1. General

Grid CAL has been established over rock units of the Proterozoic Ramsay Group, the Cambrian Crimson Creek Formation and the Devonian Meredith Granite. The sedimentary units lie within the contact metamorphic aureole of the granite and are hornfelsed to various mineral assemblages.

1.2. Ramsay Group

Rocks of the older Ramsay Sequence are exposed on the eastern sector of the grid. They comprise a finely bedded turbiditic sequence of laminated micaceous siltstone, carbonaceous shale, carbonaceous pyritic sandstone, pelite and quartzose semi pelite. The sandstone layers where massive are tectonically broken up into boudins. They are black to grey in colour depending on the amount of carbon detritus, are micaceous and are quartzo - feldspathic in composition.

At the top of the Ramsay Group, below the contact with the Crimson Creek Formation there is a lensoid unit of calc silicate altered pelite, argillite and meta siltstone. This unit is made up of finely bedded to massive beds and represents a calcareous sub-facies of the Ramsay Group. Calc silicate mineral development is common throughout the unit along with associated fine grained pyrrhotite and arseno-pyrite.

1.3. Crimson Creek Formation

The overlying Crimson Creek Formation rock units comprise, towards the base, essentially fine grained dark grey argillite and meta siltstone. This sequence passes westwards into medium to coarse tuffaceous lithic wacke interbedded with meta siltstone and argillite and including units of porphyritic micro gabbro. Overall, the Crimson Creek rock units comprise a well bedded turbiditic sequence with a predominance of ferromagnesian minerals, and basic lava clasts forming the mineral and lithic content. The units towards the base tend to be more quartzose in composition. Angular quartz and feldspar clasts form up to 10% of the lithic components in the tuffaceous lithic wackes.

...2

Within this sequence, units of metasomatised fine grained rocks have been mapped, folded into a northly plunging asymmetric syncline. These comprise finely bedded calc silicate altered meta dolomite, pelite, chert breccia, and quartzo-feldspathic acid tuff. It does not prove possible to trace these rocks as a distinct formational sequence north of line 5000N although continuation is indicated by the presence of float of arkosic lithic sandstone, similar in composition to the acid tuffs, on lines 5240N and 5480N. There is pervasive hydrothermal alteration within these rock units with replacement by diopside, tremolite, tourmaline and sulphides pyrrhotite, pyrite and arsenopyrite.

Ultrafine metasomatic tourmaline commonly occurs in the fine grained argillaceous units. Quartz diorite veins occur adjacent to the granite. The very fine tourmaline in the argillites is only discernable under the microscope but may form up to 20% of the rock. Tourmaline development is closely associated with the sulphides in the calc-silicate argillite sequence.

The effects of thermal metamorphism are widespread with all the rocks hornfelsed to varying degrees. Porphyroblastic cordierite is developed in spotted argillites on the southern grid line 4520N. Tremolite - phlogopite alteration is prevalent throughout the grid in the arenaceous units.

1.4. Meredith Granite

The CAL grid is established over the eastern contact of the Meredith Granite. In this area, the main granite type is a feldspar biotite equigranular adamellite. Although the contact with the Crimson Creek Formation is probably fairly irregular, it is considered to have an easterly dip of 40 - 50°. A shallow (35°) west dipping porphyritic adamellite dyke has been mapped on lines 4520N and 4640N cross cutting the east dipping sedimentary units.

Schorl development is widespread along the granite margin in the CAL area. It occurs as radial aggregates, vein like and dyke like masses and is associated with quartz. Quartz - tourmaline veins are associated with the adamellite dyke mapped east of the contact. Patchy muscovite greisenisation occurs on the access road where quartz - muscovite - tourmaline rocks are ferruginised.

2. Geophysics

2.1. Airborne Electromagnetic Survey

An airborne electromagnetic INPUT survey was conducted over the Comstaff southern sectors by Geoterrex Pty Ltd using the Barringer Mark V Input system and a Geometrics 803 nuclear precession magnetometer, mounted in a fix winged Super Canso PBY-5A aircraft. A number of anomalies were identified. Anomaly CAL was designated for ground follow up work. It is a six channel bedrock conductor at fiducial 132.40, of ratio 8/1.3 with an associated magnetic response of 400nT.

2.2. Ground Electromagnetic Survey

A Crone electromagnetic survey was carried out on lines 4760N, 4880N, 5000N and 5120N. A Max Min electromagnetic survey was carried out on lines 4520N, 4640N, 5240N and 5480N.

A) A distinct CEM anomaly is seen at:

5020E on line 4760
5040E on line 4880
5040E on line 5000N
5030E on line 5120N

It forms a distinct zone which is almost coincident with the interpreted fold axis in the metadolomite argillite unit. The anomaly amplitude decreases northward indicating a northerly plunge. The anomaly is east dipping, the interpreted depth of burial on line 5120N is 40m and the dip is 60° to the east.

The Max Min EM response at 5117E on line 4640N also has an interpreted easterly dip and lies along strike from the main CEM anomaly along the fold axis. There is no response to the south on line 4520N. The CEM anomaly does not continue from 5120N to 5240N except perhaps as a minor magnetic response. The northerly plunge of the conductor may account for this.

B) A partly defined CEM anomaly is seen at:

5270E on line 4760N
5270E on line 4880N
5270E on line 5000N

This anomaly lies within upper units of the Ramsay Group and may be explained by black shales although the anomalous response on line 4760N lies within calc silicate altered pelite and metadolomite units.

...4

The Max Min EM responses at:

5310E on line 5240N
5450E on line 5480N

also lie within the upper units of the Ramsay Group, have an easterly dip and are along strike from the CEM anomaly to the South.

C) There is a Max Min EM response at 4960E on line 4520N. The indicated dip is to the west, which is adjacent to and parallels, the west dipping adamellite dyke.

2.3. Ground Magnetic Survey

The magnetic signature of the Ramsay Group rock units is a consistent plateau while that of the Crimson Creek rocks is erratic with a high background. The pattern over the Meredith Granite is typically flat.

Two zones of anomalous magnetic patterns occur:

A) A western zone which is coincident with the EM anomaly A and is associated with metasomatised calc silicate units within the synclinal fold structure.

B) A response over the basal Crimson Creek units where pyrrhotite in basic igneous rocks has been mapped.

3. Geochemistry

Soil Samples were collected from the C Horizon and analysed for Cu, Pb, Zn, Sn, W and As.

3.1. Sn

The Sn values may be grouped into three populations 0-12, 13-43 and greater than 43 ppm. A clearly defined Sn anomaly occurs over the western end of line 4760N with coincident anomalous W, Pb and Zn values. It does not extend to the lines north and south. A follow up 40m square is currently being established to further define this zone.

The responses centered at 4930E on line 4760N and at 5150E on line 4640N coincide with the calc silicate altered pelitic units - on opposite limbs of the inferred fold.

The linear response from line 5120N to 4520N is coincident with the contact zone of the Upper Ramsay Group and the Crimson Creek Formation where the lensoid calc silicate altered unit occurs.

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3.2. As

The As values may be grouped into four populations 0-9, 10-36, 37-82 and greater than 82 ppm. Not all the soil samples were analysed for As but it was subsequently decided to analyse for As when arsenopyrite was observed associated with the calc silicate alteration in the metadolomite units.

The main anomalous response occurs on lines 4760N to south of 4520N and lies down slope from the coincident EM and magnetic anomalies. It is coincident with a Sn response and is associated with outcropping calc silicate altered units containing sulphide mineralisation.

A linear anomalous pattern may be traced from line 4760N to south of 4520N with a possible extension north to 5000N. This is coincident with the Sn response associated with the top most units of the Ramsay Group.

3.3. W

Tungsten values in the soils are generally low with most below the limit of detection. There is a definitely anomalous response coincident with the Sn anomaly at the western end of line 4760N. Soils derived from granitoid rocks have a higher background in W from those derived from the sediments.

3.4. Cu

Copper values may be grouped into three populations 0-30, 31-100 and greater than 100 ppm. The Cu pattern in the soils clearly defines the Crimson Creek - Meredith Granite contact zone from line 5000N to the south but not to the north where for example on line 5240N there is a single station anomaly at 4900E.

There is an anomalous Cu response associated with the contact zone within the Crimson Creek Formation. The main central anomaly is coincident with the folded calc silicate altered unit, particulary with the EM and magnetic anomalies on lines 4880N, 5000N and 5120N.

A somewhat discontinuous anomalous pattern is associated with the Ramsay Group - Crimson Creek contact zone, possibly reflecting the presence of the rock units.

3.5. Zn

Zinc values may be grouped into four anomalous populations 0-27, 28-120, 121-370 and greater than 370 ppm. Definite anomalous values are assocated with the Sn/W/Pb anomaly at the western end of 4760N, and extend southwards to line 4640N. Just east of this along the granite contact there is a three line linear anomaly coincident with high Cu values.

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007

The central bifurcated zone of discontinuous anomalies roughly coincides with the EM magnetic zone, especially on line 5120N to the north.

The eastern most anomaly on lines 5240N to 5480N within the Crimson Creek may be associated with basic rock types. While the southeastern anomaly on line 4760N to south of 4520N is coincident with hornfelsed calc silicate altered Ramsay Group rocks.

3.6. Pb

Anomalous Pb values are associated with the CEM magnetic anomaly on line 5120N and with the Sn/W/Zn anomaly at the western end of 4760N. There appears to be no lithological or alteration control, only isolated high anomalies.

4. Conclusions and Recommendations

A diamond drill hole is required to test the Crone EM anomaly with coincident magnetic and geochemical responses. The best target is on line 5120N at 5030E. Should encouraging results be forthcoming, further drilling along strike to the south will be required.

If these styles of EM magnetic and geochemical anomalies coincident with mapped metasomatic rock units are associated with economic Sn ± WO_3 mineralisation, then the dolomitic upper units of the Ramsay Group at the eastern side of the grid will also require testing by drilling.

G F Pigott
Senior Geologist

Approved by

R J Kernick
Exploration Manager

GFP:AML

19 January 1982

008

839136

85-1293

page 1/2 CAL 5480 N.

GEOTERREX P/L

MAX-MIN II EM SURVEY

FOR COMSTAFF P/L

JOB No 85-1293

AREA MT RAMSAY

GRID CAL

LINE 5480 NORTH

4762 E → 5721 E

COIL SEP 160 METRES

INTERVAL 40 METRES

MODE MAX COUPLED

FREQs 222, 888, 1777 Hz

DATE: 26-3-81

PAGE 1 of 2

SCALE: HOR. 1cm = 40m hor. corrected

VERT. 1cm = 10%

LEGEND: -o—o- IN PHASE

-x--x- QUADRATURE

5 cm

839137

222 Hz.

60
50
40
30
20
10
0
-10
-20

%

4792 4802 4812 4822 4831 4841 4851 4861 4871 4881 4891 4901 4911 4921 4931 4941 4951 4961 4971 4981 4991 5001 5011 5021 5031 5041 5051 5061 5071

METRES EAST STATIONS 40 METRES FOR CORRECTED

5 cm

003

839138

85-1293

page 2/2

CAL 5480N

5 cm

CH 1: 3 mV

135

120

110

100

90

80

70

60

50

40

30

20

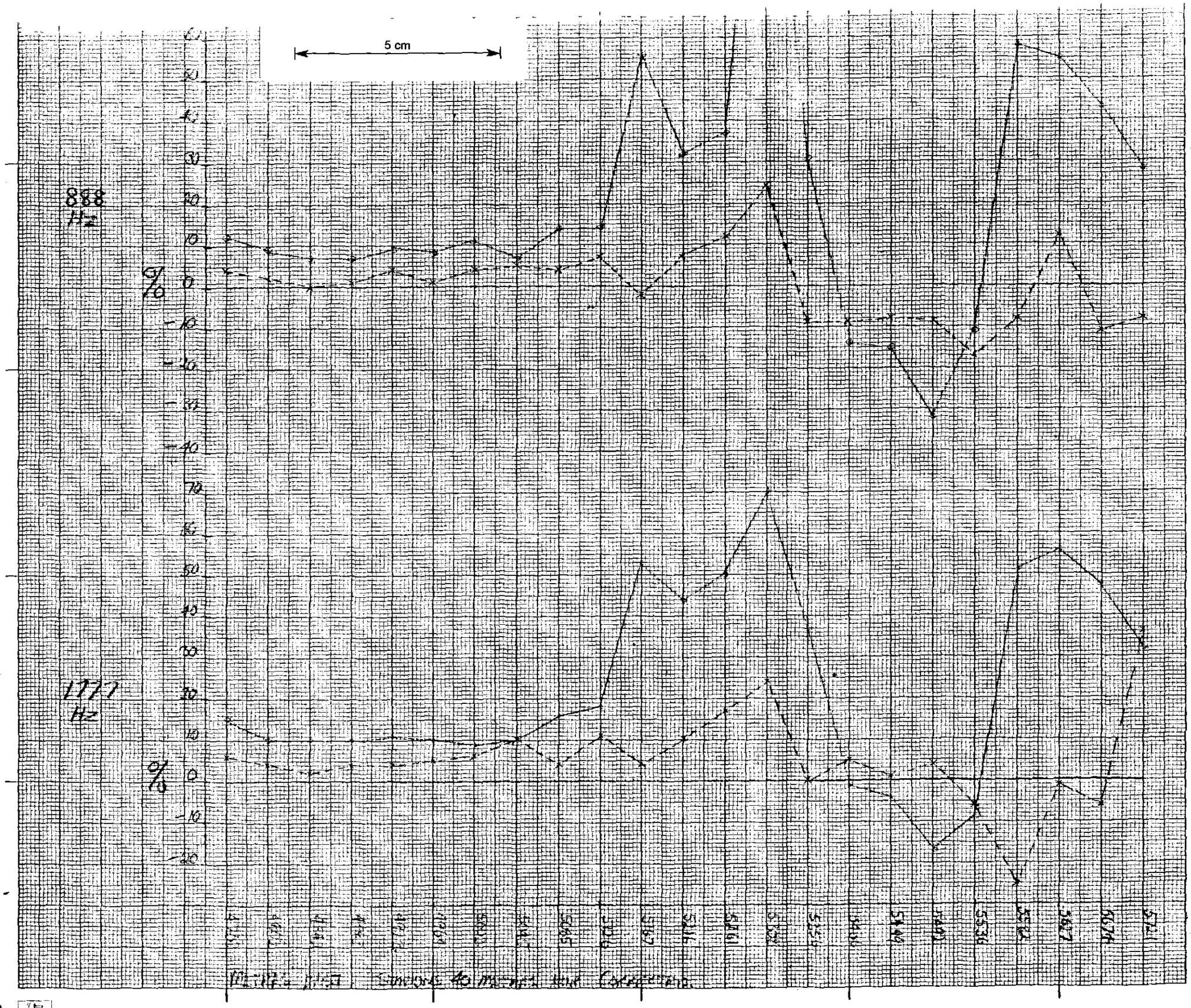
10

0 %

888 Hz

010

839139


5 cm
888 Hz
1777 Hz
%
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
5146
5491
5535
5580
5624
5669
5713
5758
5802
5847
5891
5936
5980
6025
6069
6114
6158
6203
6247
6292
6336
6381
6425
6470
6514
6559
6603
6648
6692
6737
6781
6826
6870
6915
6959
7004
7048
7093
7137
7182
7226

GEOTERREX P/L

MAX MIN II EM SURVEY

JOB No 85-1293

FOR COMSTAFF P/L

AREA: MT RAMSAY

GRID CAL

LINE: 5240 NORTH

1762E → 5873E

COIL SEP 160 METRES

INTERVAL 40 METRES

MODE MAX COUPLED

FREQ'S 222, 666, 1777 Hz

DATE 25-3-81

PAGE 1 of 2

SCALE: HOR 1cm = 40m hor. corrected
VERT 1cm = 10%

LEGEND ⊕——⊕ IN PHASE
-x--x- QUADRATURE

5 cm

012

839141

LEGEND o—o IN PHASE
-x--x- QUADRATURE

5 cm

222 Hz

60
50
40
30
20
10
% 0
-10
-20
-30
-40

4700 4600 4500 4400 4300 4200 4100 4000 3900 3800 3700 3600 3500 3400 3300 3200 3100 3000 2900 2800

METRES EAST - STATIONS 40m HOR. CORRECTED

610

839142

5 cm

85-1293

page 2/2 CAL 5240 N

PAGE 2 of 2

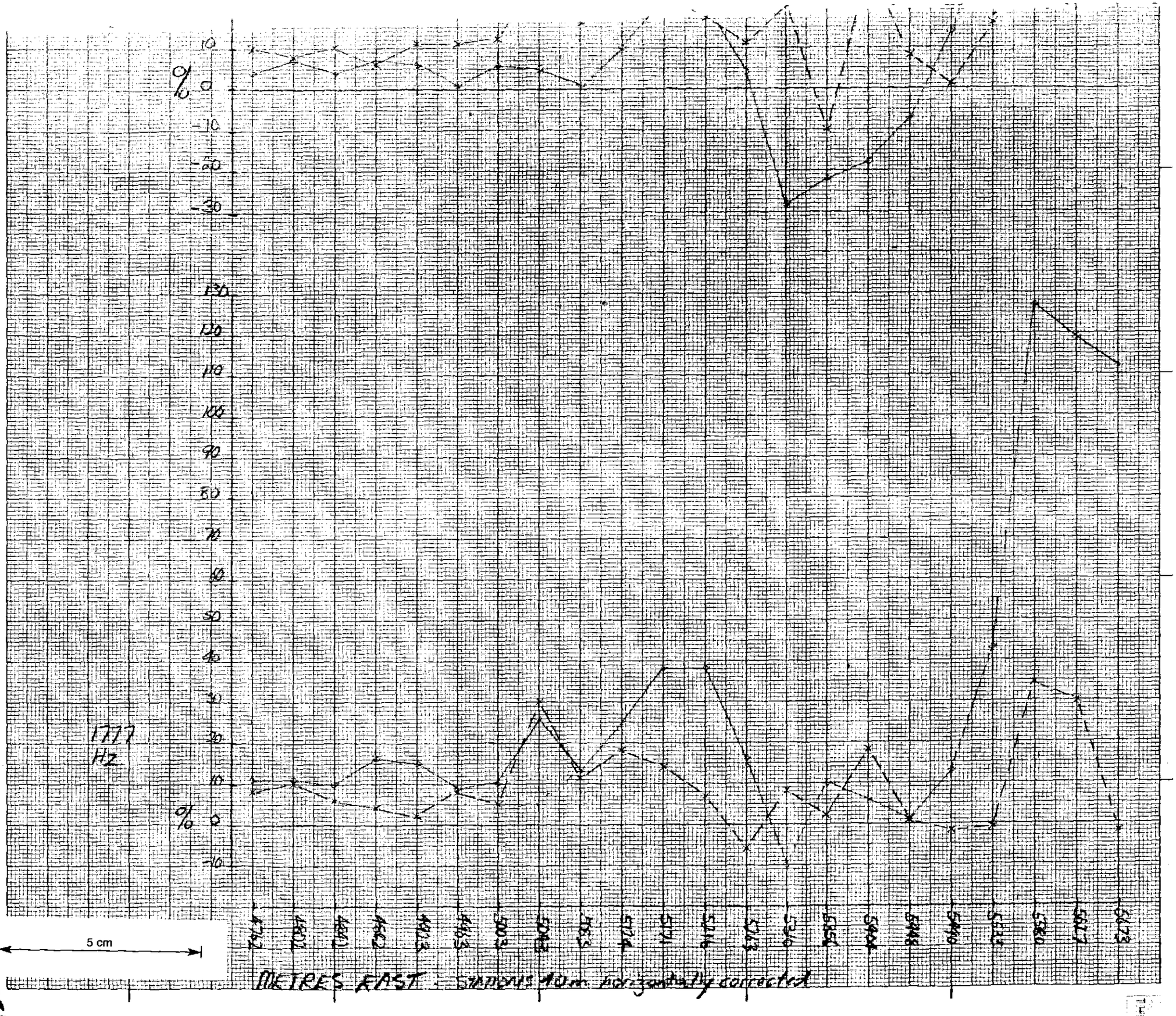
888 Hz

100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30

%

F10

839143


%
10
0
-10
-20
-30
1777 Hz
%
10
0
-10
5 cm
METRES EAST. STATIONS 10m horizontally corrected

GEOTERREX P/L

MAX MIN II EM SURVEY

JOB No 85-1293

FOR COMSTAFF P/L

AREA: MT RAMSAY

GRID: CAL

LINE: 4640 NORTH

4762E → 5266E

COIL SEP 160 M

INTERVAL 40 M

MODE: MAX COUPLED

FREQS 222, 888, 1777 Hz

DATE 6-4-81

PAGE 1 OF 2

SCALE: HOR 1cm = 40 M HOR CORRECTED
VERT 1cm = 10%

LEGEND —o—o— INPHASE
—x—x— QUADRATURE

5 cm

222
H_2

60
50
40
30
20
10
0
−10
−20
−30
−40

%

4760 4804 4814 4884 4977 4976 5034 5070 5115 5159 5209 5244 5318

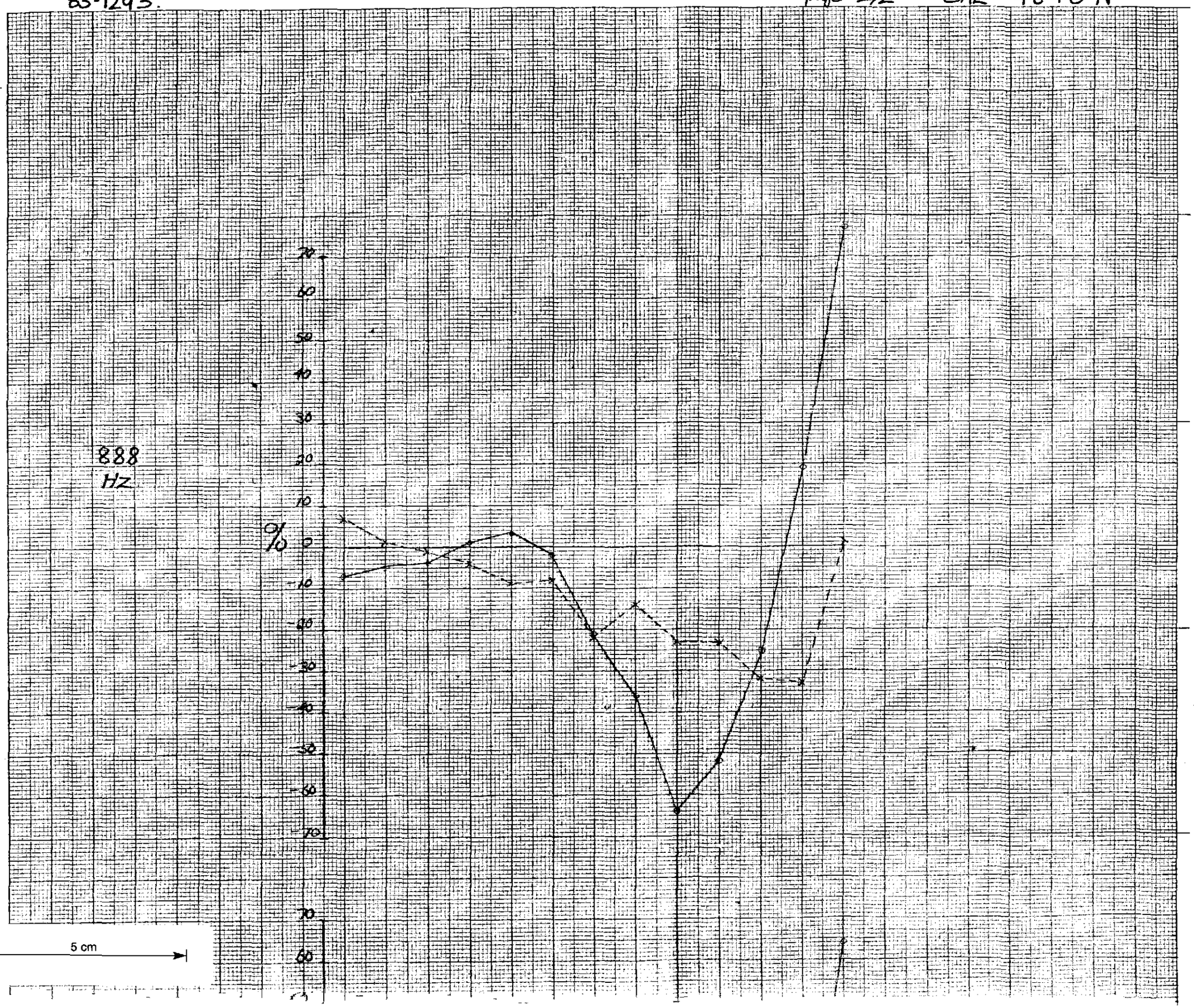
METRES EAST; STATIONS 40 M NOR CORRECTED.

5 cm

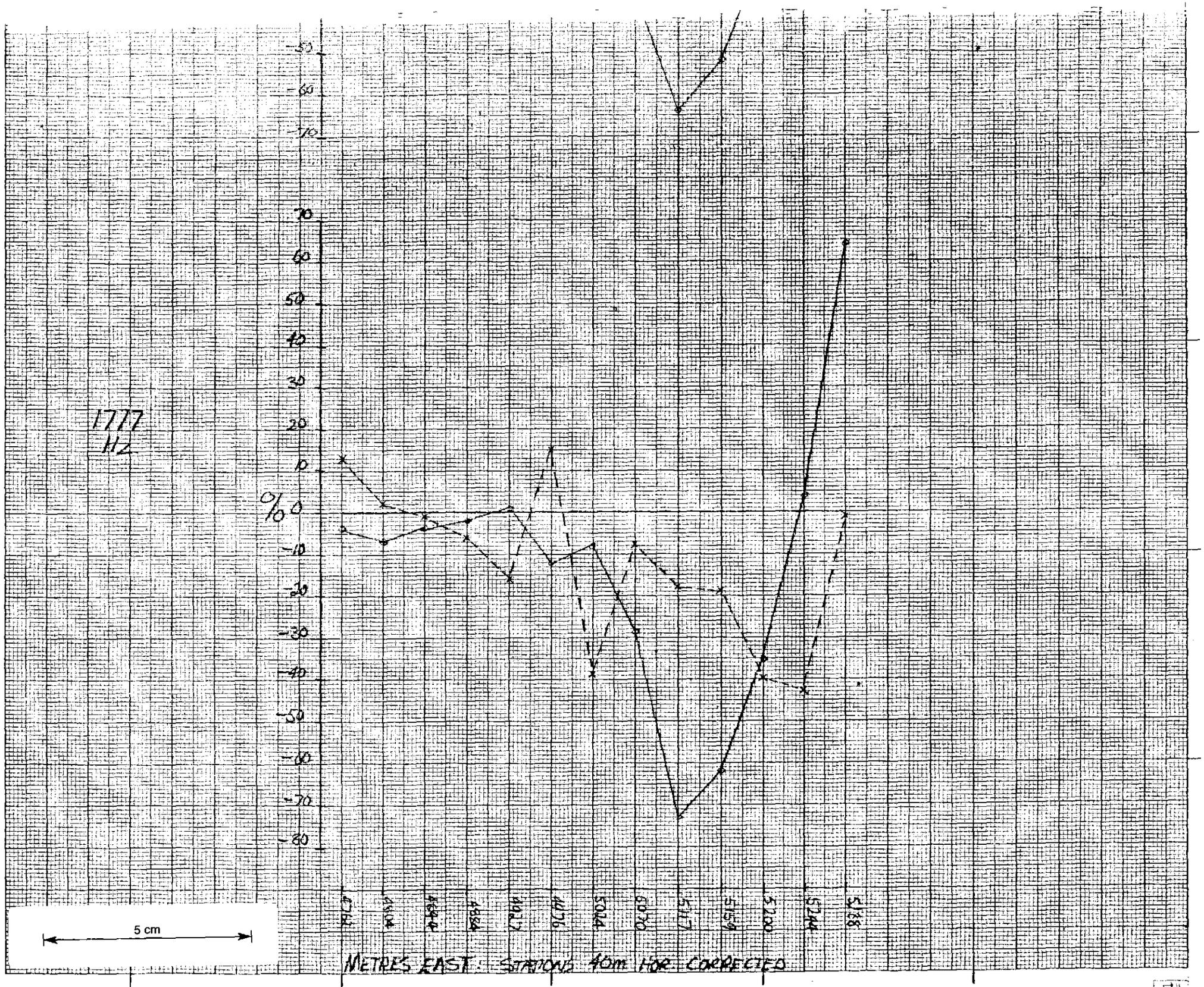
017

85-1293.

page 2/2 CAL 4640 N



018


1777 Hz
%
-50
-60
-70
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
5 cm
METRES EAST: STATIONS 40m HOR. CORRECTED

839148

85-1293.

CAL 4520 N

GEOTEREX P/L
MAX MIN EM SURVEY
JOB No 85-1293
FOR COMSTAFF P/L
AREA: MT RAMSAY
GRID: CAL
LINE: 4620 NORTH
4761 E → 5235 E

COIL SEP: 160 metres
INTERVAL: 40 metres
MODE: MAX COUPLED
FREQ's: 222, 888, 1777 Hz.
DATE: 5-6-85

SCALE: HOR 1cm = 40m hor
corrected
VERT 1cm = 10%

LEGEND: —o—o— IN PHASE
—x—x— QUADRATURE

222 Hz.

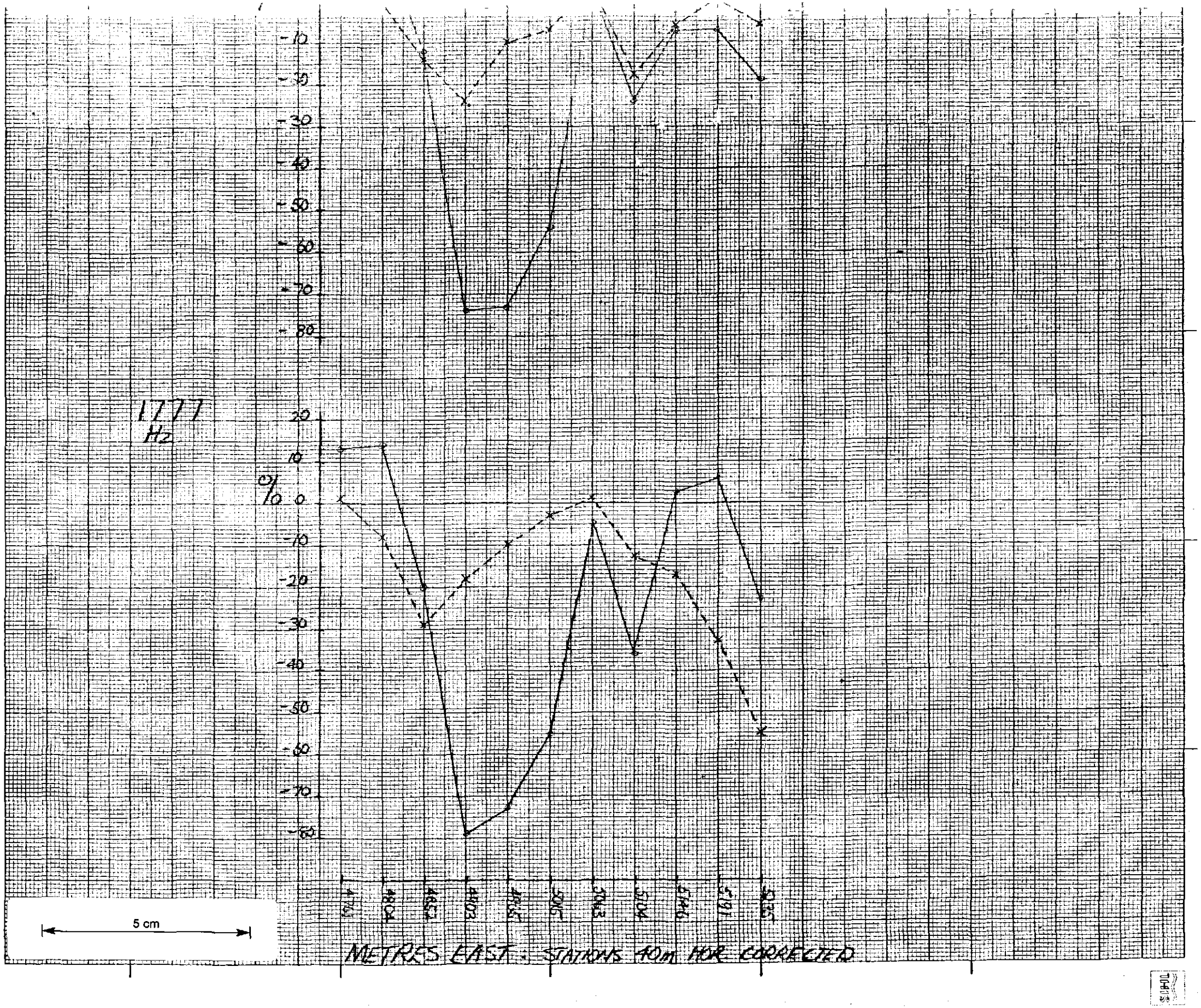
888 Hz.

%

20
10
0
-10
-20
-30
-40
-50

5 cm

020


-10
-20
-30
-40
-50
-60
-70
-80
1777
Hz
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
%
4403
4603
4803
5003
5203
5403
5603
5803
5 cm
METRES EAST - STATIONS ADM HOR CORRECTED

120

LIST OF PLANS

TAS-2-1799 Ramsay Area Location of CAL grid 1:50 000

TAS-2-1834 Ramsay Grid CAL Detailed Geology 1:2 500

TAS-2-2100 Ramsay Grid CAL Geological Interpretation 1:2 500

TAS-2-2245 Ramsay Grid CAL Composite Section Line 4520N 1:2 500

TAS-2-2246 Ramsay Grid CAL Composite Section Line 4640N 1:2 500

TAS-2-1821 Ramsay Grid CAL Composite Section Line 4760N 1:2 500

TAS-2-1822 Ramsay Grid CAL Composite Section Line 4880N 1:2 500

TAS-2-1823 Ramsay Grid CAL Composite Section Line 5000N 1:2 500

TAS-2-1824 Ramsay Grid CAL Composite Section Line 5120N 1:2 500

TAS-2-2247 Ramsay Grid CAL Composite Section Line 5240N 1:2 500

TAS-2-2248 Ramsay Grid CAL Composite Section Line 5480N 1:2 500

TAS-2-2045 Ramsay Grid CAL Auger Sample Results and Contours Cu 1:2 500

TAS-2-2046 Ramsay Grid CAL Auger Sample Results and Contours Pb 1:2 500

TAS-2-2047 Ramsay Grid CAL Auger Sample Results and Contours Zn 1:2 500

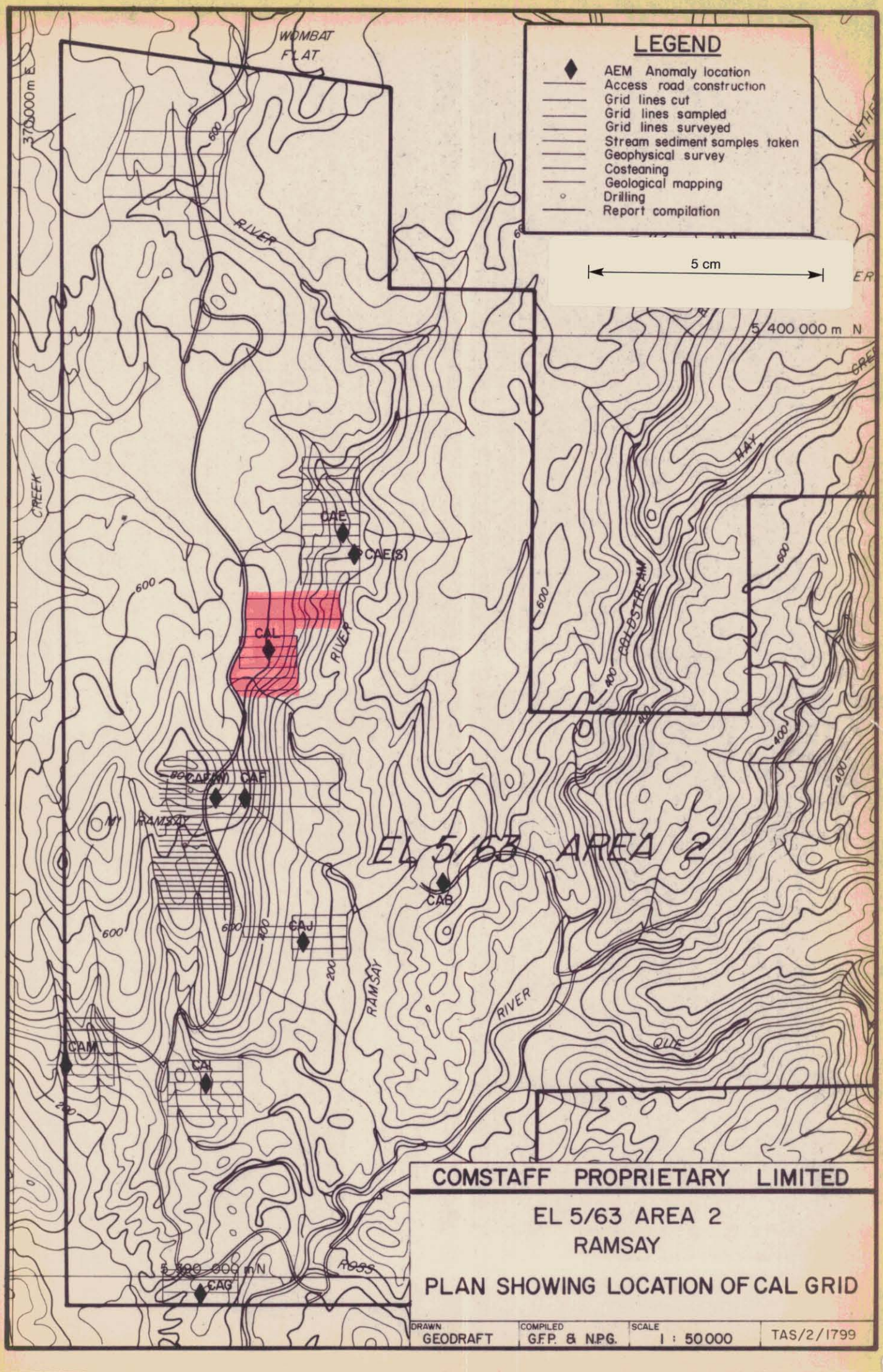
TAS-2-2048 Ramsay Grid CAL Auger Sample Results and Contours Sn 1:2 500

TAS-2-2049 Ramsay Grid CAL Auger Sample Results and Contours W 1:2 500

TAS-2-2791 Ramsay Grid CAL Auger Sample Results and Contours As 1:2 500

023

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COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 2
RAMSAY

PLAN SHOWING LOCATION OF CAL GRID

DRAWN	COMPILED	SCALE	
GEODRAFT	G.F.P. & N.P.G.	1 : 50000	TAS/2/1799

5 397 000 m N

372 000 m E

373 000 m E

839152

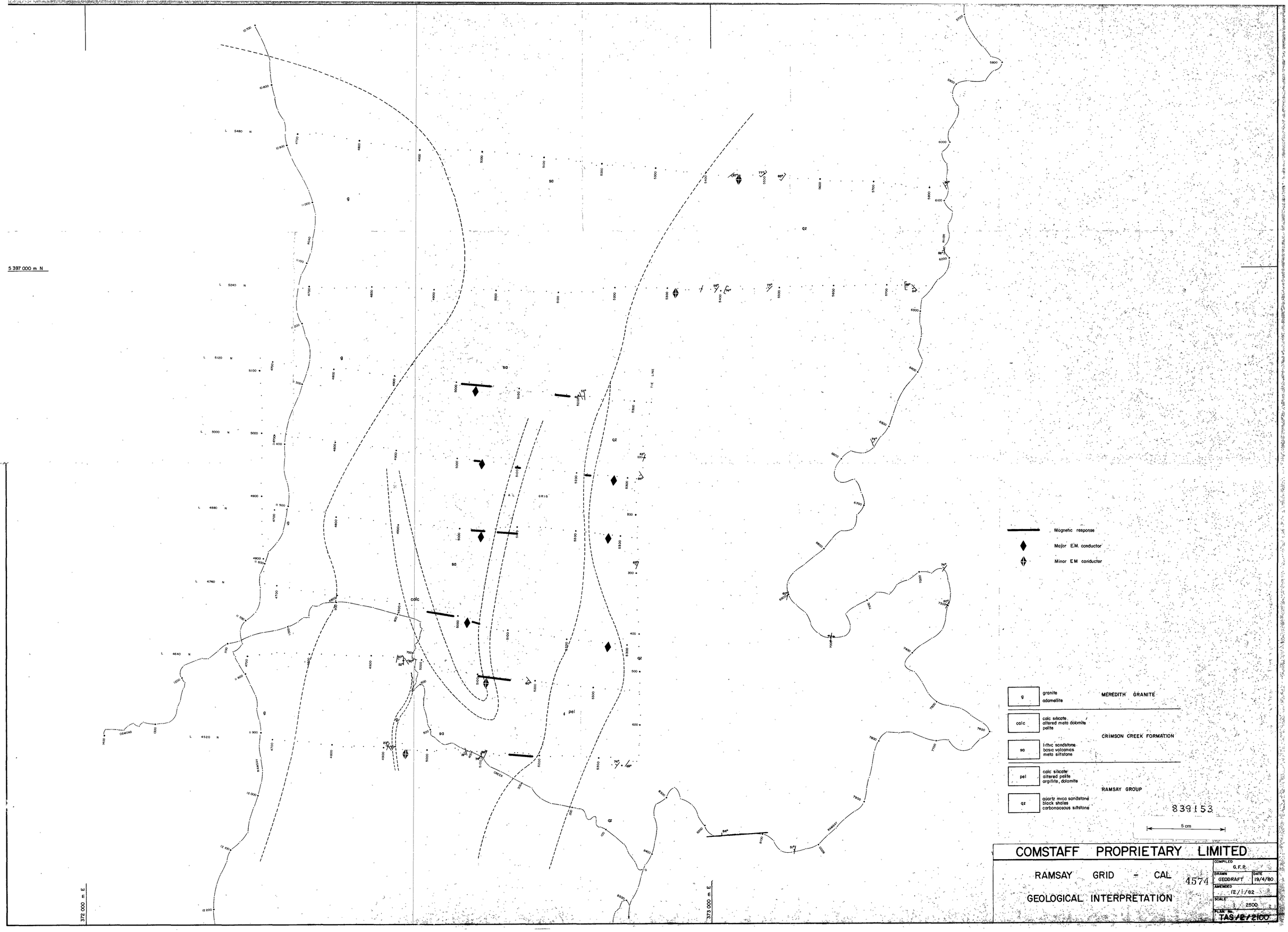
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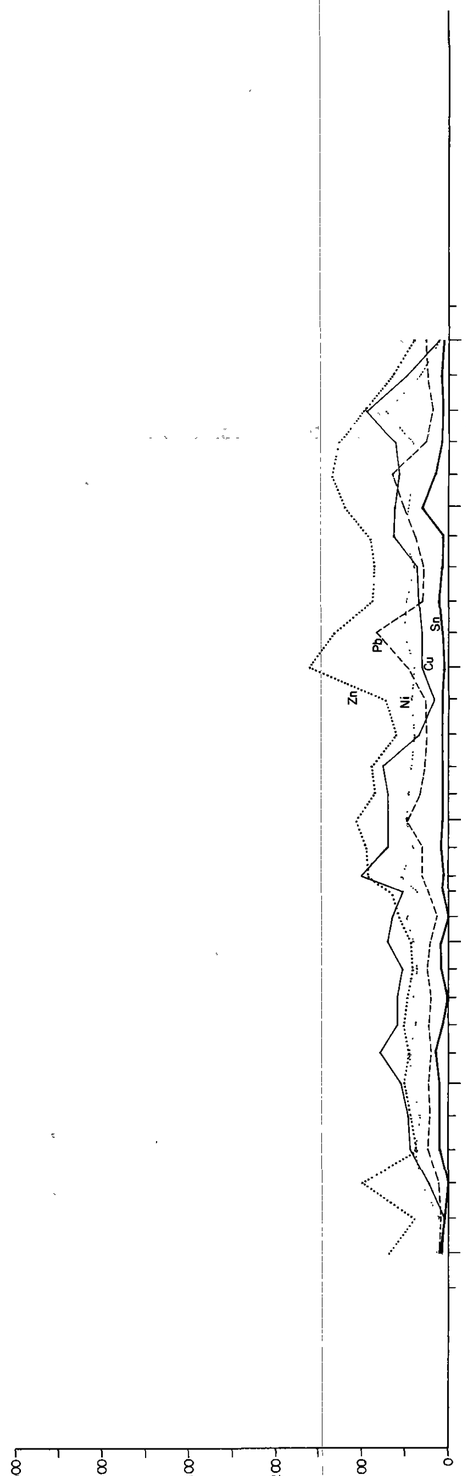
COMSTAFF PROPRIETARY LIMITED

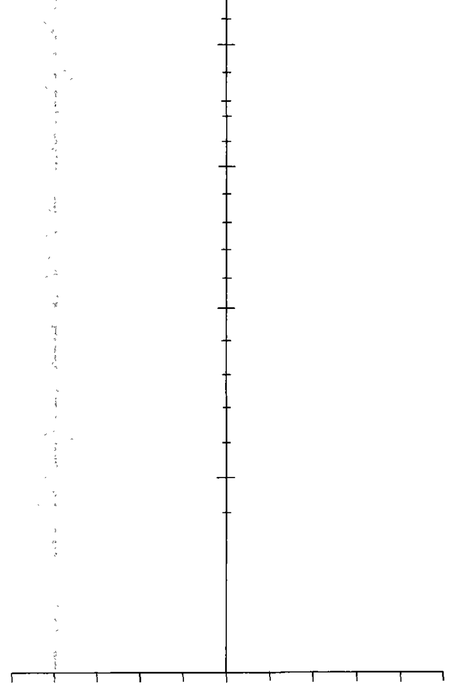
RAMSAY GRID - CAL 4568

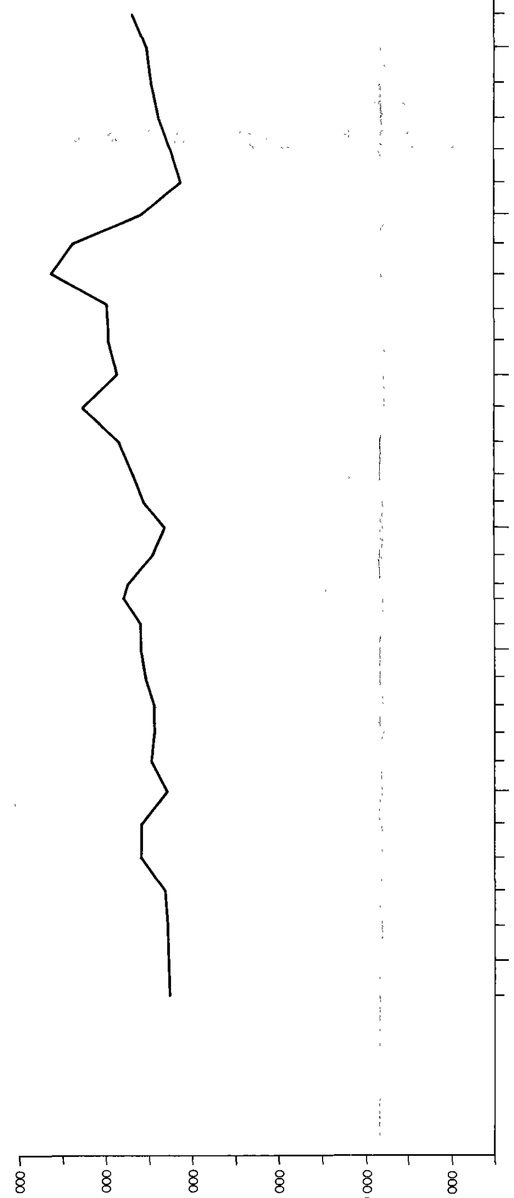
DETAILED GEOLOGICAL PLAN

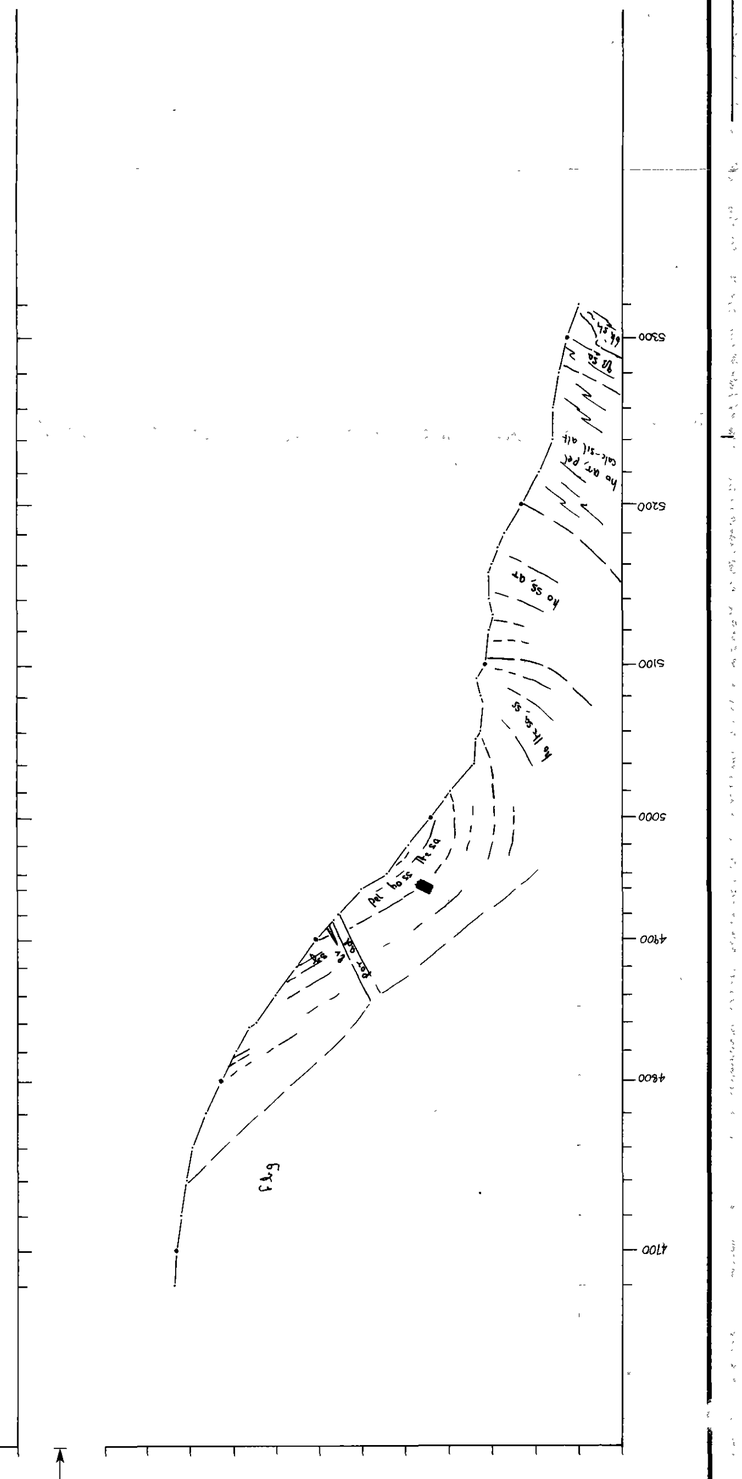
COMPILED	G.F.P.
DRAWN	G.F.P.
DATE	11/4/79
AMENDED	9/6/80
SCALE	1 : 2500
PLAN No.	TAS/2/1834


5 397 000 m N
372 000 m E
373 000 m E
L 5480 N
L 5240 N
L 5120 N
L 5000 N
L 4880 N
L 4760 N
L 4640 N
L 4520 N
RAMSAY CREEK
OSMOND ROAD
TIE LINE
A.L. GRID
calc
sa
pel
qz
g
Magnetic response
Major E.M. conductor
Minor E.M conductor
granite
adamellite
MEREDITH GRANITE
calc silicate
altered meta dolomite
pelite
CRIMSON CREEK FORMATION
lithic sandstone
basic volcanics
meta siltstone
calc silicate
altered pelite
argillite, dolomite
RAMSAY GROUP
quartz mica sandstone
black shales
carbonaceous siltstone
839153
5 cm
COMSTAFF PROPRIETARY LIMITED
RAMSAY GRID - CAL 4574
GEOLOGICAL INTERPRETATION
COMPILED G.F.R.
DRAWN GEODRAFT
DATE 19/4/80
AMENDED 12/1/82
SCALE 1 2500
PLAN No. TAS/82/2100









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COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL 4575
L 4520 N PROFILES
TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

DRAWN	COMPILED	SCALE	
GEODRAFT 8/80	G F P	1 : 2500	TAS/2/2245

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL 4576
L 4640 N PROFILES
TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

DRAWN: GEOCRAFT 8/80 | COMPILED: G.F.P. | SCALE: 1:2500 | TAS/2/2246

839155

GEOCHEMISTRY

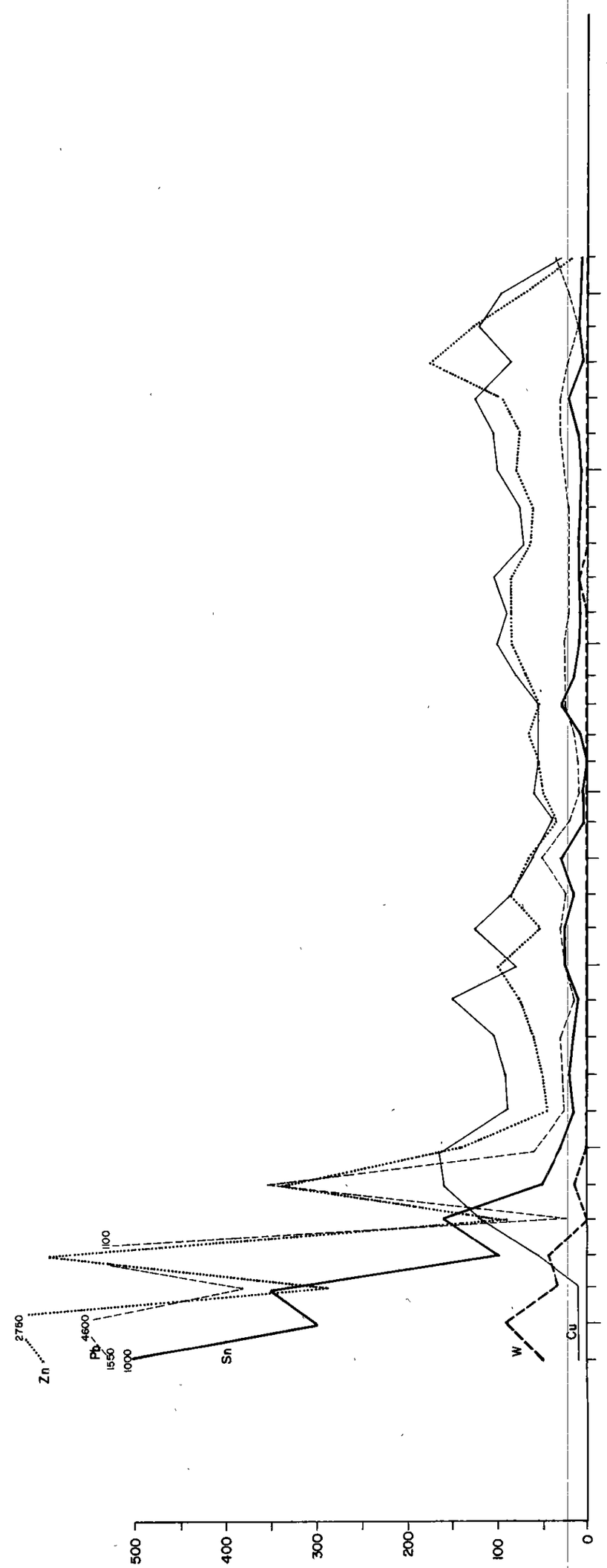
GEOLOGY

5 cm

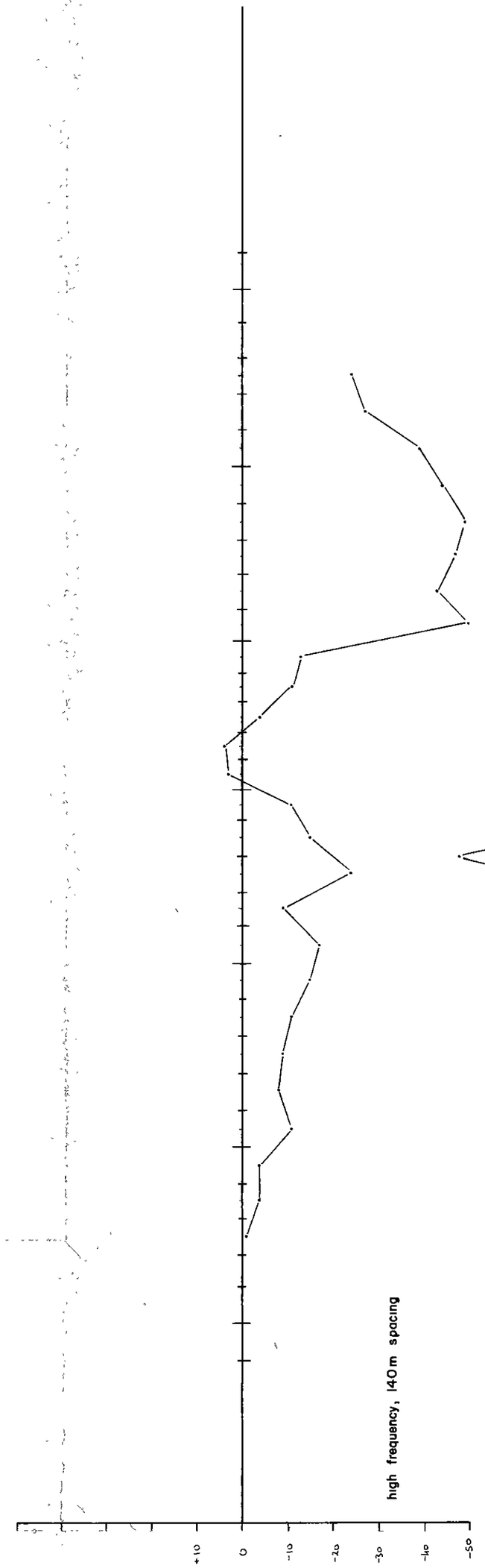
GROUND MAGNETICS nT

CRONE

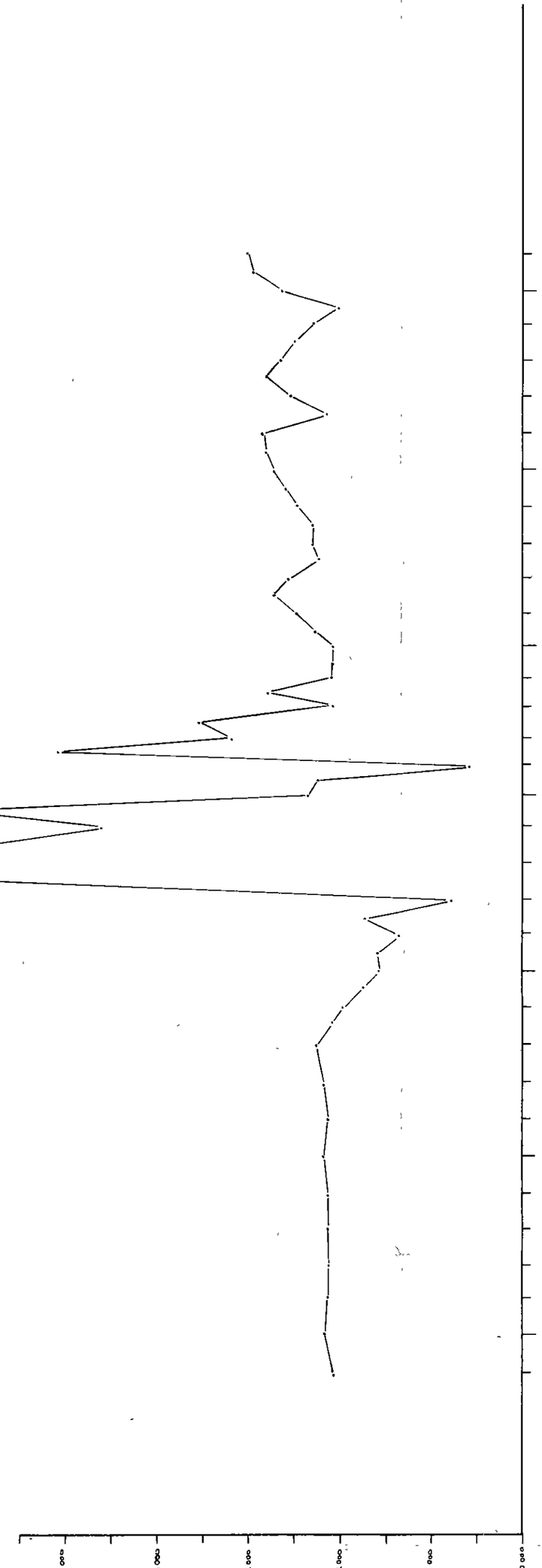
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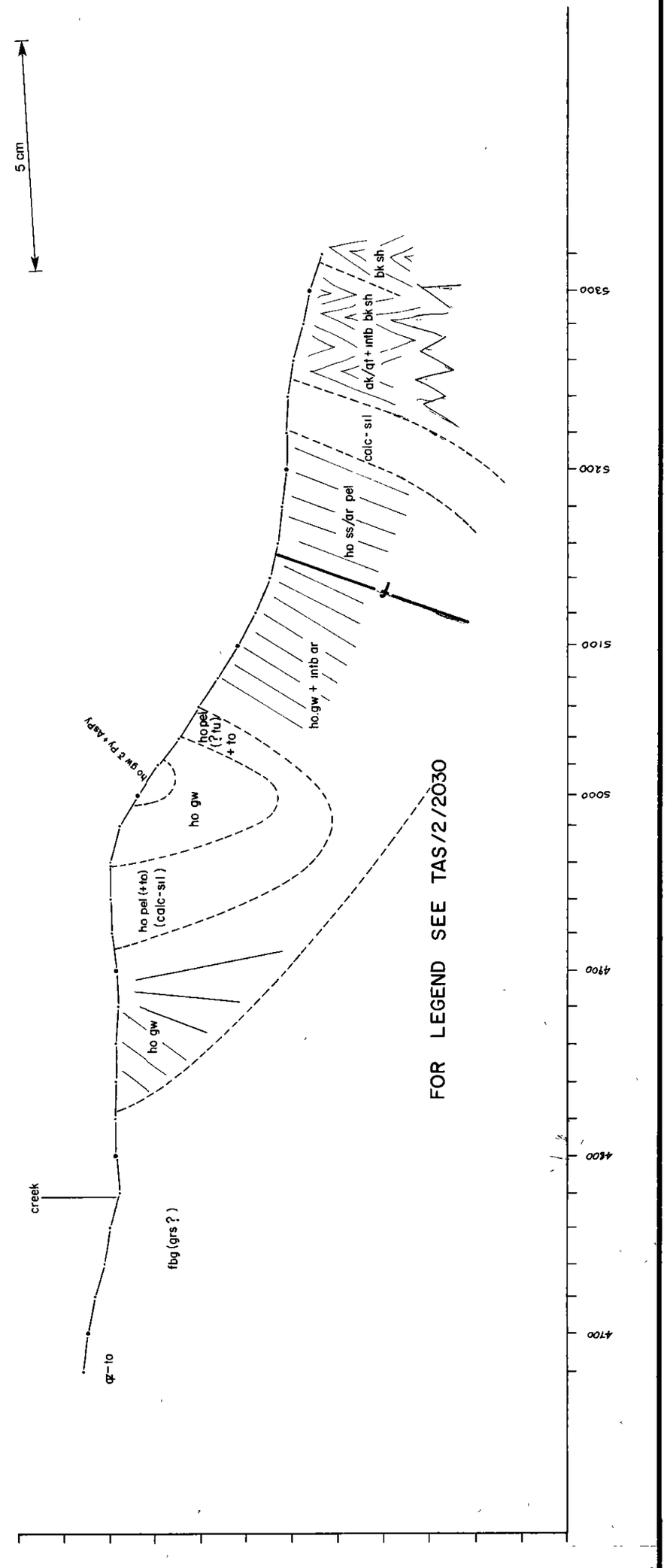
Geochemistry



Crone



Magnetics



Topography

FOR LEGEND SEE TAS/2/2030

839156

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL

L 4760 N PROFILES 4564

TOPO, MAG, CRONE, GEOCHEM

DRAWN	COMPILED	SCALE	
G.F.P 4/79	G F P.	1 · 2500	TAS/2/1821

Geochemistry

ppm

500
400
300
200
100
0

Zn
Cu
Pb
W
Sn

Crone

+50°
+30
+20
+10
0
-10
-20
-30
-50°

high frequency
medium frequency

140 m spacing

Magnetics

nT

66 000
64 000
63 000
62 000
61 000
60 000

5 cm

Topography

track
track
creek

fbg
ho gw/ss
ho gw + intb ho.ss
conductor
pel
(calc-sil)
ho gw + intb qr
ho pel(+to) + ss
calc-sil
bk sh + intb qt
qt

FOR LEGEND SEE TAS/2/2030

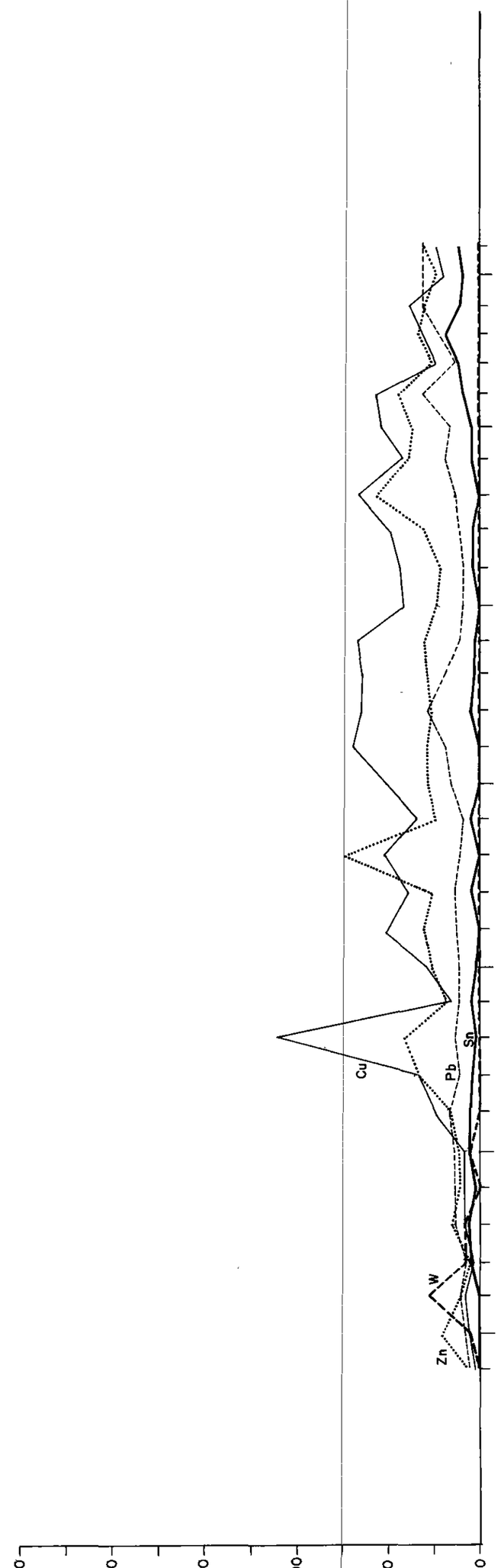
4700
4900
4980
5000
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5200
5300

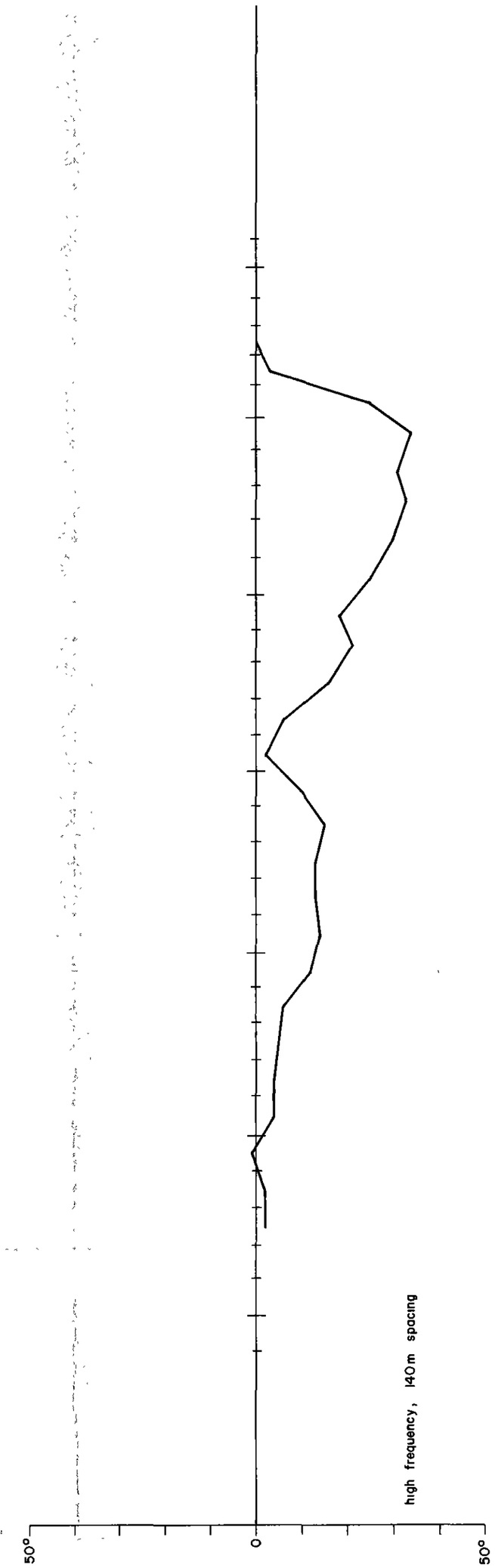
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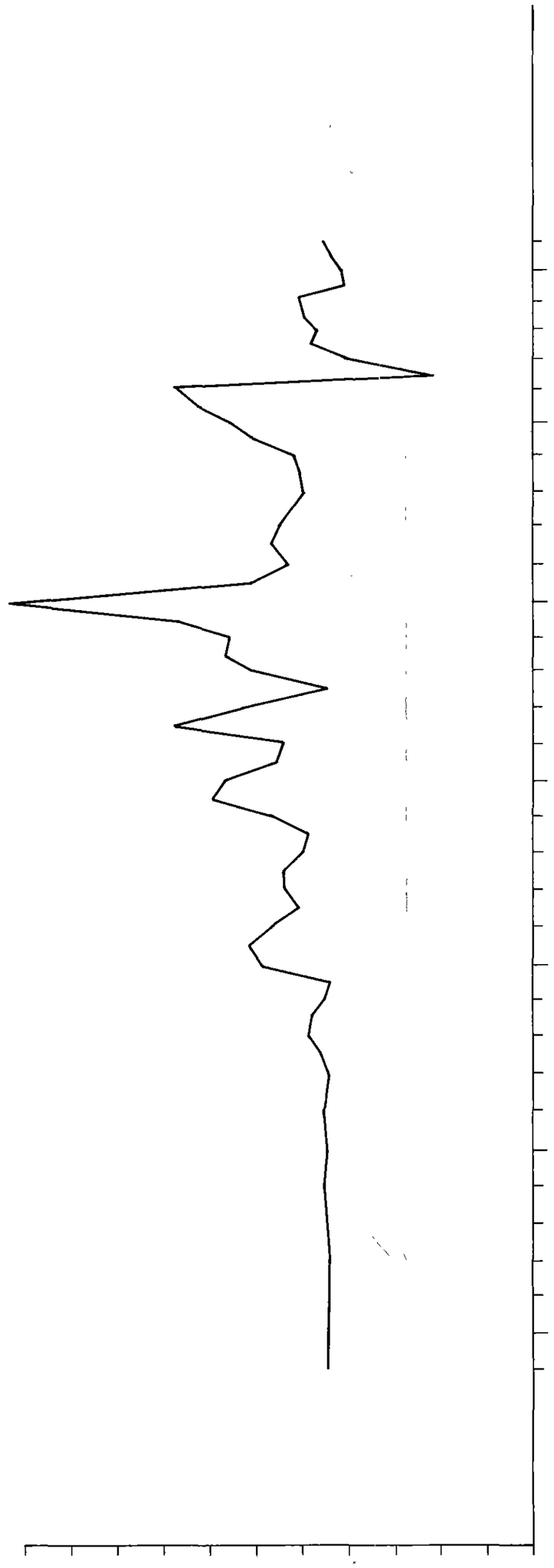
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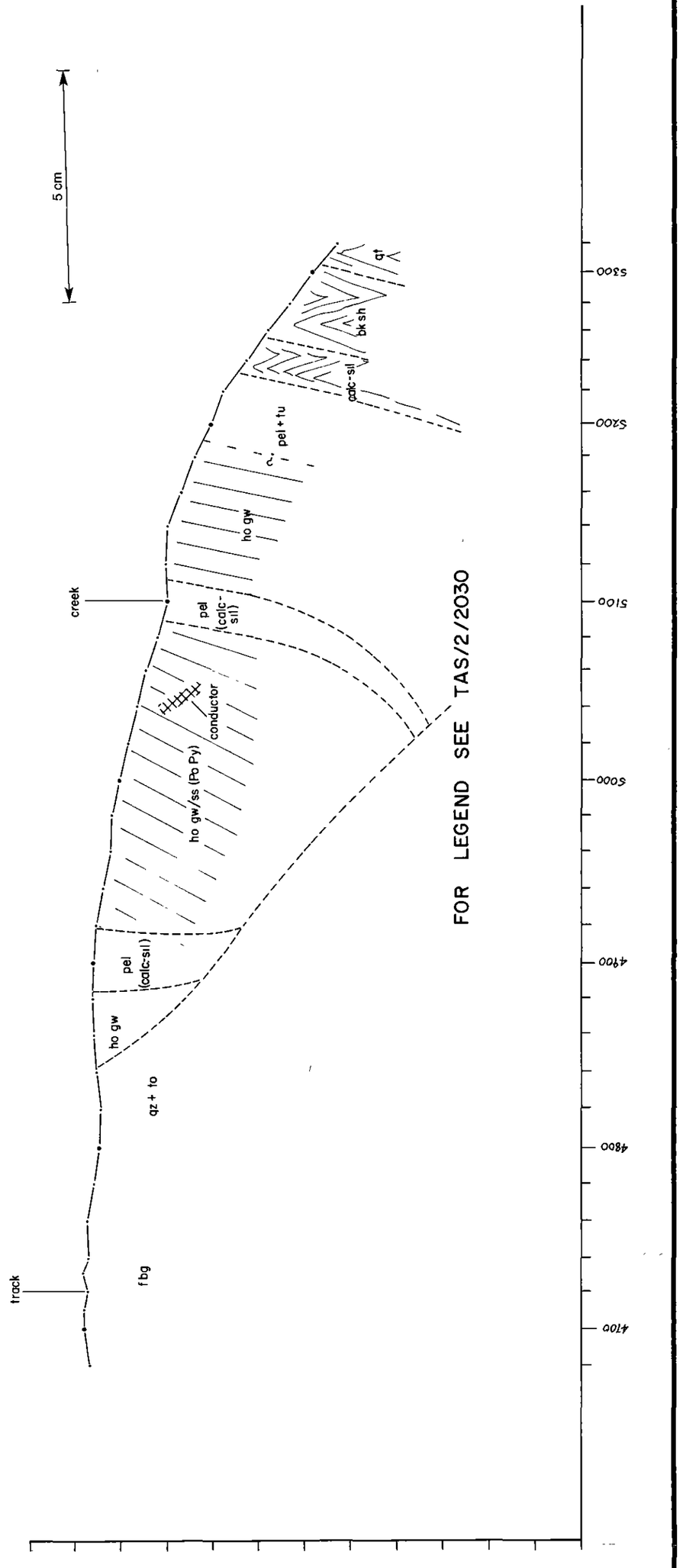
RAMSAY GRID - CAL
L 4880 N PROFILES 4565
TOPO, MAG, CRONE, GEOCHEM

COMSTAFF PROPRIETARY LIMITED









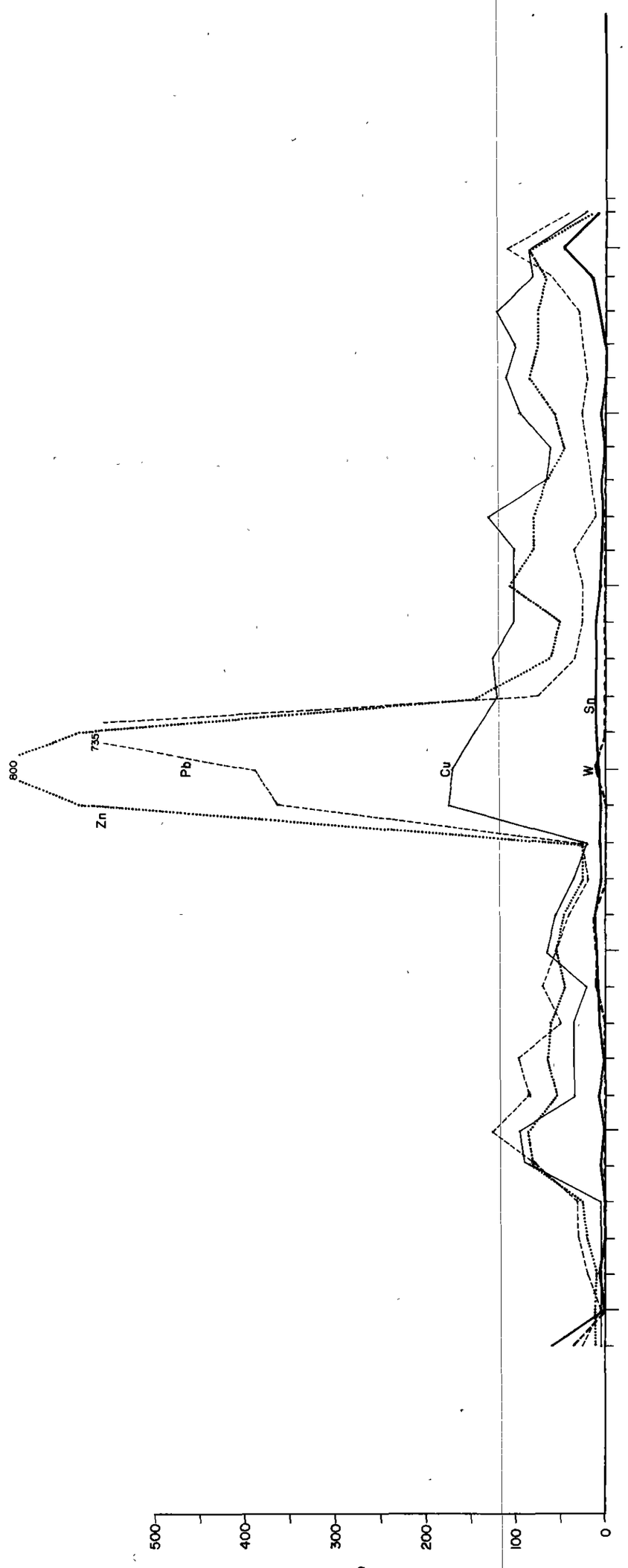
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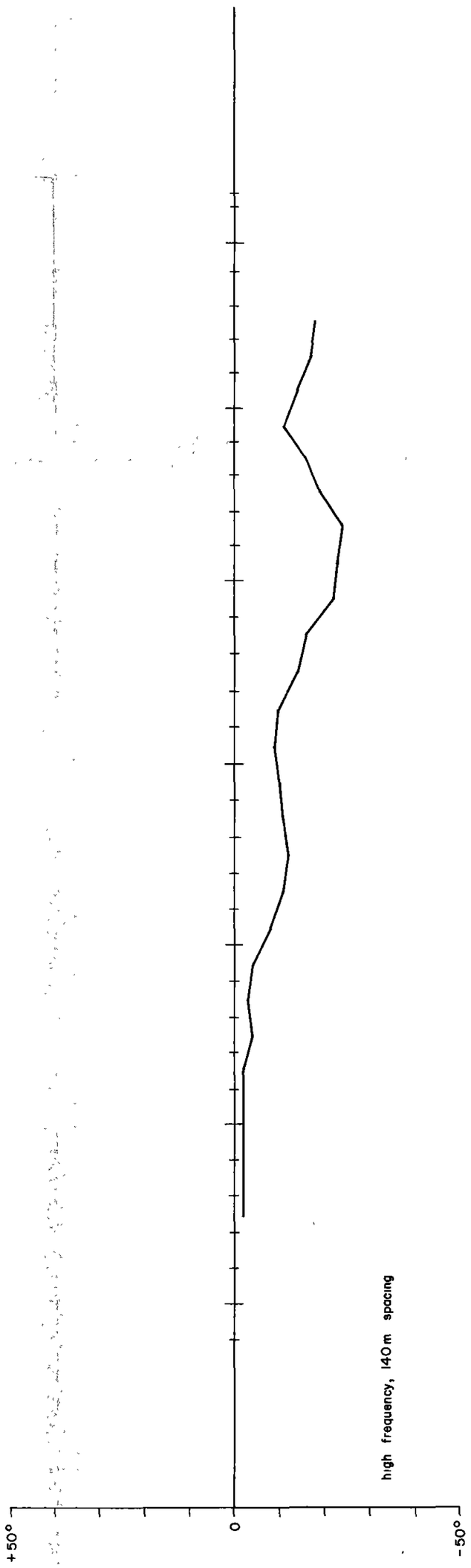
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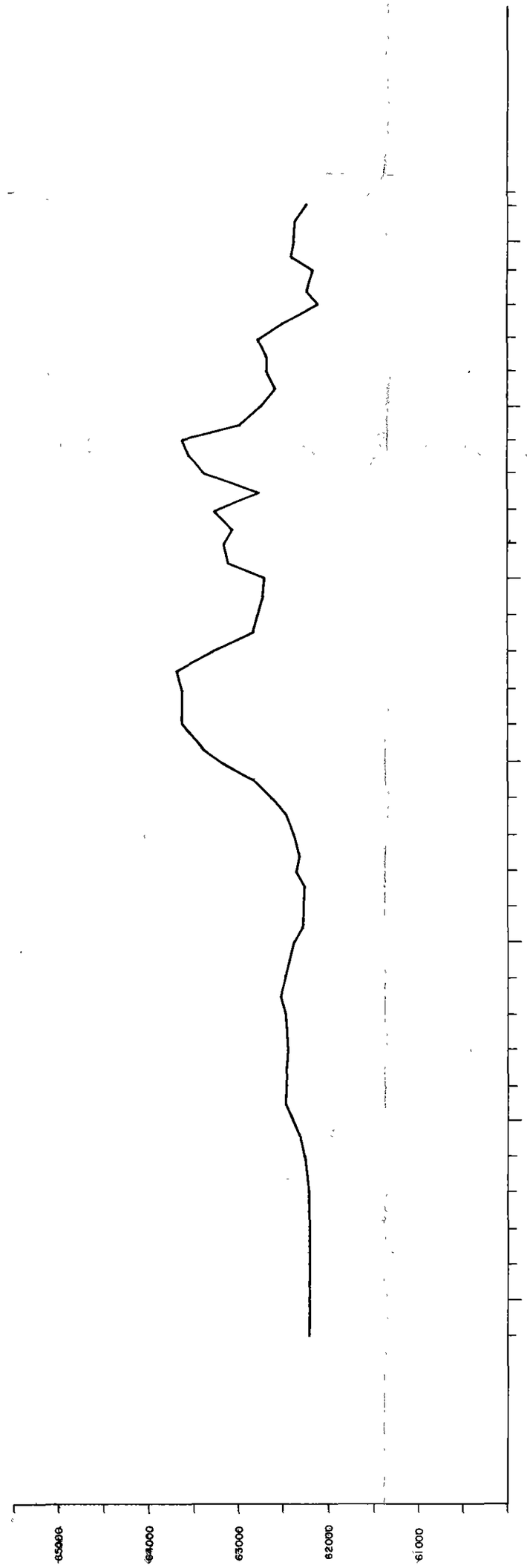
COMSTAFF PROPRIETARY LIMITED

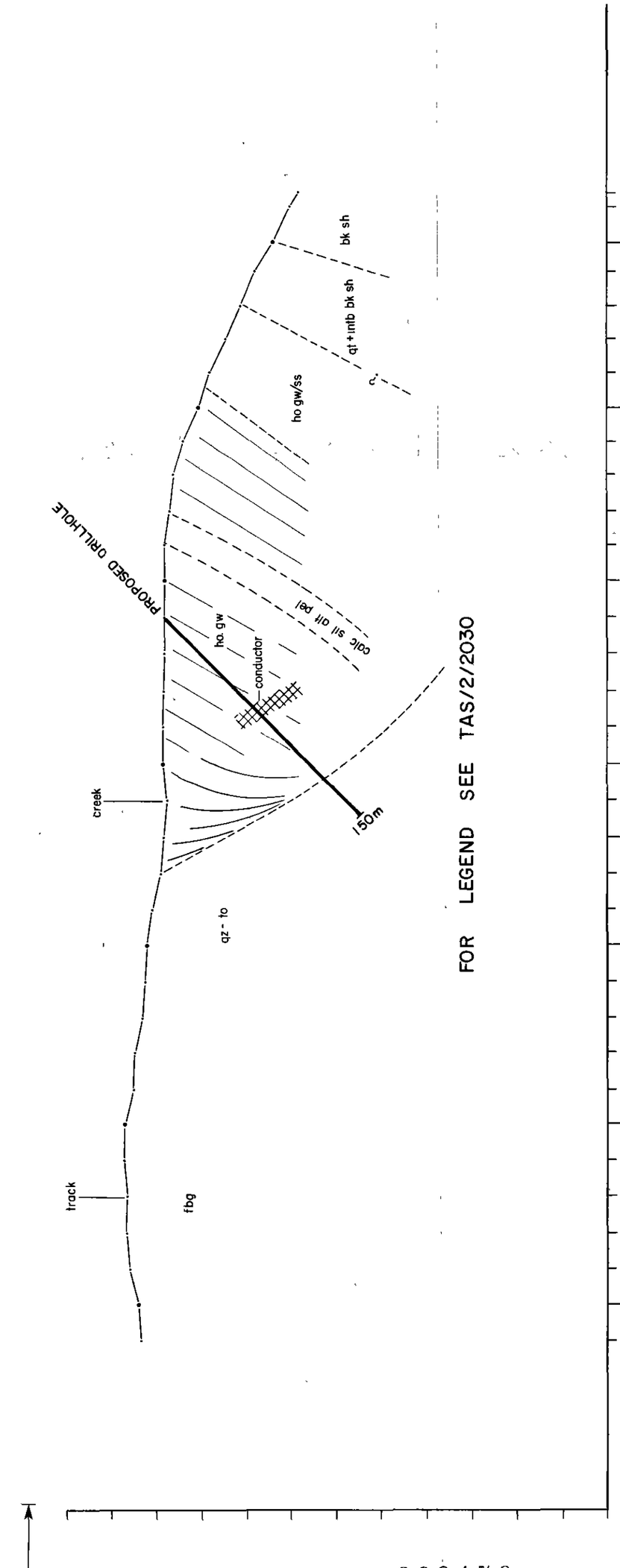
RAMSAY GRID - CAL 4566
L 5000 N PROFILES
TOPO, MAG, CRONE, GEOCHEM

DRAWN	COMPILED	SCALE	
GFP 4/79	GFP	1 2500	TAS/2/1823









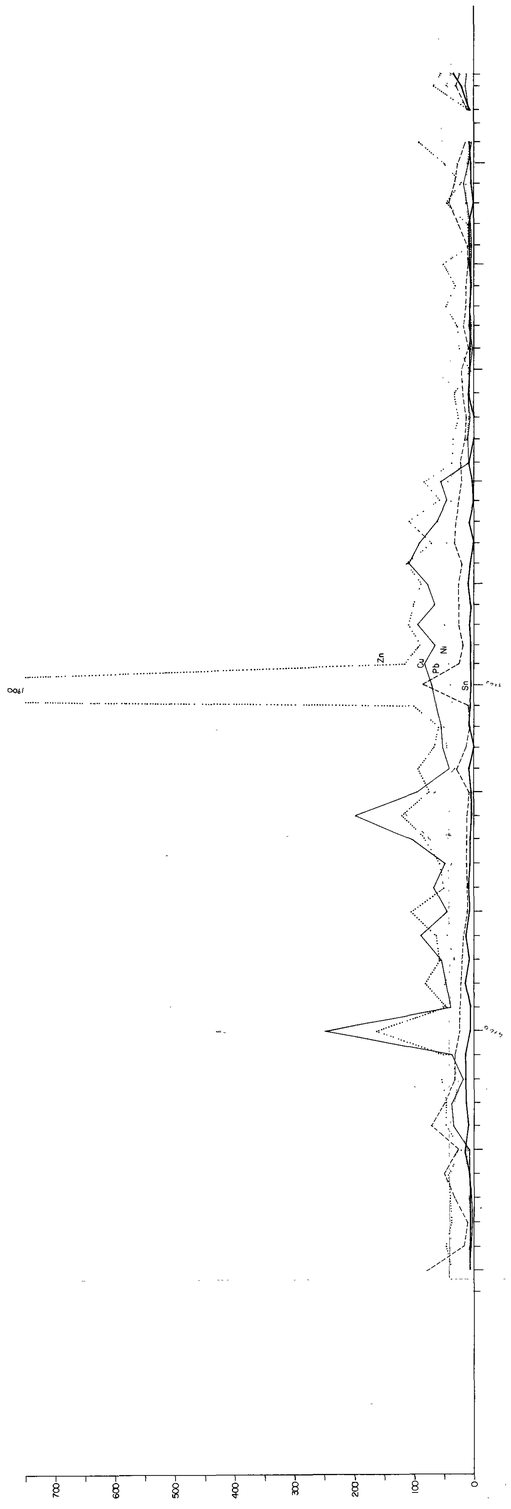
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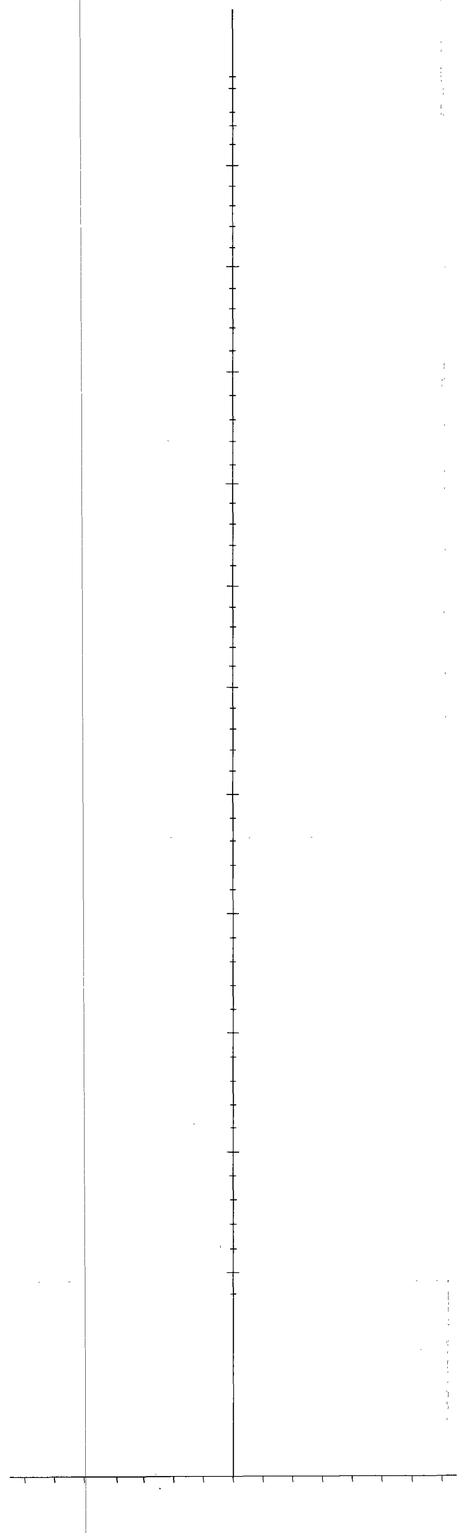
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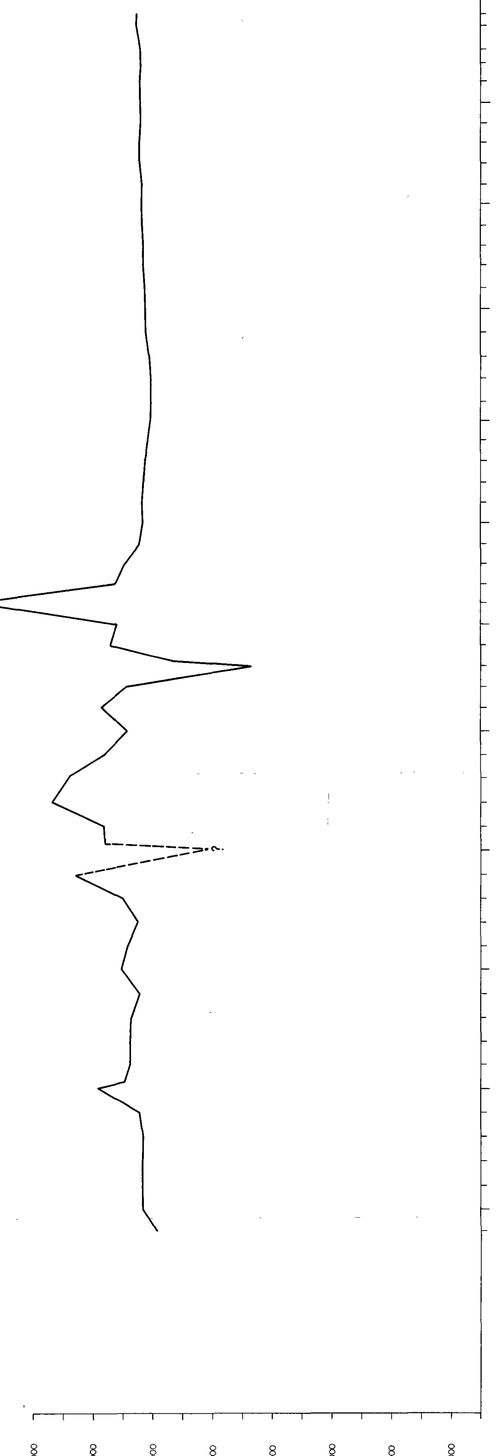
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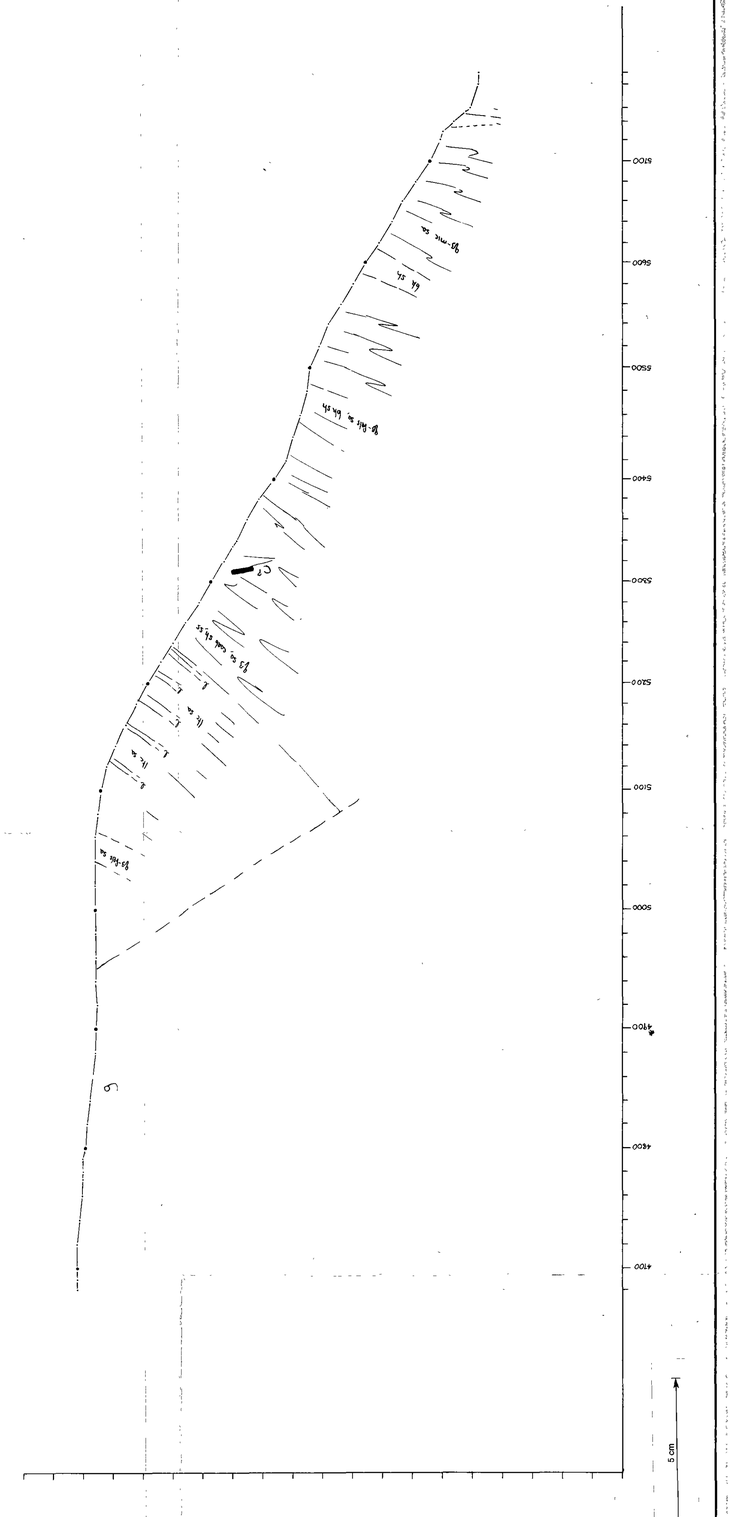
RAMSAY GRID - CAL
L 5120 N PROFILES 4567
TOPO, MAG, CRONE, GEOCHEM

DRAWN	COMPILED	SCALE	
GFP 4/79	GFP	1 : 2500	TAS/2/1824









839160

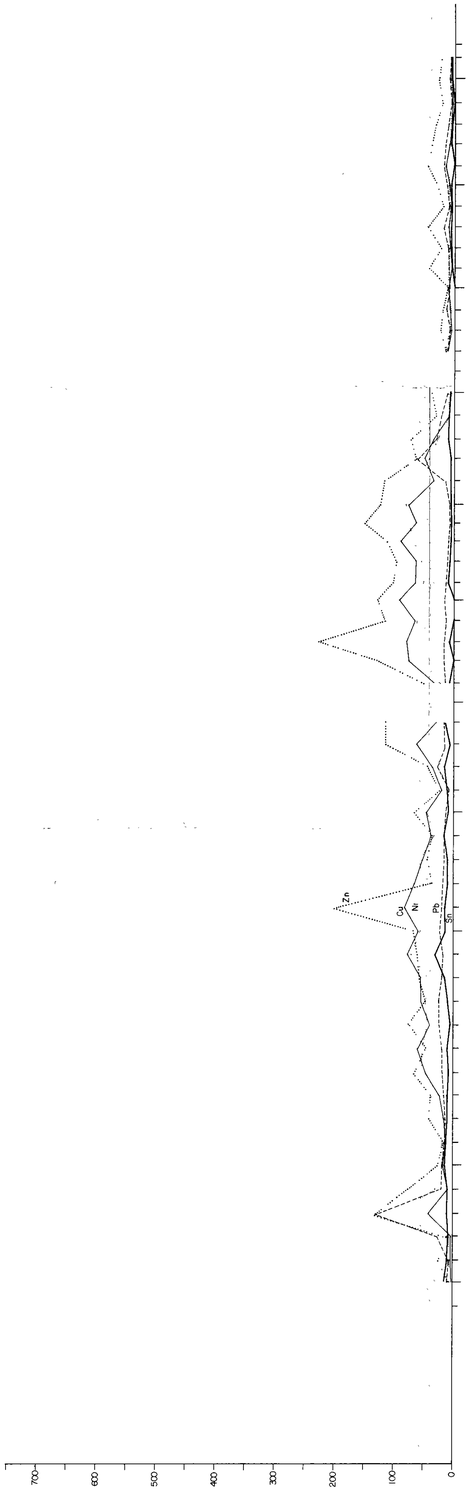
COMSTAFF PROPRIETARY LIMITED

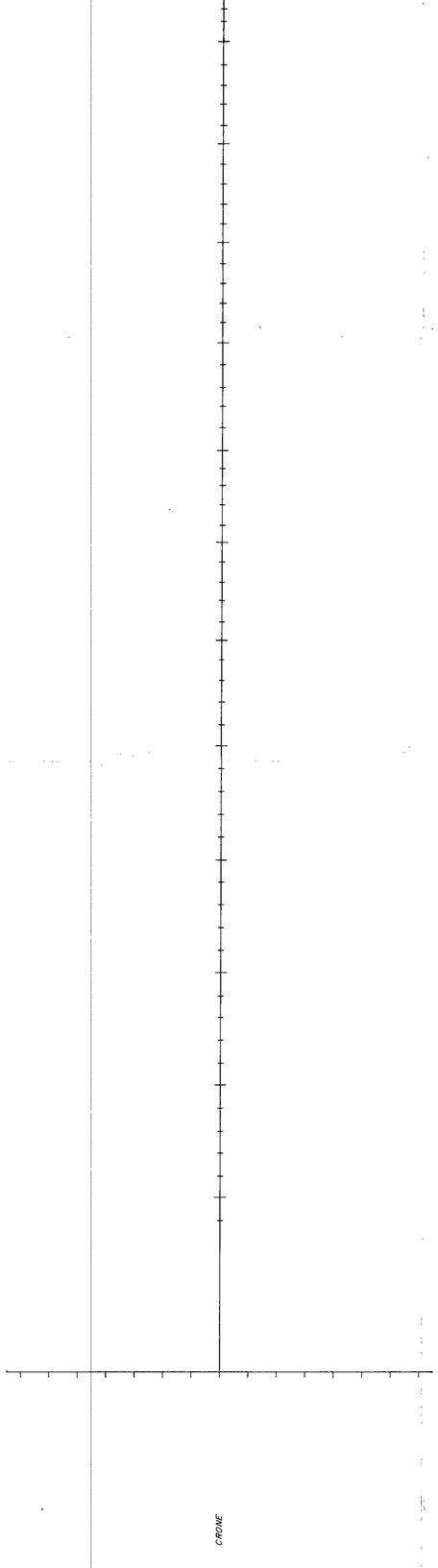
RAMSAY GRID - CAL 4577

L 5240 N PROFILES

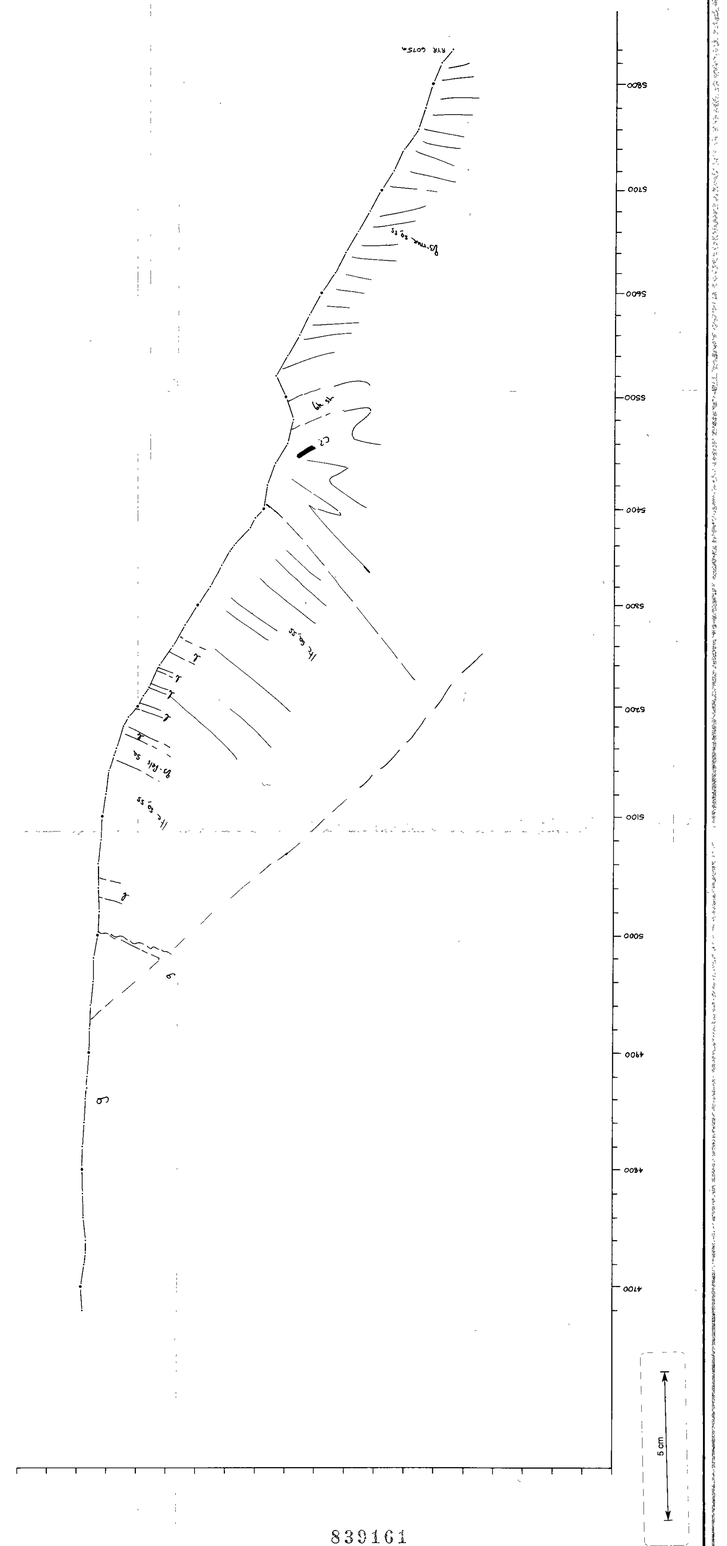
TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

COMPILED	GEODRAFT & GFP
DRAWN	GEODRAFT
DATE	25/8/80
AMENDED	
SCALE	1 : 2500
PLAN No	TAS / 2 / 2247









839161

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL
L 5480 N PROFILES 4578
TOPO , MAG , CRONE , GEOCHEM , GEOLOGY

COMPILED	GEODRAFT & GFP
DRAWN	GEODRAFT
DATE	25/8/80
AMENDED	
SCALE	1 2500
PLAN No.	TAS/2/2248

5 397 000 m N

372 000 m E

373 000 m E

5 cm

839162

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL 4569

GEOCHEMICAL GRID AUGER SAMPLING

COPPER CONTOURS in ppm

COMPILED	G F P
DRAWN GEODRAFT.	DATE 11/1/82
AMENDED	
SCALE	1 2500
PLAN No	TAS/2/2045

5 397 000 m N

372 000 m E

373 000 m E

5 cm

839163

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL 4570

GEOCHEMICAL GRID AUGER SAMPLING

LEAD CONTOURS in ppm

COMPILED	G F P
DRAWN	GEODRAFT
DATE	11/1/82
AMENDED	
SCALE	1 : 2500
PLAN No	TAS /2/2046

5 397 000 m N

372 000 m E

373 000 m E

839164

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL 4571

GEOCHEMICAL GRID AUGER SAMPLING

ZINC CONTOURS in ppm

COMPILED	GFP
DRAWN	GEODRAFT
DATE	11/1/82
AMENDED	
SCALE	1 2500
PLAN No	TAS/2/2047

5 397 000 m N

372 000 m E

373 000 m E

839165

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL 4572

GEOCHEMICAL GRID AUGER SAMPLING

TIN CONTOURS in ppm

COMPILED	GFP
DRAWN	GEODRAFT
DATE	11/1/82
AMENDED	
SCALE	1 2500
PLAN No	TAS/2/2048

5 397 000 m N

372 000 m E

373 000 m E

839166

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL 4573

GEOCHEMICAL GRID AUGER SAMPLING

TUNGSTEN CONTOURS in ppm

COMPILED	G F P
DRAWN	GEODRAFT
DATE	11/1/82
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2049

5 397 000 m N

372 000 m E

373 000 m E

5 cm

839167

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL 4579

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC CONTOURS in ppm

COMPILED	GFP
DRAWN	GEODRAFT
DATE	11/1/82
AMENDED	
SCALE	1 2500
PLAN No	TAS/2/2791

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82-1690
Vol 5A.

839168

MICROFILMED

J of M | A.O. | C.G. | E.O. | D.S.M.E
Registrar
Received 28 JAN 1982
Answered
E & T
DEPT. OF MINES
REF. No. 721/82

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

REPORT ON GRID CAF EL 5/63 PART 2

VOL 5A /9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheet : Burnie K55-03

COMMODITY/IES: Sn, W, Cu, Au

TEXT PAGES NO: 8

PLAN NOS: See List of Plans

TABLE NOS:

APPENDICES: Drill logs

AUTHOR/S: G F Pigott

DATE: 20 January 1982

OPEN FILE

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

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COMSTAFF PROPRIETARY LIMITED

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

REPORT ON GRID CAF EL 5/63 PART 2

1. Work Completed

1.1. Diamond Drilling

Two diamond drill holes were completed, a total of 384.3m. The core was logged, sampled and measured for magnetic susceptibility. Drill proposals for two further holes were submitted and approved, the pads cleared and the drill rig set up preparatory for drilling.

1.2. Grid Cutting

Grid CAF was extended 600m to the south a total of 9160m. The lines were spaced 60m apart and average 800m in length. All stations have been surveyed, and auger sampling is currently in progress.

1.3. Geophysical Surveys

A Pulse electromagnetic survey was carried out on eight lines of the new grid extensions and on two of the previously cut lines. The survey is still in progress and a full evaluation of the data will be carried out when completed. A ground magnetic survey is underway, results will be tied in with those of previous surveys, such that a comprehensive evaluation of the magnetic pattern can be made.

2. Results Achieved

2.1. Geology - Crimson Creek Formation

Rock units assigned to the Crimson Creek Formation make up the sedimentary sequence on the western sector of grid CAF. The rocks comprise a tuffaceous turbiditic sequence of lithic wackes, tuffaceous greywackes, siltstones, argillites and finely bedded pelites. Associated basic tuffs, basalts and micro-dolerites are also present.

The sequence appears to strike north northwest and dip mainly to the west although steep easterly dipping drag folding is locally common.

...2

The sedimentary and volcanic rock units at CAF are hornfelsed. The metamorphic mineral assemblages represent low to medium amphibolite facies within the contact aureole of the Meredith Granite. The highest grade of thermally metamorphosed rocks occurs adjacent to the granite contact, where a distinctive zone of skarn mineral assemblages is developed. The skarn suite is developed over a continuous zone varying between 30 and 100m wide and over 700m in strike. The skarn is made up of interlayered calc silicate rocks and coarsely crystalline garnet - vesuvianite - diopside - ferrohastingsite rocks with characteristic compositional banding. Massive crystalline and banded magnetite is common throughout the skarn. Fluorite and calcite are common as intersitial minerals.

Calc silicate altered units comprising meta siltstone, pelite and tuff and chert outcrop 900m to the east. These units are heavily silicified and the presence of calc silicate minerals such as phlogopite diopside and tremolite and widespread development of fine grained tourmaline, are indicative of calcareous rocks. These units are interpreted as being within 300m of the Ramsay Group - Crimson Creek Formation contact zone. Meta dolerite units or possibly altered intermediate lavas are associated with these altered rocks.

Meredith Granite

The Devonian Meredith Granite outcrops along the western and northwestern portions of CAF and a dyke like body of leuco adamellite intersects the sedimentary sequence in the northern sector. The main granite type is a coarse grained equicrystalline biotite granite with an intermittent marginal phase of porphyritic adamellite, which is locally intensely tourmalinised. Granitic rocks are 'wrapped' around and appear to stope out the skarn rocks at the northwestern limit of the skarn, but the eastern contact appears to steepen on the more southerly lines.

Mineralisation

Pyrrhotite, pyrite chalcopyrite fluorite magnetite and tourmaline mineralisation occur in varying amounts throughout the skarn zone. Old workings have been located including a 40m adit, shallow pits, trenches and a shaft. These have been mapped and sampled. In addition rock chip and C horizon soil samples have been collected. The results indicate a zone of WO_3 mineralisation with subsidiary Sn in the northern portion of the skarn and a zone of Sn mineralisation with subsidiary As in the south.

...3

2.2. Geophysics

Magnetics

Ground magnetic surveys have been carried out over the original grid with a more detailed survey over the skarn zone. The contoured results are shown on plans TAS-2-2419, 2436.

In the northern sector of the skarn zone a large but poorly defined anomaly is situated on the eastern margin, indicating an easterly dip for the magnetic body. Generally the highest readings occur over this eastern contact of the skarn. However, towards the south a near vertical dip is indicated by the magnetic profiles.

A northly striking anomaly has pronounced responses on lines 4760N and 4880N centred at around 4800E. Although erratic the profiles suggest a near vertical body.

The relatively flat nature of the magnetic profile between the skarn related anomaly and the central anomaly is uncharacteristic of the Crimson Creek sequence and may indicate a granite body at a shallow depth.

Electromagnetics

The AEM anomaly CAF (W) is evident in the Crone EM responses at 4810E on line 4880N and at 4820E on line 4760N. It is closed off to the north and south. The source is interpreted as being within 10m of the surface, has a steep western dip and is over 20m in width. The CEM anomaly has been confirmed and better defined by Pulse EM, so the centre of the conductor is now placed at 4830E on 4760N. A diamond drill hole is planned to test this anomaly. The coincident magnetic anomaly with the EM is suggestive of pyrrhotite mineralisation as being the source.

The AEM anomaly CAF (E) is evident in the Crone EM responses at 5210E on line 4880N, at 5240E on line 4760N and the Pulse Em response at 5240E on line 4640N. The PEM survey on line 4760N has redefined the conductor, being seen as responses at 5210E and 5330E. There is some correlation with anomalous magnetic responses. This body is thought to be highly conductive. The complex dual peak on line 4760N in the PEM results indicates an easterly dip, parallel with the steep slope. Again pyrrhotite appears to be the most likely source of the geophysical effects.

The PEM survey on line 4400N indicates a west dipping (60^{o}+) conductor at 4540E. The body is interpreted as being at a depth of 50m and has good conductivity (50 mhos). This anomaly was drilled by diamond drill hole CAF1 which proved the source to be sulphide mineralisation in skarn rocks.

The results of the PEM survey carried out over the southern grid extensions are as follows:

Line 4220N (4370E-5030E). There are two conductors on this profile. One is located at 4850E. It has a steep (80^{o}) westerly dip. The body is at a depth of less than 6m and has good conductivity (50 mhos). The source is most likely highly conductive shales.

The second conductor is located at 4560E. It has a depth of burial of 30m and medium conductivity width (18 mhos). The dip is steep and to the west. The conductor is of interest since it appears to have limited strike lengths and a reasonable depth of burial.

Line 4160N (4350E-4950E). There are three responses on this line. The most prominent anomaly is located at 4890E. It is due to a near vertical body. The dip direction cannot be defined since the line does not extend far enough east. The conductor appears to be at a depth of 70m and have a conductivity width of 50 mhos.

A small amplitude anomaly which could be due to a good conductor at a depth of 80m is located at 4750E. The dip is near vertical but cannot be resolved further.

A small amplitude anomaly which could be due to a poor conductor is located at 4560E.

An alternate and probably more likely cause of the two weak anomalies is one horizontal body lying between 4630E and 4700E. Such a body would have to be at considerable depth (150-200m).

Line 4100N - only 80m of data have been acquired on this line to date, and the survey is continuing.

Line 3980N (4310E-4990E) - no conductors.

Line 3920N (4310E-4990E) - no significant conductors. There is a minor conductive surface effect at 4640E to 4750E.

Line 3860N (4310E-4990E) - no conductors.

Line 3800N (4310E-4990E) - one conductor at 4870E to 4910E. It has horizontal dip and is possibly at a depth of 150m.

Line 3740N (4290E-5010E) - The data on this line are quite erratic. Horizontal conductors of the type interpreted to be on line 3800N may be located at 4530E-4650E, 4810E and 4910E-4970E.

...5

Line 3680E (4310E-5030E) - There is a horizontal conductor between 4870E and 4910E. The depth and conductivity are not well defined. This conductor correlates with responses on 3800N and 3740N.

2.3. Geochemistry

Soil sampling is still in progress on the southern grid extensions and so no results are available. The contoured soil sample results over the remainder of the grid are appended. Base metal values over the grid are generally low with the exception of the skarn zone.

Anomalous geochemical responses in Sn, W and As occur over the skarn. The entire skarn is anomalous in Sn with the highest values in the south. A well defined W anomaly occurs in the north coincident with the Sn. Anomalous As values are associated with the southern Sn zone. The granite contact and the eastern margin of the skarn are defined by the Cu soil values.

There is an anomalously low zone developed over the CAF (W) EM anomaly. This low zone has enhanced positive margins forming a 'rabbit ear' effect. This could be accounted by an oxidising sulphide body at depth altering the ~~eH~~ Eh and pH conditions in the overlying soil.

2.4. Diamond Drilling

2.4.1. DDH CAF1

The target for CAF1 was the southern sector of the mineralised skarn. It was planned to determine the source of the anomalous Sn values in the soils and rocks and to test the magnetic anomalies. It was designed to give valuable structural information on the granite contact and its relationship with the skarn. The objective was to determine the economic potential of the skarn mineralisation.

Drilling Summary

Diamond drill hole CAF1, collared at grid co-ordinates 371493.5mE. 5394705.1mN declined at -50^{o} on azimuth 245^{o}MN.

0-109.15 Hornfelsed finely bedded sequence of tuffaceous lithic sandstone and argillite, strongly metasomatised with extensive replacement by phlogopite, actinolite and diopside.

...6

109.15-203.00 Banded skarn mineral assemblages, composed of varying combinations of vesuvianite, diopside, garnet and magnetite with ferrohastingsite, pyrrhotite and chalcopyrite as a younger replacive phase.

203.00-216.30 Ferrohastingsite-calcite-fluorite massive replacive skarn.

216.30-271.30 Banded skarn mineral assemblages with vesuvianite as the dominant mineral, banded with and replaced by ferrohastingsite-sulphide assemblage.

271.30-282.13 Ferrohastingsite-calcite-fluorite skarn assemblage.

282.13-296.05 Hornfelsed argillite and psammite.

296.05-308.00 Porphyritic biotite granite-adamellite assemblage.

308.00 End of hole.

Detailed drill logs and drill core analyses are appended, results are shown on the attached drill hole sections.

The skarn zone is seen to occur as selective replacement along particular sedimentary units which dip steeply west into the granite. The different mineral assemblages reflect original compositional variations rather than varying chemical effects. The ferrohastingsite-fluorite-calcite skarn is a cross cutting phenomena and represents a later metasomatic pulse in the skarn development.

The skarn is distinctly anomalous in Sn, Cu, Fe, S, F and Bi. The best intersections are 199.25-216.30m; 1710 ppm Sn; 222.30-228.50: 1217 ppm Sn; 233.45-244.75: 1331 ppm Sn; 118.05-122.80: 0.157 ppm Au and 270 ppm Bi; 276.6-282.1m: 1573 ppm Cu.

The relationship between Sn and Fe is directly proportional throughout most of the skarn units except in those adjacent to the granite. The banded ferrohastingsite skarn intersected in CAF1 from 275.00-282.12m has a high Fe but low Sn content. In contrast, however, this unit has the highest WO_3 values recorded from either drill hole. There is some suggestion of a directly proportional relationship between F and WO_3 but more drill intersections would be required to establish this. Overall the WO_3 values are low in CAF1, the highest recorded being 286 ppm over 30cm.

2.4.2. DDH CAF2

The target for CAF2 was the northern sector of the mineralised skarn. It was planned to determine the source of the anomalous W and Sn values in the soils and rocks and to test the magnetic anomalies including that which lies east of the mapped skarn zone.

Drilling Summary

Diamond drill hole CAF2, collared at grid co-ordinates 371414.2mE. 5394208.6mN declined at -45° on azimuth 250°MN.

0-50.70 Hornfelsed argillite with interbedded tuffaceous lithic sandstone and siltstone. Extensive replacement by phlogopite actinolite and diopside in sandstone units.

50.70-76.30 Porphyritic biotite granite-adamellite assemblage.

76.30 End of hole.

Detailed drill logs and drill core analyses are appended, results are shown on the attached drill sections.

The hole was terminated when it became apparent that it had gone into the main granite mass and not simply into a dyke. It may be concluded that the skarn zones have a shallow depth extent in this part of the prospect and that this hole, had it been continued, would have passed underneath them. A shallow, near vertical, hole collared within the skarn is planned to test the depth extent and evaluate the mineralisation.

No results of economic significance were recorded from the CAF2 intersections.

3. Conclusions and Recommendations

A significant zone of skarn mineralisation occurs east of the Meredith Granite at CAF. It appears to increase in depth extent from north to south as the easterly dipping granite contact steepens.

Furthur diamond drilling is required to test the zone. A drill hole is proposed to test the northern area of the skarn. It would test at depth the grade and potential of the anomalous W and Sn rocks and determine the cause of the magnetic anomaly.

The skarn zone will be traced to the south, possibly away from the granite contact and evaluated initially by surface mapping, sampling and geophysical techniques. Diamond drill targets can then be selected.

A diamond drill hole is required to test the coincident EM and magnetic anomalies east of the outcropping skarn rocks. It would be designed to intersect the steep westerly dipping body at a depth of 50m beneath the centre of the anomaly. The most accessible target is on line 4760N at 4830E.

If the CAF (W) geophysical anomaly is due to an economic style of mineralisation then CAF (E) will have to be urgently evaluated and all other EM anomalies followed up.

for G F Pigott
Senior Geologist

Approved by

R J Kernick
Exploration Manager

GFP:AML

20 January 1982

CAF 1

DRILL ADVANCE

LITHOLOGY

LOST BORE?	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	Tri coned										
	No Core Recovered										
	3·00	2·00	1·80	90%	3·00	Massive'd fine sandstone, x minor interbedded siltstone ~ minor interbedded argillite, fresh rock is dk grey weathering to gy-gr then finally to oxidised brown, common along fractures. Core is very broken, av piece 3cm, Evidence of drill grinding away of core and multiple drilling. Sandstone is feldspathic up to 40% = water deposited epiclastic tufaceous material.	Alteration and Weathering along very common fractures ubiquitous. Brown-ye Fe oxidation products conspicuous in conjunction ~ wh-ye clay alteration material often as veins permitting oxidation and fracturing. Often a v. sl. wthd gy-gr aureole is assoc ~ fractures having a sharp contact ~ dk gy fresh rock. Rare fine wh. irreg. kaolinite? veins. Fine discontinuous pitted veins, common - 2mm thick v- @ 150. V. Rare fine wh-ye stained q.v. Cloudy alteration diffusing grain boundaries related to contact metamorphism, also rare areas of f. subtle dk. spotting.		~ E w 200 veining. Appears generally massive ~ v. minor scouring and graded bedding ~ B e 30° elongate ripped clasts of pelitic material in f-m sandstone. Poss Bedding generally obscured by fracturing, & wthg and cloudy alteration probably related to the distal thermal metamorphism	Fine ferruginous veins poss as a result of Po-Py emin[2m]	
	5·00	0·60	0·55	92%							
	5·60	0·30	0·30	100%							
	5·90	0·05	0·05	100%							
	5·95	0·15	0·20	133%							
	6·10	0·20	0·17	85%							
	6·30	1·10	0·30	27%							
	7·40	0·05	0·05	100%							
	7·45	0·25	0·27	108%							
	7·70	0·10	0·10	100%							
	7·80	0·20	0·22	110%							
	8·00	0·65	0·73	112%							
	8·65	0·25	0·32	128%							
	8·90	1·40	1·40	100%							
	10·30	0·20	0·15	75%							
	10·50	0·25	0·20	133%							
	10·85	0·35	0·36	103%							
	11·00	0·60	0·70	116%							
	11·60	0·45	0·47	104%							
	12·05	0·60	0·55	92%							
	12·65	0·35	0·35	100%							
	13·00	1·00	1·07	107%							
	14·00	0·70	0·63	90%							
	14·70	1·65	1·40	98%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CAF 1

LOGGED BY NPG FROM 0 TO 15 DATE 1/7/81 PAGE 1 OF

839178

VOL 5 APPENDIX 1

T10

5 cm

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	16.35	0.58	0.40	73%	15						
	16.90	0.80	0.86	107%	16						
	17.80	0.45	0.42	93%	17						
	18.25	1.05	1.00	95%	18						
	19.30	0.30	0.34	113%	19	Interbed of predominantly pelitic material, appears highly disturbed	Fracturing and oxidation effects and products as above. Parts of core more competent & conformable alteration of some s.s. beds noted by increase in hardness and pale gy - gr colour. Fresher core apparently recrystallised		B @ 20° B @ 25° B @ 35° - Bedding displaced by fine mesofaults max 1cm. very fine	V. fine irreg Py vein. & wthd gy alt. pelitic rocks., Py intimately assoc. & dk gy scaly mineral.	
	19.60	0.25	0.25	100%							
	19.85	0.90	0.85	94%	20						
	20.75	0.35	0.35	100%	21						
	21.10	0.20	0.20	100%							
	21.30	0.20	0.20	100%							
	21.50	0.20	0.15	75%							
	21.90	1.10	1.15	105%	22						
	23.15	0.25	0.30	120%	23						
	23.40	0.25	0.25	100%							
	23.66	0.70	0.50	71%							
	24.96	0.30	0.83	277%	24	24.0 Fresh hornfels, gy - dk gy & brown tinge & recrystalised contact metamorphosed fo sandstone & irregularly interbedded - intercalated pelitic hornfels, Pelitic hornfels gy often & blue tinge., Common irregular qz amphibole veining & replacement v.f. br mica?	Common qz - ot irregular amphibole - qtz veins & rare bl & brown veinlets often discontinuous & anastomosing bivaricating, Rare areas of gr - dk gr fibrous amphibole replacement/alteration. Common areas of diffuse br & coloured replacement commonly in coarser beds, poss. due to f. zone of mica - phlogopite? interbed		Structure generally obscured by pervasive alteration effects, recrystallisation and veining. Few areas of au healed autobrecciation & well rounded clasts of pelitic hornfels in coarser fractions broken f. bdg & ripped elongate clasts. Be 45° Evidence of soft sediment deformation.	V. rare irregular discontinuous Po or Py veins	4%
	25.90	1.00	1.00	100%	25						
	27.50	1.60	1.62	101%	26						
	29.60	1.00	0.99	99%	27						
	29.60	0.10	0.14	140%	28						
	31.90	2.30	2.32	100%	29					29.7 - V. minor f. diss. Py	
					30						

SCALE 1:100 (1cm = 1 m)

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COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH CAI 1

LOGGED BY NPG FROM 15 TO 30 DATE 6/7/81 PAGE 2 OF

5 cm

C1

LITHOLOGY

DRILL ADVANCE

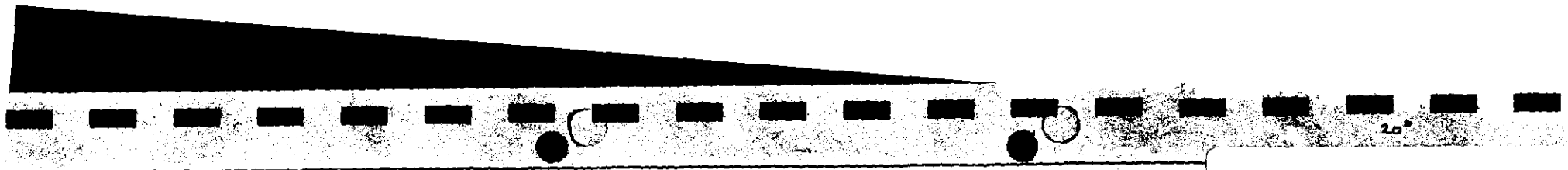
LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	32.00	1.70	1.30	100%
	33.70	0.20	0.16	80%
	33.90	0.20	0.20	120%
	34.10	0.90	0.95	105%
	35.00	1.40	1.35	96%
	36.40	1.60	1.60	100%
	38.00	0.65	0.60	100%
	38.65	1.90	1.90	100%
	40.50	0.95	0.93	98%
	41.50	1.65	1.65	100%
	43.15	2.75	2.70	98%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
30						
31						
32						
33						
34						
35					35.4m - localised network of vuggy Py veining. assoc. ± common milky wh. highly irreg. discontinuous q.v	
36						
37		Fine br. alteration, replacing in coarser ho. sl. more common along with dk br spots + dk br concentration apparently along relic bedding - sometimes picking out faulted bdg		36.8 rounded clasts of f gy pel. hornfels in br-gy coarser hornfels. few clasts finely bd generally aligned @ 45°. 37.5 B @ 135°.		
38						
39				Common areas of relatively undisturbed bedding along ± few areas of highly and intricately deformed - brecciated interbedded f. bd f. pel. ho ± coarser interrabbed ho.	39.1 - few irreg. discontinuous broken qtz - Po veins - dk gr actinolite veins.	
40						
41				B @ 20° - broken + graded bdg uphole B @ 30° B @ 20° B @ 10° B @ 10°		
42	42.20 Massive hornfels - gy-dk gy with dk brown tinge in some areas, V. hard, heavy massive competent rock, original rock types almost completely masked by recrystallisation, replacement and irregular veining assoc ± contact metamorphism.	42.4m 10mm wi-fromal + dk gr qz - actinolite vein.			Local network - patchy Po - ± minor Cpy, sharply contained in a faulted? intercalat on commonly assoc. ± dk gr actinolite	
43						
44						
45						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH CAF 1

LOGGED BY NPG FROM 30 TO 45m DATE 6/7/81 PAGE 3 OF



D13

LITHOLOGY

DRILL ADVANCE

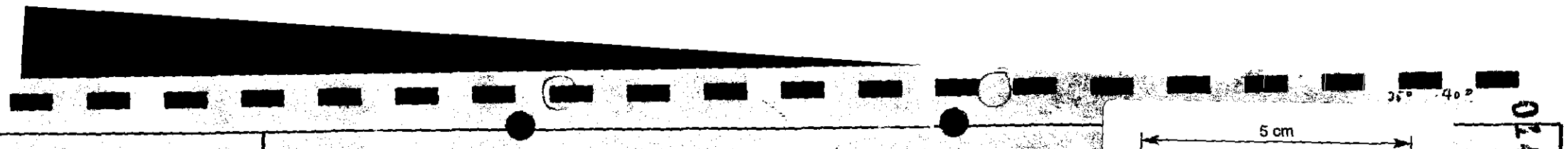
LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	45·90	0·10	0·25	250%
	46·00	1·00	0·95	95%
	47·00	1·50	1·50	100%
	48·50	1·40	1·40	100%
	49·90	1·15	1·15	100%
	51·05	1·925	1·92	99%
	52·00	0·25	1·25	110%
	53·25	0·65	0·65	100%
	53·90	0·60	0·55	93%
	54·50	1·50	1·60	107%
	56·00	0·40	0·40	100%
	56·40	1·20	1·08	90%
	57·60	0·85	0·95	112%
	58·45	2·35	2·35	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
45·90	Massive hornfels, distinctly dk gy poss due to higher pelitic hornfels content, properties as before.	dk gy alteration halo gy. diss. Po. replacement poss 1°?		Evidence of soft sediment (minor) deformation & v. shallow folding	V. fine regular Po. Py-Cp? vein cuts small coarser bed? introducing minor replacement	<1%
		2cm Irreg wh-dk gy-angl. vein & gr. alt^n halo. @ 80° distinctly bx. replaced bed by. v.f bx. mica		B @ 5°, poss. v. shallowly folded.	46·7m - common diss Po. av. <1mm	2%
				B @ 10° - sl. deformed.		<1%
				B @ 25°		
				B @ 15°, meso faulted.		
				B @ 15° - Bedding regular & minor deformation of a pelitic? bed		
				B @ 20°		
				B @ 20° & few mesofaults @ 35°, mina soft sed. deformation obscured by alteration	52·9 minor av. 2mm Po & minor Py vein	
55·10	Massive hornfels, subtle ghostlike mottling common & gy diffuse areas against a background of br-gy-dk gy. Core continues to be V. hard (recrystallised) heavy and competent, ft. Appears to contain recrystalised m-co hornfels as detrital grains still visible & fg dk br clots of br. mica sometimes giving f-v.f (sometimes?) spotted areas.	Few f gy-dk gy amph-wh qz veins @ 30° Core continues to be highly altered & v.f. br-dk br mica (phlogopite?) common in background of mottling, more Relatively common f-v.f qtz-actinolite +/- Po & assoc gy-bl. alteration halees often irregular & discontinuous partly giving rise to mottling effect. Zone of increased pale gy-wh v.f. wispy q.v., highly irregular & discontinuous		Structure mostly obscured by ubiquitous contact metamorphic alteration, br mica replacement appears to preferentially replace the coarser hornfels. Some areas of well healed brecciation also giving rise to mottling effect. B @ 20° Fault @ 70°	54·7m patchy 10mm ± qtz-amph-Po.	

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH CAF 1

LOGGED BY NPB FROM 45m TO 60m DATE 7/1/81 PAGE 4 OF ....



DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	60·00	0·30	0·25	102 %
	63·00	3·00	2·90	96 %
	66·00	3·00	3·06	102 %
	67·00	3·00	3·02	100 %
	70·00	1·50	1·52	101 %
	71·50	2·50	2·43	97 %
	74·00	3·00	2·80	93 %

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
60						
61					61·4m Minor qtz - dk. gr amph (actinolite) - Po - Cpy - Py veining up to 5mm.	
62						
63						
64		64·7m - few regular though discontinuous pale gr - gr veins ? replaced beds ? @ 40° - 50°		64·9m B @ 35°		
65				65·4m B @ 25°		
66	65·80 Areas of relatively little altered sediments displaying unobscured structure and original units, fm sandstone ± up to 40% wl feltic ~~to~~ epiclastic tuffaceous material, interbedded (often disturbed) ± dk gy ± pelitic material.	Zone containing areas of less altered rocks than before, structure relatively clearer.		Highly disturbed zone, comm soft sed. deformation, rip up clasts - healed autobreccia, sharp erosion boundaries, minor ~~B~~ meso faulting. @ 45°		
67						
68						
69				69·9 B ± grading @ 40° uphole ± erosional base.		
70						
N	70·9					
72	Massive hornfels, predominantly pelitic ± few rel. unaltered f. sandstone ± conspic. epiclastic tuffaceous material. V. altered, structure obscured. Grey and altered brown usually ± smooth diffuse boundaries, poss originally ~~bed~~ controlled by bedding. Rare ovoid structures of qz - gr - wh alteration ± qz, Py, Po.	Recrystallised - V. hd ± semi conc. fracture. Few fine rarely patchy dk gr. fibrous actinolite veins ± qz (wlky wh). Rare pale gr - wh f. veins of chlorite ? V.f. br mica replacement relatively common, ± assoc pervasive alt^n obscures original structure		71·4 - B @ 40° Bedding picked out by preferentially alt^n replacement alteration. 72·6 - B @ 30° 72·9 - B @ 25° + where visible appears to be still disturbed irregularly ~~not~~ regularly as in a turbiditic environment of deposition	Increase in f. Po veining & minor patches + rare f. replacement assoc. ± dk gr (actinolite ?) amph + minor qz	
73						
74					Rare - f irreg. discont Po ± Py veins	
75						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH CAF 1

LOGGED BY NPG FROM 60 m TO 75 DATE 8/7/81 PAGE 5 OF ...

5 cm

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	A			
	77.00	0.90	1.10	122%
	77.90	1.70	1.68	99%
	79.60	1.30	1.30	100%
	80.90	1.15	0.79	73.5%
	81.05	0.25	0.20	80%
	81.30	0.55	0.55	100%
	81.85	0.95	0.95	100%
	82.80	2.80	2.85	102%
	85.60	3.00	3.04	101%
	88.60	3.00	3.00	100%

INTERVAL: 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90

DESCRIPTION

85.75 Sandstone predominant with med. gn tuffaceous clasts. Green tremolitic? alteration

86.25

Dn from 70.9 m Predominantly brown brittle/fractured hornfelsed argillite - siltstone to pelite with grey-green diffuse alteration along bedding in patches. Interbedded med. gn equigranular tuffaceous sandstone units common, Bn - gy.

87.20 - 88.05 Med gn tuffaceous sandstone) Rock are well bedded, but contortions in part may be due to soft sediment deformation

ALTERATION

84.5 Pale green calc-silicate? alt' assoc with sulphides

Increase in actinolite veins with sulphides.

Green alteration patches only occur in sandstone units with one in actinolite veining.

GRAPHIC LOG

STRUCTURE

77.9 m B @ 10°

80.3 m B @ 35°

82.7 m B @ 40°

83.4 m B @ 15°

84.1 m B @ 35° graded. uphole

84.9 B @ 30°

85.75 vn @ 70°

86.45 B @ 20° sharp contact

87.20 B @ 0°

87.50 B @ 10° graded unit facing up hole

88.05 B contact @ 50°

89.20 B @ 40°

89.60 microfaulting in bedded sa to finely laminated pelite @ 50° B 0°-20°

MINERALISATION

VISUAL PERCENTAGE MINERALISATION

<1%

1) Patchy - discontinuous Po ± wispy Py veins
2) Sharply bounded disseminated Po av. 2mm in some places

3%

1%

Patchy network of Py ± Po: 85-92

2%

<1%

Po in actinolite veins - sufficient to give magnetic response.

2%

Finely disseminated Po in patches confined to sandstone units

>

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CAF 1

LOGGED BY NPC / GFP FROM 75 TO 90m DATE 9/7/81 PAGE 6 OF

LITHOLOGY

5 cm

LOST CORE	DRILL ADVANCE DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					91	The fine grained clouded argillites are dark grey with brown (biotite?) overprint.	90-45 Calc-silicate alteration 90-70		90.45 Pseudo breccia text - elongated on foliation.	90.7 Po in tension veins, Po in ovoid blue alteration patches. Minor act/sulphide veins.	2%
	91.60	1.30	1.30	100% NQ	92	93.05 15 cm calc silicate alt.			92.25 B @ 50° (well laminated)		
	92.90	0.70	0.68	97%	93 93.05	Pelitic hornfels. Clouded fine grained rock similar to above with spots of altered metamorphic mineral - cordierite?	93.20 Diffuse halo of alteration (marbles actinolite-sulphides) on. Bedding obscured by alteration - mainly recrystallisation. Hornfels spotting.		92.80 Act vn @ 60° 93.20 Fractured - infilled with qtz.	93.0 Po in rare actinolite veins	93.0 <1%
	93.60	0.25	0.25	100%							
	93.85	0.55	0.57	104%	94				94.20 B @ 30° well bedded to finely laminated		
	94.40	1.00	1.00	100%							
					95 95.05	Hornfelsed sandstone with brecciated pelite-chert interbeds. Light green to cream.	Calc-silicate alteration, will actinolite less altered patches		95.05 Contact @ 85° 95.20 FQ @ 35° bioturbated chert 95.80 Contact @ 25°	95.8 Po in tension veins. Po in tuffaceous sst. units crystalline Po around amphibole in veins and tension structures.	2%
	95.40	1.15	1.06	92.2%	96 95.80	Hornfelsed fine grained sandstone. Dull grey to brown. as above. Well bedded - varies from m.g equigranular tuffaceous sst to clouded argillite	brown overprint due to f.g biotite alteration. Irregular actinolite veins and tension structures.		96.40 B @ 30°		
	96.55	1.05	1.04	99%	97						
	97.60	1.40	1.37	97.9%	98				97.70 Contact @ 35°		
					98.70 99 99.0	Hornfelsed sandstone and brecciated chert. Hornfelsed tuffaceous sandstone with minor interbedded argillite. Gy-bk. Medium to fine grained. Includes. minor well bedded argillite laminae.	Calc-silicate alteration actinolite irregular veins, mica (phlogopite) alteration. Sulphide-pyrrhotite veins with halos of 2° feldspar-alteration.		99.0 B @ 55°	Po interstitial in brecciated calc. sil. alt. sections	
	99.00	1.25	1.27	101.6%	100						
	100.25	0.20	0.20	100%					100.75 B @ 60° pelitic layer 100.85 B @ 60° to gradational unit - basing 101.20 Felsic vn @ 40° with [illegible]		
	100.45	3.00	2.77	92%	101						
					102		102.05 Calc-sil. alt in pelite 102.10 Calc silicate alt in breccia pel ord 50 - occ 2.3 cm 102.60 1 cm calc-silicate alt		102.10 Calc-sil. alt @ 50°		
					103 103.15	Hornfelsed argillite. Predominantly fine grained siltstone with finely bedded units. Gy to dk grey in colour. Interbedded carbonate [illegible] of hornfelsed ss units.	Recrystallised, well bedding well preserved. Phlogopitic alt. pervasive.		103.20 B @ 35°	103.75 Po in qtz veined breccia > 2% Pb in stage calcsilicate - qtz vns > 3 finely disseminated - especially in bx. hx ss units	3%
	103.45	3.00	3.01	100%	104				Sharp 104.30 mod. intense qtz vns. 104.50 Fract & qtz-chl @ 5° 104.90 B @ 45°		
					105						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH .....

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83184

839185

LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	A			
	106.45	0.90	1.10	122%
	107.35	2.65	2.67	100%
	110.00	2.15	2.16	100%
	112.15	0.35	0.30	86%
	112.50	0.50	0.50	100%
	113.00	0.35	0.35	100%
	113.35	0.95	0.91	96%
	114.30	1.70	1.72	101%
	116.90	3.00	3.00	100%
	119.90	3.00	3.00	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	fm 105.3 Interbedded finely bedded ?dolomitic pebble beds, with a 'striped' appearance.	microfractured with infilling ± vein cutting quartz (-tellspar?) veins, minor actinolite - quartz veins with local alteration selvages		105.55 — bioturbated unit 20cm c sulphides 105.70 BQ 50° 107 Bed 30° / finely bed dk? layer. 107.4 folded bedding - sulphide core in fold + truncated fabric by alteration.	Patchy Po in base section — 5% Py, Po mainly in fracture cross-cutting veinlets 1%	
		108.50 Patchy calc-silicate alteration		109.15 - faulted @ 35° faulted	Po core along contacted bedding as disconnected stringers. 107.55 5% Patchy massive Po in calc-silicate alt. section 7%	
109.15	Calc-silicate : vesuvianite - diopside - garnet - skarn. Totally metamorphosed calcareous rock, possibly a bedded carbonate? Coarse mottled txt with light green diopside (not - cryst), actinolitic amph, coarse-brown granular sections lt green diopside pred. with brown-orang garnet giving a PICARDO brecciated txt in sections	Granular m-g cryst amphibole - vesuvianite? with sc. inter. granular fine-gn tremolite - diopside crystals included in garnet. Cryst vesicle devel. along bands. Calcite in interstitial voids		109.75 Band @ 25° Massive generally roughly foliated & banded in parts Banding may reflect compositional changes along original bedding	Patches of diffuse cryst Po & scatt Cp on rims of patches in Peanite distribution 5%	
				112.10 Silicate @ 30°	Core of massive Po in patches and stringers along bands. 111.35 15%	
112.10	Calc-silicate hornfelsed pebble skarn. Fine grained gn-gy banded pt with ca v fg clasty sections. Finely granular txt. Cut by coarse grained amphibolitic skarn veins mod - coarsely crystalline lt & dk green intersecting amphibole crystals with cryst calcite. Calcareous.	Fine grained pt sections alt to granular calc-sil - lt gn-cream. Ps alt to fine saccharoidal txt. Coarse cryst amph in veins cutting on, interstitial calcite.		112.85 Band @ 40° Amph on @ 8° finely bedded' interbedded by amphibolitic dyke - or vein. 114.00 Amph vn @ 2°. 114.30 end grid section 114.50 Cont @ 38° 114.60 Band @ 32° 15°	Diffuse Po in fg psammite section. Patchy - steadily blebs Po Tr Cp 112.85 Coarse - weakly patchy Po ± Cp conc on margins. Patchy Py Py veins. Po 20% Cp 3% Py 2% 114.00 Finely diffuse Po with conc in weakly patchy. Blebs Cp to 5% Cp 3% 7% Po conc in patches in amph vn	
114.50	Calc-silicate hornfels, diopside - garnet skarn Fine-med grained banded sedimentary sequence. Flesh coloured to lt ga in well banded section ± dk ga amph conc along foliation. Cut by cryst amph. veins	10cm cryst amph skn vn on contact. Mottled patchy txt in amph. section of 109.15 type.		115.20 Bd @ 8° @ 20° 115.60 Amph vn con 10cm @ 20° 115.90 Cont @ 35° Massive crystalline.	Fine diffuse Po in lt ga amph section 5% Po conc in ca amph vn 30% Tr 115.90 Patchy fine cryst Po infilling + late stage, irregular shapes but controlled by pervasive crystal cleavage Cp as fine ga cryst diffuse conc in diffuse patches 5% Cp 20% Po 117.55 25% patchy Po ± minor Cp 5%	
115.95	Garnet - Vesuvianite coarse grained skarn. Med ga granular matrix of lt ga - wh calcareous minerals with dk green fg amphibolite (tremolite?) matt throughout or conc in crystalline accumulates.	Vesicles occur as c. crystalline masses or conc along banding. Calcite occurs as cryst interstitial late stage mineral.				
		Garnet beds with coarse crystalline calcite devel.				
118.05	Hastingsite - calcite - pyroxenite cryst alline skarn	Patchy amphibole crystalline 30% Po 5% calcite				
118.55	Garnet - diopside fine grained skarn. Pale bo - lt ga with cryst dk ga amph sections. Generally fine grained but increase in crystalline txt down hole. Crystalline brown vesuvianite	Garnets in crystalline masses - beam. of v fg in fg sections. Non interaction. 119.85 inc in calcareous content		119.90 Calcite @ 35° Massive - non foliated	Small patches, concentrations of Po ± Tr Cp at the grain edges 5% 118.55 Patches, blebs + stringers in bands Po 15% 119.85	

SCALE 1:100 (1cm = 1 m)

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DRILLHOLE LOG FOR DDH .....

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839186

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	122·0	3·00	3·07	102%
	125·0	3·00	3·00	100%
	128·0	3·00	2·99	100%
	131·0	3·00	3·03	101%
	134·0	3·00	3·00	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	in banded concentrations			120·2 Po bnd @ 40°		15%
120·65	Vesuvianite-Andy banded skarn red gy blk cryst lt gy calc-mass mtx with dk gn amph cryst scatt throughout or conc along darkish bands. 120·65-121·05 Well banded dk gy-gn magnetite rich bands alternating with lt gn ? diopside and dk gn hastingsite rich bands. Highly magnetic.	Vesuv. dom in coarsely cryst sections assoc E calcite. ? dk gn amphibole, replacing vesuvianite - diopside -		120·65 Vn gyangt to, Cp @ 10° 121·00 Bd @ 25° 121·5 Bd fg gyan pl ave 15cm @ 30° 122·0 Bands @ 45° 122·5 Bands @ 45° well banded	Po mainly as diffuse conc. in patches or irregular steadily thick alongst Py, Cp. Coarsely cryst Po in c-xtyst gyangt-amph-calcite alt sections, gross Mt conc along bands 10%, Po as lates diffuse patches, also bands and in veins 2% (10%)	20% 10% 20% (10%)
122·8	Diopside-Vesuvianite banded skarn Med to coarsely xtalline. Med gy lt gyan diopside rich sections with bands of xtallins gyangt + c xtyst vesuvianite	Calcite as xtyslline coarse intergrowth with xtyst gyangt and vesuvianite. Veinlet alongs vns in fg pt unit at 122·0		122·8 Band gyangt large @ 30° moderately banded becoming segregated	Po > Cp xtyst patchs interstitial to cg gyangt + vesuvianite xtyslst	2%
125·0	125·2 50cm fg gy ps - granular bit. Less banded more irregular segregation of skarn minerals			123·2 Bd @ variant @ 35° banding but obscure 125·2 Calcite @ 47° 125·5 Po vn @ 55° segregated	Skarn Po in pt unit 125·2 C. angular patchs Po & Cp Po conc in vn (along band?) 125·6	2% 5%
	126·6 Magnetite-vesuvianite-diopside banded skarn Unit is banded melanocratic skarn distinctive by fine bandings of mtx xtyst magnetite. Vesuv. conc along occasional band.	strongly silicified in brown 2° alteration patches and in Mt rich bands		127·0 Band Mt @ 40° well banded 127·6 Band Mt @ 30° coarse segregated pyroxene 127·9	Mt as disperse bands or interg with Po. Coarse patchs Po & Cp as fillets along margins. 126·6	15% 20% Mt
128·0	128·1 Diopside-Vesuvianite fine grained skarn at 118·65m and 125·70m pale brown with dk gn 'streaks'	non calc. cryst. garnets in calcite veins		129·25 Calcite vn @ 65° 129·45 Cont @ 45°	Po & inclusions Cp along vns & fract. Diffuse Po diffuse patches 128·5	7%
	129·75 Marbles - diopside skarn dk gy to green. Mtx is mg granular calcite with irregular pale brown Mt in finely banded concentrations cf 126·6.	Calcite - white xtyslline intergranular to gyangt PYROXENE. See ? cryst calcite - silicified		129·20 Band @ 15° Patchy segregation 130·20 Band @ 15° 130·60 Cont @ 13°	Mt is disseminated, conc in patchs interstitially intergrown with Po or in bands. Po also as lates irregs overgrowing patches	10% 30% Mt
	130·60 Gyangt-Diopside-Vesuvianite skarn. Mainly f-mg granular intergrown crystals - lt green with pale brown f-mg mineral in irregular patches or as foliated segregations. Sections also m-cg xtyslline intergrowths of same minerals & dk. gn amph in patchy clusters or bands & v dk gn chl? after actinolite. Unmarked fg sections occur in sharp contact & xtyslline irregular sections	calcite in xtyslline interstitial conc & c. xtyslline sections fg calcareous mineral in gn mtx of granular minerals. Dk gn actinolite in veins & patches assoc & patches Po.		131·00 Mineral Sag @ 15° minerals segregated into bands 131·40 Cont @ 35° fg patchy calc-sil xtyst 131·95 Band @ 5° 132·0 Band @ 5° pattern fg irregular & coarse banded calc-sil assemblage in patchy - rolled lt 132·2 Band @ 15° 132·5 Mt vn @ 10° fg bn pattern. 133·0 Mt conc @ 45° banded. Mt + Po conc	Po conc along bands - mineral segregations, xtyslline in cg conc & dk gn 2° amph & xtyst calcite. Cp around Po patches 131·6 Po as fine blebby disseminations in fg patches not closely related calc-sil. Po is in xtyslline seams & conc in elongate patches in m-cg xtyslline Mt - amph sections	10%
	134·0 Calc @ 30° along bandings 134·3 Band @ 80° Faintly banded due to differential segregation of minerals	134·05 Calcareous, fgn coarsely xtyslline saccharoidal bit & sc. conc patchy gyangt &			Chief Mt in diffuse bands - coarser patchs Po & inclusions Cp (Py) 134·05 Po confined to dk gn chl-act. in intersecting veins 134·50	20% 2%

SCALE 1:100 (1cm = 1 m)

5 cm

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DRILLHOLE LOG FOR DDH

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839187

DRILL ADVANCE / LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	137.0	3.00	3.00	100%
	140.0	3.00	3.00	100%
	143.0	3.00	3.00	100%
	146.0	1.40	1.42	101%
	147.4	2.80	2.83	101%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
136		135.3 as 130.6. - cgyst tourmaline ± Po.		135.2 fg pt bnd 10cm @ 37°	sc crystalline pockets Cp 135.3 cgyst Po in veins of vuggy segregations - almost barren. Blebs Sp (1%). Diffuse patchy fg Po also especially in fg "patchy" sections	5% 10%
137		137.15 calcareous ± cgyst calcite interstitial in tourmaline - (magnetite) amph - Po. sections		135.85 Fg bnd @ 20° fg, patchily segregated 136.75 bnd @ 10° mg ± cgystalline patchily segregated 137.60 Con @ 45° 138.05 Con @ 25° v fg Sp Py - Po vn @ 15° cut by contact - F? 138.65 Bnd @ 25° 139.0 Mt bnd @ 50° minerals segregated like dark bands or concentrations in layers. 140.0 Mt bnd @ 60° 140.55 Bnd @ 50° 141.2 Cont. Mt @ 40° well banded ± foliated 141.95 Mt bnd @ 35° foliated 142.95 Mt bnd @ 35°. 144.35 Mt layr @ 20° 145.2 Bnd @ 40° 146.85 Bnd @ 25° 146.90 Foliations @ 15° 147.2 Gal @ 15° v. finely banded foliations 147.8 Bnd @ 15° contorted.	cgystalline remains cons in patches amnt 137.35 ± dk grn chl" dkt = accmpt ± rel 137.90 Po in minor cut-vn 138.05 c mineral cons Po in dk grn chl" aggregates 138.45 sections Pdmin with silver sulphide ?? ± Bo an cloud ± cgyst Mt in bands or as disseminated cgystal cons in dark layers. Cgyst Po in vns = dense massive patches. Sp as dark blebs and as inclusions ± Po. 139.55 Tr silver sulph ? Ag-Py ± Cp in rare blebs 140.15 layers dk massive to densely disseminated Mt. Po as coarse cgystalline irregular masses cross cut Mt and are later. Cp as dark blebs from 1% throughout 142.05 146.3 146.7 146.8	5% 10% 15% 20% 20% (Mt 15%) 10% 15% (Mt 5%) 10% (Mt 20%) 5% Mt 30% 7% Mt 20% 10% Mt 15%
147.0	Hornblende schist. Laminated schistose sediment with well defined alternating foliae. Lt bn-pu lrd gy - mult'ip of finely interlayered calc-sil minerals with wispy bands of m-cg dk grn amphibole shears.	Calc-silicate alteration - minerals finely segregated in discrete bands. Amphibole shears highly calcareous		147.4 Foliations @ 15°	Cp as fine grained blebs. Po as diffuse patches + stream	1%
148.75	Hastingsite shears Overall dark green - dk gn m-cg cgyst amphiboles scattered in a pale green mg calcareous matrix - minerals of gn	Highly calcareous with 15% calcite as discrete cgystalline masses		148.65 Con @ 25° Massive coarsely cgystalline		
150						

SCALE 1:100 (1cm = 1 m)

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839188

DRILL ADVANCE / LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	150·2	1·10	1·04	94·5%
	151·3	3·10	3·13	101%
	154·4	3·20	3·23	101%
	157·6	2·80	2·86	102%
	160·6	3·00	3·03	101%
	163·4	0·60	0·58	96·5%
	164·0	3·00	3·00	100%

INTERVAL: 151 · 151·45 · 152 · 153 · 154 · 155 · 156 · 157 · 158 · 159 · 160 · 161 · 162 · 163 · 164 · 165

DESCRIPTION

cut with calc-silicate minerals.
Interlayered with fg bn banded stream of 147·0 type

gradational contact

Diopside stream equigranular mod. grained brgreen stubby pyr. crystals - massive to stratified. Where stratified it can diopside? mg massive patches are interwoven with coarse equigranular bn-brecciated vesuvianite aligned along bedding. Minor garnet lenses. Assemblage is garnet-vesuvianite-diopside.

154·85 Magnetite veins in large patches appear along bedding

155·95 Pyrrhotite becomes a dominant and framing mineral. Magnetite is distributed throughout core section as distinct build ups in concentrations. Scattered Mt patches again will banded concentrations then die away into scatt. patches again

ALTERATION

Alt green amphibole/clinopyroxene core grained concentrations occur, appear to following bd. of 147·0 crystalline sections.

calcareous.

diopside grains included in coarse vesuvianite crystalline patches

GRAPHIC LOG

STRUCTURE

family foliated in fg sections

151 bnd @ 15°

152 bnd @ 35° — Faintly banded in sections -

152·9 fol @ 15°

153·5 fol @ 0-5°

banded due to core of Mt, Po along bedding

155·6 Mt bnd @ 50°

generally massive with massive core to vaguely segregations

157·3 Sc²vn @ 65° faint blk fluorescence

158·2 Po seg @ 20°

161·25 Band @ 15° faint banding

161·60 Mt bnd @ 40° — 1 calcite veins 1-3mm thick - widely spaced

162·55 Calc vn @ 20°

163·1 Mt+Po in contorted bands 0-40°

163·8 fine banding @ 10°

MINERALISATION

151·0

Po as dimensional blebs and diffuse patches along banding & inclusions of Cp. Particularly concentrated in amphibole alteration 153·3 sections. Mt as dimen crystals in 10% alt green alt sections 154·1 7%

154·85 cryst Mt in massive patches or dense dimensions. Po in blebs assoc. & Mt or as elongate patches + minor Cp 155·95

Po as dimensional crystals and patchy concentrations. up to 40% Po with Mt at 157·40 158·10 Blebs Cp with Po (2%)

158·40 Po mainly as crystalline massive concentrations

gradational 159·60

Mt as scatt. minor patches - rare in patches Po as diffuse 160·4 dimen. Sc dimens blebs Cp

161·6

Po as separated crystalline 162·2 masses & diffuse dimen. patches or core along bands & 163·15 massive Mt layers

163·90 Mt in mineral segregations or bands and as dimensional cryst. patches - Po as ⊙ cryst.

SCALE 1:100 (1cm = 1 m)

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LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	167.0	3.00	3.00	100%
	170.0	3.00	2.93	97.5%
	173.0	3.00	3.00	100%
	176.0	3.00	3.03	101%
	179.0	3.00	2.98	99.5%

SCALE 1:100 (1cm = 1 m)

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				166.7 Mt/Po bands @ 50°	narrow v. irregular patches & stringers and narrow diffuse patches & bands. Cp as blebs & Po in stringers and patches (1-2%)	15% (Mt 10%)
				166.4 Cont & cg amph section @ 10°		
				166.4 Po vein in band @ 25°		
				167.95 Mt band @ 30°	Mt as discontinuous coalescing bands - interstitial. Po in gr Fe amph/calcite patches as narrow crystl blebs, also as diffuse patchy stringers // Cp crystals in Po patches (Mt 2%)	10%
		Fg-o dk green cg hastingsite crystalline patches & cg calcite.		169.45 Mt banded layer @ 30°		
				169.60 Mt/s conc band @ 25°	169.6 Mt in bands - patchy distribution to narrow m-cg crystalline Po in c aggregates. 1% Cp blebs Po in more veins (Mt 10%)	7%
	170.55 includes minor units of fg hastingsite-amphibolite			170.55 } ho. ar @ 0° 170.85 }		
				171.25 Mt band @ 0°		
				171.60 40mm ho ar band @ 20°		
				172.05 45mm ho ar band @ 40°	172.1 Mt conc in discrete bands. Po in coarse c aggregates. Narrow patches & Mt. Discrete crystal Cp assoc & Po 1% (Mt 2%)	5%
		172.60 Dk green coarse amph & calcite.		172.90 Mt band @ 15°		
				173.00 fg ho gr ps @ 30°		10% (Mt 7%)
					174.25 Mt as scatt. crystalline patches and as minor bands. stringer Po & 1% Cp & patches & & as amph veinlets	7%
				175.35 Fg band @ 30°		
				175.45 Fg-c amph band @ 35°	175.10 Coarse Po conc in bands and in elongate diffuse patches along banding	15%
				176.05 Min zone @ 25°	175.40 Po in coarse irregular patches	10%
		175.25 Bands of U gr mg hbl amph. Calc Pyr & var gr amph coarse		176.30 Amph band @ 45° with banded	176.10 Po in separated bands of & crystalline aggregates. minor blebs Cp in Po patches	10%
176.30	Diopside - Hastingsite skarn. Lt gr pyroxene skarn with dk gr amph as irregular diffuse patches and irregular bands. 177.45 with interbedded hornblende-amphibolite layers	15cm c coarse hastingsite bands & coarse calcite, Po		177.7 ho ar @ 30°	177.8	7%
178.05	Diopside - vesuvianite - hastingsite skarn. Lt green with dk gr. amph veinlets of anisotropic granular coarse calcite silicate pyroxene - amphibole assemblage. Patchwork of lt gr, dk gr and Po	Calcareous. dk green irregular patches of amph - calcite - Po - also poorly developing as		178.3 Po band @ 45° Massive "skarn" coarse crystalline text. with faint schist banding	178.1 Po in large diffuse patches elongated along ?banding and as semi-massive concentrations along bedding 178.25	20% 5%

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839190

LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	182.0	3.00	3.00	100%
	185.0	3.00	3.00	100%
	188.0	3.00	3.00	100%
	191.0	3.00	3.00	100%
	194.0	3.00	2.98	99.5%

SCALE 1:100 (1cm = 1 m)

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
		core along banding direction		well banded 180.70 Bnd @ 50°	Py as dense crystals or small crystalline aggregates	
				Massive granular cryst. text with faint banding or segregation of minerals 181.75 Bnd @ 40°		
				182.40 Po band veins 183.10 Po bnd @ 25°	Py occurs as disseminated 182.35 cryst aggregates concentrated along banding. Cryst Cp as m-cg grains or inclusions in Po.	15%
		Massive cryst Po. Interspersed C c cryst dk gy amph + c cryst calcite Tourmaline crystals are c gy amph - Po - calcite sections		183.80 Py-Po bnd @ 40° 184.15 Bnd @ 45°		
				186.30 Po bnd @ 45°	Po aggregates combine to 184.15 almost massive, banding core along banding. 2% Cp assoc C Py and as discrete tourmaline aggregates 185.65	20% 10%
				186.85 Po stringer-band @ 25°	Py in more concentrated sections 186.45 bands to occur as bands C po - minor inclusions Cp	20%
187.50	Diopside - tourmaline skarn with Tourmaline - calcite vein C opaque txt in the gr-ve calcareous mosaic C dk gy amph in bands + irregular patches. Dk gy-gy colour, indistinct banding up bands or inclusions of ho gy amph	Dk gy amph with inclusions of tourmaline crystals intergrown with Py		187.80 Cont C cryst amph-C 45° 187.85 Cont calcite @ 40° 188.50 ho as cont @ 60° 189.80 ho as @ 5° 188.85 F at 15° 189.10 Calcite Schaltlin Bottom Bnd @ 10° + calc @ 60°	Po on cryst patches 187.35 Py in stringers along banding 188.25 minor inclusions Cp	10% 7%
				190.2 Calc vn @ 40°	Anhedral cryst white Cp 2% 189.20 Anhedral cryst patches of Py grs 'pseudo-porphyritic' text.	15%
190.60	Diopside - tourmaline - magnetite skarn Similar to above although coarse txt with increase in dk gy amph.-calcite alteration. Pyroclastic content decreases proportionally to increase in magnetite. Dk green to grey colour due to amph and Mt content	Dk gy m-c crystalline amph sections progressively increase in frequency + intensity down hole C c cryst patches inclusions of calcite highly calcareous, in mtx of pyr assemblage, as c crystals with dk gy amph and as calcite veinlets		191.4 Calc vn @ 35° 191.85 band @ 30°	Mt as scatt crystalline grains 190.20 v fg. Patches crystalline Py 191.00 and cryst zone in cryst calcite section	15% 10%
				192.8 vn Mt+Po @ 15° 193.2 Mt band + calc vn @ 60° 193.7 hoam unit @ 45°	Massive bands of cryst Mt 191.80 along bedding. C irregular patches Py. Patches Py C Mt in veins.	7% 20%
194.45	Diopside - (amphibole) skarn with extensive amphibole - calcite - pyroclastic sections. Similar			194.7 Band - segregation @ 45°	Po as stringers of patches along band 194.35	5%

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DRILLHOLE LOG FOR DDH .....

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5 cm

839191 LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	197.0	3.00	3.04	101.5%
	200.0	3.00	2.99	99.7%
	203.0	3.00	2.98	99.5%
	206.0	3.00	2.94	98.0%
	209.0	3.00	2.98	99.5%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	to 197.50 Pale mottled dk green. Alternating sections of (1) lt gr. banded px amphibole with m. 'spinifex' cryst. bxt & (2) thin to wide sections of dk green amphibole with calcite and pyrobolite	195.25 massive to coarsely cryst. dk gr. bxt calcite veins & minor chlorite.		196.25 Thin amph band @ 25° 196.70 Calc vn @ 30°	Po in discrete cryst. blebs, cryst. interstices in cg amph network or on cooling joints along bands	3% (1%Ni)
		197.75 amph. alt obscuring bands. or as Po rich lenses + patches. calcite veining		197.70 Band @ 25° with banded Po blebs/ot in part 198.30 Calc & Po lenses @ 40° 198.65 Po band @ 55° 198.90 Finely banded @ 40°	Po in massive cryst. line aggregates elongate along bedding.	10%
	199.25 Hastingsite-pyrobolite assemblage with cryst. calcite interspaces	199.75 dk gr-bk hastingsite amph. - calcite 'mottled' alteration in irregular wispy patches not along bedding		199.40 Indistinct veins/bands with Po 199.70 Calc-fill alt. at 25°&0° Fine banding @ 25°	Po disseminated on cryst. aggregates along bands	20%
	202.10	202.10 alternating bands of lt gr px and dk gr amph.		201.75 Mn veg @ 25°	Po as coalescing cryst. line aggregates with Sp intermittently along aggregate margins (2%)	
202.00	Hastingsite amphibolite. Dark green coarsely cryst. amphibole, mottled with varying amounts of interstitial calcite.	interspersed calcite veins and white granular cryst. patches of calcite. Rare coarse transparent crystals of ?quartz.		202.70 Cont @ 20° 15° 202.80 Band @ 20° banded 203.00 Obscure cont @ 35° 203.35 Calc vn @ 20° Massive coarsely cryst. bxt	Po in disseminated diffuse patches 202.40	1%
					Po conc in diffuse patches & calcite 204.70	1%
				206.5 Calc vn @ 20°		Tr
					diffuse patches Po. to almost massive aggregates. 208.40 209.75	5%
		209.70 Inc in interstitial calcite content to 15-20%		209.6 Mg amph band @ 25°		2%

SCALE 1:100 (1cm = 1 m)

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DRILL ADVANCE

839192

LITHOLOGY

5 cm

034

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	212.0	3.00	3.05	101.7%
	215.0	3.00	2.96	98.7%
	218.0	3.00	2.97	99%
	221.0	3.00	2.95	99.3%
	224.0	3.00	3.05	101.7%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	cf 210.65 fine grained green amphibolite inclusion? or portion of finer facies	amphibole ore generally coarse crystalline - interstrown c calcite		210.2 calc vn @ 15°		
				211 Cons ly cryst calc vn @ 60°		
from	211.6 intermittent interlayered f.g green amphibole rock - v fine grained layers are pelitic sediments. Hastingsite rock is usually coarse grained to banded, med to v coarsely crystalline	med - coarsely crystalline intermittent calcite veining		211.2 20mm calc-fil att pl @ 27°	Po concentrated along banding. finely disseminated in pelitic layers and as diffuse patches interstitial to amph. crystals Minor Cp in some Po patches	5%
				212.2 40-50mm pl layer-ab @ 45°		
				212.85 calc vn @ 30°		
				213.15 10mm pl layer @ 25°		
		213.75 v coarsely crystalline with radiating masses of cg amph. Crystals up to 25mm in length				2%
				214.95 25mm pl layer @ 40°		
				215.05 5mm " " @ 46°		
				216.30 cont @ 15°		
216.3	Deepside shears (with green? brown? zones) med gr hdo crystalline densely spaced rock dk green to light with brown patches. Fine gr - pegm layers may represent altered pillows. Probably a pyroxenite - pelite bedded sequence which has been thoroughly altered to calc-silicate pyroxene. Brown patches, layers are either garnet or possibly vesuvianite.	patches, irregular bands becoming more extensive down hole of hastingsite (amphibole) with calcite. Pyroxene skarn is non-calc. ie in scatt cg amph crystals		216.90 bed @ 20° bedded appearance	disseminated in diffuse patches of Po Cpy? Po ± amph patches of alteration	1%
				217.40 wavy bed @ 0°		
				218.50 bed @ 35° well bedded		
219.55	Interlayered crystalline hastingsite amphibolite units into Pyroxene skarn units Hastingsite units are coarsely crystalline with coarse mats to radiating masses of dk green amphibole. Interstitial calcite is particularly prominent in v cg sections. Pyroxene skarn sections vary from pale green-brown hdo granular skarn to heavily amphibolitised amphibole - pyroxene assemblage Pyroxene skarns include intermittent fg pelitic interbeds.	c. cryst calcite in c cryst amph sections. Amphibolitisation extends out gradationally into scatt. amph crystals and bands		219.55 Cont @ 75° wavy-slightly foliated	Po concentrated along foliae in irregular patches.	3%
				220.1 fol @ 0°-30°		
				220.35 granular calcite @ 50° crystalline		
				220.70 Amph band @ 30° moderately banded	Cp in cryst patches in dk green amph bands + patches	1%
				221.00 Pel layer @ 60° granulitic		
		Random cg amph c interlayered Pyroxene skarn		221.40 abs ore contact		
				221.70 Cp @ 55° crystalline t. broadly foliated	cg cryst diffuse patches Po concentrated in cg amph sections inc. down hole 222.25	7%
				222.75 Cont at 0°		
		Heavily amphibolitised Pyroxene skarn.		223.0 Pel layer @ 0° well foliated	mg cryst aggregates and disseminations of Cp ± minor Cp increasing to coarse diffuse patches down hole 224.25	10%
				223.50 fol @ 20°		
				224.20 fol @ 20°		5%
				224.45 cg amph vnt @ 10°		

SCALE 1:100 (1cm = 1 m)

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839193 LITHOLOGY

C30

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	227.0	3.00	2.97	99%
	230.0	3.00	3.00	100%
	233.0	3.00	3.05	101.7%
	236.0	3.00	3.00	100%
	239.0	3.00	3.00	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
225	225.25 Finely interbedded predominantly crystalline hastingsite amphibolite (dk green, crystalline) & pyroxene-amphibole skarn (lt green-greenish)	Pyr-amph sections are highly calcareous. C.g hastingsite crystals occur in bands, veins, patches and scattered crystals.		225.25 pel sediment/bed @ 25° well foliated 226.05 amph foliation @ 20° 226.70 Po-hastingsite banding @ 0° 227.10 amph/to foliation @ 15°	c.g patches Po in dk grn hastingsite bands	7%
227				227.65 Minor Po band @ 17°	massive to diffuse crystalline aggregates concentrated in dk grn amph foliation, especially along margins of bands. Broadly disseminated aggregate in pyx skarn. Rich sections (2%)	20%
228	228.4 Pyroxene skarn with hastingsite alteration patches bands and scattered crystals. Includes intermittent calc-silicate altered pelitic units	moderately calcareous in patches of pyr. skarn or as c. crystal veinlets & hastingsite		228.4 Po-alog contact @ 20° bedded 229.0 Pel band, patchily basic @ 10° 229.6 foliation @ 20° 230.0 15cm wide gr pelitic unit 230.5 foliation @ 20°	Crystl patches Po core in amph. alteration sections	5%
230	at 231.35 10 cm unit pale cg-pg banded calc-silicate altered semipelite.			231.35 Bedded semipelite @ 45° 231.85 Bedded contact @ 45°		1%
231	231.85 Semipelitic-psammitic interbedded sequence pale gy well bedded sediments, weakly altered to calc-silicate minerals.	psammitic amphibolitization dominant over chilled margin to amph.		232.10 Bed @ 30° very well bedded to 232.45 Bed @ 40° getting thinner beds with boudinaged calc-sil bands 233.00 Bed @ 40° (Slump structures?) banded 233.45 Contact @ 60° interbedding?	Po coarse along bedding bds as massive layers and as patches.	5%
233	233.45 Crystalline hastingsite amphibolite skarn with interlayered pyroxene skarn and pelitic.	v.fg dk grn crystl amph interbedded with thick calcsil veins dominated by calc-sil minerals coarsely crystl hastingsite fine grained skarn contacts		233.85 Contact @ 25° initial crystl foliation 234.35 @ 35° 234.10 banded calc-sil @ 30° banded pyr-sk. 234.55 Cont @ 20° foliated crystalline banded pyr-sk	diffuse patches Po aligned along foliations in amphibolitic sections.	
234	Amphibolite skarn sections are med to very coarsely crystalline with 15% interstitial calcite. Generally dk green, irregular sections are lt gy due to a pyroxene mineral. Generally foliated with fg dk grn amph foliae in irregular contact & c crystl hastingsite bands.	sc. dk grn amphibolitization coarsely crystalline with fg bands.		235.45 foliated 235.95 Cont @ 30° broadly banded pyr-sk		2%
235				236.80 band @ 30° foliated to banded with thin layers & inclusions of pyr-sk.		
236	Pyroxene skarn sections are thinly to broadly banded pale brown to green, med grained - pegmatitic, with fg dk green amphibolitized contact zones.	sc. dk/dk gy amph crystals		237.45 band @ 40° broadly banded pyr-sk 237.85 238.90 banding @ 15°		3%
237				239.70 Cont @ 40° pyr-sk layer & inclusion 239.90 Cont of c crystl hastingsite & fg band @ 0°	veins of massive Po & crystalline patches	5%
238						
239						
240						

SCALE 1:100 (1cm = 1 m)

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930

5 cm

839194

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	242·0	3·00	3·01	100·3%
	245·0	3·00	2·98	99·3%
	248·0	3·00	2·99	99·7%
	251·0	3·00	2·96	98·7%
	254·0	3·00	3·00	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
		granitic to v fg patchy tex		240·2 Cont @ 100 sharp basal pyr-sk. 240·65 Bnd @ 15° 240·80 Cont @ 30°	isolated patches of coarse blebby Po	
		closely alt & sc dk gr coarse crystals		241·25 irregular intensive contact		2%
		Predominantly coarsely crystalline dk green hastingsite with irregular sections of lt ga. pyroxenaceous. Contain 10% Po blebs in silic mineral interstitial to amphiboles		241·40 Band/fol @ 35°		
				243·3 fol @ 20°		
				244·1 Band @ 20°	diffuse patches Cp.	5%
				244·70 Sm shear/fol veining @ 60° 244·75 Contact @ 300° 245·10 fol @ 25° banded		
	Brkn 245·75	Banded pyroxene-amphibole skarn with pelites				
		Calc-silicate altered sediments, pelites altered to pyroxene skarn, sillimanite and laminated pelite. Cut by basally concordant bodies of crystalline hastingsite amphibolite.	Crystalline hastingsite bands and patches within pyroxene skarn sections.	245·7 Bedding in interbanded semi pelite @ 35° 246·5 Bnd/fol pel @ 10° 246·75 Amph vn @ 00° semi pelite - pelitic sections well bedded & laminated	crystalline patches Po + Cp intergrown ± cg. hastingsite crystals, also Po in diffuse patches. 245·6	5%
				246·60 irregular intensive contact		2%
		med gr. amphibole, dk green & coarse calcite		246·10 band @ 35° irregular fol/banding or massive banding	disseminated crystalline aggregates Po 247·6	5%
				248·85 Sharp contact		
		sharp & skarn sections are mottled and include scattered amph. crystals.		249·10 fol. amphvn @ 00° 249·25 banding @ 15° 249·70 banding = bedding @ 25° – 0 249·90 banding @ 10°	Fine Po along bedding planes in pelitic sediments. Coarse Po + Cp & cg amphiboles 249·8	2%
		coarsely crystalline dk ga amphibolite		250·30 massive, crystalline	scattered aggregates Po 250·2	3%
	250·80	Calc-silicate altered sediments - pyroxenite and semi pelite cut by crystalline hastingsite amphibolite bodies. Pale green to grey with amph. sections dark green, as patches, bands, and selective alteration along? bedding. The sediments vary from fg gy ps to strongly altered pyroxene skarn usually with v cg intermittent secondary amphiboles	patchy alteration to dk green amphiboles.	250·80 Contact @ 35° bedded & laminated but contorted.	fine Po concentrated along bedding and in fractures. Patchy Po & amphibole crystals. Cp ~ 1% 250·8	5%
				251·70 Banding @ 30°		
		m-g crystl amphibolite + calcite		252·3 sharp contact @ 60° 252·7 bedded contact @ 45° foliated & cg crystalline	crystl aggregate Po + Cp 252·3 252·7	7%
		calc-silicate minerals follow original bedding to give mineral segregated banding. Minor calcite & amphibolite sections		253·5 Amphband contact @ 20°	crystl Po aggregates areas & amph sections. Small dissem crystl Po in ps.	1%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

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839195

LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	257·0	3·00	3·02	100·7%
	260·0	3·00	3·00	100%
	263·0	3·00	2·96	98·7%
	266·0	3·00	3·00	100%
	269·0	3·00	3·04	101·3%

SCALE 1:100 (1cm = 1 m)

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
256						
256·40	Amphibole skarn, medium crystalline dark green amphibolites with subordinate lt gn pyroxenitic patches. Includes thin calc-silicate granulite layers. Amphibolite is banded to foliated med gn to occasionally coarsely crystalline.	Calc-silicate minerals segregated along bands.		256·4 Bedding @ 15° 256·6 Carbonate banded contact at 40° faulted 257·2 Bedding 25° interlayered banded pyr. 257·30 Pyroxene bedding @ 20° 257·35 Carb & amph & pyr @ 20 257·60 Min bedding @ 30° 259·65 Bedding @ 40° & interlayered gy ft 260·35 Contact @ 45°	256·4 Po to Dk gn bedding 256·6 Crystalline aggregate of Po concentrated in patches along bedding - mainly in c.g amphibolite bands & some bands of white to brown mineral 260·35	2% 5% 2%
260·35	Calc silicate altered psammitic sediments with intermittent layers and bands of amphibolite. Generally mottled med gn granulitic pyroxene skarn with br. patchy diffuse bands of vesuvianite. High specific gravity. Hastingsite is replacing brown vesuvianite - diopside banded skarn assemblage.	dk gn amphibolite in porphyroblastic distribution in m-cg patches and in diffuse bands often intersected by cg amphibolite amphibolite bodies 260·55 dk gn mg amph cut by 260·65 cg calcite amph vein 261·50 dk gn mg amph banded 261·95 & cg amph augen & calcite		262·30 Min bedding @ 20° 262·55 Amph crystal vn @ 5° 262·80 Amph crystal vn @ 10° 263·75 crystal amph augen & Po @ 10° 264·65 Fol @ 0° 265·1 Fol @ 5° 265·35 Garnet band @ 20°	260·35 Po occurs as coarse crystalline patches interspersed & c.g coarse amphibole and calcite. Also as diffuse patches in portions of pyroxene skarn 264·60 264·80 Fine patchy Po distributed along banding. Po patches have ≤ 10% Cp - overall 1% Cp. 265·4 strongly magnetic & bright SC	1% 3% 5% 7%
266·0				267·0 Amph banded contact @ 20° 268·0 Calc vn @ 65° 268·35 Amph contact & pyr-garnet skarn @ 5° 269·6 Amph irregular contact @ 10° 269·65 10cm granulitic calc vn @ 40°	267 Crystal aggregate Po in dk gn amph. sections 267·5	3% 1%
269·0		269·75 Moderately to totally altered to amphibolite. Gen f-mg dk gn & lt gn pyr sections 269·85 Patchily altered to amphibolite 269·6 Moderately to totally altered to			269·6	2%

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH .....

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839196

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	272·0	3·00	3·00	100%
	275·0	3·00	3·00	100%
	278·0	3·00	2·96	98·7%
	281·0	3·00	3·00	100%
	284·0	3·00	3·00	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
271	270·25 Fine bedded calc silicate altered lt gy semi pelite ± bedded Po concentrations	amphibole 270·25 inclusion of pyr sh. 270·25		270 to 270·25 Foln in sh/lam/pel @ 25° 270·25 cut in amph ss @ 35° to @ 25°	disseminated Cp + Po 270·50	5%
271·30	Amphibole skarn. Dark green med grained to coarsely crystalline hornfelsic - calcite skarn with pyroxene skarn and pervasive layers included. Amphibole range from hornfelsic to actinolite	v coarsely crystalline (± minor finely bedded section) ± extensive white calcite and sections thin calcite veins common.		270·85 Contact ± gy lam semi pelite @ 43° 271·05 Bedding in fine pel @ 37° 271·30 Contact @ 20°	Po Po along bedding planes	7%
272				272·30 Bedding @ 5° in f-mg amph	± coarse Po and Cp interspersed ± acicular amph crystals in densely mineralised aggregates 272·2	5%
273		272·75 med gr ± patchy lt gy granular pyr. skarn		272·75 272·80 Calc vn @ 25° 273·10 thin coarse bedding @ 25° 273·45 granular/coarse alteration contact 273·55 Bedding @ 20° foliated to thinly bedded 273·90 bed @ 15°	coarse Po ± coarse amph 273·60	2%
274		274·45 Pyroxene skarn predominant with patchy amphibolitic alteration		274·60 Contact @ 15° unit gy ± gr amph 274·80	aggregates coarse Po + minor Cp 274·80 274·90	5% Tr
275		Calcite in crystalline sections			patches coarse Po 275·00	2%
276	275·00 Amphibole skarn. Dark green, dense, fine to medium grained crystalline mat of hornfelsic crystals. Appears to be well banded with interlayered units of gy calc-silicate hornfels and pyroxenitic skarn at oblique angles. Occasionally altered and strongly mineralised	275·25 gy-gr fg granulitic section (iron calc) 276·5 Sulphide concentrate in more fine sections, with v fine gr-wh mineral (iron calc, not qz)		275·35 Banding @ 20° banded with 275·70 Banding @ 20° structures 275·90 Calc vn @ 80° becoming more 276·10 Banding @ 5° obscured by 276·45 thin banding @ 20° hornfelsing	coarse Po interspersed ± amph crystals in densely aggregates 275·65	3% Tr
277				7 gy fg band @ 0-5° ± patchy laminated 277·6 Contact @ 12½°	Po in stringer-like amph. veins 276·90 coarse patches Po >> Cp and Tr. Py in metallic aggl Mt Po Cp in veinlets 277·50	2% 20% Tr Mt Tr
278					finely disseminated Po. Po in aggl coarse patches Cp ± Po and in thin stringers. Scatt Mt crystals. Cp 2% Po 15% Mt 2% 278·60	20% (2% Po)
279	279·5 Uneven Magnetite concentrated in patches and in distinct bands - dk gy. Crystalline Magnetite in veins - developed at the expense of Po.	calcite + quartz in sulphide veins		279·5 Po Cp vn @ 16° Veined with sulphides and Magnetite 280·65 @ 0° vn parallel to core along a vein ± wisps. calcite ± Cp + Po	disseminated Po, Po in dense aggl patches, less stringer veins of Po + Cp paragenetic Mt. Cp 2% 279·6	10% (2% Po)
280				281·35 calcite ± Cp + Po 281·40 Banding @ 55° 281·70 thin Po + Cp in vn @ 0-5° 282·13 Contact @ 70°	± patchy Po + Cp. Po + Cp in narrow vn 5% Cp 10% Po 281·35 282·13	15% 2%
282	282·13 Calc silicate hornfelsed pyroxenite	fine dk gr amph in fractures.		282·60 Cont @ 20° bedded to finely 282·90 Band @ 30° 283·10 Calc vn @ 45° uniform, ± 283·70 Banding @ 50° minor fractures Calc vn @ 45° throughout	finely disseminated Po unevenly distributed in coarse granular patches or along bedding, also in fract 283·40	1% 5%
283	light grey, medium grained granulitic calc-silicate mineral assemblage with original bedding finely well preserved. Patches coarse med gr pyroxenitic with more garnets or vesuvianite	283 Patchy amph-calcite alteration along band. Quartz in narrow bands calcite veins		284·60 Banding @ 50° 285·00 Banding + Po @ 45°	Po uneven along bedding. coarse Po coarse in fractures and particularly at intersecting fractures or vein fract. cut bedding plane 284·40	5%
284						
285						

SCALE 1:100 (1cm = 1 m)

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630

5 cm

839197

DRILL ADVANCE — LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	287.0	3.00	3.05	101.7%
	290.0	3.00	3.01	100.3%
	293.0	2.00	2.00	100%
	295.0	3.00	3.00	100%
	298.0	1.00	1.00	100%
	299.0	3.00	2.95	98.3%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
285.5	Ca- 285.3 to fine hornblend-augite basalt. **Hornblend augitite and pyroxenite interbeds** Hornblend augitite in dk brown, fine sp'd and laminated. The pyroxenite in lt to dk grey and occurs mainly as discon'd patches, rarely as discrete beds - but is well laminated + bedded.	brown alteration which generally a feature of hbl beds occurs as an alteration feature; eg biotite. The fracture pattern largely controls the degree + pattern of alteration. Ub calc-silicate minerals overprint primary features and postdate biotite alteration		285.3 Laminated. Finely bedded, sheared 285.4 ham - Bedding @ 45° bedded and 287.15 Bedding @ 50° N-bedding fract. 287.75 Mem Pe band @ 60°	Scatt (rare) euhed Mt. Pe in intermittent gr comp vn 285.6 finely disem Pe mainly conc along bedding. Pebbles cmgst Pe possible bedding, and rare in fractures.	3% 7%
				289.10 Band @ 55° parallel fract 289.20 Pe + qz chalc along band @ 20° 289.60 Bedding @ 130° mines faulted.	289.75 Pe in fract, pebs disem Pe + chl calc-silicate alt. sections	2% Tr
	291.0 **Spotted hornblend augitite** with interbedded pyroxenite, similar to above. Porphyroblastic aggr of diopside - anthophyllite and are random in orientation — overprint the biotite hornblend texture.	Coarse spotted hornblend texture. White ms calc-silicate minerals overprint brown biotite alteration		congruent bedding, pebbles preserved 292.60 Sand @ 30° 293.05 Fine to cg disc bedding @ 20° 293.15 Bedding @ 20° - 293.60 calcite vn'd fract @ 20° bedding @ 100° 294.40 Calc vn + Pe @ 20°	Abnorm Pe + minor Cp mod in c-mg calc-silicate alteration spots 293.05 Pe + Cp along bedding and conc in fractures 293.6	1% 2% 1% Tr
296.05	**Biotite Granite** coarse crystal white granite :- Feldspar 45% quartz 40% biotite 10% ?amphibole 5%. The ?amphibole near contact is dk green and clearly defined but becomes interstit and light green in granite proper. The biotite phenocrysts are clearly defined and have small inclusions. Feldspar phenocrysts are white with faint perthitic structures.	tourmaline in veins near contact		296.05 veined contact zone 70° 296.25 qtz vn 20cm. 20° 296.75 Tour vn @ 5° 299.35 Tour vn @ 3°	Scatt Pe blebs near contact Pe + Cp + tourmaline in near veins one euhedral blebb Cp	Tr

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH .....

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839198 LITHOLOGY

5 cm

LOST CORE	DRILL ADVANCE DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	287.0	3.00	3.05	101.7%
	290.0	3.00	3.01	100.3%
	293.0	2.00	2.00	100%
	295.0	3.00	3.00	100%
	298.0	1.00	1.00	100%
	299.0	3.00	2.95	98.3%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	— from 285.3 to 285.5 hornfelsed argillite breccia.					
285.5	**Hornfelsed argillite and greywacke interbeds**	286.3 brown alteration halo gradually a feature of host rock crosses an alteration feature; by biotite.		285.5 Lower contact	Fine sulphide (pyrite) crystals Mk. Py in interstitial groundmass.	2%
286	Hornfelsed argillite in dk brown, fine grained and laminated. The greywacke is lt to dk grey and occurs mainly as disconnected patches, rarely as discrete beds - but is well laminated & hornfelsed.	The fracture pattern largely controls the degree & pattern of alteration. Ub calc-silicate minerals overprint primary features and post date biotite alteration		286.1 Lam = Bedding @ 45°	Finely disseminated Py mainly core along bedding. Patches cogn to parallel bedding, and veins in fractures.	7%
287				Faulted and moderately broken. 287.15 Bedding @ 50° 287.25 Fine Py lam @ 60°		
288					Py in fract, patches dissem Py & ub calc-silicate alt. fractures	2%
289				289.10 Bed @ 55° parallel fract 289.20 Py + qtz stringers along bed @ 20° 289.60 Faulted @ 75° minor shearing		
290						Tr
291	291.0 **Spotted hornfelsed argillite** with interbedded greywacke, similar to above. Porphyroblasts are of diopside-anthophyllite and are random in orientation — overprint the biotite hornfelsed texture.	Coarse spotted hornfelsed texture. White mg calc-silicate minerals overprint brown biotite alteration.		291.0 Contact @ 20° competent bedding, possibly porphyroblastic	Dissem Py + minor Cp mainly in c-mg calc-silicate alteration spots.	1%
292				292.60 Calc [illegible] @ 20° 293.05 Bedding @ 20° 293.15 Bedding @ 20° 293.60 calcite vn'd fract @ 20° bedding @ 10°	295.05 Py + Cp along bedding and cross fractures 293.6	2%
293						1%
294				294.60 Calc vn + Py @ 20°		Tr
295						
296	296.05 **Biotite Granite** coarse crystalline white granite:- Feldspar 45% quartz 40% biotite 10% ?amphibole 5%. The ?amphibole was noted in the green and clearly defined but having interlocking and light green in granite proper. The biotite phenocrysts are clearly defined and have small inclusions. Feldspar phenocrysts are white with faint perthitic stemtures.	tourmaline in veins near contact		296.05 Veined contact zone ~7° 296.25 qtz vn 20cm @ 20° 296.35 Tour vn @ 5° 299.35 Tour vn @ 3°	Small Py blebs near contact Py & Cp & tourmaline in some veins one coarse blebby Cp	Tr
297						
298						
299					Coarse Cp in Tour vn	1%
300						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

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5 cm

T60

DRILL ADVANCE

839199

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					301	(biotite granite continued) green mineral may be altered plagioclase? ∴ rock is a porphyritic biotite micro adamellite or K/Na granite			301.3 5cm merge dyke @ 40°		
	302.0	3.00	3.07	102.3%	302				302.8 fault @ 10°		
	305.0	0.90	0.88	97.8%	304						
	305.90	2.10	2.19	104.3%	305				305.7 fault @ 20°		
	308.0				306						
					307						
					308	EOH					

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH

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5 cm

839200

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	total Fe	total S	F.	As			SAMPLE NUMBER
														Start of	Ground	Core ↓
3·0	8	140	BLD	25	110	0·2	0·040	BLD	BLD				8			
6·0	BLD	155	10	25	115	0·1	0·064	BLD	BLD				11			
9·0	BLD	85	BLD	35	90	0·1	0·032	BLD	0·5				8			
12·0	BLD	125	BLD	15	135	0·1	0·024	BLD	0·5				8			
15·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 3 TO 18 m DATE 19/8/81 PAGE 1 OF 21

5 cm

839201

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
15·0	BLD	35	BLD	35	170	0·1	BLD	BLD	0·5				9			
18·0	BLD	90	BLD	55	380	0·2	BLD	2	0·5				9			
21·0	BLD	110	BLD	40	140	0·2	0·048	BLD	BLD				8			
24·0	BLD	70	BLD	BLD	110	0·2	0·032	BLD	BLD				10			
27·0	BLD	40	BLD	45	120	0·2	0·008	BLD	BLD				18			
30·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 15 TO 30m DATE 19/8/81 PAGE 2 OF 21

5 cm

839202

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
30·0																
	7	40	BLD	45	125	0·1	0·016	BLD	BLD				12			
33·0																
	BLD	40	14	50	125	0·2	0·064	4	BLD				16			
36·0																
	BLD	145	BLD	40	115	0·2	BLD	BLD	BLD				9			
39·0																
	BLD	35	BLD	35	115	0·2	BLD	BLD	BLD				7			
42·0																
	BLD	30	BLD	50	120	0·3	BLD	2	0·5				7			
45·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 30 TO 45m DATE 19/8/81 PAGE 3 OF 21

839203

5 cm

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
45·0																
	BLD	85	BLD	20	180	0·4	0·016	4	BLD				10			
48·0																
	BLD	95	BLD	45	110	0·3	0·016	BLD	BLD				7			
51·0																
	BLD	80	BLD	35	100	0·3	0·032	BLD	BLD				7			
54·0																
	BLD	70	BLD	10	95	0·2	0·008	BLD	0·5				7			
57·0																
	BLD	115	14	BLD	115	0·3	0·016	BLD	BLD				14			
60·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 45 TO 60 m DATE 19/8/81 PAGE 4 OF 21

839204

5 cm

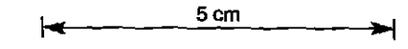
950

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
60·0	BLD	60	BLD	BLD	125	0·2	0·016	BLD	BLD				9			
63·0	BLD	95	BLD	5	145	0·2	0·048	BLD	BLD				10			
66·0	BLD	50	11	BLD	125	0·2	0·064	BLD	BLD				4			
69·0	BLD	135	BLD	10	135	0·2	0·016	BLD	BLD				6			
72·0	BLD	60	BLD	5	165	0·1	BLD	BLD	BLD				10			
75·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 60 TO 75m DATE 19/8/81 PAGE 5 OF 21

839205



Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
75·0	BLD	85	BLD	BLD	120	0·2	BLD	BLD	BLD				5			
78·0	BLD	230	18	BLD	160	0·2	BLD	BLD	BLD				10			
81·0	BLD	60	16	BLD	130	0·1	0·064	BLD	BLD				BLD			
84·0	BLD	95	BLD	5	230	0·2	0·024	BLD	0·5				3			
87·0	5	60	BLD	25	170	BLD	BLD	BLD	BLD				10			
90·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF1

ASSAYED BY Analabs FROM 75 TO 90m DATE 19/8/81 PAGE 6 OF 21

839206

5 cm

038

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
90·0	BLD	125	14	30	195	BLD	0·024	BLD	3·5				12			
93·0	BLD	80	26	30	190	BLD	0·048	BLD	0·5				19			
96·0	BLD	100	25	35	205	0·2	0·032	BLD	0·5				13			
99·0	28	150	18	25	225	0·1	BLD	BLD	BLD				14			
102·0 Mo 102·12)	BLD	180	29	40	265	BLD	BLD	BLD	0·5				19	Ground Split	Core ↑ Core ↓	
104·0	24	76	BLD	25	280	BLD	0·008	BLD	0·5	6·1%	2·0%	797	15			Z0501

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 90 TO 105 m DATE 19/8/81 PAGE 7 OF 21

839207

5 cm

039

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
106·0	BLD	65	BLD	10	230	BLD	0·008	BLD	1·0	6·3%	2·1%	861	12			Z0502
107·25	BLD	200	BLD	25	980	BLD	BLD	10	4·5	8·8%	5·1%	863	35			Z0503
108·25	20	310	BLD	10	120	BLD	0·075	BLD	2·0	10·0%	3·45%	733	30			Z0504
109·25	490	75	BLD	15	60	BLD	BLD	BLD	BLD	11·1%	0·45%	4813	280			Z0505
110·25	518	65	BLD	5	55	BLD	BLD	BLD	BLD	10·7%	0·4%	5093	210			Z0506
111·35	398	510	BLD	25	65	BLD	0·050	120	BLD	14·8%	4·5%	4381	420			Z0507
112·15	40	230	BLD	15	40	BLD	BLD	BLD	BLD	10·3%	1·5%	517	40			Z0508
112·95	490	470	52	35	70	BLD	BLD	20	BLD	16·2%	3·6%	2733	80			Z0509
114·0	203	355	BLD	20	70	BLD	BLD	BLD	0·5	12·0%	1·55%	2165	420			Z0510
114·5	411	370	BLD	20	60	BLD	BLD	10	BLD	12·4%	3·3%	3317	470			Z0511
115·8	223	1150	BLD	30	110	BLD	0·196	380	BLD	18·9%	7·3%	1·1%	700			Z0512
116·8	367	750	BLD	20	70	0·5	0·025	20	1·0	15·7%	6·0%	6861	900			Z0513
117·55	344	135	BLD	10	80	BLD	0·008	BLD	BLD	9·6%	1·6%	6365	800			Z0514
118·05	207	1150	BLD	35	95	BLD	0·200	400	BLD	16·8%	6·3%	5589	1100			Z0515
118·35	349	170	BLD	30	95	BLD	0·008	20	BLD	9·2%	1·55%	5749	700			Z0516
119·85																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 105 TO 120 m DATE 19/8/81 PAGE 8 OF 21

83920 81

5 cm

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
	154	870	BLD	20	95	0.5	0.292	560	BLD	16.1%	7.25%	5917	700			Z0517
120.65	332	590	BLD	BLD	75	BLD	0.208	320	BLD	16.9%	5.35%	4925	880			Z0518
121.95	317	630	BLD	25	85	BLD	0.158	250	BLD	25.7%	5.55%	3701	600			Z0519
122.8	170	160	BLD	25	85	BLD	0.017	50	BLD	9.8%	1.2%	1.4%	300			Z0520
124.0	141	70	BLD	15	80	0.5	BLD	10	BLD	9.2%	0.36%	7077	800			Z0521
125.2	166	650	BLD	20	100	BLD	0.008	30	BLD	11.2%	3.7%	4149	260			Z0522
126.6	351	525	BLD	15	175	0.5	0.125	330	BLD	39.4%	4.75%	5021	290			Z0523
128.1	99	375	BLD	10	105	BLD	BLD	20	BLD	11.6%	3.35%	7709	150			Z0524
128.85	277	220	8	10	150	BLD	0.025	90	BLD	31.4%	2.25%	1.3%	100			Z0525
129.6	239	350	BLD	25	150	BLD	0.050	110	BLD	31.7%	2.85%	1.3%	130			Z0526
130.6	403	450	BLD	20	105	BLD	0.042	80	BLD	18.8%	3.45%	4039	200			Z0527
131.4	123	330	BLD	35	115	BLD	BLD	30	BLD	9.9%	2.3%	1.1%	200			Z0528
132.6	214	580	BLD	30	110	BLD	0.008	30	BLD	11.2%	2.65%	5471	140			Z0529
133.6	482	495	BLD	10	100	1.0	0.042	80	BLD	27.0%	7.1%	4975	110			Z0530
134.85	273	190	BLD	20	70	BLD	0.033	90	BLD	12.7%	1.4%	1.2%	520			Z0531

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 120 TO 135m DATE 19/8/81 PAGE 9 OF 21

5 cm

839209

Metres	Sn	Cu	WO3	Pb	Zn	Ag1	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
135																
136.3	158	510	BLD	20	125	BLD	0·033	90	BLD	11·2%	3·95%	6673	100			Z0532
136.3	164	350	23	25	120	BLD	0·008	50	BLD	12·4%	4·2%	6999	80			Z0533
137.35	335	595	BLD	20	90	BLD	0·07	50	BLD	14·5%	4·75%	7151	430			Z0534
138.45	307	480	BLD	15	110	BLD	0·054	100	BLD	9·6%	2·85%	2799	200			Z0535
139.55	547	300	BLD	20	100	BLD	0·025	40	BLD	15·4%	2·4%	1·1%	120			Z0536
140.2	191	405	BLD	20	110	BLD	0·008	10	BLD	14·1%	3·35%	1·4%	210			Z0537
141.2	242	325	BLD	15	135	BLD	0·025	20	BLD	20·3%	3·45%	1·2%	130			Z0538
142.0	381	115	BLD	20	335	BLD	BLD	10	BLD	34·5%	1·15%	1·0%	270			Z0539
143.5	280	190	BLD	10	180	BLD	BLD	10	BLD	38·9%	1·75%	1·0%	350			Z0540
145.0	284	165	BLD	20	110	0·5	BLD	10	BLD	29·8%	1·75%	1·0%	220			Z0541
146.0	282	430	BLD	5	105	0·5	BLD	10	BLD	21·5%	3·4%	1·2%	200			Z0543
147.0	255	85	BLD	20	80	BLD	BLD	BLD	BLD	11·3%	0·3%	4647	250			Z0544
148.75	406	90	BLD	30	110	BLD	BLD	20	BLD	10·9%	0·2%	1·2%	250			Z0545
150.0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 135 TO 150m DATE 19/8/81 PAGE 10 OF 21

5 cm

8392104

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
150.0	336	65	BLD	20	85	BLD	BLD	20	BLD	10.2%	0.45%	1.1%	180			Z0546
151.48	322	380	BLD	10	90	BLD	BLD	10	BLD	12.4%	2.6%	7439	230			Z0547
152.5	416	650	BLD	15	105	BLD	BLD	30	0.5	15.0%	5.4%	4074	310			Z0548
153.5	378	630	BLD	15	110	BLD	BLD	20	BLD	13.7%	5.05%	6394	265			Z0549
154.1	516	515	BLD	10	110	BLD	0.017	20	BLD	17.7%	4.65%	3514	250			Z0550
154.85	457	410	BLD	10	265	BLD	0.050	120	BLD	32.2%	3.16%	5434	300			Z0551
155.95	298	1325	BLD	5	110	0.5	0.050	100	BLD	18.4%	7.15%	5578	410			Z0552
157.0	356	1450	BLD	5	120	BLD	0.025	50	BLD	22.1%	8.75%	1.0%	360			Z0553
157.7	250	1100	BLD	5	90	0.5	0.025	50	BLD	19.0%	7.2%	1.3%	190			Z0554
158.4	279	345	BLD	15	85	BLD	0.033	90	BLD	11.9%	2.5%	1.9%	130			Z0555
159.5	341	900	BLD	5	120	0.5	0.042	120	BLD	16.3%	5.85%	1.6%	230			Z0556
160.4	886	610	BLD	20	160	BLD	0.025	40	BLD	19.5%	4.65%	5.4%	94			Z0557
161.4	370	675	153	20	160	BLD	0.017	50	BLD	23.1%	5.55%	8.8%	100			Z0558
162.4	195	1400	BLD	15	110	1.0	0.017	70	BLD	23.4%	8.6%	1.6%	50			Z0559
163.4	291	750	BLD	10	140	BLD	0.033	90	BLD	24.6%	5.7%	5674	90			Z0560
164.4																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF1

ASSAYED BY Analabs FROM 150 TO 165 m DATE 19/2/81 PAGE 11 OF 21

839211

5 cm

043

Metres	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
	187	1200	BLD	20	100	0·5	0·030	130	BLD	22·1%	8·5%	1·1%	250			Z0561
165·4	202	1150	8	15	105	0·5	0·025	70	BLD	20·5%	7·35%	1·9%	150			Z0562
166·4	204	1200	36	BLD	110	BLD	0·075	160	BLD	17·7%	6·95%	7290	150			Z0563
167·4	330	470	27	20	145	BLD	0·017	30	BLD	29·0%	4·1%	1·7%	100			Z0564
168·4	267	690	30	20	110	BLD	0·008	90	0·5	21·3%	4·95%	6410	210			Z0565
169·6	192	500	BLD	20	175	BLD	BLD	50	BLD	18·2%	3·95%	9162	200			Z0566
171·0	153	475	BLD	30	160	0·5	0·017	10	BLD	15·6%	3·7%	7042	280			Z0567
172·1	445	295	BLD	30	200	0·5	BLD	BLD	BLD	24·3%	2·1%	1·2%	210			Z0568
173·1	795	710	BLD	20	170	BLD	0·008	BLD	BLD	31·8%	5·0%	6650	70			Z0569
174·35	364	590	BLD	30	150	BLD	0·008	20	BLD	18·7%	5·0%	1·7%	240			Z0570
175·1	370	1300	10	25	110	0·5	0·008	10	BLD	20·0%	6·95%	1·6%	200			Z0571
176·3	379	950	38	20	100	0·5	0·008	40	BLD	17·5%	5·9%	1·5%	160			Z0572
177·3	357	455	BLD	BLD	145	BLD	0·008	30	BLD	12·7%	3·85%	1·8%	200			Z0573
178·1	337	1550	BLD	30	90	0·5	BLD	20	BLD	22·4%	8·8%	1·5%	280			Z0574
179·25	354	810	15	30	100	BLD	0·008	30	BLD	16·8%	5·25%	1·8%	340			Z0575

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 165 TO 180 m DATE 19/8/81 PAGE 12 OF 21

839212

5 cm

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As	Acid Soluble Sn		SAMPLE NUMBER
180																
180.75	860	160	10	20	65	BLD	BLD	10	BLD	14.8%	1.2%	1.0%	600			Z0576
182.35	494	1600	BLD	15	85	BLD	0.008	BLD	BLD	25.7%	8.0%	9042	310			Z0577
183.5	1120	1850	BLD	20	75	BLD	0.008	30	BLD	25.0%	8.85%	4954	180	50		Z0578
184.8	475	1450	BLD	15	65	0.5	0.008	40	BLD	31.5%	9.7%	1.0%	130			Z0579
185.5	332	1200	BLD	15	80	BLD	0.008	30	BLD	21.2%	7.5%	1.4%	250			Z0580
186.5	721	1200	BLD	25	105	BLD	BLD	BLD	BLD	22.8%	9.15%	1.1%	200			Z0581
187.5	942	460	BLD	10	105	BLD	BLD	BLD	BLD	22.5%	4.05%	6338	100			Z0582
188.25	195	360	BLD	30	110	1.0	BLD	BLD	0.5	11.2%	2.2%	1.8%	230			Z0583
189.2	426	1300	BLD	15	75	0.5	BLD	10	BLD	21.1%	8.1%	7378	69			Z0584
190.6	1060	1350	BLD	BLD	95	1.0	BLD	20	BLD	27.0%	7.25%	1.5%	42	50		Z0585
191.8	684	435	BLD	20	120	BLD	BLD	10	BLD	26.6%	3.45%	6818	140			Z0586
193.3	515	420	BLD	BLD	135	0.5	BLD	BLD	0.5	33.5%	3.5%	1.3%	85			Z0587
194.45	386	730	BLD	15	90	0.5	BLD	20	0.5	15.8%	5.25%	1.3%	240			Z0588
195																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 180 TO 195 m DATE 19 / 8 / 81 PAGE 13 OF 21

5 cm

839213

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As	Acid Soluble Sn		SAMPLE NUMBER
195																
195.25	1020	65	BLD	35	100	1·0	BLD	BLD	BLD	15·2%	0·25%	2·0%	2800	200		Z0589
196·75	587	805	BLD	30	90	1·0	BLD	BLD	BLD	19·6%	6·85%	6170	88			Z0590
198·25	566	635	BLD	45	100	0·5	BLD	BLD	BLD	17·7%	5·6%	7586	72			Z0591
199·25	419	1500	BLD	10	90	0·5	BLD	BLD	0·5	30·2%	9·7%	3674	23			Z0592
200·0	967	1650	14	BLD	70	1·0	0·008	BLD	BLD	31·8%	9·9%	7234	20			Z0593
201·0	1240	1200	BLD	BLD	85	0·5	BLD	BLD	BLD	31·4%	8·95%	5951	10	50		Z0594
202·0	1020	385	BLD	5	95	BLD	BLD	BLD	BLD	17·5%	3·3%	1·5%	830	50		Z0595
203·0	2440	135	BLD	5	150	1·0	BLD	BLD	0·5	23·3%	1·05%	2·3%	940	175		Z0596
204·5	1920	30	BLD	10	120	1·0	BLD	BLD	BLD	22·4%	0·15%	2·8%	870	600		Z0597
206·0	1700	75	BLD	BLD	105	0·5	BLD	30	BLD	21·8%	0·45%	1·5%	820	275		Z0598
207·5	1950	55	BLD	5	110	BLD	BLD	20	BLD	22·3%	0·3%	2·0%	720	275		Z0599
208·4	2300	80	BLD	5	115	BLD	0·008	20	1·0	22·5%	0·7%	1·6%	550	275		Z0600
209·6																
210																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 195 m TO 210 m DATE 19/8/81 PAGE 14 OF 21

5 cm

839214

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As	Acid soluble Sn		SAMPLE NUMBER
	1770	40	BLD	5	110	BLD	0.008	30	0.5	21.8%	0.2%	1.9%	86	400		Z0613
210.6	1990	10	112	BLD	85	BLD	BLD	BLD	0.5	16.5%	0.15%	4911	81	575		Z0614
211.6	1650	90	37	BLD	110	BLD	0.008	10	0.5	22.0%	0.85%	1.4%	410	175		Z0615
212.5	1590	45	11	5	120	0.5	BLD	30	BLD	22.4%	0.3%	2.0%	190	350		Z0616
214.0	1880	15	BLD	BLD	110	BLD	BLD	BLD	BLD	21.7%	0.1%	2.0%	140	625		Z0617
215.25	1760	10	BLD	BLD	120	BLD	BLD	BLD	BLD	22.6%	0.05%	3.0%	170	575		Z0618
216.3	383	150	BLD	5	100	BLD	BLD	30	BLD	11.3%	1.3%	1.4%	270			Z0619
217.3	521	60	BLD	BLD	100	0.5	BLD	BLD	BLD	10.1%	0.25%	6847	810			Z0620
218.5	653	10	BLD	5	120	0.5	BLD	BLD	BLD	12.6%	0.05%	2.0%	460			Z0621
219.55	1130	60	BLD	BLD	100	BLD	BLD	10	BLD	20.5%	0.4%	1.2%	480	200		Z0622
220.5	418	50	BLD	15	100	0.5	BLD	50	BLD	11.1%	0.25%	1.7%	390			Z0623
221.4	651	95	250	20	120	1.0	0.008	10	BLD	15.6%	0.7%	4.6%	49			Z0624
222.3	1970	390	20	10	75	0.5	BLD	10	1.0	21.1%	3.6%	6911	90	100		Z0625
223.4	1400	830	4	10	80	BLD	0.008	BLD	0.5	20.9%	6.9%	1.0%	100	75		Z0626
224.5																

210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Anslabs FROM 210 TO 225m DATE 19/8/81 PAGE 15 OF 21

5 cm

839215

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As	Acid Soluble Sn		SAMPLE NUMBER
225	933	510	BLD	BLD	110	BLD	BLD	BLD	0.5	16.6%	3.7%	1.5%	260			Z0627
225.8	1050	1200	BLD	BLD	75	BLD	BLD	20	BLD	28.3%	8.8%	7135	360	75		Z0628
226.8	905	1050	BLD	BLD	70	1.0	BLD	BLD	BLD	29.5%	9.1%	6399	210			Z0629
227.8	1120	725	BLD	BLD	80	BLD	BLD	10	0.5	26.4%	6.35%	4895	190	75		Z0630
228.5	531	230	BLD	20	115	BLD	BLD	20	1.0	13.6%	2.75%	7687	180			Z0631
229.5	625	30	BLD	20	115	0.5	BLD	10	0.5	11.3%	0.15%	7775	170			Z0632
230.8	573	68	BLD	10	105	BLD	0.008	20	0.5	11.8%	0.45%	6399	620			Z0633
231.85	32	455	7	20	60	BLD	BLD	30	0.5	10.0%	3.1%	2560	19			Z0634
232.65	78	360	23	5	80	BLD	BLD	BLD	1.0	9.9%	2.75%	3936	39			Z0635
233.48	1360	40	BLD	5	80	BLD	BLD	30	BLD	18.7%	0.15%	1.5%	60	350		Z0636
234.5	1390	35	BLD	BLD	85	BLD	BLD	20	BLD	18.3%	0.2%	1.1%	31	375		Z0637
236.0	1650	50	74	10	70	BLD	BLD	BLD	BLD	20.5%	0.15%	7808	29	300		Z0638
237	1330	70	20	30	70	BLD	BLD	10	0.5	17.5%	0.35%	1.4%	58	150		Z0639
239.0	1460	55	4	10	85	BLD	BLD	BLD	BLD	17.8%	0.25%	2.1%	56	150		Z0640

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CNF 1

ASSAYED BY Analabs FROM 225 TO 240m DATE 19/8/81 PAGE 16 OF 21

839216

5 cm

0458

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As	Acid Sn Soluble		SAMPLE NUMBER
240																
240·8	933	45	BLD	30	75	BLD	BLD	20	0·5	16·3%	0·25%	6448	100			Z0641
242	1110	30	BLD	20	65	BLD	BLD	50	BLD	20·5%	0·35%	1·2%	10	·250		Z0642
243·8	1440	60	BLD	5	85	BLD	BLD	10	1·0	21·1%	0·6%	6096	45	225		Z0643
244·75	741	175	BLD	30	105	BLD	BLD	BLD	0·5	14·1%	1·65%	7232	87			Z0644
245·6	316	55	BLD	15	100	BLD	BLD	BLD	1·0	9·7%	0·4%	7552	160			Z0645
246·6	545	20	BLD	5	105	BLD	BLD	20	1·0	11·3%	0·1%	6640	87			Z0646
247·6	1210	105	BLD	BLD	100	BLD	BLD	BLD	1·0	18·4%	0·75%	1·7%	50	150		Z0647
248·85	520	105	BLD	5	105	BLD	BLD	30	0·5	10·9%	0·7%	7456	99			Z0648
250·0	592	70	BLD	BLD	105	0·5	0·008	10	0·5	12·3%	0·35%	5656	42			Z0649
251·0	382	135	BLD	15	165	BLD	BLD	10	BLD	9·0%	0·86%	6250	190			Z0650
252·0	744	120	BLD	5	110	BLD	BLD	30	BLD	16·3%	0·96%	1·7%	100			Z0651
252·75	448	80	BLD	10	125	BLD	BLD	22	BLD	9·3%	0·5%	1·7%	300			Z0652
254·0	449	95	BLD	20	110	BLD	BLD	16	BLD	9·3%	0·68%	1·4%	210			Z0653
255																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF1

ASSAYED BY Analabs FROM 240 TO 255 m DATE 19/8/81 PAGE 17 OF 21

5 cm

839217

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As	Acid Soluble Sn		SAMPLE NUMBER
255																
255.4	470	65	BLD	15	85	BLD	BLD	16	BLD	10.9%	0.36%	2.0%	180			Z0654
256.4	773	60	13	20	95	BLD	BLD	18	BLD	17.7%	0.46%	1.3%	42			Z0655
257.9	831	60	BLD	15	85	BLD	BLD	8	BLD	19.8%	0.36%	6394	18			Z0656
259.35	1080	55	BLD	10	125	BLD	BLD	BLD	BLD	18.0%	0.36%	6794	24	240		Z0657
260.35	387	305	BLD	10	115	BLD	BLD	6	BLD	11.0%	2.38%	1.6%	260			Z0658
261.6	412	420	BLD	15	120	BLD	BLD	16	BLD	11.5%	2.93%	1.4%	340			Z0659
263.0	994	220	BLD	10	110	BLD	BLD	10	BLD	13.3%	1.86%	7338	200			Z0660
264.05	581	435	BLD	10	115	BLD	BLD	18	BLD	10.7%	2.63%	1.3%	360			Z0661
268.4	324	430	BLD	5	100	BLD	BLD	14	BLD	10.4%	3.16%	1.7%	180			Z0662
267.0	535	65	BLD	BLD	105	BLD	BLD	14	BLD	10.9%	0.34%	3.0%	150			Z0663
268.5	414	185	BLD	5	115	BLD	BLD	16	BLD	9.1%	0.98%	1.7%	290			Z0664
269.6																
270																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 255 TO 270m DATE 27/8/81 PAGE 18 OF 21

5 cm

839218

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As	Acid Soluble Sn		SAMPLE NUMBER
	804	90	BLD	BLD	100	BLD	BLD	14	BLD	13.4%	0.55%	1.4%	78			Z0665
270.5	547	540	BLD	BLD	110	0.5	BLD	360	BLD	15.3%	3.84%	2.0%	42			Z0666
271.3	780	175	BLD	BLD	85	BLD	BLD	66	BLD	18.7%	1.32%	2.5%	19			Z0667
272.3	768	175	19	10	130	BLD	0.008	88	BLD	17.5%	2.13%	13.4%	39			Z0668
273.15	358	30	BLD	BLD	70	BLD	BLD	8	BLD	10.1%	0.19%	1.9%	480			Z0669
274.3	437	150	BLD	BLD	85	BLD	BLD	12	BLD	13.8%	0.83%	6442	77			Z0670
275.0	549	315	45	BLD	110	BLD	BLD	122	BLD	19.9%	2.62%	5.0%	150			Z0671
275.65	534	485	12	BLD	135	BLD	BLD	BLD	BLD	14.7%	2.22%	6322	9			Z0672
276.6	334	725	260	BLD	115	BLD	BLD	66	BLD	19.5%	3.61%	3.8%	43			Z0673
277.3	281	1150	286	BLD	135	BLD	BLD	78	BLD	21.4%	5.18%	6.0%	16			Z0674
277.6	365	1350	144	BLD	140	BLD	BLD	200	BLD	22.5%	5.29%	5.5%	25			Z0675
278.5	57	2250	224	5	155	BLD	BLD	220	BLD	24.5%	9.0%	9.9%	5			Z0676
279.5	241	1150	132	BLD	110	BLD	0.042	220	BLD	18.3%	4.61%	7.7%	55			Z0677
280.5	163	1000	174	BLD	90	BLD	BLD	68	BLD	21.5%	5.57%	6.0%	20			Z0678
281.35	74	3050	193	BLD	145	0.5	BLD	142	BLD	21.5%	8.3%	9.5%	21			Z0679
282.15	83	350	17	BLD	40	BLD	BLD	BLD	BLD	11.6%	1.5%	2426	29			Z0680
283.0	130	840	14	BLD	70	BLD	0.075	40	BLD	11.9%	3.56%	3662	25	Split	Core ↑	Z0681
284.0														Ground	Core ↓	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF1

ASSAYED BY Analabs FROM 270 TO 285m DATE 27/8/81 PAGE 19 OF 21

5 cm

839219

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
	9	340	19	25	115	0·2	BLD	BLD	6·0				13			
287·0	4	330	19	10	115	0·1	BLD	BLD	2·0				3			
290·0	BLD	105	24	5	130	0·2	BLD	BLD	BLD				1			
293·0	BLD	135	15	5	85	BLD	0·064	BLD	BLD				11			
295·0	5	75	39	BLD	75	BLD	0·016	BLD	BLD				1			
298·0	BLD	80	73	BLD	70	BLD	0·032	BLD	1·0				1			
299·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF1

ASSAYED BY Analab6 FROM 285 TO 300m DATE 19/8/81 PAGE 20 OF

839220

5 cm

250

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
	5	90	58	BLD	55	BLD	0·032	BLD	1·0				1			
302·0	BLD	80	66	BLD	60	BLD	0·048	BLD	BLD				7			
305·0	BLD	50	223	BLD	40	BLD	0·048	BLD	BLD				3			
308·9	BLD	65	57	BLD	60	BLD	0·048	BLD	BLD				3			
308·0	End of DDH: CAF 1 at 308·0m															

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 300 TO 308 m DATE 19/8/81 PAGE 21 OF 21

5 cm

839221

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
251.0														Ground	Core (replaced by Split)	
	657	100	BLD	50	165	BLD	BLD	9	BLD				210			
254.0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 251 TO 255 m DATE 19/8/81 PAGE 17A OF 21

839222

5 cm

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
	586	110	103	60	135	0·7	0·048	26	BLD				130			
257·0	1058	65	BLD	40	135	BLD	0·016	23	BLD				54			
260·0	595	205	BLD	40	140	0·1	0·016	19	BLD				140			
263·0	761	365	BLD	35	135	0·1	BLD	6	BLD				440			
266·0	614	195	BLD	55	130	BLD	0·048	14	BLD				150			
269·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF1

ASSAYED BY Analabs FROM 255 TO 270m DATE 19/8/81 PAGE 18A OF 21

839223

5 cm

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	Total Fe	Total S	F	As			SAMPLE NUMBER
	776	250	BLD	15	120	0·3	BLD	64	BLD				68			
272·0	795	198	BLD	20	130	0·2	0·048	33	BLD				80			
275·0	493	625	160	20	140	0·9	0·064	62	BLD				41			
278·0	177	2150	213	25	165	2·1	0·064	380	BLD				40			
281·0	131	2150	108	10	160	1·2	0·064	80	0·5				25			
284·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 270 TO 285 m DATE 19/8/81 PAGE 19A OF 21

DRILL ADVANCE

839224

LITHOLOGY

5 cm

050

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	3.0	1.5	0.33	22.0%	3.00	Sandstone - siltstone - argillite. Dark grey fine to medium grained occasionally pyritic. Mainly m.g. feldspathic quartzose siltstone grading to siltstone. Minor thick fg. argillite interbeds	hornfelsed in sections - hard, dk gy with non-hornfelsed weathered rock between hornfelsed sections. Patchy silt clay alteration.		bedding very obscure on core in broken heavily fractured	limonite in fractures and in veins of clay minerals	
	4.5	7.0	0.37	5.3%							
	11.5	0.6	0.55	142%						fg clast in clay alt patch. 11.90	
	12.1	0.6	0.73	122%			12.00 non hornfelsed		12.20 B 0° contorted silt sediment disturbed and micro-faulted	limonite weath. Primarily clay fract & clay minerals	
	12.7	0.3	0.30	100%			12.40 hornfelsed. weathering effects remarkable along fracturing and veins which acted as channelways		12.90 B 20° finely bedded ss, fg ss.		
	13.0	0.6	0.36	60%							
	13.6	0.55	0.38	69%							
	14-15	1.35	1.50	111%			non hornfelsed		14.55 20° sandy - limonite vn		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH SAF 2

LOGGED BY ..... FROM ..... TO ..... DATE / / PAGE ..... OF .....

839225 LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	15.5	0.30	0.30	100%			non hematised		15.45 40° B or faulted contact between mg lithic sst and siltstone		
	15.8	0.15	0.15	100%							
	15.95	0.35	0.35	100%	16						
	16.1	1.45	1.45	100%	16.45	laminated silty shale. dk grey to black ? carbonaceous argillaceous sequence.	16.55 Friable, soft (core barrel) & white clay minerals along fract.		16.45 25° B		
	17.55	0.35	0.32	91%							
	17.9	0.40	0.40	100%	17						
	18.3	0.30	0.30	100%	17.90	Sandstone with siltstone and argillite					
	18.6	0.30	0.35	117%			18.30 non hematised. Salts friable in closed argillite sections and adjacent to veins and fractures				
	18.9	0.40	0.40	100%	18						
	19.3	0.75	0.95	127%	18.60	Siltstone graduating to laminated silty shale. dk grey & black			19.45 10° Fract & wh clay mineral	laminate associated to fractures as crystal fly in sst. laminate stainings in sandstone beds may represent wealth sulphides.	Tr
	20.05	0.75	0.75	100%	19						
	20.75	1.75	1.75	100%	19.70	Interbedded fine to coarse grained feldspathic lithic sandstones with siltstone and argillite. A turbiditic finely bedded sequence			with bedded and fractured 20.50 25° Cycled B fining up hole 20.90 50° Fract & wh felsic clay mineral		
					20						
					21						
					22		patchily hematised around fract and veins non hematised.		22.35 55° wh clay min vn		
	22.5	1.10	1.30	118%	23				23.05 45° B diffuse bed		
	22.6	1.20	1.20	100%	24						
							24.30 patchily hematised 24.90 predominantly hematised		beds becomes up by 24.55 40° B moderate massive fracturing 25.05 40° fract which predates fract.		
	24.8	0.30	0.30	100%	25				25.30 30° B erosion structures - almost flame shaped ? bedding down holes		
	25.1	0.70	0.70	100%							
	25.8	0.50	0.50	100%	26				massive but fractured		
	26.3	0.10	0.10	100%							
	26.4	0.40	0.40	100%	26.40	Feldspathic lithic wacke medium grained poorly sorted sandstone lt-dk grey & scatt felsic-quartz lithics.					
	26.8	0.20	0.20	100%	27						
	27.0	0.50	0.50	100%							
	27.5	1.00	1.00	100%	28				28.45 45° B		
	28.5	0.15	0.15	100%	28.45	Interbedded sandstone with siltstone and silty shale.			will bedded fractured		
	28.65	0.20	0.20	100%							
	28.85	0.45	0.45	100%	29						
	29.4	0.50	0.40								
	29.9	0.30	0.10	100%	30		patchily hematised				

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE ../../.. PAGE ..... OF .....

839226

DRILL ADVANCE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
30.25	0.6	0.6	100%
30.85	0.4	0.3	75%
31.25	0.35	0.35	100%
31.6	0.9	0.9	100%
32.5	1.0	1.0	100%
33.5	0.4	0.45	112%
33.9	1.6	1.90	119%
35.5	0.7	0.7	100%
36.2	0.75	0.75	100%
36.95	0.55	0.70	79%
36.9	0.60	0.63	105%
37.5	0.3	0.34	113%
37.8	0.3	0.26	86%
38.1	0.3	0.28	93%
38.4	0.75	0.21	28%
39.15	0.35	0.22	63%
39.5	0.30	0.20	66%
39.8	0.20	0.15	75%
40.0	0.30	0.37	123%
40.3	0.30	0.47	156%
40.6	0.30	0.46	153%
40.9	0.30	0.22	73%
41.2	0.10	0.15	150%
40.9	0.60	0.50	83%
41.5	0.30	0.07	23%
41.8	0.10	0.10	100%
41.8	1.05	1.05	100%
42.85	0.45	0.45	100%
43.3	0.30	0.15	50%
43.6	0.60	0.60	100%
44.2	1.0	1.0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
		30.25 Clay altered & weathered 30.85				
		31.30 moderately hornfelsed		31.45 25°B	31.7 Po unweathered in thin limonite stained fract.	
32.50	Siltstone to fine grained sandstone, a predominantly argillaceous sequence with regular interbedded med gr epiclastic lithic units	32.75 clay alteration, weathered along fractures. pale alteration products in sparitic bedded units		32.75 Fractures at 2-5° to LCA are chemical ump to weathering effects 33.6 25°B 33.7 2° fract + lim + white clay min		
		34.60 elongate cavid or spotting alteration effects, follow bedding		34.60 end fract well fractured		
		35.60 non hornfelsed clay minerals along fract. minor argillic alt throughout.		35.45 40° Clit along bd 35.65 30° lim on fract core broken strongly fractured		
				36.65 55° multiple fract 36.85 55° alt fors along bd? 36.90 40°B microfaulted		
	37.80 core very broken, guarding effects common					
	38.70 eg epiclastic lith lithicwacke unit	38.70 network of white clay min veinlets		38.80 strongly fractured to brecciated. 40.0 15°B		
40.80	Hornfels. Interbedded sandstone & siltstone and argillite. Sandstones f-med grained. 41.80 end broken core	40.8 strongly hornfelsed spotting and wh cale-silicate alteration in patches - pseudo brecciated text		40.85 20° fract & clay min. 41.05 20°B well bedded minor fracturing moderately fractured with limonite alteration.	41.05 Blebs Po in hornfelsed pale gy ss unit blebs Py-Po in alteration patches	1%
	Selective hydrothermal alteration along sparitic sandstone interlayered with pale grey with dk gy margins.	42.7 moderately hornfelsed minor weathering		42.65 25°B phlogopite alteration evident 43.25 35°B " " " 44.70 20°B		
		43.6 strongly hornfelsed with cale-silicate alteration giving pale grey colouration beam phlogopite alt in some units			44.20 Py & blebs Cp along hairline fractures :- limonite seen above in replacing sulphides	1-2%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE / / PAGE ..... OF .....

5 cm

659

839227

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	45.2	0.20	0.22	110%
	45.4	1.10	1.10	100%
	46.5	0.8	1.04	130%
	47.3	0.2	0.20	100%
	47.5	1.45	1.45	100%
	42.95	1.05	1.27	120%
	50.0	1.10	1.05	95%
C	51.1	0.2	0.2	100%
C	51.30	0.25	0.17	340%
	51.35	0.5	0.53	94%
	51.85	0.65	0.60	92%
	52.50	0.25	0.33	132%
C	52.75	2.65	2.65	100%
C	55.4	2.90	2.94	101%
	58.5	3.00	2.96	99%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
46				45.70 30B 46.0 fract 30° strongly fractured		2%
47 47.0	Hornfelsed argillite with white calc-silicate alteration.	47.0 weathered due to degree of fracturing		47.0 intensly fractured	hematite developed after sulphides by reactions on fract margins	3%
48 47.95	Hornfelsed siltstone and argillite grading to fine grained sandstone. Predominently argillaceous. Generally brown colour due to Phlogopitic alteration.	47.45 hornfelsed pale gy calc-silicate alt. Phlogopitic alteration pervasive with patches of pale gy calc-silicate alt. weathering along fractures weathered ____ orange. 51.00 weathered adjacent to fract orange. fracture stained mtx 51.95		47.45 strongly fractured thin quartzose veinlets & crystals Py Po Tr ep bedding obscured by alteration 49.90 60° Con & calc-sil alt. 50 to 35° B. hematite fractures 50.70 60° post contact angle sharp	hematite along main fract. calc-silicate alt along fract & Py Po. Asbestos Po Py Tr ep in thin qtz-carb veinlets cryst blebs Py.	1%
51 50.70	Porphyritic monzogranite at contact			51.00 35° Con & cryst qz 51.25 70° fract & weath 51.75 45° fract & weath fracture - non foliated.	Tourmaline devil at contact	
51.20	Biotite granite coarse grained equigranular dark granite. White feldspar phenocrysts with quartz crystals (2:1) in a quartz-plag mosaic. Small biotite crystals - 5%. Green amphibole crystals? with vague outline - 2% and green interstitial staining on plagioclase - 1%. The porphyritic feldspar is the dominant mineral. K feldspar are not discernable in hand specimen.					
52						
53						
54						
55 NQ BQ						
56						
57		57.10 6% patches of tourmaline alt + quartz in a discontinuous vein 57.75 discrete zone of schorl development		57.70 55° joint		
58						
59						
60						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE / / PAGE ..... OF .....

5 cm

839228

DRILL ADVANCE / LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					61		60 ea fine tourmaline in small patches				
	61·5	3·0	3·02	101%	62						
					63						
					64						
	64·5	3·0	3·02	101%	65		64·9 cg schist dyke				
					66						
					67						
	67·5	3·0	2·93	98%	68						
					69						
					70						
	70·5	3·0	3·02	101%	71						
					72						
					73						
	73·5	1·0	1·17	117%	74						
	74·5	1·8	1·67	93%	75						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE / / PAGE ..... OF .....

061

839229

5 cm

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					76						
	76·3		C. O. H.		77						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE ../../.. PAGE ..... OF .....

839230

5 cm

290

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	As						SAMPLE NUMBER
0.0m																
	BLD	63	BLD	14	60	0·2	BLD	BLD	BLD	21						
11·5																
	BLD	85	BLD	10	67	0·1	BLD	BLD	BLD	2						
14·55																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 2

ASSAYED BY Analabs FROM 0 TO 15 m DATE 3/9/81 PAGE 1 OF 6

5 cm

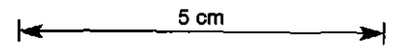
839231

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	As						SAMPLE NUMBER
	6	102	BLD	13	78	0·2	BLD	BLD	BLD	2						
17·55	BLD	105	BLD	10	94	0·3	BLD	BLD	BLD	BLD						
20·5	BLD	100	BLD	8	75	0·2	BLD	BLD	BLD	BLD						
23·6	BLD	87	BLD	4	79	0·3	BLD	BLD	BLD	1						
26·4	BLD	64	BLD	3	80	0·3	BLD	BLD	BLD	1						
29·4																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF2

ASSAYED BY Analabs FROM 15 TO 30m DATE 3/9/81 PAGE 2 OF 6

839232



094

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	As						SAMPLE NUMBER
30																
31	4	73	12	7	90	0·2	BLD	BLD	BLD	BLD						
32																
32·5																
33																
34	BLD	93	BLD	14	105	0·2	BLD	BLD	0·5	BLD						
35																
35·5																
36																
37	9	106	BLD	9	103	0·2	BLD	BLD	BLD	BLD						
38																
38·4																
39																
40	5	89	BLD	15	135	0·3	BLD	BLD	4·0	4						
41																
41·5																
42																
43	5	65	BLD	1	122	0·4	BLD	BLD	BLD	BLD						
44																
44·2																
45																

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH CAF 2

ASSAYED BY Analabs FROM 30 TO 45 m DATE 3/9/81 PAGE 3 OF 6

839233

5 cm

C90

Metres	Sn	Cu	WO_3	Pb	Zn	Ag	Au	Bi	Mo	As	SAMPLE NUMBER
	BLD	96	BLD	4	128	0·2	BLD	BLD	BLD	BLD	
47·3	BLD	55	BLD	7	136	0·3	BLD	BLD	0·5	1	
50·0	4	71	18	5	83	0·3	BLD	BLD	BLD	1	
52·75	BLD	13	BLD	8	23	0·1	BLD	BLD	BLD	BLD	
55·4	7	39	19	8	41	0·3	BLD	BLD	0·5	1	
58·5											

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 1

ASSAYED BY Analabs FROM 45 TO 60m DATE 3/9/81 PAGE 4 OF 6

5 cm

839234

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	As						SAMPLE NUMBER
	BLD	28	21	10	45	0·1	BLD	BLD	1·0	2						
61·5	BLD	25	20	8	34	0·1	BLD	BLD	0·5	3						
64·5	BLD	61	26	8	56	0·2	BLD	BLD	BLD	2						
67·5	5	41	24	10	51	0·2	BLD	BLD	3·5	2						
70·5	BLD	59	28	30	112	0·2	BLD	BLD	BLD	2						
73·5	BLD	55	25	9	50	0·1	BLD	BLD	BLD	BLD						
74·5																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 2

ASSAYED BY Analabs FROM 60 TO 75m DATE 3/9/81 PAGE 5 OF 6

5 cm

839235

Metres	Sn	Cu	WO3	Pb	Zn	Ag	Au	Bi	Mo	As						SAMPLE NUMBER
	11	290	110	11	150	0·1	BLD	BLD	1·0	2						
76·3		End of DDH: CAF 2 at 76·3 m.														

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAF 2

ASSAYED BY Analabs FROM 75 TO 76·3m DATE 3/9/81 PAGE 6 OF 6

063

839236 VOL 2/5 AP 3

PULSE ELECTROMAGNETIC SURVEY

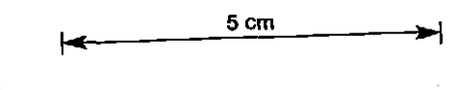
AT

RAMSAY GRID - CAF

FOR

COMSTAFF PTY LTD

Line No. 4760 N



SURVEY SPECIFICATIONS

Mode of operation	SEPARATED LOOP	
Transmitter receiver separation	60	metres
Station spacing	20	metres
Component plotted	VERTICAL	
Receiver coil orientation	HORIZONTAL	
Transmitter orientation	HORIZONTAL	
Horizontal scale	1:2000	
Surveyed by	T. LYNCH	
Time base	20	msec

geoterrex pty ltd SYDNEY

SURVEYED IN JAN. 82

JOB No. 85-1393

069

4690 4730 4770E 4810E 4850E 4890E 4930E 4970E 5010E 5050E 5090E 5130E 5170E 5210E 5250E 5290E 5330E 5370E 5410E

839237

5 cm

1 2 3 4 5 6 7 8

PLOTTING SCALE
NORMAL SCALE

070

839238

PULSE ELECTROMAGNETIC SURVEY

AT

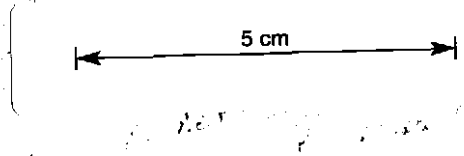
MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 4640 N



SURVEY SPECIFICATIONS

Mode of operation MOVING COIL

Transmitter receiver separation 100 metres

Station spacing 40 metres

Component plotted VERTICAL

Receiver coil orientation VERTICAL

Transmitter orientation

Horizontal scale 1:4000

Surveyed by M. ROUSSEAU

geoterrex pty. ltd. SYDNEY

SURVEYED IN DEC 81

JOB No. 85-1388

071

839239

4270E 4350E 4430E 4510E 4590E 4670E 4750E 4830E 4910E 4990E 5070E 5150E 5230E 5310E 5390E

5 cm

1.
2.
3.
4.
5.
6.
7.
8.

LINES 4100N. 4160N. 4220N.

200 150 100 50 40 30 20 15 10 5 0 -5 -10 -15 -20 -30 -40 -50 -100 -150 -200

PLOTTING SCALE
NORMAL SCALE

072

335240

PULSE ELECTROMAGNETIC SURVEY

AT

MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 4400 N

5 cm

SURVEY SPECIFICATIONS

Mode of operation . . MOVING COIL
Transmitter receiver separation . . 100 metres
Station spacing . . . . . 40 metres
Component plotted . . VERTICAL
Receiver coil orientation VERTICAL
Transmitter orientation . . . . . .
Horizontal scale 1:4000
Surveyed by . . . . . M. ROUSSEAU
TIME BASE 20 MSECS

ALE
E
CALE

geoterrex
pty. ltd
SYDNEY

SURVEYED IN DEC 81

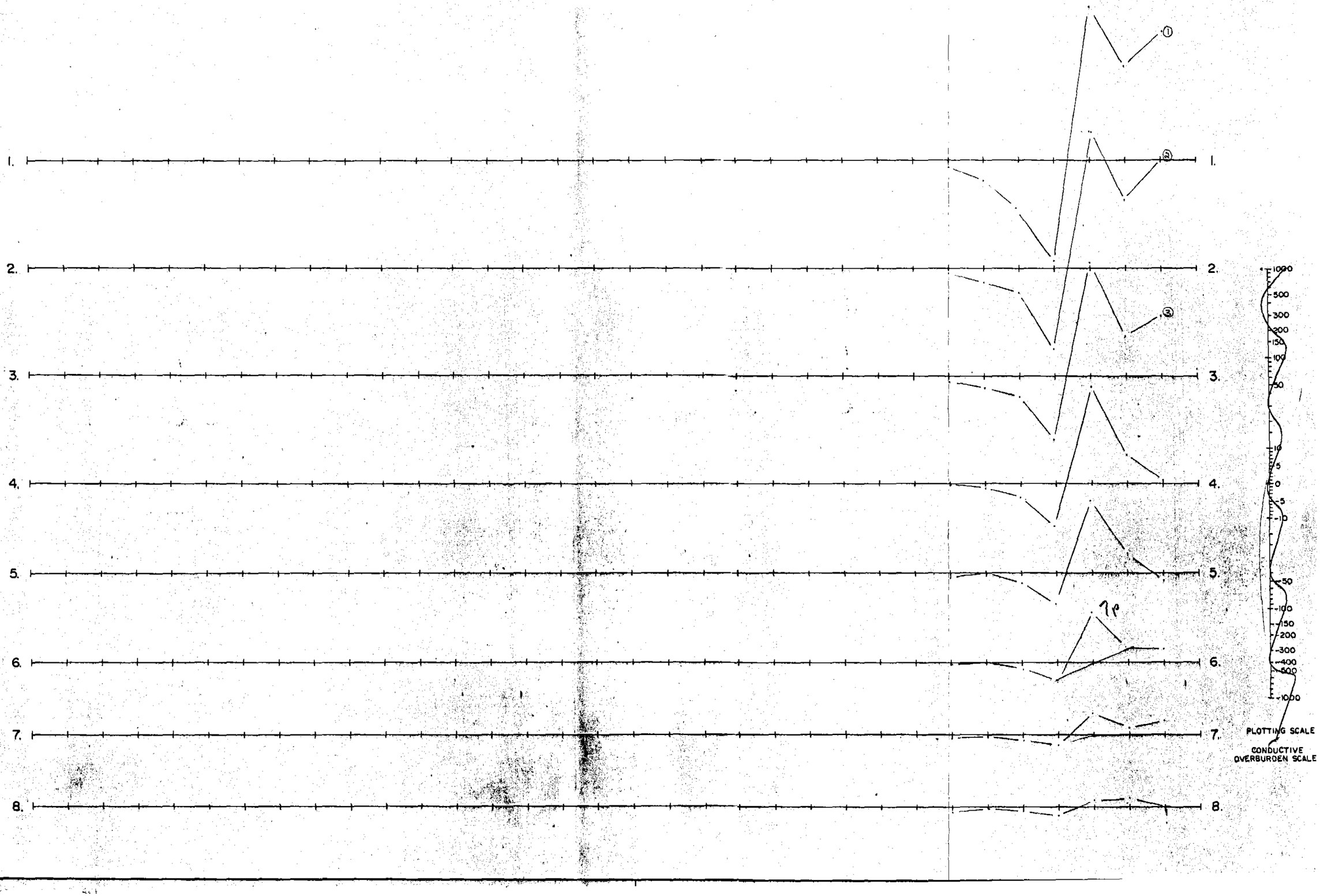
JOB No. 85.1388

073

4370E 4450E 4530E 4610E

839241

5 cm



074

839242

PULSE ELECTROMAGNETIC SURVEY

AT

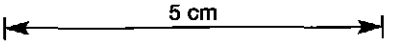
MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 4220 N



SURVEY SPECIFICATIONS

Mode of operation ..... MOVING COIL
Transmitter receiver separation ..... 100 metres
Station spacing ..... 40 metres
Component plotted ..... VERTICAL
Receiver coil orientation ..... VERTICAL
Transmitter orientation .....
Horizontal scale 1:4000
Surveyed by ..... M. ROUSSEAU
TIME BASE ..... 20 MSECS

geoterrex pty. ltd. SYDNEY

SURVEYED IN DEC 81

JOB No. 85.1388

075

4370E 4410E 4470E 4550E 4630E 4710E 4790E 4870E 4950E 5030E

839243

5 cm

1.
2.
3.
4.
5.
6.
7.
8.

1000
500
300
200
150
100
50
10
5
0
-5
-10
-50
-100
-150
-200
-300
-400
-500
-1000

PLOTTING SCALE

CONDUCTIVE OVERBURDEN SCALE

076

839244

PULSE ELECTROMAGNETIC SURVEY

AT

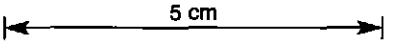
MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 4160 N



SURVEY SPECIFICATIONS

Mode of operation MOVING COIL

Transmitter receiver separation 100 metres

Station spacing 40 metres

Component plotted VERTICAL

Receiver coil orientation VERTICAL

Transmitter orientation

Horizontal scale 1:4000

Surveyed by M. ROUSSEAU

TIME BASE 20 MSECS

geoterrex pty. ltd. SYDNEY

SURVEYED IN DEC 81

JOB No 85/1388

077

4270E 4390E 4470E 4550E 4630E 4710E 4790E 4870E 4950E

839245

5 cm

1.
2.
3.
4.
5.
6.
7.
8.

1000
500
300
200
150
100
50
10
5
0
5
10
50
100
150
200
300
400
500
1000

PLOTTING SCALE

CONDUCTIVE OVERBURDEN SCALE

078

839246

PULSE ELECTROMAGNETIC SURVEY

AT

MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 4100 N

5 cm

SURVEY SPECIFICATIONS

Mode of operation ... MOVING COIL
Transmitter receiver separation ... 100 metres
Station spacing ... 40 metres
Component plotted ... VERTICAL
Receiver coil orientation ... VERTICAL
Transmitter orientation ...
Horizontal scale ... 1:4000
Surveyed by ... M. ROUSSEAU

geoterrex
pty. ltd.
SYDNEY

SURVEYED IN DEC. 81

JOB No. 25.1388

079

489DE 497DE

839247

5 cm

1.

2.

3.

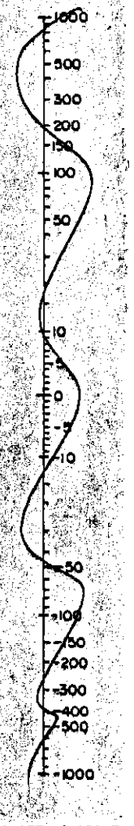
4.

5.

6.

7.

8.



PLOTTING SCALE

CONDUCTIVE OVERBURDEN SCALE

080

839248

PULSE ELECTROMAGNETIC SURVEY

AT

MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 3920 N

5 cm

SURVEY SPECIFICATIONS

Mode of operation MOVING COIL

Transmitter receiver separation 100 metres

Station spacing 40 metres

Component plotted VERTICAL

Receiver coil orientation VERTICAL

Transmitter orientation

Horizontal scale 1:4000

Surveyed by M. ROUSSEAU

Time base 20 msec

geoterrex pty. ltd. SYDNEY

SURVEYED IN DEC 81

JOB No. 85-1388

081

839249

4270E 4350E 4430E 4510E 4590E 4670E 4750E 4830E 4910E 4990E

5 cm

1. 1.

2. 2.

3. 3.

4. 4.

5. 5.

6. 6.

7. 7.

8. 8.

200 150 100 50 40 30 20 15 10 5 0 -5 -10 -15 -20 -30 -40 -50 -100 -150 -200

PLOTTING SCALE
NORMAL SCALE

382

839250

PULSE ELECTROMAGNETIC SURVEY

AT

MT RAMSAY-
CAF GRID

FOR

COMSTAFF

Line No. 3920 N

5 cm

SURVEY SPECIFICATIONS

Mode of operation MOVING COIL
Transmitter receiver separation 100 metres
Station spacing 40 metres
Component plotted VERTICAL
Receiver coil orientation VERTICAL
Transmitter orientation
Horizontal scale 1:4000
Surveyed by M. ROUSSEAU
Time base 20 msec

geoterrex pty. ltd. SYDNEY

SURVEYED IN DEC 81

JOB No. 85.1388

083

4270E 4350E 4430E 4510E 4590E 4670E 4750E 4830E 4910E 4990E

839251

5 cm

1. 1.

2 2.

3. 3.

4. 4.

5. 5.

6. 6.

7. 7.

8. 8.

200 150 100 50 40 30 20 15 10 5 0 -5 -10 -15 -20 -30 -40 -50 -100 -150 -200

PLOTTING SCALE
NORMAL SCALE

084

839252

PULSE ELECTROMAGNETIC SURVEY

AT

MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 3860 N

5 cm

SURVEY SPECIFICATIONS

Mode of operation MOVING COIL

Transmitter receiver separation 100 metres

Station spacing 40 metres

Component plotted VERTICAL

Receiver coil orientation VERTICAL

Transmitter orientation

Horizontal scale 1:4000

Surveyed by M. ROUSSEAU

Time base 20 msec

geoterrex pty. ltd. SYDNEY

SURVEYED IN DEC 81

JOB No. 85.1388

085

839253

5 cm

4270E 4350E 4430E 4510E 4590E 4670E 4750E 4830E 4910E 4990E

1. 1.

2. 2.

3. 3.

4. 4.

5. 5.

6. 6.

7. 7.

8. 8.

200 150 100 50 40 30 20 15 10 5 0 -5 -10 -15 -20 -30 -40 -50 -100 -150 -200

PLOTTING SCALE
NORMAL SCALE

086

839254

PULSE ELECTROMAGNETIC SURVEY

AT

MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 3800 N

5 cm

SURVEY SPECIFICATIONS

Mode of operation MOVING COIL

Transmitter receiver separation 100 metres

Station spacing 40 metres

Component plotted VERTICAL

Receiver coil orientation VERTICAL

Transmitter orientation

Horizontal scale 1:4000

Surveyed by M. ROUSSEAU

geoterrex pty. ltd SYDNEY

SURVEYED IN DEC 81

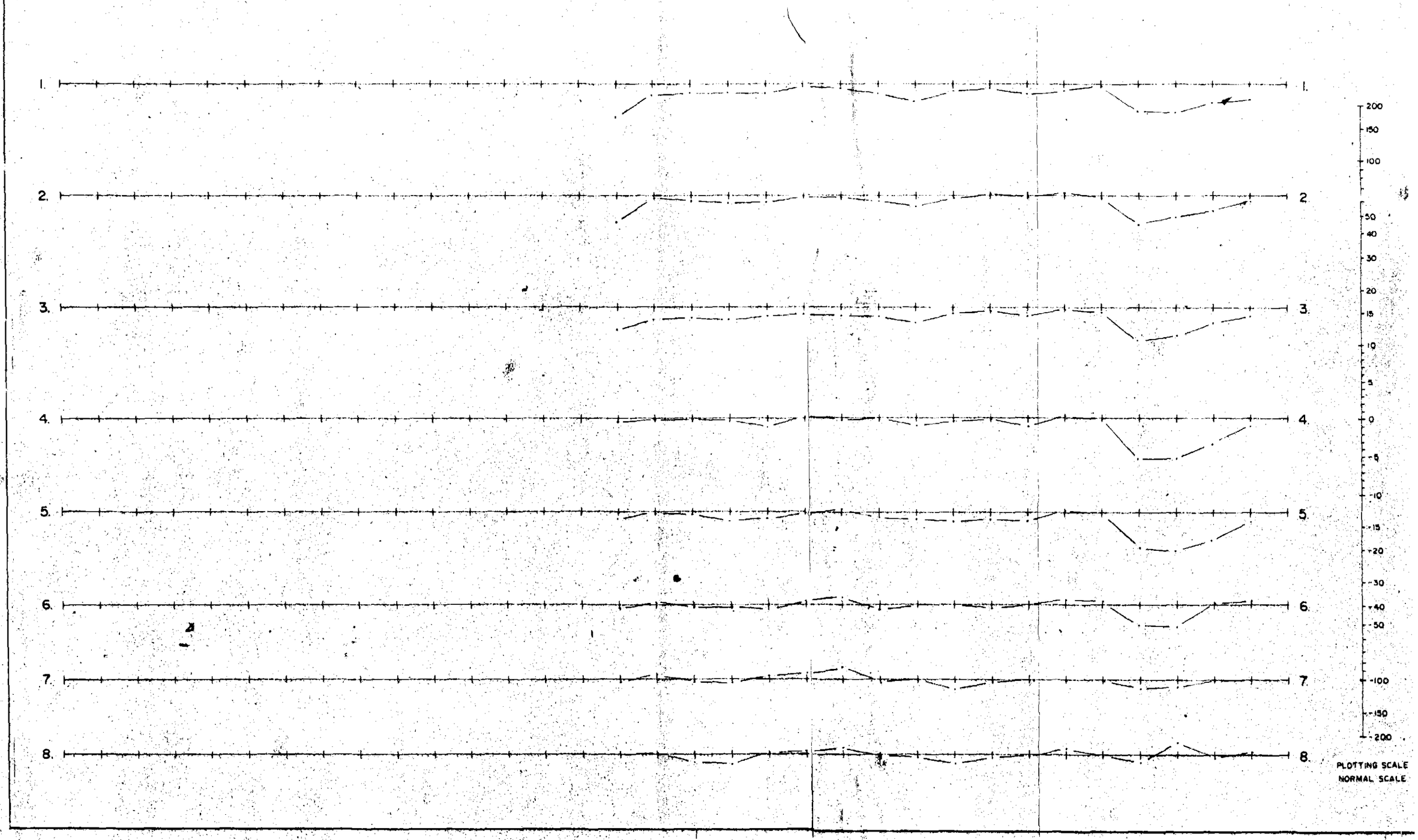
JOB No 83.1388

087

4350E 4430E 4510E 4590E 4670E 4750E 4830E 4910E 4990E

839255

5 cm



083

839256

PULSE ELECTROMAGNETIC SURVEY

AT

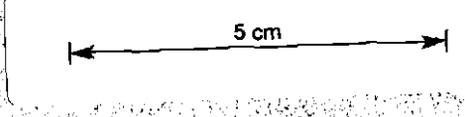
MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 3740 N



SURVEY SPECIFICATIONS

Mode of operation MOVING COIL

Transmitter receiver separation 100 metres

Station spacing 40 metres

Component plotted VERTICAL

Receiver coil orientation VERTICAL

Transmitter orientation

Horizontal scale 1:4000

Surveyed by M. ROUSSEAU

TIME BASE 10 MSECS

geoterrex pty. ltd. SYDNEY

SURVEYED IN DEC 81

JOB No 85.1388

089

4290E 4370E 4450E 4530E 4610E 4690E 4770E 4850E 4930E 5010E

839257

5 cm

1.
2.
3.
4.
5.
6.
7.
8.

200
150
100
50
40
30
20
15
10
5
0
5
10
15
20
30
40
50
100
150
200

PLOTTING SCALE
NORMAL SCALE

090

839258

PULSE ELECTROMAGNETIC SURVEY

AT

MT RAMSAY -

CAF GRID

FOR

COMSTAFF

Line No. 3680 N

5 cm

SURVEY SPECIFICATIONS

Mode of operation MOVING COIL

Transmitter receiver separation 100 metres

Station spacing 40 metres

Component plotted VERTICAL

Receiver coil orientation VERTICAL

Transmitter orientation

Horizontal scale 1:4000

Surveyed by M. ROUSSEAU

geoterrex pty. ltd. SYDNEY

SURVEYED IN DEC 81

JOB No 85/1588

091

5 cm
435OE
440OE
445OE
450OE
455OE
460OE
465OE
470OE
475OE
480OE
485OE
490OE
495OE
500OE
1
2
3
4
5
6
7
8
100
50
40
30
20
10
0
10
20
30
40
50
100
150
200
PLOTTING SCALE
NORMAL SCALE

839259

000

839260

MICROFILMED

aac

	A.O.	C.G.	E.O.	D.S.M.E

Received 28 JAN 1982
Answered

E & IL

REF. No. 7782

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE:

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

REPORT ON GRID CAF EL 5/63 PART 2

VOL 5B/9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheet : Burnie K55-03

COMMODITY/IES: Sn, W, Cu, Au

TEXT PAGES NO: 8

PLAN NOS: See List of Plans

TABLE NOS:

APPENDICES: Drill logs

AUTHOR/S: G F Pigott

DATE: 20 January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

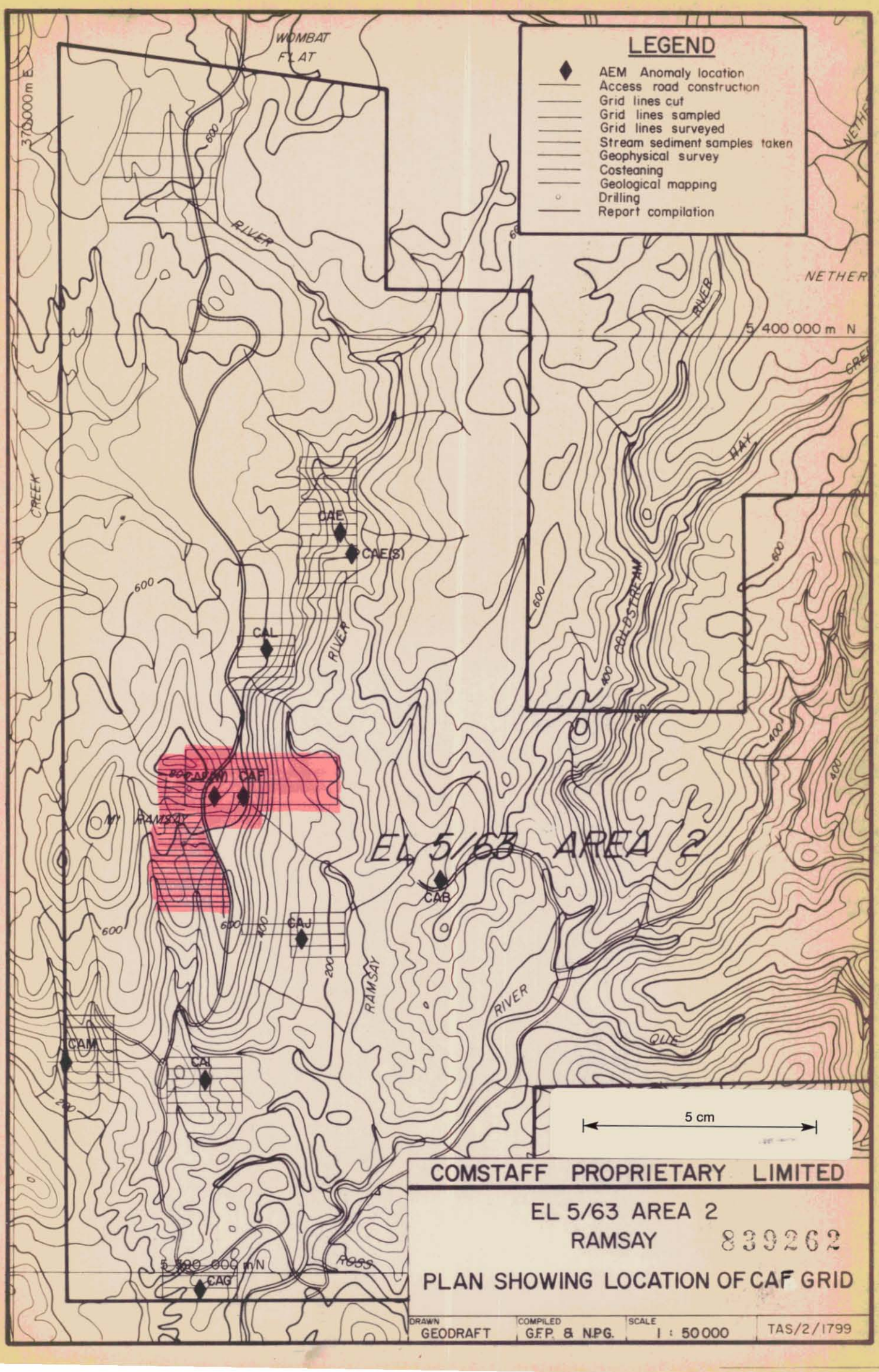
Incorporated in the State of Victoria

839261

LIST OF PLANS

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TAS-2-2410 Ramsay Grid CAF (South) Detailed Geology 1:2 500
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TAS-2-2411 Ramsay Grid CAF (South) Geological Interpretation 1:2 500
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TAS-2-2419 Ramsay Grid CAF (South Ground Magnetic Contours 1:2 500
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TAS-2-1851 Ramsay Grid CAF Composite Section Line 4760N 1:2 500
TAS-2-1852 Ramsay Grid CAF Composite Section Line 4880N 1:2 500
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TAS-2-2164 Ramsay Grid CAF (North) Auger Sample Results and Contours As 1:2 500
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TAS-2-2418 Ramsay Grid CAF (South) Auger Sample Results and Contours As 1:2 500
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TAS-2-2678 Section Line 4400N DDH CAF1 Sn, Cu, WO_3 Values 1:500
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TAS-2-2696 Section of Drill Hole DDH CAF2 Pb, Zn, Ag Values 1:500
TAS-2-2697 Section of Drill Hole DDH CAF2 Au, Bi, Mo, As Values 1:500

002


LEGEND
AEM Anomaly location
Access road construction
Grid lines cut
Grid lines sampled
Grid lines surveyed
Stream sediment samples taken
Geophysical survey
Costeaning
Geological mapping
Drilling
Report compilation
WOMBAT FLAT
RIVER
NETHER
5 400 000 m N
CAE
CAE(S)
CAL
CAF
CAF(W)
CAB
CAJ
CAM
CAI
CAG
EL 5/63 AREA 2
RAMSAY
COLDSTREAM
HAY
CREEK
370 000 m E
5 cm
COMSTAFF PROPRIETARY LIMITED
EL 5/63 AREA 2
RAMSAY
839262
PLAN SHOWING LOCATION OF CAF GRID
DRAWN GEODRAFT
COMPILED G.F.P. & N.P.G.
SCALE 1 : 50000
TAS/2/1799


L 4220 E
L 4520 E
L 5380 N
L 5240 N
L 5120 N
L 5060 N
L 5000 N
L 4940 N
L 4880 N
L 4820 N
L 4760 N
L 4700 N
L 4640 N
5300
5200
5100
4900
4800
4700
4600
4500
4400
4300
12400
12700
12900
13000
RAMSAY
GRID
CAF ACCESS TRACK
RAMSAY
LWR
5 395 000 m N
372 000 m E
5 cm
839263
COMSTAFF PROPRIETARY LIMITED
RAMSAY GRID - CAF
DETAILED GEOLOGICAL PLAN
DRAWN GFP 5/79
COMPILED GFP
SCALE 1 2500
TAS/2/1845

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4320 E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

RAMSAY CREEK

ACCESS TRACK

372 000 m E

839264

5 cm

SHEET INDEX

TAS/2/1845

TAS/2/2410

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

DETAILED GEOLOGICAL PLAN

DRAWN	COMPILED	SCALE	
G F P	G F P 2/81	1 2500	TAS/2/2410

GEOLOGICAL LEGEND

g	felspar-quartz-biotite granite	
ad	porphyritic adamellite	MEREDITH GRANITE
qz	quartz-tourmaline mineralisation	
calc	skarn rocks, calc silicates and amphibolites	
pel	pelitic units	CRIMSON CREEK FORMATION
dr	microdolerite/microgabbro	
gw	tuffaceous greywacke, lithic wacke, siltstone, argillite, interbedded	
◆	Geophysical anomaly	

005

L 4220 E
L 4520 E
L 5360 N
L 5240 N
L 5120 N
L 5060 N
L 5000 N
L 4940 N
L 4880 N
L 4820 N
L 4760 N
L 4700 N
L 4640 N
TIE LINE
CAF GRID
DDH CAF 2
RAMSAY
ROAD
CAF ACCESS TRACK
CREEK
GREEK
Leads Down Road
Lead
372,000 mE
5 395 000 m N
5 cm

SHEET INDEX
TAS/2/2101
TAS/2/2411

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GEOLOGICAL INTERPRETATION PLAN

DRAWN	COMPILED	SCALE	
GEODRAFT 1/82	GEODRAFT	1 2500	TAS/2/2101

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4320 E

372 000 m E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREEK

CREEK

L.W.P.

RAMSAY

CAJ ACCESS TRACK

ROAD

DDH CAF I

ad

g

qz

gw

calc

pel

dr

839266

FOR GEOLOGICAL LEGEND SEE TAS/2/2101

5 cm

SHEET INDEX

TAS/2/2101

TAS/2/2411

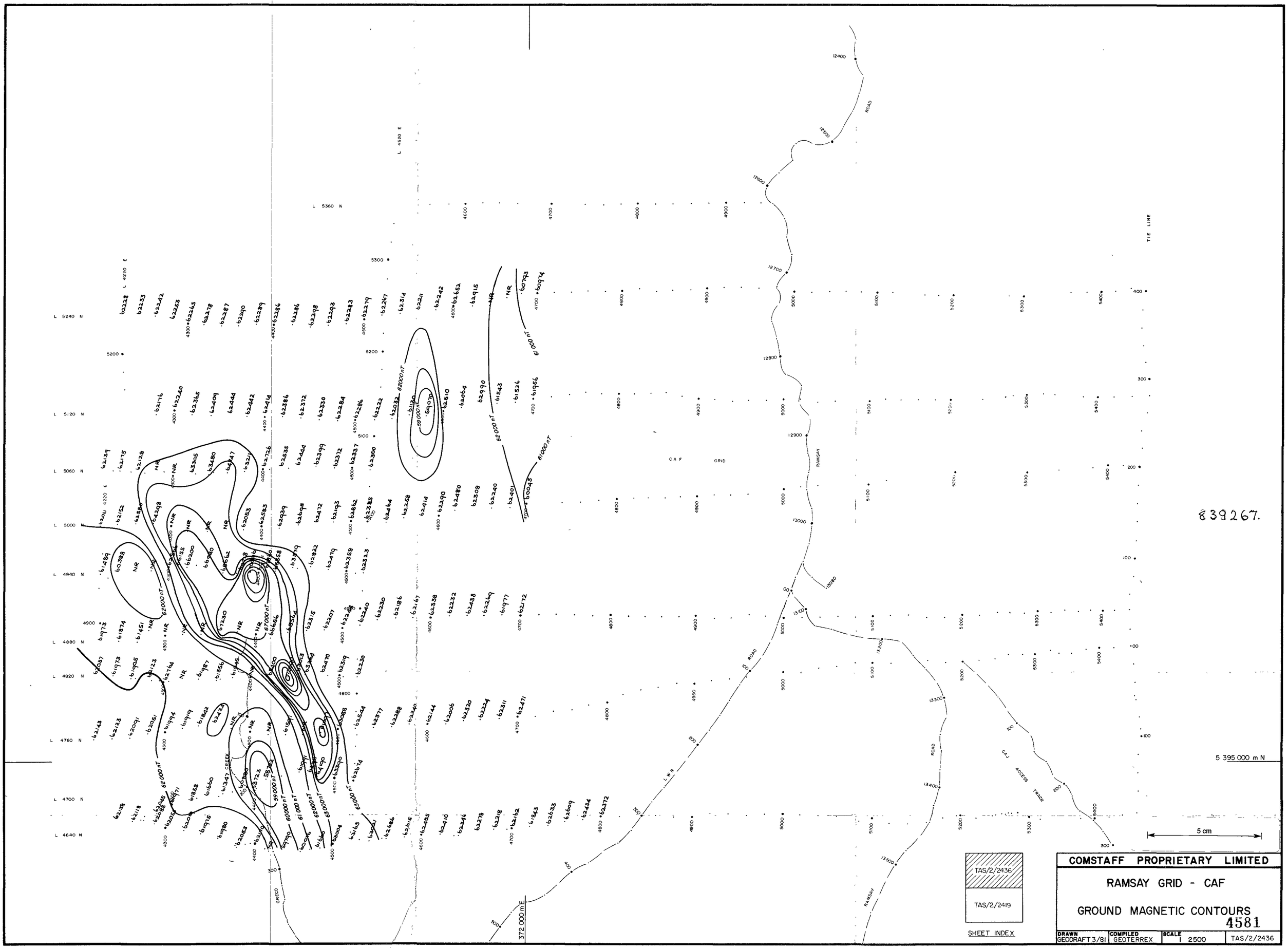
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GEOLOGICAL INTERPRETATION PLAN

4580

DRAWN	COMPILED	SCALE	
GEODRAFT	G F P	1 2500	TAS/2/2411



839267.

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GROUND MAGNETIC CONTOURS

4581

DRAWN	COMPILED	SCALE	
GEODRAFT 3/81	GEOTERREX	1 2500	TAS/2/2436

5 395 000 mN

372 000 m E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

L 4700 N
L 4640 N
L 4580 N
L 4520 N
L 4460 N
L 4400 N
L 4340 N
L 4280 N

L 4240 E
L 4530 E

63000 nT
64000 nT
65000 nT
66000 nT

CREEK
RAMSAY
ACCESS TRACK
ROAD

839268

5 cm

TAS/2/2436
TAS/2/2419

SHEET INDEX

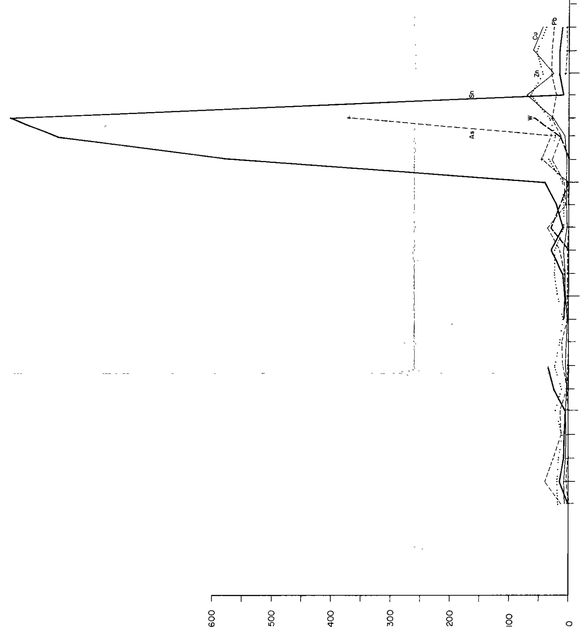
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

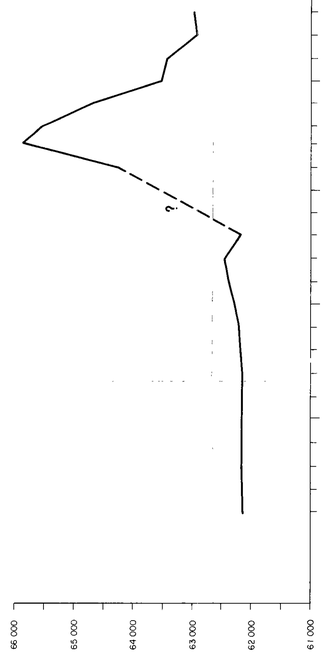
GROUND MAGNETIC CONTOURS

4582

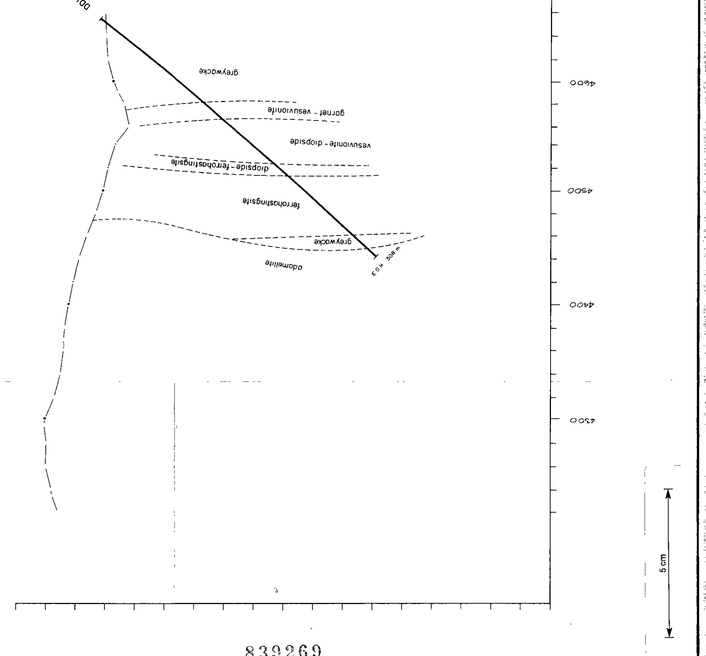
DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEOTERREX	1 : 2500	TAS/2/2419



GEOCHEMISTRY ppm



MAGNETICS nT



TOPOGRAPHY & GEOLOGY

5 cm

839269

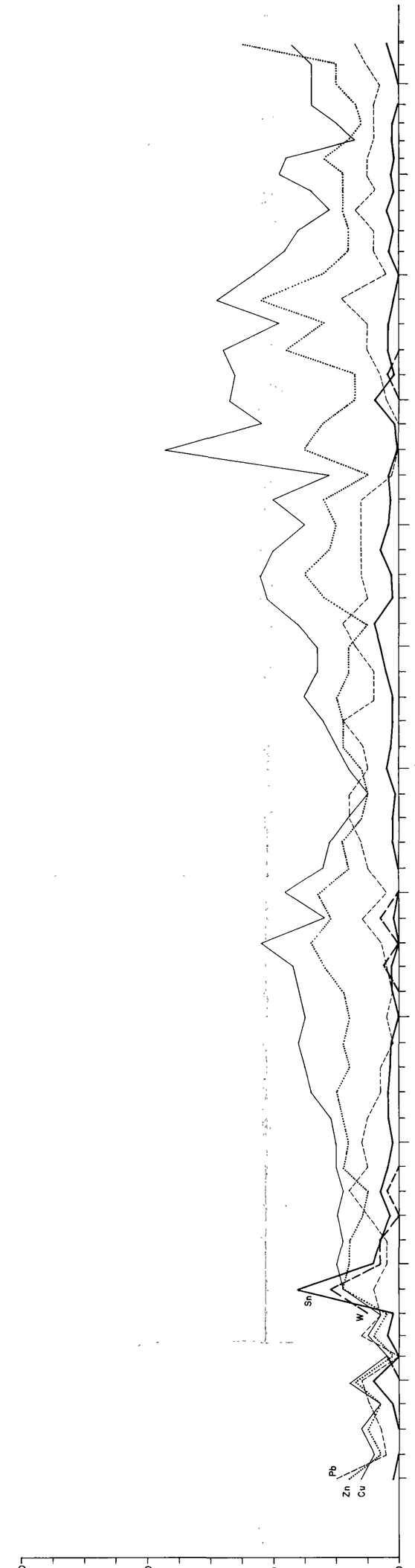
COMSTAFF PROPRIETARY LIMITED

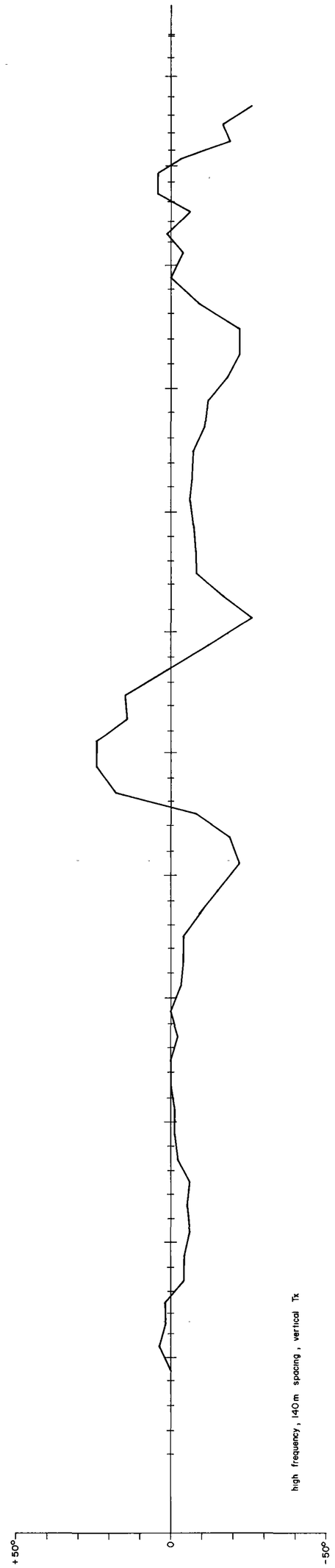
RAMSAY GRID - CAF (S)

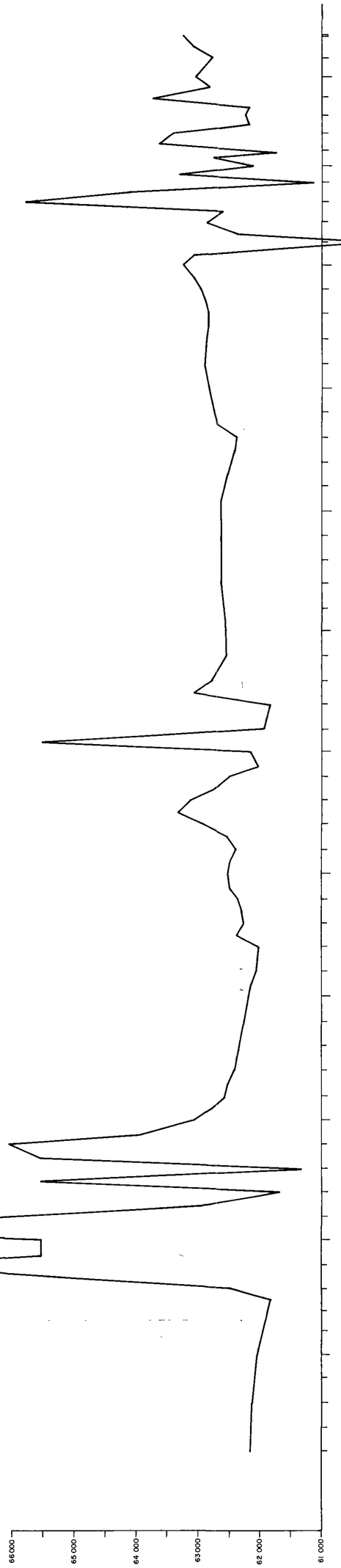
L 4400 N PROFILES 4583

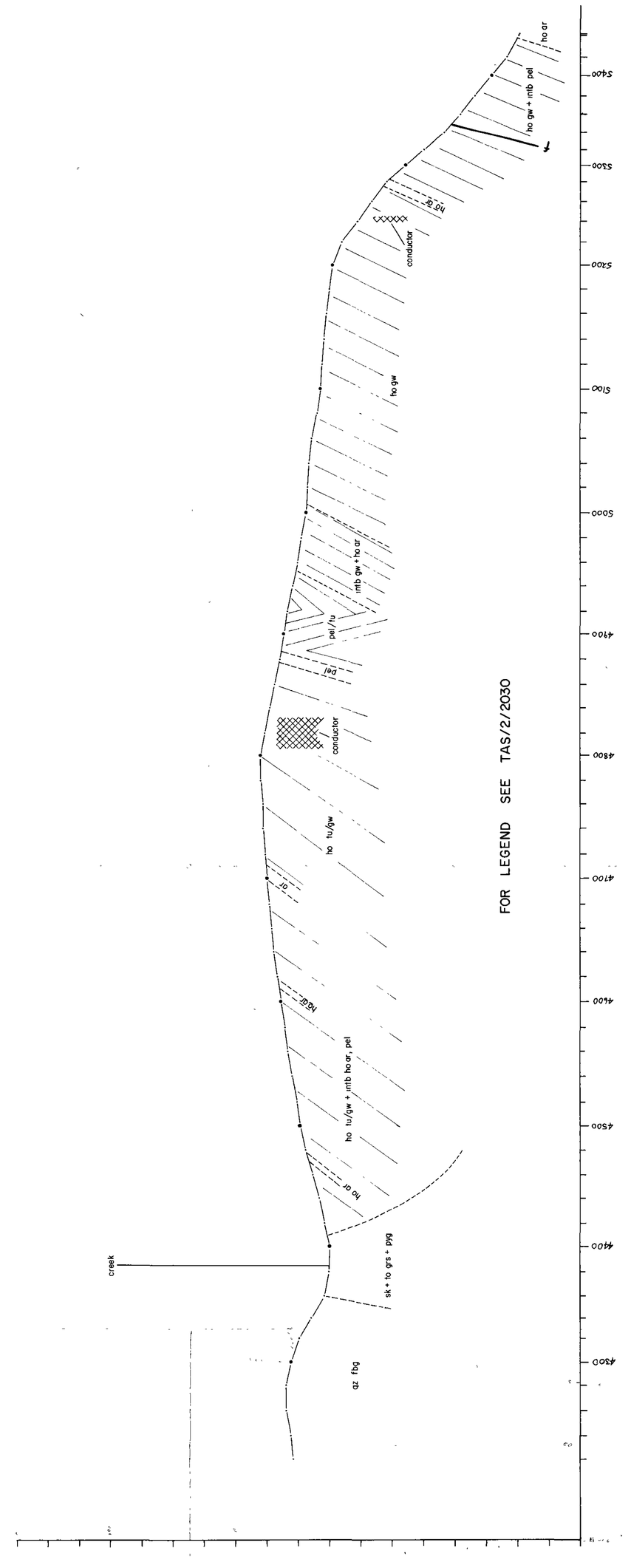
TOPO, MAG, E.M., GEOCHEMISTRY, GEOLOGY

COMPILED	GEODRAFT B G F P
DRAWN	DATE 21/3/81
AMENDED	14/1/82
SCALE	1 : 2500
PLAN No	TAS/2/2469









FOR LEGEND SEE TAS/2/2030

839270

COMSTAFF PROPRIETARY LIMITED

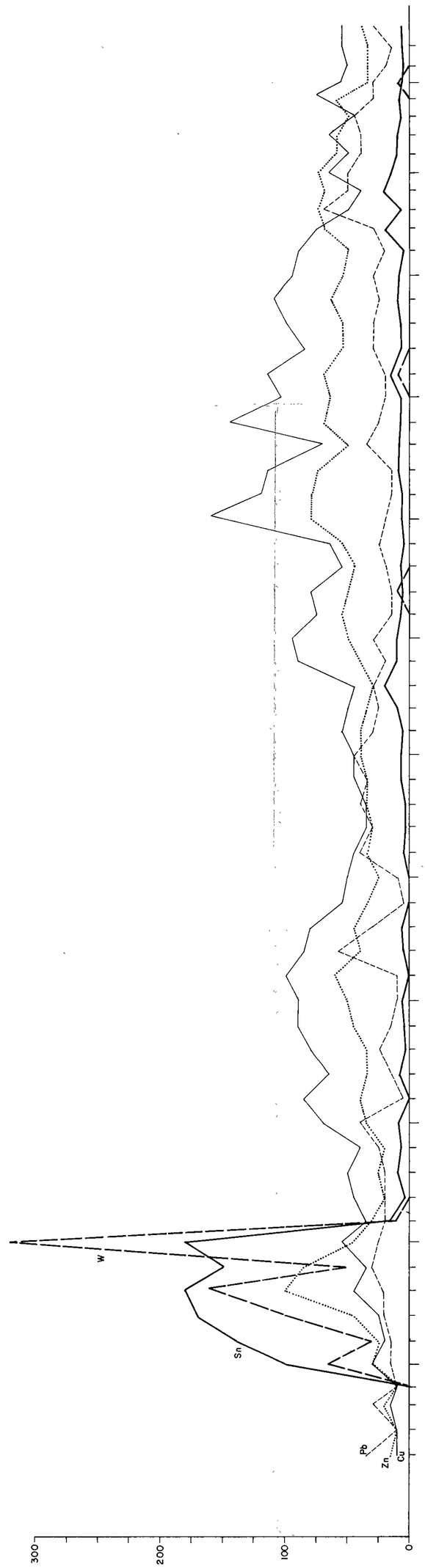
RAMSAY GRID - CAF

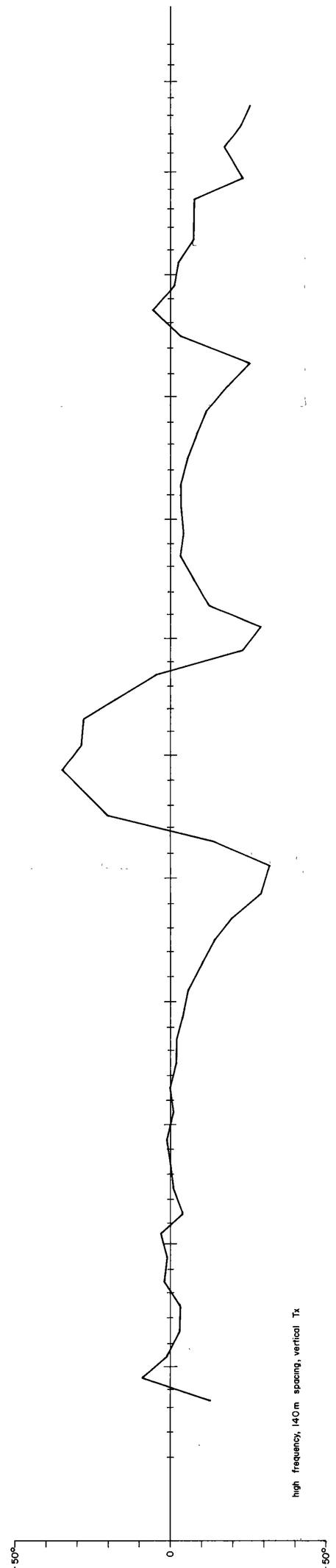
L 4760 N PROFILES

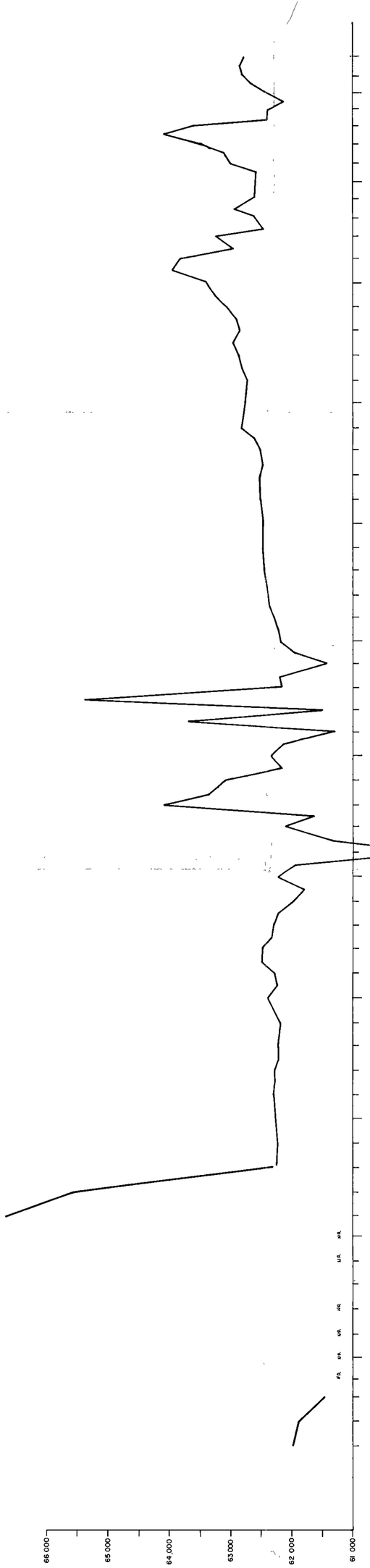
TOPO, MAG, CRONE, GEOCHEM

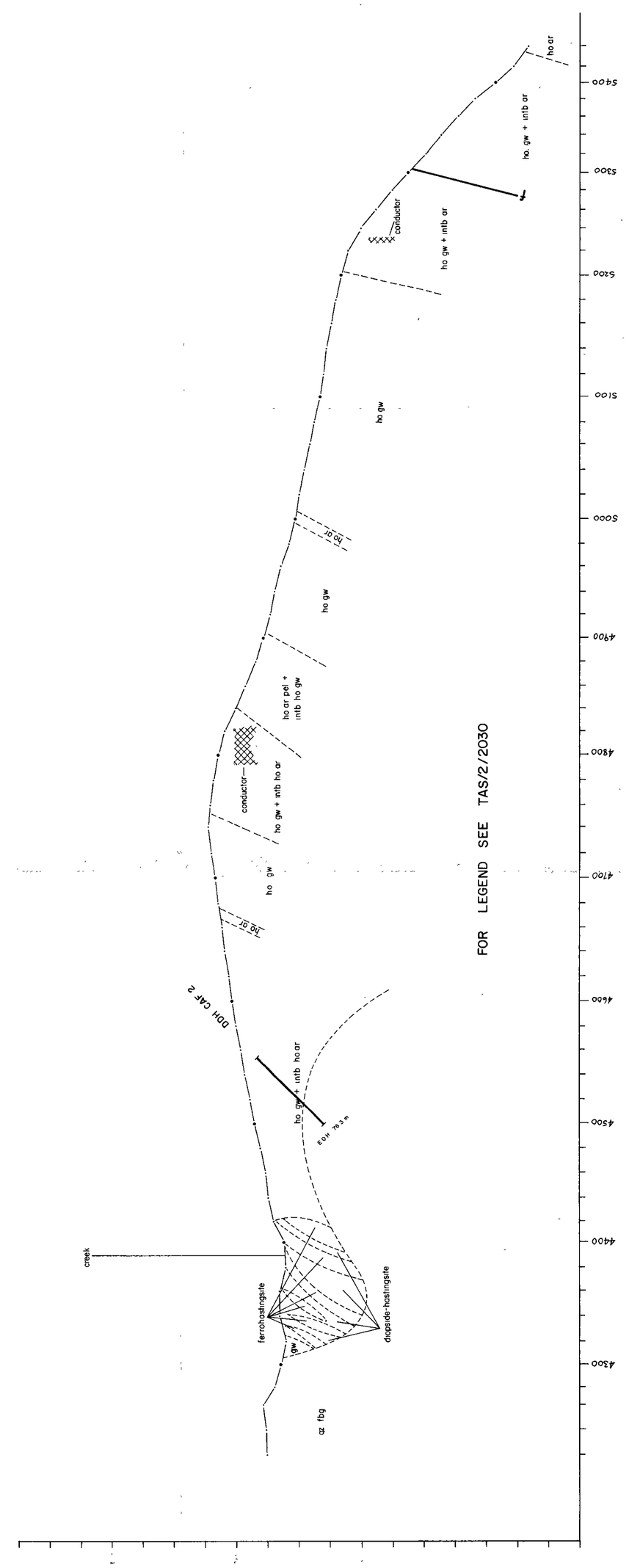
4584

COMPILED	G F P
DRAWN	G F P
DATE	5/79
AMENDED	
SCALE	1 2500
PLAN No	TAS/2/1851









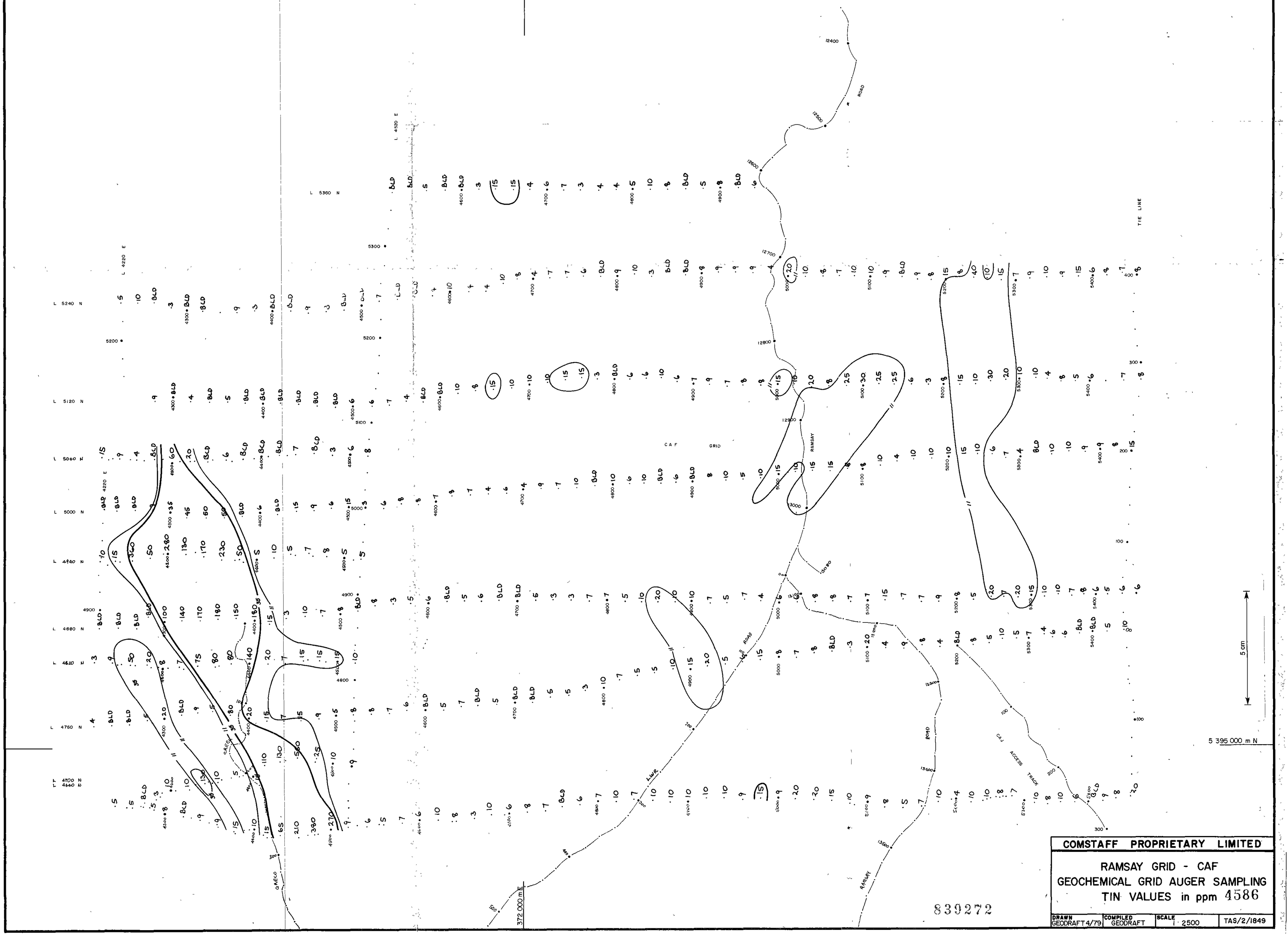
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

L 4880 N PROFILES

TOPO, MAG, CRONE, GEOCHEM 4585

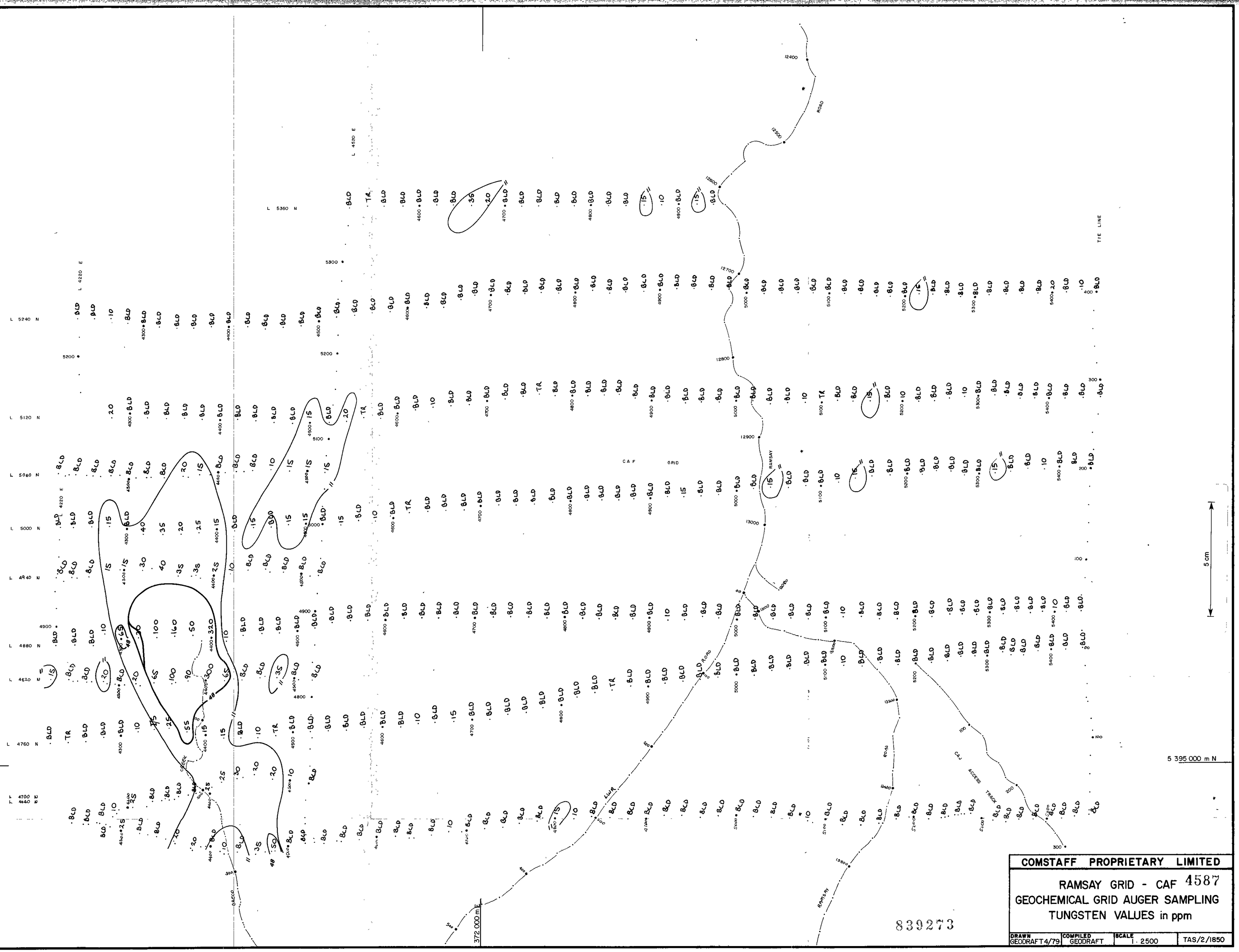
COMPILED	G.F.P.
DRAWN G.F.P.	DATE 5/79
AMENDED	14/1/82
SCALE	1 : 2500
PLAN No.	TAS/2/1852



COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
GEOCHEMICAL GRID AUGER SAMPLING
TIN VALUES in ppm 4586

DRAWN	COMPILED	SCALE	
GEODRAFT 4/79	GEODRAFT	1 : 2500	TAS/2/1849

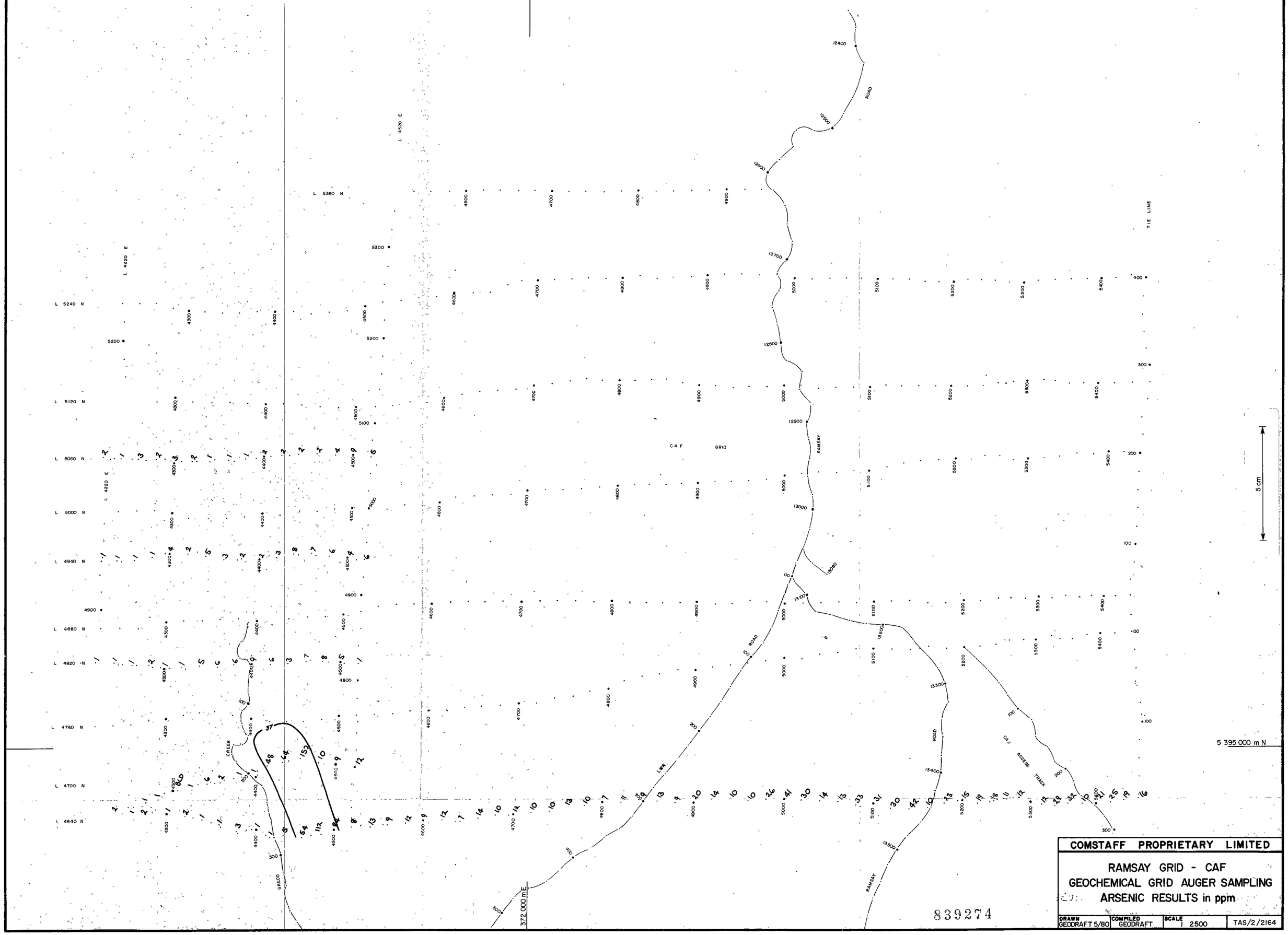


COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF 4587
GEOCHEMICAL GRID AUGER SAMPLING
TUNGSTEN VALUES in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/79	GEODRAFT	1 : 2500	TAS/2/1850

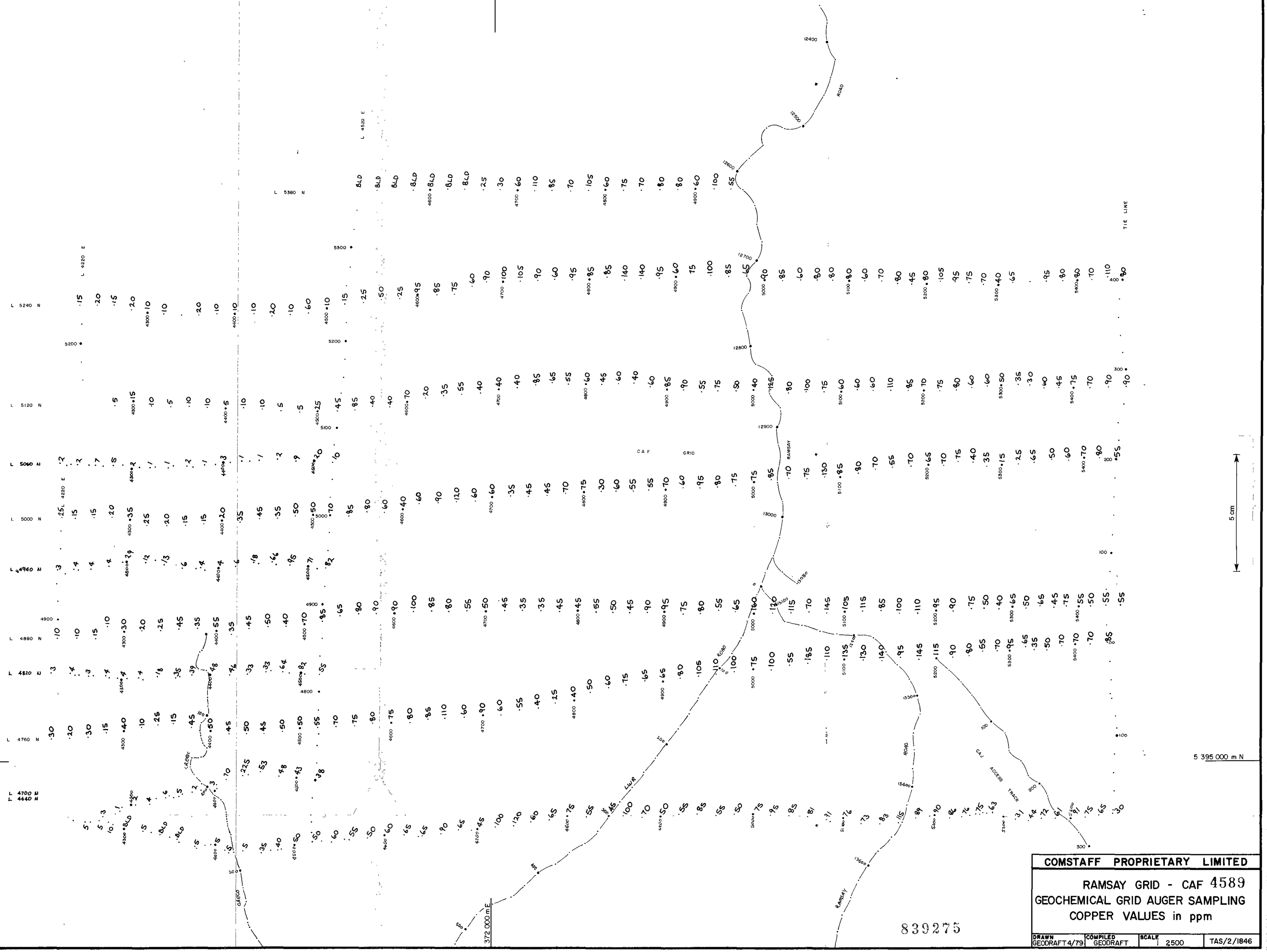
4588



COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
GEOCHEMICAL GRID AUGER SAMPLING
ARSENIC RESULTS in ppm

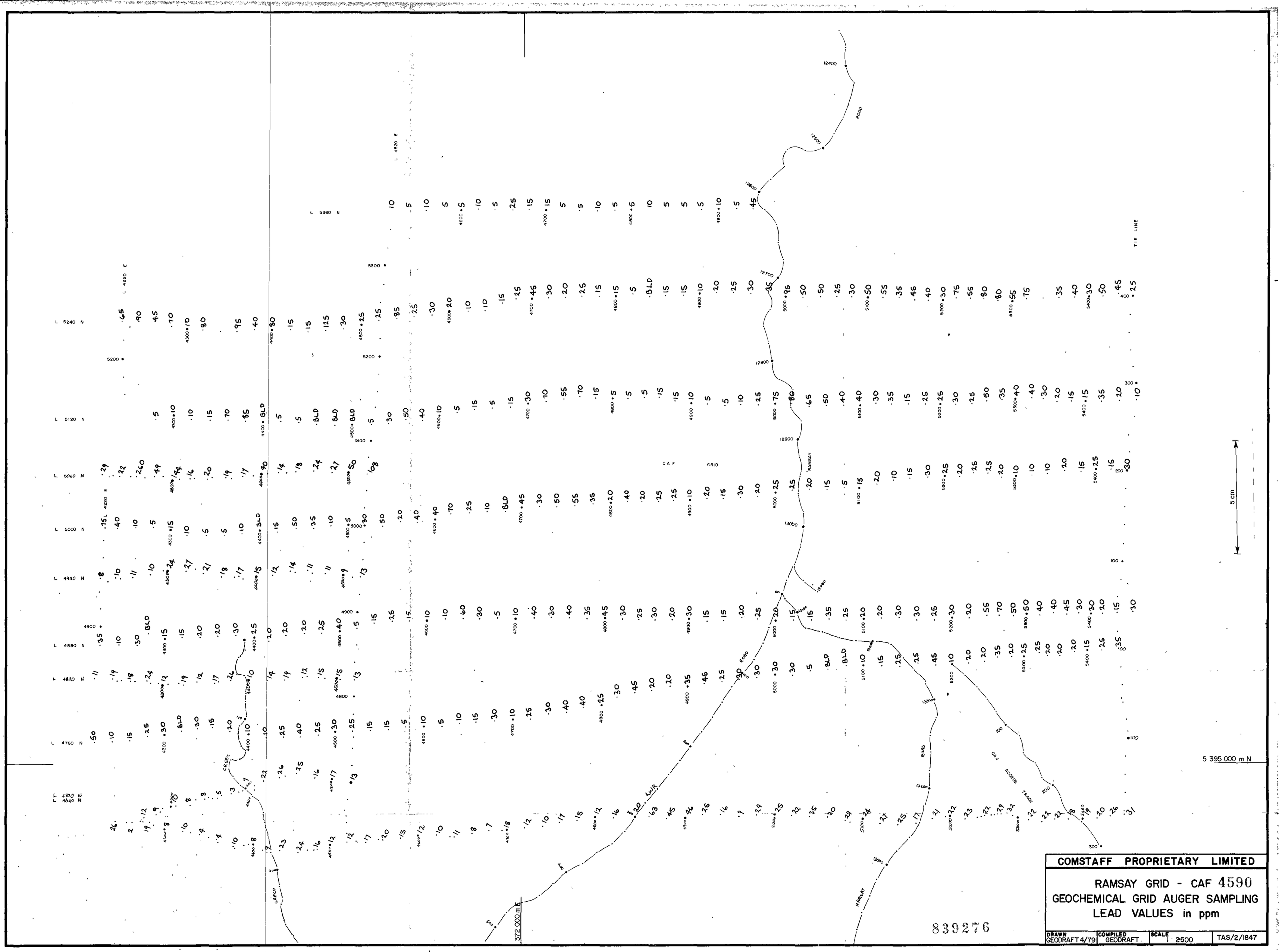
DRAWN	COMPILED	SCALE	
GEODRAFT 5/80	GEODRAFT	1 2500	TAS/2/2164



COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF 4589
GEOCHEMICAL GRID AUGER SAMPLING
COPPER VALUES in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/79	GEODRAFT	1 2500	TAS/2/1846

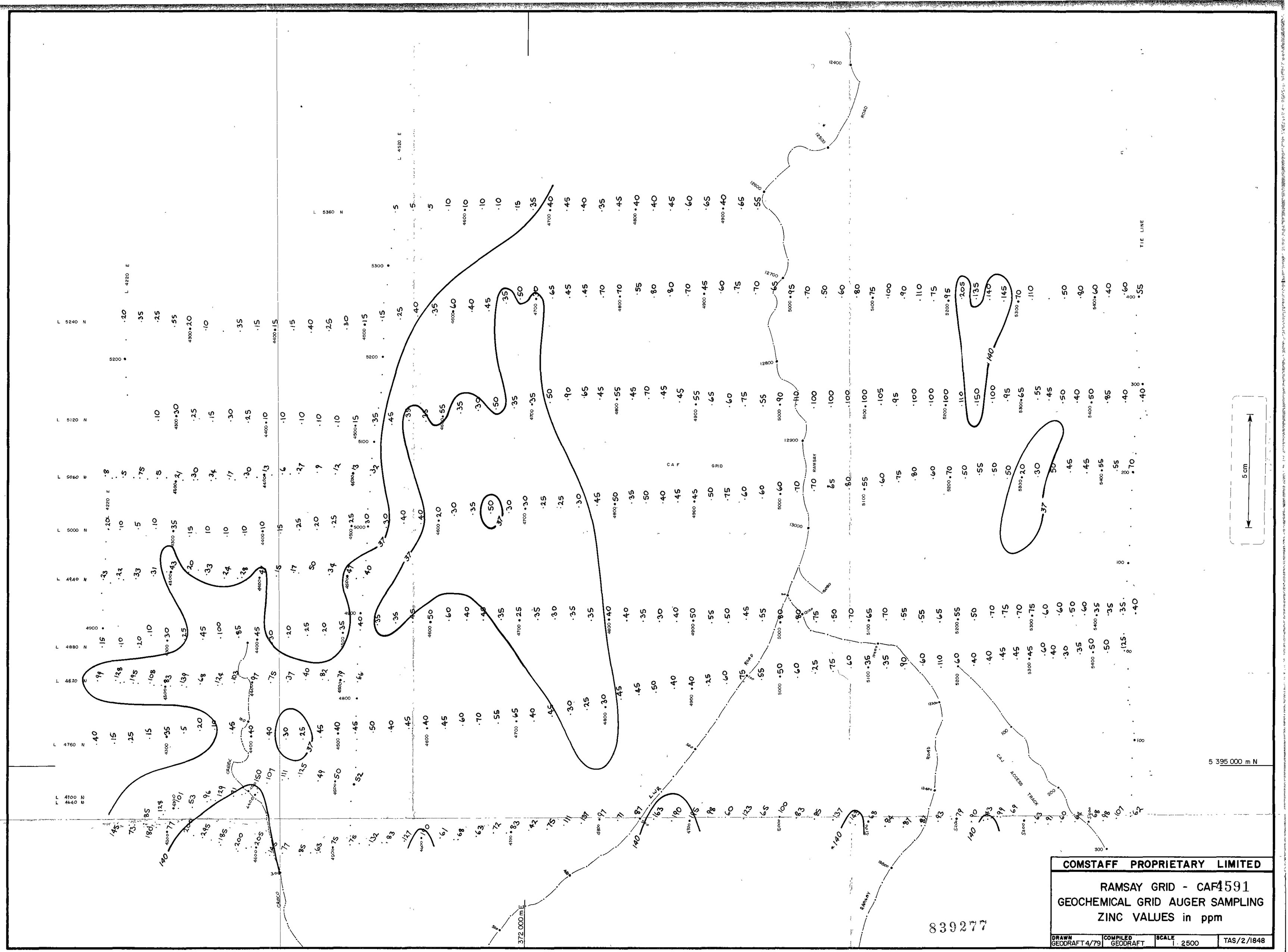


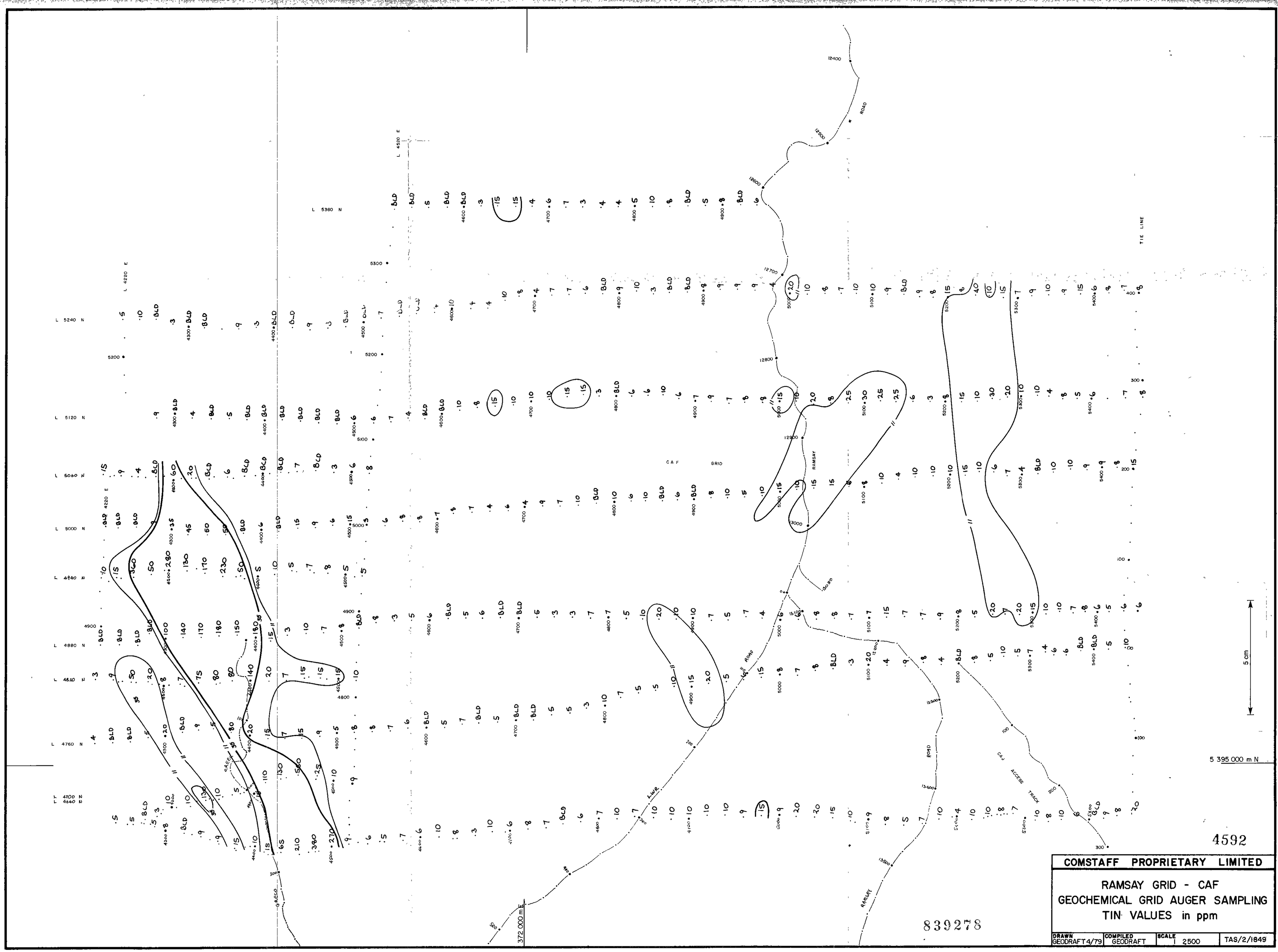
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF 4590
GEOCHEMICAL GRID AUGER SAMPLING
LEAD VALUES in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/79	GEODRAFT	1 : 2500	TAS/2/1847

839276


L 5240 N
L 5120 N
L 5360 N
L 5060 E
L 5000 N
L 4940 N
L 4880 N
L 4820
L 4760 N
L 4700 N
L 4640 E
L 4220 E
L 4320 E
CAF GRID
RAMSAY
ROAD
TIE LINE
CAJ ACCESS TRACK
Road
Track
5 395 000 m N
372 000 m E
5 cm
COMSTAFF PROPRIETARY LIMITED
RAMSAY GRID - CAF
4591
GEOCHEMICAL GRID AUGER SAMPLING
ZINC VALUES in ppm
DRAWN GEODRAFT 4/79
COMPILED GEODRAFT
SCALE 1:2500
TAS/2/1848
839277



4592

839278

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
GEOCHEMICAL GRID AUGER SAMPLING
TIN VALUES in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/79	GEODRAFT	1 2500	TAS/2/1849

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREED

CREEK

ROAD

CAJ ACCESS TRACK

RAMSAY

L W R

L 4240 E

L 4520 E

372 000 m E

5 cm

4593

839279

SHEET INDEX

TAS/2/1849

TAS/2/2416

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 : 2500	TAS/2/2416

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4520 E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

CAF ACCESS TRACK

RAMSAY ROAD

CREEK

L W P

372 000 m E.

839280

SHEET INDEX

TAS/2/1850

TAS/2/2417

5 cm

4594

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GEOCHEMICAL GRID AUGER SAMPLING

TUNGSTEN RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 : 2500	TAS/2/2417

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4320 E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREEK

CREEK

RAMSAY

ROAD

CAJ ACCESS TRACK

LWR

372 000 m E.

839281

5 cm

4595

TAS/2/2164

TAS/2/2418

SHEET INDEX

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 2500	TAS/2/2418

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4520 E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

L.W.P.

CREEK

RAMSAY

ROAD

ACCESS TRACK

CAJ

372 000 m E

839282

5 cm

4596

SHEET INDEX

TAS/2/1846

TAS/2/2412

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GEOCHEMICAL GRID AUGER SAMPLING

COPPER RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 2500	TAS/2/2412

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4530 E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREEN

ROAD

CAJ ACCESS TRACK

ROAD

RAMSAY

CREEK

L W R

372 000 m E

5 cm

4597

TAS/2/1847

TAS/2/2413

SHEET INDEX

839283

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GEOCHEMICAL GRID AUGER SAMPLING

LEAD RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 2500	TAS/2/2413

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4520 E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

372 000 m E

CREEK

ROAD

CAJ ACCESS TRACK

RAMSAY

140

37

TAS/2/1848

TAS/2/2414

SHEET INDEX

839284

5 cm

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GEOCHEMICAL GRID AUGER SAMPLING

ZINC RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 : 2500	TAS/2/2414

600 m

550 m

500 m

450 m

400 m

350 m

4400

4500

4600

DDH CAF 1 (SECTION)

LINE 4598

PERCENTAGE MINERALIZATION (TOTAL)
FOR - PYRITE, CHALCOPYRITE PYRRHOTITE, MAGNETITE

50 40 30 20 10 9 8 7 6 5 4 3 2 1 0

DEPTH 328 m

LEGEND

- Bedding plane showing facing
- Vein
- Geological boundary
- Mineralization
- Fault

For abbrevation explanation see TAS/2/1566

5 394 710 m N

5 394 700 m N

5 394 690 m N

5 394 680 m N

5 394 670 m N

DDH CAF 1 (PLAN)

2450 MN

371 200 m E.

371 300 m E.

371 400 m E.

371 500 m E.

839285

5 cm

4598

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
SECTION OF LINE 4400 N
SECTION OF DRILLHOLE DDH CAF 1
GEOLOGICAL DETAILS

COMPILED	G F P
DRAWN	GEODRAFT
DATE	27/7/81
AMENDED	
SCALE	1 : 500
PLAN No.	TAS/2/2676

4400

4500

4600

DDH CAF I (SECTION)

LMR 608

600 m

550 m

500 m

450 m

400 m

350 m

cgs units x 10^{-3}

EOH 398 m

371 200 m E

371 300 m E

371 400 m E

371 500 m E

5 394 710 m N

5 394 700 m N

5 394 690 m N

5 394 680 m N

5 394 670 m N

235° MN

DDH CAF I (PLAN)

5 cm

839286

4599

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
SECTION OF LINE 4400 N
SECTION OF DRILLHOLE DDH CAF I
MAGNETIC SUSCEPTIBILITY OF CORE

COMPILED	G F P
DRAWN	GEODRAFT
DATE	21/9/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2677

600 m

550 m

500 m

450 m

400 m

350 m

4400

4500

4550

DDH CAF I (SECTION)

VS

NGWR 6038

VS

EOH 308 m

371 200 m E

371 300 m E

371 400 m E

371 500 m E

5 394 710 m N

5 394 700 m N

5 394 690 m N

5 394 680 m N

5 394 670 m N

245° MN

DDH CAF I (PLAN)

5 cm

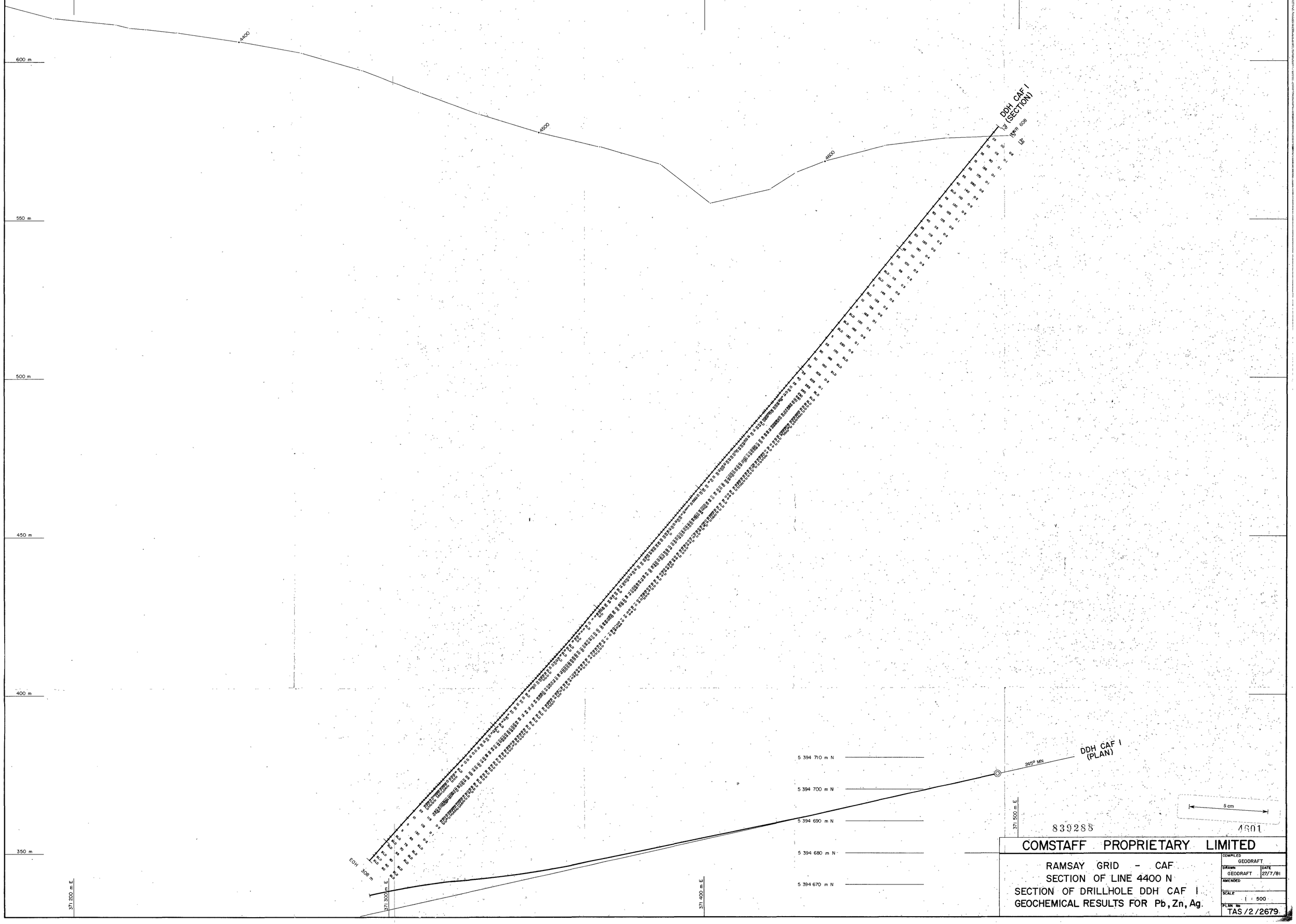
839287

4600

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
SECTION OF LINE 4400 N
SECTION OF DRILLHOLE DDH CAF I
GEOCHEMICAL RESULTS FOR Sn,Cu,WO_3

COMPILED	GEODRAFT
DRAWN GEODRAFT	DATE 27/7/81
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2678



COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
SECTION OF LINE 4400 N
SECTION OF DRILLHOLE DDH CAF I
GEOCHEMICAL RESULTS FOR Pb, Zn, Ag.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	27/7/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2679

600 m

550 m

500 m

450 m

400 m

350 m

4400

4600

4800

DDH CAF I (SECTION)

245° MN

EOH 308 m

371 200 m E

371 300 m E

371 400 m E

371 500 m E

5 394 710 m N

5 394 700 m N

5 394 690 m N

5 394 680 m N

5 394 670 m N

DDH CAF I (PLAN)

5 cm

839289

4602

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
SECTION OF LINE 4400 N
SECTION OF DRILLHOLE DDH CAF I
GEOCHEMICAL RESULTS FOR Au, Bi, Mo.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	27/7/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2680

600 m

550 m

500 m

450 m

400 m

350 m

4400

4500

4600

DDH CAF I (SECTION)

TOTAL Fe

TOTAL S

F

As

LWR 608

EOH 308 m

371 200 m E

371 300 m E

371 400 m E

5 394 710 m N

5 394 700 m N

5 394 690 m N

5 394 680 m N

5 394 670 m N

245° MN

DDH CAF I (PLAN)

371 500 m E

5 cm

839290

4603

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

SECTION OF LINE 4400 N

SECTION OF DRILLHOLE DDH CAF I

GEOCHEMICAL RESULTS FOR TOTAL Fe, As, TOTAL S, F.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	27/7/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2681

750 m

700 m

650 m

600 m

550 m

500 m

4300

4400

4500

4600

LINE 4880 N (SECTION)

LINE 4820 N (SECTION)

DDH CAF 2 (SECTION)

E.O.H 76.3 m

5 395 150 m N

5 395 125 m N

5 395 100 m N

5 395 075 m N

L 4880 N (PLAN)

L 4820 N (PLAN)

DDH CAF 2 (PLAN)

371 100 m E

371 200 m E

371 300 m E

371 400 m E

839291

5 cm

4604

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

SECTION OF DRILLHOLE DDH CAF 2

GEOLOGICAL DETAILS

COMPILED	G. F. P
DRAWN	GEODRAFT
DATE	
AMENDED	
SCALE	1 : 500
PLAN No	TAS / 2 / 2693

750 m

700 m

650 m

600 m

550 m

500 m

4300

4400

4500

4600

LINE 4880 N (SECTION)

DDH CAF 2 (SECTION)

LINE 4820 N (SECTION)

Quaternary

cgs units x 10^{-3}

0.5 H 75.3 m

5 395 150 m N

5 395 125 m N

5 395 100 m N

5 395 075 m N

L 4880 N (PLAN)

DDH CAF 2 (PLAN)

L 4820 N (PLAN)

371 100 m E

371 200 m E

371 300 m E

371 400 m E

839292

5 cm

4605

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

SECTION OF DRILLHOLE DDH CAF 2

MAGNETIC SUSCEPTIBILITY OF CORE

COMPILED	G. F. P.
DRAWN	GEODRAFT
DATE	22/9/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2694

750 m

700 m

650 m

600 m

550 m

500 m

4300

4400

4500

LINE 4880 N (SECTION)

LINE 4820 N (SECTION)

DDH CAF 2 (SECTION)

Sn

Cu

WO3

EOH 763 m

5 395 150 m N

5 395 125 m N

5 395 100 m N

5 395 075 m N

L 4880 N (PLAN)

L 4820 N (PLAN)

DDH CAF 2 (PLAN)

371 100 m E

371 200 m E

371 300 m E

371 400 m E

833293

5 cm

4606

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

SECTION OF DRILLHOLE DDH CAF 2

GEOCHEMICAL RESULTS FOR Sn, Cu, WO_3

COMPILED: GEODRAFT

DRAWN: GEODRAFT DATE:

AMENDED:

SCALE: 1 500

PLAN No: TAS/2/2695

750 m

700 m

650 m

LINE 4880 N (SECTION)

4500

4600

DDH CAF 2 (SECTION)

Zn

Ag

4300

4400

LINE 4820 N (SECTION)

4500

4600

E.O.H 76.3 m

600 m

5 395 150 m N

L 4880 N (PLAN)

4300

4400

4500

4600

5 395 125 m N

DDH CAF 2 (PLAN)

550 m

5 395 100 m N

4300

4400

4500

L 4820 N (PLAN)

5 395 075 m N

500 m

371 100 m E

371 200 m E

371 300 m E

371 400 m E

839294

4607

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

SECTION OF DRILLHOLE DDH CAF 2

GEOCHEMICAL RESULTS FOR Pb. Zn. Ag.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	
AMENDED	
SCALE	1 500
PLAN No.	TAS/2/2696

750 m

700 m

650 m

600 m

550 m

500 m

LINE 4880 N (SECTION)

LINE 4820 N (SECTION)

DDH CAF 2 (SECTION)

Au
Bi
Mo
As

EOH 76.3 m

4300
4400
4500
4600

5 395 150 m N

5 395 125 m N

5 395 100 m N

5 395 075 m N

L 4880 N (PLAN)

L 4820 N (PLAN)

DDH CAF 2 (PLAN)

371 100 m E

371 200 m E

371 300 m E

371 400 m E

5 cm

839295

4608

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
SECTION OF DRILLHOLE DDH CAF 2
GEOCHEMICAL RESULTS FOR Au. Bi. Mo. As.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	
AMENDED	
SCALE	1 500
PLAN No	TAS /2 /2697

000

839296

MICROFILMED

aac
D of M | A.O. | C.G. | E.O. | D.S.M.E
Answered 28 JAN 1982
DEPT. OF MINES
REF. No. 271/82

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE:

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

REPORT ON GRIDS CAI AND CAG

EL 5/63 PART 2

VOL 6/9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1 250,000 Sheet : Burnie K55-03

COMMODITY/IES: Sn, W

TEXT PAGES NO: 3

PLAN NOS: TAS/2/1799

TABLE NOS:

APPENDICES:

AUTHOR/S: N P Green

DATE: 20 January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

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COMSTAFF PROPRIETARY LIMITED

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

REPORT ON GRIDS CAI AND CAG

EL 5/63 PART 2

1. CAI Grid

1.1. Work Completed

1.1.1. Geology

This 4.2 line km grid initially installed over an airborne 'Input' EM was geologically mapped.

1.1.2. Geophysics

A ground magnetic survey was completed over the grid utilising a Geometrics Proton Precession Magnetometer.

1.1.3. Geochemistry

Selected rocks collected on the geological traverses were dispatched for assay. Soil sampling had been completed in the first half of 1982.

1.2. Results Achieved

1.2.1. Geology

Initial observations confirm that the bulk of the rocks at CAI are Crimson Creek Formation tuffaceous lithic wackes, mudstones and tuffs sometimes exhibiting turbiditic features such as rip up clasts, flame structures and graded bedding. These rocks appear to be hornfelsed and metasomatised in the northwestern portion of the grid owing to the proximity of the Meredith Granite less than 3 km to the north.

This suite of rocks is accompanied by minor microgabbro which is typical of the Crimson Creek Formation.

A green vesicular andesite lava occurs in the southeast corner of the grid. This may belong to the mid Cambrian, however, its significance has yet to be fully assessed.

No surface expression of mineralisation was encountered.

Geological maps have yet to be completed.

1.2.2. Geophysics

Diurnal variation corrections and plotting of profiles and contoured plans have yet to be completed.

1.2.3. Geochemistry

There are no highly anomalous values for any of the elements analysed that would immediately indicate mineralisation. Statistical interpretation of results together with contouring have yet to be carried out.

No results from the rock assays have been received.

2. CAG Grid

2.1. Work Completed

2.1.1. Geology

This 3.2 line km grid initially established over an airborne 'Input' EM anomaly was geologically mapped.

2.1.2. Geophysics

A ground magnetic survey was completed over the grid using a Geometrics Proton Precession magnetometer.

2.1.3. Geochemistry

C Horizon soil samples were taken every 20m using a hand auger and analysed for Cu, Pb, Zn, Ni, As, Sn and W.

Selected rock samples collected on the geological traverses were dispatched for assay for various elements.

2.2. Results Achieved

2.2.1. Geology

Preliminary observations indicate a sedimentary sequence of mudstones, siltstones, tuffaceous sandstones and tuffaceous lithic wackes (Crimson Creek Formation) very similar to that mapped along the South Huskisson Road to the north. In addition the sequence appears to be intruded locally by a medium grained equicrystalline feldspathic pyroxenite?

The only indication of possible sulphides was minor talus of highly ferruginous siltstone and ironstone.

Map compilation has yet to be completed.

...3

2.2.2. Geophysics

Diurnal variation corrections and plotting of profiles and contoured plans have yet to be completed.

2.2.3. Geochemistry

There are no highly anomalous values for any of the elements analysed that would immediately indicate mineralisation. Statistical interpretation of the results together with contouring of the results have yet to be carried out.

No results from the rock assays have been received.

N P Green
for Geologist

Approved by

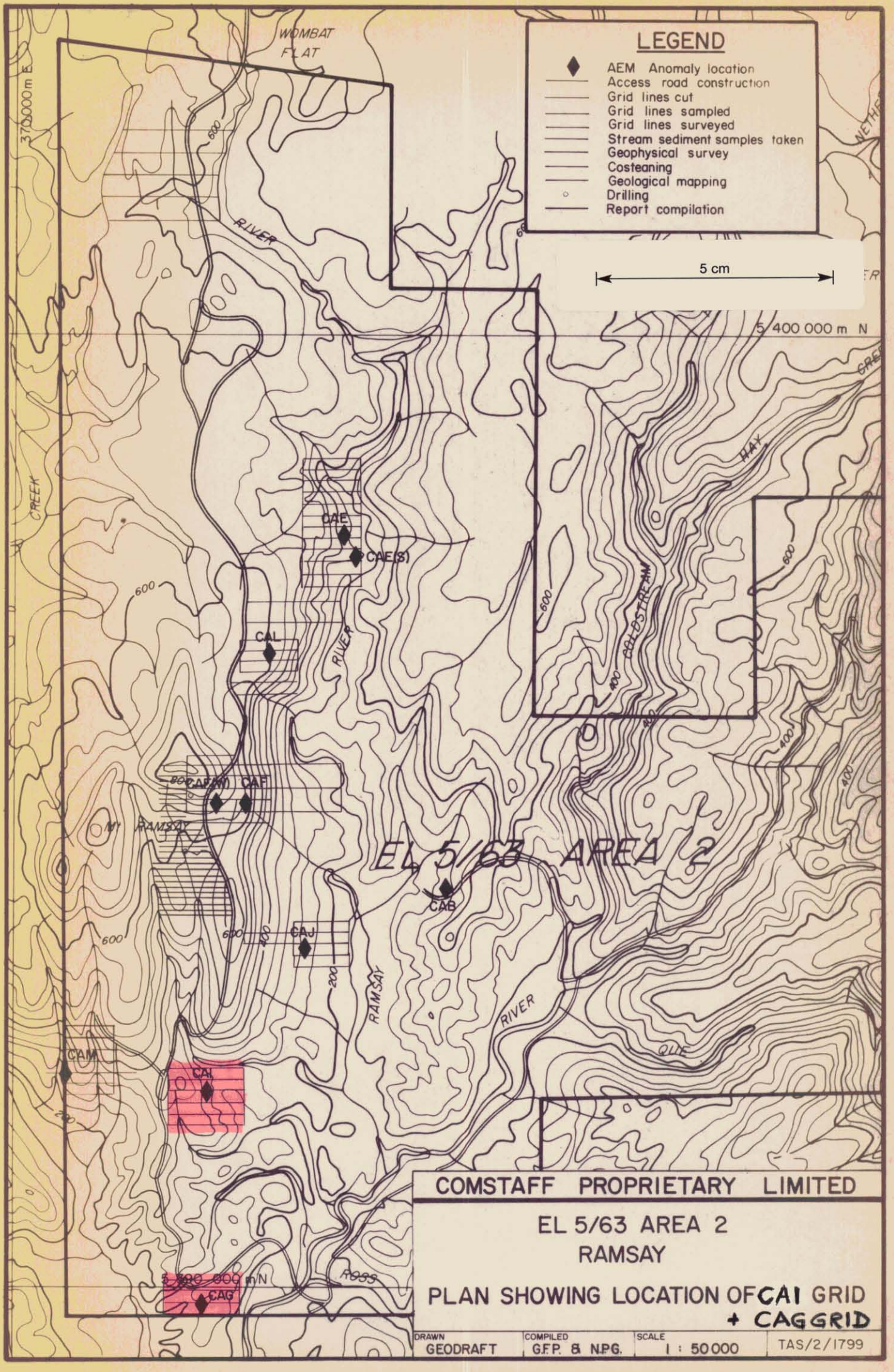
R J Kernick
Exploration Manager

NPG:AML

20 January 1982

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LEGEND
AEM Anomaly location
Access road construction
Grid lines cut
Grid lines sampled
Grid lines surveyed
Stream sediment samples taken
Geophysical survey
Costeaning
Geological mapping
Drilling
Report compilation
5 cm
WOMBAT FLAT
370 000 m E
5 400 000 m N
RIVER
CREEK
HAY
CAE
CAE(S)
CAL
CAF(N)
CAF
RAMSAY
CAB
CAJ
CAM
CAI
CAG
EL 5/63 AREA 2
COMSTAFF PROPRIETARY LIMITED
EL 5/63 AREA 2
RAMSAY
PLAN SHOWING LOCATION OF CAI GRID + CAG GRID
DRAWN GEODRAFT
COMPILED G.F.P. & N.P.G.
SCALE 1 : 50 000
TAS/2/1799

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D of M | A.O. | C.G. | E.O. | D.S.M.E.
Received 28 JAN 1982
Answered
DEPT. OF MINES
REF. No. 771/82

MICROFILMED

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

REPORT ON THE MOUNT BLOCK - SOCK CREEK AREA

EL 5/63 PART 3

VOL 7|9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheet : Burnie K55-03

COMMODITY/IES: Ag, Pb, Zn, Cu

TEXT PAGES NO: 3

PLAN NOS: TAS-2-2143

TABLE NOS:

APPENDICES:

AUTHOR/S: B E Anderson

DATE: 21 January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

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COMSTAFF PROPRIETARY LIMITED

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT

OF MINES FOR THE PERIOD ENDED

30 DECEMBER 1981

REPORT ON THE MOUNT BLOCK - SOCK CREEK AREA

EL 5/63 PART 3

1. General

The Mt Block section, part of the Mt Read Volcanic Belt, comprises a sequence of massive acid to intermediate volcanics, over which a work programme of detailed geological mapping and geochemical surveys are currently in progress.

The area is situated in the southern section of EL 5/63 Section 3 with a northern boundary along Animal Creek. (see map TAS-2-2143). It excludes the area east of Mt Block proper, where a full work programme of geological mapping, geochemical and geophysical surveys were previously undertaken and a final report completed. The area was found to be unprospective. (Hall 1979, DAC Report.)

2. Work Completed

2.1. Geology

Using tape and compass survey control, track and stream traverses have been geologically mapped. To date these include an HEC transmission line track (Mt Block Road) which extends 3.4 km northeast from the Murchison Highway, on the west side of Mt Block to its junction with Animal Creek. From a point, 2050m on Mt Block Road, a bulldozed access track (Steve's Road) extends east 3.6 km around Mt Block to DAC grid lines and has a short extension to the north at 455m (0.6 km).

Animal Creek has been surveyed 4.5 km with geological mapping in progress. In the southwest Farm Creek has been surveyed and geologically mapped 5.2 km from its junction with Tramway Creek, northeast toward Mt Block. Work is in progress on several tributaries into Farm Creek and in the southeast on Tullabadine Creek. Problems have occurred on Tullabadine due to changes in drainage patterns as a result of the Tulla Hydro Project. Much of the creek no longer exists although a major tributary (Fork Creek) has been surveyed and mapped 840m. The upper reaches of the catchment where access is difficult are still to be surveyed.

...2

2.2. Geochemistry

Stream sediment sampling is in progress with a sampling interval of 100m and samples being sieved to -80# and analysed for Pb, Zn, Cu and streams include Animal, Farm and Tullabadine Creeks plus significant tributaries draining the central Mt Block area.

3. Results Achieved

3.1. Geology

The rocks form a complex succession of massive acid to intermediate volcanic pyroclastics and lavas. Outcrop is generally good over most traverses although glacial till blankets a lot of outcrop particularly in the southwest corner.

The most common rock type is a massive rhyodacite. Distinctive by its pink colouration and small infilled chlorite fractures, it is moderately porphyritic with quartz and feldspar phenocrysts in a very fine grained matrix. A massive unit, it is very hard and extensively jointed in no predominant direction and exhibits no orientation or flow features in hand specimen. It is probably a shallow intrusive.

Interbedded with the rhyodacites are pyroclastic units of varying thicknesses commonly fine grained quartz - feldspar crystal tuffs, very fine ash tuffs and crystal lithic lapilli tuffs.

Tuffaceous andesites occur in an alternating sequence with rhyodacite between 2652-2780m on Mt Block Road. Andesitic dykes and flows - largely tuffaceous are also common along Steve's Road, with thick sequences exposed between 1260-1380m and 2875-3155m. Associated with rusty brown weathering characteristics and Fe enriched clay soil, they are very distinctive from the rhyodacites and quartz - feldspar tuffs which produce a leached pale surface colouration. Andesites have also been found in Farm and Animal Creeks.

A pyroclastic breccia, comprising angular clasts of cream - pink rhyodacite set into a fine Fe enriched rhyodacitic matrix has been noted in several areas. On Steve's Road it is very coarse but appears to become finer to the south, particularly in Fork Creek and Tullabadine suggesting greater distance from a vent area.

No sediments have been found although it is likely they will occur on Tullabadine as part of the Eastern Sequence (Hall 1979) comprising acid tuffs, greywackes and quartzites.

...3

Thin sectioning of the main rock groups present on Mt Block will be undertaken to refine description and composition and enable better correlation between the very weathered rocks with fresher samples.

3.2. Geochemistry

No sediment sample results have been received to date.

for B E Anderson
Geologist

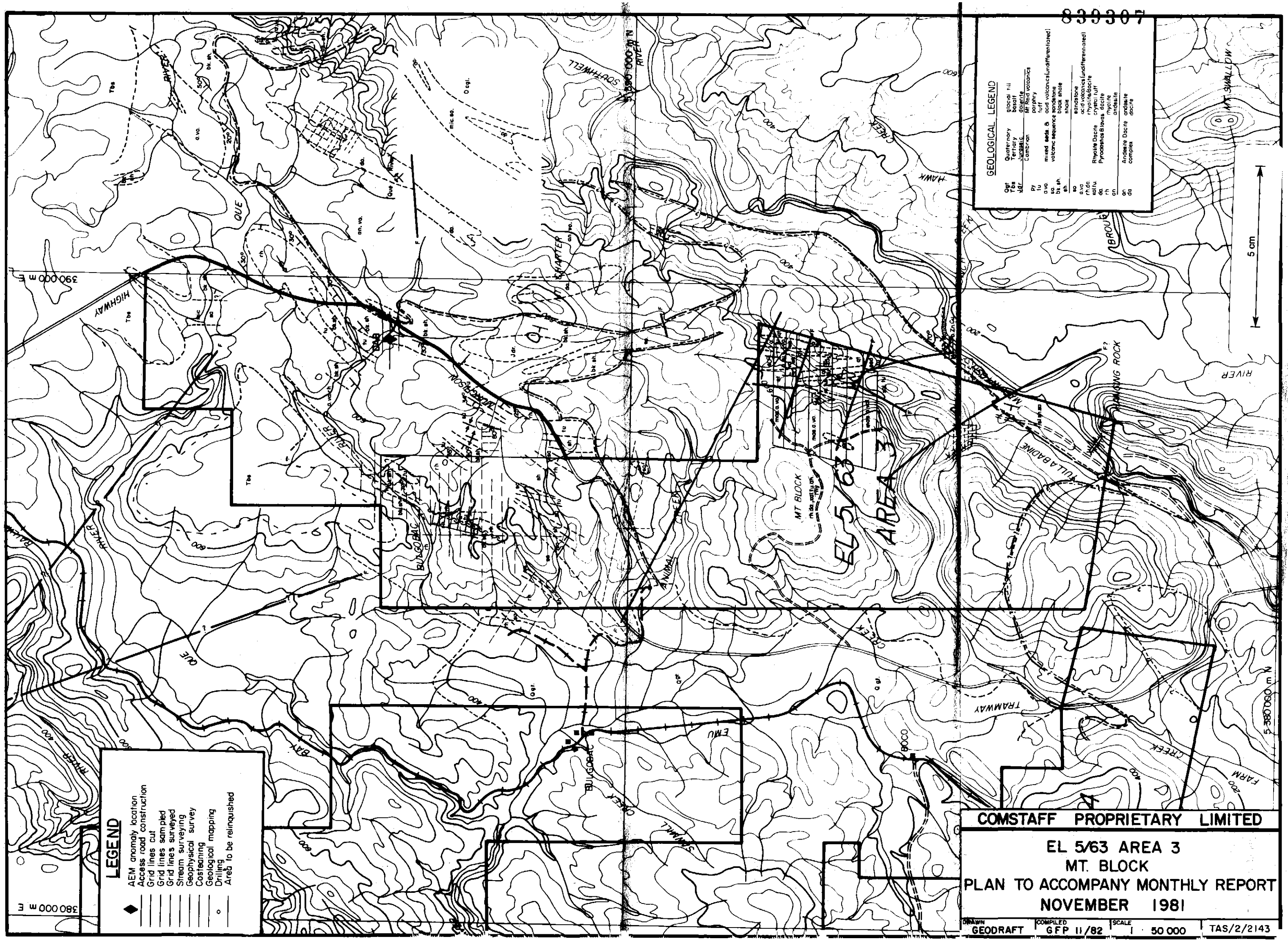
Approved by

R J Kernick
Exploration Manager

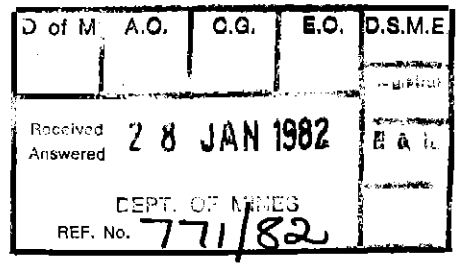
BEA:AML

21 January 1982

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GEOLOGICAL LEGEND
Qal Quaternary glacial till
Tba Tertiary basalt
Jdr Jurassic dolerite
Cambrian Mt Read volcanics
Py porphyry
Tu tuff
avo mixed sedis. & acid volcanics(undifferentiated)
ss volcanic sequence sandstone
bs. sh. black shale
sh. shale
ss sandstone
avo acid volcanics(undifferentiated)
rd.da rhyolite/dacite
cd.tu Rhyolite Dacite crystal tuff
dc Pyroclastic flows rhyolite
rh dacite
an ryolite
an andesite
dc Andesite Dacite andesite
dn complex dacite
LEGEND
AEM anomaly location
Access road construction
Grid lines cut
Grid lines sampled
Grid lines surveyed
Stream surveying
Geophysical survey
Costeaning
Geological mapping
Drilling
Area to be relinquished
390 000 m E
380 000 m E
5 360 000 m N
5 cm
SOUTHWELL RIVER
HAWK CREEK
BROWNS CREEK
MT SWALLOW
HIGHWAY
QUE RIVER
BLACKBOY CREEK
BLACKBOY RIDGE
MT BLOCK
EL 5/63 AREA 3
MT BLOCK CREEK
BULLA BADINE
LONG ROCK
TRAMWAY
FARM
EMU
BAY
RIVER
COMSTAFF PROPRIETARY LIMITED
EL 5/63 AREA 3
MT. BLOCK
PLAN TO ACCOMPANY MONTHLY REPORT
NOVEMBER 1981
DRAWN GEODRAFT
COMPILED GFP 11/82
SCALE 1 : 50 000
TAS/2/2143

839308



PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: SIX MONTHLY REPORT TO TASMANIAN DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

REPORT ON CHESTER - PINNACLES AREA

EL 5/63 PART 4

VOL 8/9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheet : Burnie K55-03

COMMODITY/IES: Ag, Pb, Zn, Cu

TEXT PAGES NO: 11

PLAN NOS: As per attached list

TABLE NOS:

APPENDICES: 2 - Drill logs

AUTHOR/S: G F Pigott

DATE: 21 January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

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COMSTAFF PROPRIETARY LIMITED

SIX MONTHLY REPORT TO TASMANIAN DEPARTMENT OF MINES FOR THE PERIOD ENDED 30 DECEMBER 1981

REPORT ON CHESTER - PINNACLES AREA

EL 5/63 PART 4

1. Work Completed

1.1. Geological Mapping

Bulldozed tracks, creeks and grid lines in the vicinity of the upper contact zone of the East Chester Andesites were geologically mapped and rock chip samples collected.

1.2. Geochemistry

Channel and rock chip samples were collected and analysed for base metals. The Ao soil values recorded on the East Chester Grid EAB, and on the original East Chester Grid were re evaluated and statistically appraised.

1.3. Diamond Drilling

Two diamond drill holes were completed, a total of 525m. The core was geologically logged and analysed for Cu, Pb, Zn, Ba, Ag, Au and S.

2. Results Achieved

2.1. Geology

The geology at grid EAB consits of a central zone of andesitic lavas and pyroclastics flanked by sequences of acid volcanics and sediments. The andesites are exposed in a broad anticlinal structure which plunges to the north east. Lavas dominate the sequence with pyroclastics prominent along the western flank. The lavas are micro-porphyritic in plagioclase, are flow banded and contain amygdales filled by deuteric quartz. The pyroclastics are mainly lapilli tuffs to almost agglomeratic in sections. Typically the rocks are massively bedded, heavily stained with iron and manganese and deeply weathered.

The eastern volcanic sequence appears to be essentially sub aerial with ignimbrites, ash fall tuffs, rhyolites and rhyodacites. Thin shaley units occur within the andesites close to the eastern contact. The Induced Polarisation surveys have not shown any distinct anomalies associated either with the contact zone or the overlying rocks.

...2

The western Volcanic-Sedimentary Sequence on the other hand was probably deposited within an intravolcanic basin. The sequence is dominated by water lain lithic and crystal tuffs with agglomerate, quartz feldspar porphyry and breccia. Interbedded with these pyroclastic units are grey, pyritic, cherty sediments, laminated pyritic grey siltstones and black pyritic shales. The sequence suggests rapidly changing conditions of deposition probably in a marine shallow water environment. Such a volcanic setting makes the area prospective for volcanogenic exhalative ores.

Pyritic ferruginous bedded cherts are exposed at the western end of costean 2950S and may be traced south into costean 3350S. Galena in thin quartz veinlets occurs within these cherty sediments. Sphalerite and chalcopyrite in silicified shale occurs at float at 2950S/1440W. To the north in costean 2540S and 2340S the interbedded siltstones, shales and fine tuff horizons are ubiquitously pyritic and silicified. Chloritic alteration patches within pyroclastic units also contain pyrite. A 6m chip sampled section in costean 2340S analysed at 0.14% Pb (with 15 ppm Cu, 75 ppm Zn and 560 ppm Ba) from a siliceous flow banded rhyolite. A 3m section in the same costean analysed at 0.14% Pb (with 75 ppm Cu, 690 ppm Zn and 240 ppm Ba) from weathered tuffaceous siltstone immediately overlying the andesite.

Petrological descriptions of two rocks collected from shallow trenches along the drill profile of EAB2 report the presence of sulphide minerals. The first, a sedimentary rock, is a finely bedded argillaceous siltstone interbedded with carbonaceous shale. It is pervasively pyritic with minor amounts of sphalerite and galena. The second is a sericitised rhyolitic fragmental and contains traces of pyrite, sphalerite, galena, barite and ? tetrahedrite.

2.2. Geochemistry

The contoured geochemical results for Cu, Pb and Zn are shown on the accompanying plans. A number of significant anomalies are indicated:

Anomalous Ao geochmical responses in Pb, Zn and Cu occur in soil samples over the contact zone between the andesites and the western volcanic sedimentary sequence. These responses have been confirmed by costean and auger sampling as originating from within the acid rocks and interbedded sediments rather than the andesites.

On line 2340S the anomalous Ao values from 1000W-1060W, viz:

	Pb	Zn	Cu	Ba	Mn
1000E	430	98	14	40	n/a
1020E	490	190	12	420	510
1040E	780	400	12	540	1540

can be related to rhyolitic tuffs and siliceous black shales exposed in the costean (see section on mineralisation) The Chief Divisional Geologist, East in a memorandum dated 5 March 1980 drew attention to the fact that the shales were not the sole source of the anomalous material, and pointed out that the peak values were in the volcanic units.

On line 2950S the costean did not extend far enough west to test the anomalous Ao responses from 1340W-1380W, viz:

	Pb	Zn	Cu	Ba	Hg (ppb)
1340W	1150	36	40	260	140
1360W	330	42	20	480	140
1380W	60	24	6	520	85

however, auger sampling over the zone confirmed the existance of the anomaly viz:

	Pb	Zn	Cu	Ba	Mn
1340W	860	210	24	220	4050
1360W	425	63	22	360	855
1380W	295	295	15	460	142

Distinctly anomalous Ao responses in Pb, Zn and Cu also occur in soil samples over the upper contact zone of the andesites on the south eastern flank of the anticline. Interlensed units of micaceous quartz sandstones, siltstones and black shales have been mapped in this area overlying the andesitic lavas and which in turn are overlain by trachytic lavas. Further grid cutting, mapping and sampling is planned as follow up exploration. A sedimentary lens within an otherwise volcanic sequence is a prospective geological unit for the concentration of exhalative base metal sulphides.

Anomalous Zn values within the andesite pile are now seen to be due to sphalerite mineralisation from evidence in EAB1. Further exploration is required to check these anomalies, particularily those associated with anomalous IP responses.

...4

The coincident Cu, Pb and Zn soil anomaly in the NW sector of the grid was also found when the Pinnacles grid was soil sampled. This pronounced response is in acid pyroclastic rocks which are leached and silicified. It requires testing by diamond drilling to determine the source.

2.3. Geophysics

The only strong IP anomaly on the EAB grid occurs over the contact zone between the andesites and the western Volcanic-Sedimentary Sequence. To a large extent the response is formational due to:

(a) A contrast in the geophysical properties between the massively bedded andesites and the finely bedded acid volcanics and tuffs, and

(b) units of pyritic carbonaceous shale units within the Volcanic-Sedimentary Sequence.

However, it is important to note that the black shales interbedded with the andesites on the southeastern flank of the anticline do not give rise to an IP anomaly. There are no anomalous IP patterns over the contact between the andesites and the eastern volcanic sequence.

It is evident that contributing factors to the anomalous IP responses along the north western flank of the andesites could be disseminated sulphide mineralisation within the volcanics as well as base metal mineralisation in the shales. Certainly the IP anomaly on line 2950S cannot be related to black shales but rather to finely bedded tuffs and pyritic cherts as exposed in the costean. Indeed the only shales noted on this line occur upslope from both the anomalous IP and Pb/Zn anomalies.

2.4. Diamond Drilling

2.4.1. DDH EAB1

The target for EAB1 was volcanogenic base metal mineralisation within acid tuffs and sediments overlying andesitic volcanics. It was planned to (1) determine the source of the anomalous Pb and Ba values in the soils and rocks; (2) traverse through the acid volcanic-sedimentary units and penetrate into the andesites; (3) determine the source of the IP response where there are contributing black shale units; (4) obtain subsurface samples below the zone of leaching to allow for an understanding of the dispersion of the elements in the volcanic sequence.

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Drilling Summary

Diamond drill hole EAB1 collared at grid co-ordinates 378887mE 5384505mN declined at -50° on azimuth 148°MN.

0- 61.60	Porphyritic lavas, a sequence of quartz-feldspar porphyritic rhyodacites and rhyolites with minor tuff-lava units.
61.60- 65.05	Pyritic dacite crystal-lithic and lapilli tuff.
65.05- 83.90	Crystal-lithic, ash-lapilli rhyolitic tuff.
83.90- 93.60	Crystal-coarse ash rhyolitic and rhyodacitic tuffs.
93.60-100.85	Lithic ash-lapilli dacitic tuffs with carbonaceous shale interbeds. Galena in a quartz vein at 95.75m.
100.85-102.80	Carbonaceous shale with ash and lapilli epiclasts.
102.80-108.60	Lithic ash-lapilli dacitic tuff grading up hole into more acid rhyodacitic tuff.
108.60-111.90	Carbonaceous shale with epiclasts of pyroclastic debris.
111.90-115.00	Pyritic, lithic, ash-lapilli dacitic tuff grading up hole into more acid rhyodacitic tuff. Galena in a fracture at 113.90m.
115.00-121.80	Crystal-lithic lapilli rhyolitic tuff grading down hole into a tuff-lava.
121.80-124.80	Pyritic, lithic, ash-lapilli dacitic tuff with subordinate carbonaceous shale material.
124.80-170.15	Carbonaceous pyritic shale.
170.15-176.55	Carbonaceous pyritic shale alternating with tuffaceous siltstone.
176.55-182.00	Tuffaceous arkosic sandstone grading to siltstone with interlayered carbonaceous shale and silty shale units.

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182.00-183.90 Brecciated shale.

183.90-202.70 Tuffaceous arkosic sandstone with minor interlayered thin carbonaceous shale unit.

202.70-213.90 Tuffaceous arkosic sandstone with thin dacitic tuff units.

213.90-219.30 Quartz-carbonate vein breccia zone.

219.30-238.20 Fine grained dacitic and andesitic tuffs interbedded with tuffaceous sandstone and silstone.

238.20-275.40 Lithic lapilli andesitic tuff with minor porphyritic andesite lavas.

275.40-276.90 Pyritic dacitic tuff.

276.90-283.10 Pyritic lithic-crystal, lapilli-ash andesitic tuff with sphalerite from 282.75-283.10m.

283.10-284.60 Vesicular porphyritic andesite.

284.60-295.50 Lithic andesitic tuff with pyrite.

295.50 End of hole.

The detailed drill logs and drill core analyses are appended, results are plotted on the accompanying sections.

The analytical results for the ground core samples are distinctly anomalous from a number of intersections but none recorded economic grade. The mineralisation appears to be stratigraphically controlled but there is no evidence of an exhalative source.

	Cu	Pb	Zn	Ag	Ba	Au
95.9 - 96.7	50	3750	1300	3.5	300	x
96.7 - 98.3	25	440	540	0.5	340	x
98.3 -101.2	15	500	935	0.5	270	0.008
101.2 -103.5	15	345	345	1.0	340	0.008
103.5 -106.5	15	80	750	0.5	450	0.017
106.5 -109.5	40	340	1700	0.5	450	0.025
109.5 -112.5	50	390	325	1.5	400	x
112.5 -115.5	25	310	1800	0.5	580	x

...7

The geological log over this intersection is as follows:

93.60-100.85 Lithic ash-lapilli dacitic tuffs with carbonaceous shale interbeds. Galena in a quartz vein at 95.75m.

100.85-102.80 Carbonaceous shale with ash and lapilli epiclasts.

102.80-108.60 Lithic ash-lapilli dacitic tuff grading up hole into more acid rhyodacitic tuff.

108.60-111.90 Carbonaceous shale with epiclasts of pyroclastic debris.

111.90-115.00 Pyritic, lithic, ash-lapilli dacitic tuff grading up hole into more acid rhyodacitic tuff. Galena in a fracture at 113.90m.

	Cu	Pb	Zn	Ag	Ba	Au
121.3 -124.00	100	8000	3.1%	6.5	360	x
124.00-126.7	60	1450	2500	2.0	310	x
126.7 -129.4	50	420	450	1.0	250	x
129.4 -131.85	50	450	510	1.0	250	x

115.00-121.80 Crystal-lithic lapilli rhyolitic tuff grading down hole into a tuff lava.

121.80-124.80 Pyritic, lithic, ash-lapilli dacitic tuff with subordinate carbonaceous shale material.

124.80-170.15 Carbonaceous pyritic shale.

	Cu	Pb	Zn	Ag	Ba	Au
168.3 -170.7	135	565	1550	1.5	180	0.025
170.7 -172.15	80	230	455	1.5	230	x
172.15-175.2	85	535	1700	2.0	230	0.008
175.2 -178.5	35	315	1750	1.0	260	x
178.5 -181.25	20	355	1650	0.5	280	x
181.25-184.5	40	1050	2250	0.5	130	x
184.5 -186.4	40	1800	4350	1.0	130	x
186.4 -188.7	90	550	6500	1.0	130	x
188.7 -191.1	35	280	1300	1.0	180	x
191.1 -193.4	20	150	345	1.0	160	x
193.4 -196.5	20	240	1000	0.5	660	x
196.5 -200.5	25	695	2400	1.0	200	x
200.5 -204.3	20	290	820	x	240	x
204.3 -207	65	490	1450	1.0	220	x
207 -210.5	65	260	1950	0.5	120	x

210.5 -213.6	40	285	1700	0.5	120	x
213.6 -217.5	60	1750	8600	1.0	9500	x
217.5 -220.2	50	345	3950	1.0	3300	x
220.2 -222.3	50	510	620	1.0	340	x
222.3 -224.6	280	2550	330	10.0	230	x
224.6 -225.95	270	1850	785	10.0	230	x
225.95-228.9	195	1300	2650	7.0	250	x
228.9 -231.1	150	2800	3750	2.0	260	x
231.1 -233.7	55	80	260	x	180	x
233.7 -236.7	85	470	2400	0.5	190	x

170.15-176.55 Carbonaceous pyritic shale alternating with tuffaceous siltstone.

176.55-182.00 Tuffaceous arkosic sandstone grading to silstone with interlayered cabonaceous shale and silty shale units.

182.00-183.90 Brecciated shale.

183.90-202.70 Tuffaceous arkosic sandstone with minor interlayered thin carbonaceous shale unit.

and

	Cu	Pb	Zn	Ag	Ba	Au
280.5 -283.3	80	505	2900	1.0	320	x

276.90-283.10 Pyritic lithic-crystal, lapilli-ash andesitic tuff with sphalerite from 282.75-283.10m.

283.10-284.60 Vesicular porphyritic andesite.

2.4.2. DDH EAB2

The target for EAB2 was the same geological contact zone, 400m along strike to the southwest. It was planned to (1) determine the source of the anomalous Pb, Zn, Cu and Ba values in the Ao and C horizon soil samples; (2) traverse through the acid volcanic-sediment pile which includes mineralised grey cherts and terminate in the andesites; (3) determine the source of the IP anomaly where there is no apparent contribution from black shale units.

Summary Log of DDH EAB2

0- 4.00	Triconed.
4- 7.35	Sericitised epiclastic tuffaceous sandstone, siltstone and carbonaceous silty shale. Blebs of Galena in rhyolitic lithic clasts.
7.35- 13.75	Lithic (vitric?) lapilli-ash dacitic tuff. Heavily sericitised with 5% finely disseminated Pyrite.
13.75- 16.35	Bedded fine to course crystal-lithic tuffs, redeposited into epiclastic sandstone in layers. With 1-2% blebs Galena, Sphalerite and Pyrite.
16.35- 20.70	Crystal-lithic, ash-lapilli dacitic tuff. Heavily sericitised with 3% disseminated Pyrite and minor blebs Sphalerite and Galena.
20.70- 23.65	Lithic lapilli-ash aquagene dacitic tuff. Heavily sericitised.
23.65- 28.15	Interbedded coarse ash dacitic tuff and tuffaceous sandstone with 2-3% finely crystalline Pyrite.
28.15- 35.85	Alternating tuffaceous sandstone and finely bedded tuffaceous siltstone and shale.
35.85- 38.90	Lithic-ash aquagene redeposited tuffs.
38.90- 39.75	Carbonaceous silty shale with 5% disseminated Pyrite.
39.75- 50.45	Lithic lapilli-ash, fine ash and course ash aquagene tuffs with interbedded tuffaceous siltstone.
50.45- 51.25	Crystal-lithic, ash lapilli, rhyolitic tuff.
51.25- 74.20	Interbedded tuffaceous sandstone, tuffaceous siltstone, carbonaceous silty shale with interlayered fine ash and lithic rhyolitic tuffs. 2-3% Galena and Sphalerite with Pyrite and Chalcopyrite.

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74.20- 78.40	Crystal-vitric, ash, grading down hole to lapilli, rhyolitic tuff with 2-5% Pyrite, Galena and Sphalerite, with minor Chalcopyrite.
78.40- 83.85	Tuffaceous sandstone with fine ash tuff and carbonaceous shale layers.
83.85- 92.25	Crystal-vitric rhyolitic ash tuffs with interlayered tuffaceous sandstones. Heavily sericitised with average 5% Pyrite and Galena.
92.25-100.85	Interlayered crystal-lithic, ash; lapilli-ash and vitric fine ash tuffs redeposited into sedimentary epiclastic layers in sections.
100.85-171.60	Plagioclase crystal ash Rhyodacitic tuff with prominent flow banding. Iron staining is common.
171.60-181.10	Feldspar crystal dacitic tuff with fine grained ash layers with Pyrite and Sphalerite in thin veinlets.
181.10-197.70	Lithic lapilli andesitic tuff with 1% Pyrite Sphalerite and Galena.
197.70-201.00	Porphyritic vesicular andesitic lava.
201.00-202.20	Lithic lapilli andesitic tuff.
202.20-229.50	Vesicular porphyritic andesite lava, with minor lithic lapilli-ash tuffs.
229.50	End of hole.

Analytical results are lower than those in EAB1. Anomalous values in Zn with lesser Pb occur in the mixed tuffite and tuff sequence in which the hole is collared. Fine grained disseminated and fracture controlled sulphides occur throughout this sequence in minor amounts.

3. Conclusions and Recommendations

The diamond drilling has confirmed the geological interpretation that the Volcano-Sedimentary Sequence overlies the andesites and that in the area drilled, the sequence dips and faces to the northwest towards a synclinal axis. The source of the anomalous soil geochemical values with coincident IP effects has been identified as being sub-economic sulphide mineralisation. Moreover, the drilling has indicated that EAB2 traversed a Volcano-Sedimentary Sequence that was closer to the west source than did EAB1.

...11

Exploration along the northwestern acid volcanic sequence should be intensified to the south, towards the presumed vent, where geochemical soil anomalies require testing by diamond drilling.

The Zn soil anomalies and IP responses over the andesite pile require more detailed exploration. Intermediate grid lines will be established to allow for follow up sampling and mapping to be carried out.

The sedimentary lens within the andesitic and trachytic volcanics along the eastern margin of the andesitic pile should be explored for base metal sulphide mineralisation. The EAB grid will be extended northwards to the tenement boundary to allow for this work to be carried out.

for G F Pigott
Senior Geologist

Approved by

R J Kernick
Exploration Manager

GFP:AML

21 January 1982

EAB 1

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	TRICONED										
	6.00	0.60	0.56	93.4 NQ	6.00	Quartz feldspar porphyritic rhyolite and dacite lava. Strongly porphyritic with moderate to dense concentrations of plagioclase phenocrysts and varying amounts of quartz phenocrysts in a micro granular feldspathic matrix. Cream sections are rhyolitic with q:f :: 2:1 Green-brown sections are rhyodacitic to dacitic with q:f :: 1:3 Quartz phenocrysts are 3-4 mm in dia. Plag phen are 1-3 mm along c axes. Strongly quartz eye sections have a "quartz-eye" texture.	strongly weathered cream sections partly silicified. Ground mass in rhyolitic sections are silicified. The grn in the dacitic sections is chloritic.		strongly layered with flow banding and auto brecciation along pseudo bedding.	hematite developed along fractures	
	6.60	0.90	0.60	66.7							
	7.50	0.80	0.83	103.75							
	8.30	0.90	0.99	110							
	9.20	0.80	0.89	111.25							
	10.00	2.30	2.46	106.95							
	12.30	0.40	0.53	132.5		11.40 predominantly rhyodacitic, brecciation along original banding common. Porphyroidal and "pyroclastic" texture q:f :: 1:2.			6.50-65° brecciation along flow banding. 7.40 60° bore. Moderately fractured 8.20-55° bore along layering 9.40 50° flow banding; devitrification of original vitric ground mass. 10.20 60° 20cm dacite layer in 10.70 heavily micro fractured rhyolite seq. 8° fract with preferential zeolite. 11.40 30° pyroclastic brecciation with quartz eye phenocrysts throughout.		
	12.70	0.40	0.32	130	12.70	Feldspar porphyritic dacitic tuff-lava. Strongly chloritic due to concentration of plagioclase phenocrysts and feldspathic crystal clasts. q:f :: 1:4. Scatt quartz phenocrysts in lava sections, rare in pyroclastic sections green to greenish-brown in colour.	chloritic alteration of grn gives pale greenish colour.		12.70 45° planar foliation 13.10 base. both lava flow and blocks of pyroclastic textures (por. vs in breccia "matrix") material. 14.03 35° flow banding or layering 14.95 15° strong fract	12.70 dk brown fe material along fract, in concentrated patches and as an infill to pyroclastic blocks	
	13.10	0.40	0.24	60							
	13.50	1.20	1.20	100							
	14.70	0.30	0.81	115.8	15						

SCALE 1:100 (1cm = 1 m)

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DRILLHOLE LOG FOR DDH EAB 1

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8300394 VOL 8 APPENDIX 1

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	15.40	0.20	0.20	100
	15.60	0.90	0.82	91.1
	16.50	1.90	2.23	117.4
	18.40	2.30	1.13	49.1
	20.70	2.40	2.47	102.9
	23.10	1.10	1.22	110.9
	24.20	0.80	0.85	106.25
	25.00	0.40	0.34	85
	25.40	0.40	0.49	122.5
	25.80	1.10	1.08	98.2
	26.90	0.50	0.56	112
	27.40	1.70	1.90	111.9
	29.10	0.60	0.43	107.5
	29.50	2.00	2.10	105

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
15.10	Quartz-feldspar porphyritic rhyolite cream to pale green siliceous volcanic, characterised by an abundance of quartz phenocrysts. Plagioclase phen are sericitised and partially obscured by alteration. q:f varies from 1:1 to 1:2. Groundmass has a brecciated texture, in fine grained felsic material	Silicification often brecciation - did not affect quartz phenocrysts		moderately fractured with fine hairline intersecting fract. 1.5	hematite staining on fractures.	
17.60	Quartz-feldspar porphyritic rhyolite tuff-lava q:f :: 1:4 pervasively brecciated textures	pale grn chlorite alteration in grn. silicified		17.40 5°f	fractures with clay + hematite	
18.15	Quartz-feldspar porphyritic rhyolite lava. q:f :: 1:1 cream, with prominent quartz-eye phen.			18.10 2°f	allow with cut hairline fract	
18.85	Lithic-crystal-rhyodacitic ash-lapilli tuff (or poss. a tuff lava breccia) lapilli of q-f por ash in chl. dacitic grn densely packed in poss polymodal. Crystals are of quartz and plag- pseudo-porphyritic texture.	19.5 deeply weathered, Candle until hematite staining		18.85	Pyroclastic "brecciated" structure - pervasive.	
20.75	Feldspar-quartz porphyritic rhyolite q:f :: 2:1 phen set in granular q-f grn cream colour	silicified - partly weathered		20.75		
21.30	Quartz-feldspar porphyritic rhyodacite Strongly flow textured. q:f :: 1:2	green colour in grn - chlorite pale green + brown mineral in "pumice" matrix		21.30 60° cut to hairline fract. 21.50 55°f 21.70 3° fract brecciated texture > 22.00 60°f flow textured		
22.30	Quartz-feldspar porphyritic rhyolite tuff-lava or lava breccia with pyroclastic textures. cream, white, pale green interlayered sections with lithic fragments of cream quartz porphyritic material enclosed in pale green aphanitic dacitic material	white sections have 2° silicification pale green grn may be due to chl/ser alt.		22.30 moderate secondary late fractures cut core infilled with hematite cut hairline fracts		
24.20				24.20 5° f 24.35 25° f		
25.00	Quartz-feldspar porphyritic rhyodacite lava Strongly porphyritic with dense sections showing pyroclastic brecciation textures. Random green. Int with cream rhyolitic brecciated inclusions q:f :: 2:3. Groundmass is finely granular feldspathic + ? minor chl.	pl chloritic alteration in pale green grn. Clay alt in brecciated zones.		massive to pseudo-brecciated. 26.60 10° brec + fract.	25.80 Remnant fly cast in hematite fract indicates that 20% Fe minerals in fract once after fly.	
28.55	Quartz-feldspar porphyritic rhyolitic lava Strongly porphyritic pale green to cream with coarse phenocrysts 2-3mm dia. q:f :: 2:1 "quartz eye" texture prominent.	weathered & clay alteration pale cream silicification along early ? cooling fractures		27.20 10° brec + fract. Massive with moderately bevelling intersecting fractures cut by late fract.		

SCALE 1:100 (1cm = 1 m)

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	31.50	1.50	1.54	102.7
	33.00	1.20	1.37	114.2
	34.20	0.80	0.82	102.5
	35.00	1.70	1.82	107
	36.70	0.60	0.77	128.3
	37.30	0.80	0.85	107.5
	38.10	1.20	1.33	110.5
	39.30	0.60	0.75	125
	39.90	0.60	0.66	110
	40.50	1.20	1.50	125
	41.70	0.90	0.95	105.5
	42.60	0.40	1.70	425
	43.00	3.50	3.32	94.8

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					Limonite on fractures	
30.70	Quartz-feldspar lithic-crystal tuff or tuff-lava. Locally clastic to porphyritic textures. Lithics or lava clasts of q-fpr rich and fg rich beams more typically porphyritic lava type down hole. q:f :: 1:3 rhyodacitic in composition	clay alteration and weathered limonite along fractures		Fractured & Veined i. pyroclastic text dominant 31.50 60° f.t. Heavily micro fractured 32.30 35° q.v. and quartz veined		
32.60	Quartz-feldspar porphyritic rhyodacite and rhyolite lava sequence. Pale green to beam will contain more felsic sections. Strongly porphyritic with plag and quartz phen q:f :: 1:1 in f-mg granular vitric almost shard like ground mass. Felsic cream rhyolitic sections have e.g. quartz phen. q:f :: 2:1 These sections are subordinate to the plag porph. rich sections	more clay/chlorite alt in gm. Weathering effects along fractures as limonite and clay alt. silicified in rhyolitic sections		Massive to flow layered. Moderately fractured		
		beam weath. Chlorite in the matrix and along fractures while exhibits pale brown limonite	37.60	32.20 15° fract 38.75 55° brec along flow banding 39.30 2° irreg non limonitic fract.		
	ch403 25cm felsic porphyritic dacite : recrystallised plag phen, subordinate quartz phen in gm chl. gm.	clay and chlorite in dacite				
40.90	Feldspar-quartz porphyritic rhyolite. Phenocrysts of quartz eyes and subordinate plag in a foliated lt green-beige gm. Beige gm sections may indicate fr feldspar. q:f :: 3:2.	beige-beam mottled in foliated gm highlights flow textures.		41.15 fr @ 70° flow banded and brecciated along 42.30 fr @ 60° lineation Strong planar foliation 43.15 fr @ 25° Secondly fractured	Fe oxide along fractures.	
44.00	Quartz-feldspar Porphyry a massive plagioclase feld. porphyroidal rock consists of coarse	Fresh, unweathered except for limonite along fractures		massive		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	46.50	0.90	0.90	100
	47.40	0.60	0.73	121.6
NG FRI	48.00	1.20	1.10	91.6
	49.20	2.10	2.13	101.4
	51.30	0.50	0.45	90
	51.80	2.10	2.10	100
	53.90	0.60	0.83	138.8
	54.50	0.90	0.88	97.7
	55.40	2.20	2.52	114.5
	57.60	1.70	1.79	105.3
	59.30	0.70	0.82	117.1

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
46	plagioclase of white plag with scattered round plag. of quartz eyes q:f :: 1:3. Set in a grey-green fine grained groundmass - veinlets from ultra fg to 5mm banded.	yellow sericitic grains and patches in chloritic fine groundmass. dk green chlorite lined along banded layers		46.40 fr @ 1° 46.50 fr @ 20° - quartz veinlets 47.35 fr @ 35°	moderate secondary fractures with lt green sericitic clays and some limonite along fractures	
47						
48						
48.40	Altered shear zone. Sheared sericitised volcanic with relict quartz phenocrysts. lt green colour	Sericitic with total destruction of plag. phen.		48.40 Strongly sheared		
49						
49.10	Sheared porphyritic rhyodacite. Cream-brown to lt green. Quartz eyes prominent and unaffected.	Sericitic with total destruction of plag. phen. weathered plag phen very cream. Groundmass is well preserved		49.10 Sheared, fractured 49.60 0° fr		
50						
50.00	Quartz-feldspar porphyritic rhyodacite. Quartz eye crystal tuff - lavas). Densely porphyritic to dense aggregation of plag. phenocrysts (white) with subordinate quartz (clear) q:f :: 1:3 in a green-brown when stained groundmass.	chloritic gm. Plag phen very from relatively fresh to heavily sheared and altered to sericite.		50.80 flow layered to 'auto' brecciated volcanic structures cut by heavily limonite quartz vein along fractures 51.05 30° fl		
51						
52		52.30 Weathered with haematite Fe & crystalline quartz in bleached cream dense plag phen. section				
53						
54				54.0 flow banding structure in groundmass quartz veined + limonite		
54.0	Feldspar-quartz porphyritic rhyodacite. Quartz eye phen predominate in fg flow banded lt gn. gm of devitrified glass.	Siliceous. limonite along quartz veins and in fractures				
55						
55.15	Feldspar porphyritic rhyodacite & minor quartz phen	Chlorite gm when stained strong		55.60 4° Sh 55.80 20° Sh		
55.45	Weathered Shear Zone. Feldspar porphyritic volcanic - densely packed eg phen (or crystals in tuff)	Heavily altered to clay and limonite		Preferentially weathered along limonite encrusted shear planes		
56						
56.70	Weathered quartz-feldspar porphyritic ? rhyodacite, quartz eyes well preserved, plag phen vary from minor to total alteration. Weathering mainly along quartz veins and fractures.	56.70 sheared plag phen altered to sericitic clay. Ground mass generally less stained, partially originally chloritic in sections.		moderately intense quartz veining fractured and locally cut by late iron encrusted fractures		
57						
58						
59						
59.40	Feldspar-quartz porphyritic rhyolite lava. med gr 1-2mm phen of orange-white plag and angular					
60						

SCALE 1:100 (1cm = 1 m)

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	60.00	0.60	0.62	103 3
	60.60	0.30	0.30	100
	60.90	0.60	0.76	126.7
	61.50	0.90	0.93	103 3
	62.40	0.70	0.80	114.3
	63.10	0.80	0.84	105
	63.90	0.60	0.61	101.7
	64.50	2.00	2.13	106.5
	66.50	2.50	2.50	100
	69.00	1.50	1.54	102.7
	70.50	3.00	3.09	103
	73.50	2.20	2.30	104.5

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	coarse quartz (and quartz eye) scattered in a lt grey v fg siliceous aphanitic mass. q:f :: 1:1	orange colour in fold plan probably due to iron		Planar to wavy moderate to strong moderate later fractures infilled limonite	limonite along fractures	
	from 61.40 feldspar phenocrysts predominate - dacitic	trace chloritic and iron stained		61.60		61.60
61.60	Pyritic dacite crystal-lithic ash-lapilli tuff. Dark green pyroclastic volcanic composed of dk green lithic clasts of dacite - andesite composition with irregular plagioclase and subordinate quartz crystals in a light-dark green chloritic matrix.	Weathered, heavily iron impregnated also fractures		unsorted massive pyroclastic texture	disseminated pyrite and chloritic alteration.	3%
		62.35 heavily chloritised with pyrite associated & alteration				
	Interlayered dacite and rhyolite crystal-lithic lapilli tuffs.	strong chloritic alteration in dacitic sections		64.20 20° fr fractured 64.50	fine crystalline pyrite in dacitic sections	64.20 1%
64.20				64.70 20° qv (strongly quartz veined		
65.05	Crystal-lithic, and lapilli rhyolitic tuff	fresh, cut by vuggy minor quartz veins		65.05		65.05
	Angular coarse grained lithic clasts of dominantly orange-brown quartz-feld porphyritic rhyolite with fg rhyolite and laminar dk green dacite. ie clasts of both types seen above in hole. Crystals are angular coarse grains of white plag feldspar and rounded quartz eyes, concentrated in variable amount from dense to very scattered. Matrix is dark grey-green chloritic where fresh, stained orange brown where weathered. Pyroclasts are polygonal, rare lapilli are about block size of siliceous porphyritic rhyolite.	66.85 Silicified and subsequently weathered.		strikingly devious pyroclastic texture	limonite along secondary fractures (joints)	
		68.20		67.15 55° layering	botryoidal goethite in quartz veins after pyrite	
				moderately quartz veined		
				71.60 0-3° secondary fracture		
				73.65 25° wispy quartz vein		
		73.80 grandmom to pyroclasts				

SCALE 1:100 (1cm = 1 m)

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
							is light brown-orange stained				
	75.70	3.00	2.96	98.7	76						
					77						
					78						
	78.70	3.00	3.04	101.4	79						
					80						
					81				81.25 20° shearing 81.70 50° layering + flow banding 82.0 40° Fr		
	81.70	3.00	3.07	102.4	82						
					83						
					83.90	Crystal, coarse ash rhyolitic tuff. coarse crystal of predominantly plag. feldspar (white) with round quartz crystal in a brown f-m grained ground mass - made up of interlocking devitrified shards? or glass.	brown-yellow colour after siderite? or similar mineral staining obliterates any evidence of K feldspar.				
	84.70	2.50	2.51	100.4	85				84.70 0° fractured quartz vein		
					86				86.45 0° very limonite filled fractures		
					87		86.85 weathered. Dk brown limonite along fractures		86.85 Fractured		
	87.20	2.50	2.55	102					87.80		
					87.80	Crystal coarse ash rhyodacitic tuff.	iron stained along fractures		minor fracturing		
					89	coarse crystals of plag feldspar - very common well defined white to cloudy diffuse altered. Matrix where fresh is grey to buff of fine to coarse ash material	88.75 generally harsh with minor iron staining along fractures		89.45 15° qv minor quartz veining		
	89.70	3.00	3.04	101.4	90						

9633 8

SCALE 1:100 (1cm = 1 m)

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	92.70	1.30	1.13	86.9
	94.00	0.40	0.20	75
	94.40	0.50	0.50	100
	94.90	1.80	1.74	96.7
	96.70	1.60	1.60	100
	98.30	2.20	2.22	100.9
	100.50	0.70	0.60	85.7
	101.20	2.30	2.16	93.9
	103.50	3.00	3.00	100

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
91		90.90 brown progressively more iron stained				
91.75	Carbonaceous shale with lithic tuffaceous pyroclasts at top	91.75 iron stained, indurated	c.c.	91.75 60° contact welded		
92 92.00	Crystal coarse ash-lapilli rhyolitic tuff Clasts densely orientated & predominantly platy plag with minor quartz. Matrix of green-brown ash with minor carbonaceous mud. Subaqueous deposit	92.00 iron stained, indurated brown-orange stained hematite? along fract or as magnetic pellets.		92.00 65° contact oxidised with increase in pyroclasts 92.60 30° fract		
93				(end crystal tuffs) (start lithic dacitic tuffs)		
93.60	Lithic ash lapilli dacitic tuff with scattered crystals. Lithics of green fg dacitic volc, wispy angular shape with coarse crystal plag and rare quartz. Matrix is heavily weathered	Strongly weathered, iron stained and friable due to clay development		Fractured mineral quartz vein		
94				Sheared, quartz veined		
94.00				95.75 15° quartz vn inc in hydrothermal activity	Coarse galena in quartz vein 95.75-95.80	2%
94.40				96.10 20° fract		
94.90				96.25 wavy contact 96.50 75° q-c vn 2nd generation vein @ 15° wavy contact		
95						
96		quartz veined, fractured and sericitised				
96.35	Carbonaceous shale with g-f pos ash bands, lapilli	quartz veined and fractured				
96.70				97.10 10° qvn along fract inc in hydrothermal activity		
96.80	Lithic lapilli-ash dacitic tuff or tuffaceous (epiclastic) lithic wacke Sub rounded to sub angular green fg dacitic volc, tuffaceous texture and black shale lithics in a green dacitic to grey fractionally carbonaceous ash matrix.	heavily clay altered, brecciated and quartz veined intense weathering, effect along qvn.		quartz veined		
97						
98				98.60 50° B 98.60 35° Fract quartz-hematite vn 98.75 45° quartz vn 99.15 25° qv		
99						
99.70	Carbonaceous shale with pyroclastic and epiclastic lithics	iron stained weathered iron stained in fractures		99.70 20° wavy contact Fractured		
100.15	Lithic ash-lapilli dacitic tuff or tuffaceous epiclastic lithic wacke	iron stained, heavily clay altered along fractures		Fractured		
100						
100.85	Carbonaceous shale. Black carbonaceous shale matrix to ash and lapilli pyroclasts and epiclasts. Brecciated			100.85 bedding Strongly fractured - brecciated with infilling vein quartz		
101						
102				102.25 bedding 102.30 60° B 102.50 75° bedding cleaved 102.80 90° contact	evident pyrite along cleavage 102.25-102.80	3%
	-102.25 Carbonaceous cherty tuffaceous Siltstone.	indurated (silicified?)				
102.80	Lithic ash-lapilli rhyodacitic to dacitic tuff becoming more lapilli in clast and matrix components down hole. Lithics of green fg dacitic volc, wispy angular shape with coarse crystal plag and rare quartz. Matrix is heavily weathered. Coarse lapilli of pumice. g-f pos ash with minor med. clasts of f. pos andesite, - plag and quartz crystals	brecciated & silicified 103.30		103.10 65° 10cm carbonaceous shale unit 103.45 35° with dacitic pyroclasts 104.0 2° fr		
104		hematite along fractures		104.30 float of g-f pos Ash. 104.70 Blocks of rounded g/y clasts fg silic ? volc or sed		
105	104.60 lapilli predominantly of q-pos andesite	104.60				

SCALE 1:100 (1cm = 1 m)

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DRILLHOLE LOG FOR DDH .....

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	106.50	3.00	3.04	101.4
	109.50	1.40	1.54	110
	110.90	0.90	0.53	58.8
	111.80	0.70	0.77	110
	112.50	0.50	0.56	112
	113.00	2.50	2.46	98.4
	115.50	0.90	0.93	103.3
	116.40	0.90	0.86	95.5
	117.30	0.90	1.02	113.3
	118.20	1.30	1.25	96.1
	119.50	1.80	1.78	98.8

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
106	- the matrix of chert in dk green and chloritic with scattered dacitic clasts. Bands, blebs & boulders of grey cherty vole (or fg siliceous tuff) occur at 106.50, 105.15, 106.50, 107.25. Scattered crystal cfg plag die out down hole.	105.45 Iron stained - brown. 107.10		105.15 Block & boulder bedded gy silic ash 105.90 accum of siliceous clyolitic blocks and lapilli 106.50 Por gy silic ash block 107.25 Bbld or boulder gy cherty tuff		
107						
108						
108.60 109 108.95	Carbonaceous epiclastic conglomerate Carbonaceous siltstone and shale. Interbedded dk gy black interlayered siltstone with shale partings with interclumped minor units of lithic clyolitic lapilli tuff, and crystal ash tuffs. Increase in pyroclastic material down hole	108.60 volcaniclasts chloritized 108.95 Undisturbed 109.80 Heavily fracturized 110.25 Iron staining in pyroclastic units		108.60 50° contact fine in Pyroclasts 108.95 unsorted, poorly bedded well bedded and cleaved. 109.50 15° gv 109.65 10° gv 109.90 35cm unit coarse lithic tuff 110.25 110.25-35° crystl tuff layer 50° unit of crystl tuff	oxidized Pyrite in Carbonaceous 108.60 shale along cleavage and fractures. 2% Massive pyrite fg 109.90 10% 110.25 dissem fg core along fractures 5%	
110						
111 111.90	Crystal-lithic lapilli clyolitic tuff Lithics of g-f gr clyolite, & por anhedral crystal plag, quartz	Iron stained bleached + chloritized		110.90 Fractured 111.40 50° sharp contact Pyroclastic decrease in Pyroclasts		
112 112.60	lithic ash / lapilli dacitic tuff. Sub rounded polymodal lapilli of green f.g dacitic? & grey fg clyolitic? rocks in ashy flow banded matrix. Fractured matrix and clasts with disseminated Pyrite	yellow-green sericitic alteration		112.60 Foliated & flow banding or layering acid int	disseminated euhedral pyrite - very fine grained 10% - Calcite crystal along fractures	
113						
114		114.00 Iron stained, weathered 114.20 Fractured		113.90 15° Contact 114.50 30° flow banding		
115 115.00	Crystal-lithic lapilli clyolitic tuff with units of pyroclastic tuff-lavas. Polymodal lapilli clasts of f-g pm clyolite, coarse plag and occasional quartz crystals in quartz spary fine crystal ash matrix. Clyolitic tuff lavas very close massive to pyroclastic breccias of felt-quartz porphyritic rock with a fine grained siliceous matrix. Tuff lavas are:- 116.20 - 117.35 ; 118.70 - 119.70.	115.50 Iron stained, chloy altered 116.15 silicified iron stained along fractures 117.35		115.00 Transition via phyric crystal tuff int 115.50 65° contact acid 115.25 Re worked, rounded lithics 50° Iron gy cherty rhyolitic unit with pyroclasts 117.30 35° fract. 118.70 65° minor F	core pitchy fg 115.95 5% 116.10	
116						
117						
118						
119						
120		119.60 Fractured, iron stained				

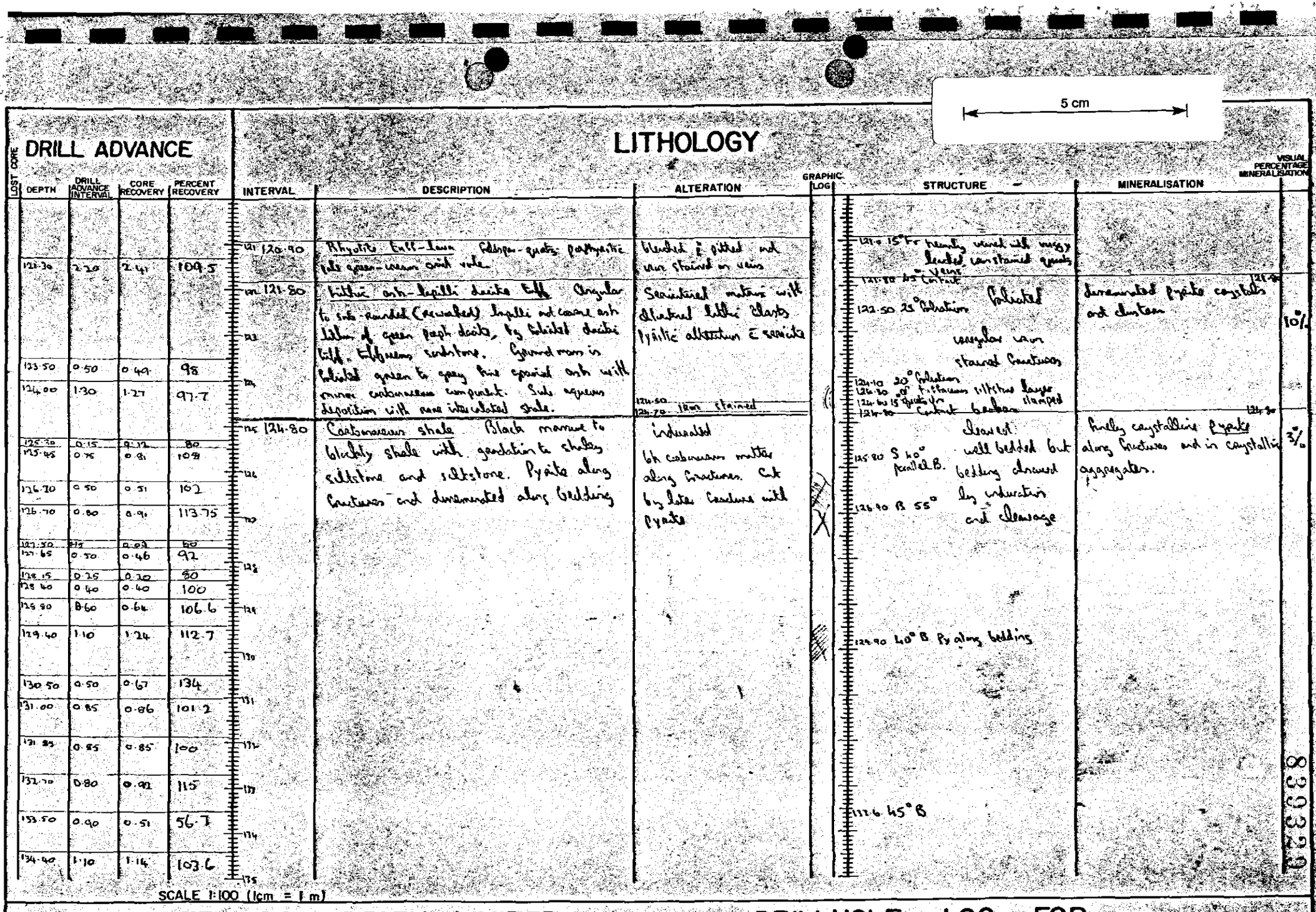
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DRILLHOLE LOG FOR DDH .....

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DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
122.30	2.30	2.41	104.5
123.50	0.50	0.49	98
124.00	1.30	1.27	97.7
125.30	0.15	0.12	80
125.45	0.75	0.81	108
126.20	0.50	0.51	102
126.70	0.80	0.91	113.75
127.50	0.15	0.03	20
127.65	0.50	0.46	92
128.15	0.25	0.20	80
128.40	0.40	0.40	100
128.80	0.60	0.64	106.6
129.40	1.10	1.24	112.7
130.50	0.50	0.67	134
131.00	0.85	0.86	101.2
131.85	0.85	0.85	100
132.70	0.80	0.92	115
133.50	0.90	0.51	56.7
134.40	1.10	1.14	103.6

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	135.60	0.50	0.41	82
	136.10	0.30	0.15	50
	136.40	0.40	0.31	77.5
	136.80	0.40	0.33	82.5
	137.20	0.60	0.95	158.3
	137.60	1.25	0.91	72.8
	139.05	0.95	0.79	83.1
	140.00	1.00	0.64	64
	141.00	0.15	0.20	133.3
	141.15	0.65	0.85	130.8
	141.80	0.30	0.23	76.7
	142.10	0.25	0.20	80
	142.30	0.26	0.19	76
	142.75	0.60	0.50	83.4
	143.25	0.65	0.54	83
	144.00	0.40	0.60	150
	144.40	1.10	0.83	75.5
	145.50	1.60	1.71	106.9
	147.10	1.40	1.40	100
	148.50	1.40	1.41	100.7
	149.90	1.60	1.53	95.6

DESCRIPTION: Carbonaceous pyritic shale (cont)

ALTERATION

GRAPHIC LOG

STRUCTURE

137.20 60° β along Fr = B
137.40 25° γ along Fr = S

Average dominant one bedding

139.70 25° S

140.10 broken crystalline quartz vn.

141.05 qv. cryst. shaley bedding
141.25 qv prominent

142.10 qv cryst
142.25 qv

143.50 75° shaley B

144.00 85° shaley B

concentrated carbonaceous coal

146.10 85° B

149.20

149.65 55° qv. [illegible] bioturbation with shaley bedding

MINERALISATION

Pyrite predominantly as v fg framboids or clusters along bedding.

Also concentrated in fractures bedding planes + cleavage planes

PERCENT MINERAL

SCALE 1:100 (1cm = 1 m)

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DRILLHOLE LOG FOR DDH

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LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	151·50	0·50	0·52	104
	152·00	0·50	0·82	164
	153·50	1·50	1·16	77·4
	154·00	1·80	1·80	100
	155·80	1·60	1·50	93·75
	157·40	3·00	2·92	97·4
	160·40	2·00	2·10	105
	162·40	1·10	1·12	93·4
	163·50	0·80	0·80	100
	164·30	1·20	1·18	98·4

INTERVAL

DESCRIPTION

Carbonaceous pyritic shale (cont)

150·90 brecciated infilling by vuggy quartz

151·45 – 151·55 F. yellow weath siderite carbonate and pyrite

ALTERATION

GRAPHIC LOG

STRUCTURE

beach agate - breccia

structures infilled with

151·25 35° B quartz - pyrite - ?siderite

151·45 – fault gouge material

152·05 75° B pyrite zone

minor – rare thin quartz veins and breccia zones

155·40 75° B

151·15 80° 2cm qtz-carb-pyrite conc along B

156·85 80° q.v + B

153·50 75° B

160·90 75° B

163·90 65° B

164·55 – 164·95 quartz infilled shale breccia

MINERALISATION

VIS PERCENT MINERALISA

150·90 – 151·55 cavitiform pyrite in quartz - carbonate vein breccia fill material

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

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5 cm

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	165.50	1.30	1.33	102.3
	166.80	1.50	1.44	96
	168.30	2.40	2.40	100
	170.70	1.45	1.42	97.9
	172.15	3.05	3.01	98.7
	175.20	1.20	1.27	105.8
	176.40	2.10	2.07	98.6
	178.50	2.75	2.78	101.1

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
166	Carbonaceous pyritic shale (cont)			165.90 50° B	dissem/clots pyrite along bedding
7				167.70 65° B	
8					
9					
170	170.15 Grey tuffaceous-carbonaceous siltstone units and layers/interbedded blk carbonaceous shale and silty shale. Gradual increase overall in grain size down hole with few alternating coarser units			169.70 45° B Quartz-pyrite 2-3cm zones of brecciation and veining parallel B 170.35	
1				Finely alternating 171.40 10° qv infill Beds of shale 171.60 R° B Breccia zone silty shale and 172.30 55° qv in breccia siltstone 173.20 70° B	
2					
3					
4					
5				174.45 174.80 35° breccia sections brecciated infilled with quartz 175.40 85° B 1 pyrite Soft sediment deform.	cryst/clots py in breccia zones
6					
176.55	Tuffaceous sandstone grading to siltstone with interlayered carbonaceous shale and silty shale. Sandstone units are grey to green m.g. grading up hole into fg sandstone into siltstone. Composed of felsic tuffaceous material and with a carbonaceous matrix. Interlayered carbonaceous sections are	Sericite alteration in sandstone units.		176.55 50° variable content of host sandstone unit 177.45 60° B base of sa unit 177.85 65° B top sa unit 178.60 80° B base	dissem fg along bedding dissem fg along bedding and in quartz veined fractures
7				178.50 178.75 40° B top sa unit fg ss-ss fractured unit bedded 179.10 179.45 75° B 179.90 85° B fg sa & intbd ss	fg in carbonaceous silty shale layers
8					
180					

SCALE 1:100 (1cm = 1 m)

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	181.25	0.45	0.40	88.9
	181.70	0.50	0.56	112
	182.20	0.85	0.98	103.5
	183.05	0.35	0.39	111.4
	183.40	0.15	0.12	80
	183.55	0.25	0.20	80
	183.80	0.70	0.76	108.6
	184.50	1.90	1.86	97.9
	186.40	2.30	2.40	104.3
	188.70	2.40	2.44	101.7
	191.10	1.40	1.38	98.6
	192.50	0.90	0.80	88.9
	193.40	1.60	1.65	103.1
	195.00			

LITHOLOGY

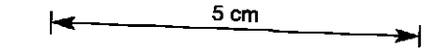
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INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
	composed of distinctly finely alternating dk-dkn grey tuffaceous siltstone, thinly silty shale and black carbonaceous shale.			180.30 80° B alternating tuffaceous sst, ss carbony. silty sh, more shale 181.05 75° B tuff sst fractured 181.75 broken alt ss, ss more sh 182.00 heavily fractured core very broken	Py ∈ carbonaceous beds
		patchy mineralisation in tuffaceous sst ∈ strong K⁺ patches.			dissem Py, Py in sst
182.00	Breccia Zone carbonaceous shale and subordinate carbonaceous-tuffaceous siltstone fractured and brecciated in sections. Breccias annealed with quartz and minor yellow carbonate				
183.90	Tuffaceous siltstone coarse-medium grained grey-green subsolic tuffac. sst. Becomes less brecciated and more distinctly bedded down hole	altered. yellow mineral staining in breccia. Crack sections. Carbonaceous matter on cracks. Structures ∈ Qz		183.90 15° sheared 184.10 15° brecciated but annealed faintly bedded - grn maroon	dissem Py, Py in tuffaceous matrix. Py, Sph. Cpy in fracks as irreg veins, stringers, laminations. Minor Sb in quartz vein
185.30	Alternating tuffaceous siltstone with very finely bedded carbonaceous shale and tuffaceous siltstone 'stepped' beds. Soft sediment deformation and convolution folding evident	Sandstone units grey-green ∈ saussuritic alt.		185.45 50° B very well bedded 186.30 65° B 186.40 15° B stringers 186.65 15° Sheared > fractured 186.45 Faulted Shear Zone ∈ quartz 187.45 Fractured.	f-g dissem Py, Py in subsolic layers - concentrated along bedding in shaley units. Cpy, Py also in tuffac layers or along minor fracts
187.45	Tuffaceous siltstone of 183.90 sheared?	186.20 bedding destroyed in sheared > sheared rock			
188.00	Sheared alternating tuffaceous siltstone, with components of carb. sh and ss interbeds. Contains a thin base unit of fg ash rhyolitic tuff	altered yellow mineral staining - epidote?		188.00 Sh α=3° cut by quartz vn 188.30 60° brecciation of tuff at 40° unit or?large lapilli epiclast	dissem cpy, Py, Py along sheared beddings - v fg sph, Py, Cpy Chalcopy v fg Py, Py along sheared beddings. Minor fg Cpy
189.05	Alternating tuffaceous siltstone with siltstone in well bedded turbiditic units Sandstones grade from mg feldspathic subsolic lithic-crystal wackes to green v fg clayey units. Interbedded grey carbonaceous units range from fg sandstone to siltstone.	Saussuritic alteration of feldspathic layers give yellow-lt green coloration		189.05 0-3° Contact B. 189.20 20° B well bedded 190.05 35° B rare quartz vein 190.90 30° B breccias cut bedding 191.65 40° B grading up hole 192.20 45° B	Py concentrated along bedding or irregularly disseminated in grey carbonaceous layers and fg, cryst Cpy
				193.90 Fractured, coal broken vuggy with thin quartz 194.30 15° Sh Violets + carbonate 194.60 15° Shearing, aligned ∈ Bedding	Py irregularly disseminated in coarser feldspathic units

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH

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LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	195.00	1.50	1.69	112.7
	196.50	1.30	1.46	112.3
	197.80	2.70	2.81	104
	200.50	0.70	0.29	41.4
	201.20	0.80	0.66	82.5
	202.00	2.30	2.44	106
	204.30	1.60	1.73	108.1
	205.90	0.40	0.25	62.5
	206.30	0.70	0.70	100
	207.00	1.00	0.95	95
	208.00	0.70	0.82	117.1
	208.70	1.80	1.70	94.5

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
RL 7 6 9 200 1 2 3 4 205 6 7 207.00 8 207.90 9 210	Alternating units of m-fg tuffaceous sandstone (cont)			195.70 75° B 195.95 20° B vn 199.00 60° B quartz vn along bedding 199.65 50° B vein fg along bedding 199.75 45° B recalculation to 10° broken due to moderate fracturing	
202.70	Andesitic tuff or tuffaceous altered sandstone red gn interbedding crystalline text. igneous aspect.	chloritised in sections dk green & pale fg Spotted alteration		massive – ignneous txt	diffuse fine pockets fg one in chloritised sections
203.40	Tuffaceous fabric sandstone? or fabric tuff (cf 202.70) but coarser grained. Narrow to candidly layered near top – could be a tuff, grading down into bedded alternating layers. Varies from coarse grained crystal tuff. ss & fine grained fundamentally pyroclastic clasts but with some reworking – a sediment derived from weathering of a tuff pyroclastic rocks?	yellow green heavily sericitised with limonitic dull green chloritic alteration in bands or layers Feldspars partially to totally obliterated by alteration		203.40 massive 203.80 massive ↑ inc in pyroclastic texture 204.5 75° layering candidly layered moderately fractured	fg in crystalline pockets Cpy along sheets or coal in dk grey bands – bedded? minor brown-red Sf
207.00	Alternating fabric tuffaceous sandstone with finely bedded siltstone and minor silty shale bands	silicified, moderately calcite veined		207.05 75° bedding – bedding due to fracturing (sheets)	fg in fg patchy clusters in bed
207.90	Altered fabric tuff or tuffaceous sandstone of 203.40 but more altered and fractured. Green & fg candidly layered siliceous fabric rock Stocking at a narrow angle 2-3° to core.	silicified, heavily sheared to salt pug in parts. calcite veined. feldspars totally altered to sericite		209.0 3° bSh candidly layered 209.30 20° Cale Vn strongly fractured and sheared	fg in fg aggregate along fractures. Hematite blebs alt 4° fg Sz blebs brown Sp in matrix fabric fg bands

SCALE 1:100 (1cm = 1 m)

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	PER-MINERAL
						probably dacitic in composition	Spotted alteration text.		210.65 breccia 210.80 Fault plug	Py Sp Marcasite (cont)	
	210.50	0.63	0.84	133.4	211	210.85 dk green chloritic in bands and patches – mas bonic in composition ? transition to andesite	chlorite alteration calcite veined		211.20 45° calc vn	Sulphides v fg disseminated Py Cp Sp	
	211.13	1.97	1.88	95.4	2						
	213.10	0.50	0.50	100	212.95	Andesite breccia. 1. Med grained sphitic textured dark green andesite composed of interlocking feldspar and mafic crystals. Fragmented by meso to micro white calcite veining and minor meso siderite veining. Andesitic tuff with possible minor intercalated sediment.	mafics heavily chloritised feldspars sericitised. obscure texture well preserved.		brecciated and heavily carbonate veined	Barren Py in andesitic fragments Cryst Py To Cp in veins. Isolated cryst Ga in veins	
	213.60	1.50	1.35	90	4				214.65 35° pelvic layering & carbonaceous material – interbed of sediment		
	215.10	2.40	2.42	100.8	215	215.90 2. Yellow siderite vein material predominant enclosing sub rounded fragments of andesite with rare dacite. Reaction rims around clasts of tuff carbonate, grade away to calcite (white) & later quartz tension vein veins.			215.90 vein breccia of variated fragments in carbonate cement	Cg cryst Ga > Sp dissem & scatt in carbonate - quartz vein material. Minor dissem Py in andesite fragments	
	217.50	2.70	2.67	98.9	6						
					7						
					8	217.95 3. Fine breccia of partially absorbed equi-sized andesite clasts in quartz-pinkish carbonate vein cement (no calc)	high SG		217.95		
					9				218.90 20° Calc vn & hairs both cryst 219.15 30° contact Shear or Fault	Py cryst along calcite veins	
					219.15	Dacitic tuff with lesser andesitic tuff.	pale yellow green colour probably due to sericite				
	220.20	2.10	2.17	103.3	220	Predominantly pale yellow green banded lithic-dacitic ang ash tuff (Cf 207.90 type) becoming dark green and mas domin tuffaceous andesitic dom beds. Includes rare lapilli tuff layers and very scatt. lithics.	andesitic sections chloritised		220.05 85° layering - bedding	Under Sp & cryst Ga in dacitic units. Core Sp in patches along carbonate veins dissem Sp Py in chloritic sections	
					1				crumbly to well layered / bedded		
					2				cut by meso calcite veins and meso carbonate vein sheared. gouge/clay	cryst Ga, dissem Sp in complex carbonate sheared sections two dissem Ga Sp Py in matrix Tr Cp	
	222.30	2.30	2.44	106	3		220.40 chloritic alteration more prominent – patches increase in andesitic component				223.90
					4					dissem Sp Py > Cp in matrix	
	224.60	1.30	1.23	102.5	224.40 225	Lithic ash-lapilli andesitic tuff.	Patchy Fe stained		224.65 10° carbonate vein 224.40 60° layering - bedding layered.	Cryst Ga & Sp along micro fracs. Under Ga, Sp & carbonate	

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	225.90	0.15	0.16	110
	226.05	2.95	2.94	99.7
	226.90	1.20	2.18	99
	231.10	2.60	2.63	101.1
	233.70	3.00	2.90	96.7
	236.70	1.80	1.82	101.1
	239.50	3.00	2.90	96.7

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
226	lapilli-ash forming dom beds into predom. lapilli tuff. Lithics of dark green andesitic material in light grey-green more dacitic matrix. Finer units of ash tuff are layered. Lithics increase in size and frequency down hole.	heavily chloritised in andesitic lithics		225.70 20° bedding by carbonate vein beds cut by yellow carbonate veins to 227.40 35cm / veins carbonated @ 13°	225.15 Cp ± Ga in thin veinlets along carbonate veins cut in fractures. veinlets, fract. fill of Sp+Cp ± yellow all marked on vein margins	5%
7		fine yellow flakes alt mineral along veins, fractures, cut in patches amgd ± sulphides			227.10 Sp+Cp crust along carbonate vein margins	1%
8	from 227.90 Predom lapilli tuffs or tuff-lava ± rare 10cm v fg lava flows or fine ash tuffs	more chloritised due to inc. in andesitic component in lapilli tuffs and in volc matrix. yellow blebs of alteration mineral cuts in fg lava? units			228.00 red-brown Sp ± Ga along fractures concentrated into patches at nodes and intersections	7%
9				231.70 60° 10cm fg lava unit or tuff.		
230					229.95 fg Ga ± Sp in minute concentration along fractures at 90° to bedding	10%
230.30 1	Andesitic ash tuff predominantly fine grained grey fabric composition with m-g andesitic sections.	carbonate - crystallites in veins and fract.		230.40 70° Bedding Faintly layered 231.40 20° bedding 231.80 20° contact	230.40 Aluminum fg Cpy. Conc along fract as beds of Sp ± Ga+Cp fg Py along beddings in fabric units	5%
2 231.80	Vesicular andesite lava fine grained green andesitic lavas with amygdales elongated in flow direction. Lava units separated by carbonate brecciated andesite (cf 212.95 type 1-3) Rare coarse phenocrysts of plag in andesite ± more alk. green fine mafic phenocrysts. Ground mass is a finely granular crystalline interlocking mosaic.	carbonate - mainly calcite occurs on breccias cement in lava breccias, but also in veins and veinlets Calcite occurs in veinlets Pale green waxy v soft clay mineral occurs with calcite in coarse cutting veins Patchy of carbonate - chlorite alteration		232.30 50° flow banding (from amygdales)	231.80 fg and Cp occur with some carbonate veinlets + along fractures particularly in brecciated sections	1%
3						
4						
235					235.2 crust Sp+fg in intersecting carbonate veins with fractures Sp in crust blebs in fract or along some carbonate veins in brecciated sections	3%
6				235.7 35° fract		1%
7					235.0 Rare crust fg ± carbonate	Tr
8						
9	from 239.00 Lava units massive and more vesicular with lavas breccias			239.95 40° flow banding		
240						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE / / PAGE ..... OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					241	Porphyritic versicular andesite (cont)					
	241.50	3.00	2.97	99	2						
					3				~2mm @ 40° calcite - quartz vein		
					4						
	244.50	3.00	2.97	99	245		a pink - khaki coloured carbonate occurs with the calcite				
					6						
					7						
	247.50	3.00	2.92	97.4	8						
					9						
					250				~1mm @ 60° layering minor dacite lava unit		
	250.50	3.00	3.06	102	1						
					2	at 251.80 minor interclated unit of pink rhyolitic lava - a differentiate from andesite?					
					3						
	253.50	3.00	2.97	99	4	253.50 porphyritic versicular andesite lava with gradations to light green dacite and pinkish-brown rhyolite with quartz phenocrysts					
					255						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	256.50	3.00	2.94	98
	259.50	3.00	3.05	101.7
	262.50	3.00	2.96	98.7
	265.50	3.00	2.91	97
	268.50	3.00	2.90	96.7

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
256	Seqpares basonds more acid down hole with quartz infilled vesicles in dacitic (light green fine grained) units.			255.85 70° layering dacite lava unit		
7						
8				258.40 40° carbonate vein & chloritic clasts		
258.40	Dacite lava or altered andesite ?	carbonate veined and carbonate brecciated in sections		258.60		
9	similar to dacitic sections in predominantly andesite flows above and below. Fine grained light green to brown-green groding to buff matrix with green mafic phenocrysts and chloritic amygdales. Quartz infilling amygdale is subordinate giving more acid composition. Strong brecciation indicates more viscous lavas with more hydrothermal activity hence variation in texture, composition and alteration			258.85 40° carbonate vein brecciated & crispy chloritised andesite fragments		
260				259.20		
1				259.55 auto-volcanic brecciated		
2				predominantly flows with intermittent breccias		
3				261.55 autobrecciated		
262.95	Porphyritic vesicular andesite lava.			262.95		
4	Predominantly dark green fine grained andesite with scattered and some phenocrysts of dk green mafic - augite and coarse plagioclase.	infrequent carbonate veining and brecciation		marine flows		
265	Amygdaloidal - rare to dense. Thin rock type grades into subordinate pink-brown more acid sections with quartz vesicles (or alt. phenocrysts?) cf 253.50.	dacitic composition may be due to silicification during cooling.			267.50 Rare crystals Sp & carbonate	
6						
7						
8				268.0 75° layering		
9				268.6 extensive carbonate veining		
270				269.15		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

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8393338

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					271	Vesicular and brecciated andesite lavas (cont)	pink hematite? developed on veined fractures and in feldspar phenocrysts.		270.5 55° contact c ductic unit	v small blebs Py c Tr dissem Cpy in fg spaces ductic units	Tr
	271.50	3.00	2.99	99.7	2					271.75 Py crystals, some Sp c and Fe in carbonate veined fractures	Tr
					3				273.05 35° calcite-pyrite vn.		
					4				274 20° calcite veined fracture 274.25 35° layering - flow banding		
	274.50	3.00	2.98	99.4	275				275.20 35° contact carbonate breccia 275.85 base of flows	Pyrite in carbonate cement	1%
					6	Pyritic andesite tuff grey, green - brown colour. Varies from ash to lapilli size - lithic lapilli-ash tuff. Lithics are subrounded fg ash composition often cemented by pyrite into semi spherical aggregates. Sequence is predominantly lapilli tuff with layered intercalations of ash tuff.	characterised by strong mottled effect. Carbonated - calcite occurs as matrix to pyrite clasts and as veins. Generally matrix of tuff is slightly calcareous. Pyritised replacement of lithic clasts, or as rims or halos to clasts		marine tuff	275.35 Pervasive Py - fine grained replacing lithics and to a lesser extent ash matrix. 275.95 Patches semi massive pyrite cement lithics and matrix	5%
					7				276.75 15° carbonate vn - host c Py		15%
	277.50	3.00	2.98	99.6	8				277.65 277.75 85° Bedding 277.85 calcite veining 278.05 bedded tuff.	277.55 Py core in lithic clasts and as irregular patches developed along bedding 278.45	10%
					9				278.45 marine tuff		
					280				280.25 50° calcite vn	Patches Py Py c Tr Sp in matrix of lithic clasts and in ash matrix of tuff Tr Cpy Sp as fine crystals	7%
	280.50	3.00	2.98	99.4	1						
					2						
					3						
	283.15				283.15	Porphyritic vesicular andesite lava dark green f.g andesite of 262.95 type same down into a carbonate lava breccia	Carbonate veined + brecciated ash matrix + calcite in veins		283.75 60° approx contact 285.40 55° flow banding	283.75 Sp in fracture, diffuse pyrite Py 283.25 Sp in fracture - brecciated	10% 5%
	283.50	3.06	2.97	99	4						
	284.50				285	Pyritic andesite tuff of 275.20	irregular wisps dk green chloritic alteration		284.50 base lava breccia bedded ash tuff	284.50 Dissem Py in andesite lava mat 284.65 Py vein along bedding	2% 10%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH .....

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	286.50	3.00	2.93	97.7
	289.50	3.00	3.00	100
	292.50	3.00	2.93	97.7
	295.50			

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
286	Coarse ash-lapilli andesitic tuff interspersed with ash tuffs and lapilli-ash tuffs. Generally dark and equigranular	Pyritised in lithic clasts/fragments or as disseminated clasts. Calcite occurs in matrix in sections but only generally as calcite veins		286.75 40° bedding - hard & soft v fg yellow green clay mixed 286.6 35° bedding 286.9 bedded ash tuff 287.6 bedded ash and lapilli tuffs 287.6 massive lapilli tuff 289.25 10° Calc. vn 291.10 10° calc vn 293.40 35° 295.15 10° foliation	286.6 fg inter-dispersed within fine ash tuff layers fg in lithics in lapilli tuff 287.6 Tr Sp Sf Sa in calcite veins 291.10 Sf seen in calcite vein 291.40 v fg dissem. Py in andesitic matrix. rare blebs Sf in carbonate veins	10% 5% 7% 5% 2%
291.10	Crystal-lithic andesite-dacite lapilli tuff Polymictic inclusions of andesite, porphyritic dacite and feldspar crystals. Ash matrix is dark green calcitic in composition clasts are polymictic.	Pyritised in matrix. yellow epidote blebs.				
293.40	Andesite-dacite lava breccia or tuffy lava Pale brown dacite lava breccia grading down into dk green andesitic breccia. Concentrations of calcite vesicles show lava origin.	veins of dk-lt green chlorite + calcite cut core discordant to ? working joints				
295.50	E O H					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE ../../.. PAGE ..... OF .....

8339340

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
6.6	15	5	190	BLD	140	BLD	0.005%									
9.2	35	BLD	195	BLD	130	BLD	0.005%									
12.3	20	25	160	BLD	160	BLD	BLD									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 6.6 TO 15m DATE 20/10/81 PAGE 1 OF 20

83934

839342

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
15·4	20	10	80	BLD	60	BLD	BLD									
18·4	20	10	125	0·5	110	BLD	BLD									
20·7	25	10	100	BLD	80	BLD	BLD									
23·1	25	30	100	BLD	80	BLD	BLD									
25·8	40	5	110	0·5	120	BLD	BLD									
27·4	20	10	145	BLD	110	BLD	BLD									
29·5																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 15 TO 30m DATE 20/10/81 PAGE 2 OF 20

839343

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
	10	10	140	BLD	100	BLD	BLD	
31.5	25	55	175	0.5	110	BLD	BLD	
34.2	10	35	160	0.5	110	BLD	BLD	
37.3	5	15	145	0.5	150	BLD	BLD	
39.9	35	25	105	BLD	110	BLD	BLD	
42.6	10	25	170	0.5	110	BLD	BLD	
43.0	25	5	110	0.5	110	BLD	BLD	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 30 TO 45m DATE 20/10/81 PAGE 3 OF 20

839344

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
45								
46								
47	4-5							
48	25	10	150	BLD	120	BLD	0·005%	
49								
50	49·2							
51	25	25	145	BLD	120	BLD	0·005%	
52	51·8							
53	10	15	155	0·5	170	BLD	BLD	
54								
55	54·5							
56	5	30	175	BLD	220	BLD	BLD	
57								
58	57·6							
59	15	145	150	0·5	90	BLD	0·005%	
60								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 45 TO 60m DATE 20/10/81 PAGE 4 OF 20

839345

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
60								
60.6	15	36	175	0.5	170	BLD	0.055%	
63.1	10	55	140	BLD	160	BLD	0.005%	
66.5	15	30	260	BLD	190	BLD	0.005%	
69.0	25	30	380	0.5	200	BLD	0.005%	
70.8	40	25	300	0.5	160	BLD	0.005%	
73.5	10	20	240	0.5	190	BLD	BLD	
75								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 60 TO 75m DATE 20/10/81 PAGE 5 OF 20

839346

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
75								
76 78·7	5	20	220	0·5	200	BLD	BLD	
77								
78								
79 78·7	5	20	180	0·5	250	BLD	0·005%	
80								
81 81·7	BLD	15	150	0·5	200	BLD	0·005%	
82								
83								
84 84·7	BLD	15	145	0·5	230	BLD	0·005%	
85								
86								
87 87·2	BLD	10	125	0·5	200	BLD	0·005%	
88								
89								
90 89·7								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB1

ASSAYED BY Analabs FROM 75 TO 90.m DATE 20/10/81 PAGE 6 OF 20

839347

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
	10	170	515	1·0	370	BLD	0·025%	
92·7	20	95	225	0·5	390	BLD	0·005%	
94·9	50	3750	1300	3·5	300	BLD	0·12%	
96·7	25	440	540	0·5	340	BLD	0·020%	
98·3	15	500	935	0·5	270	0·006	0·015%	
101·2	15	345	345	1·0	340	0·006	0·005%	
102·9	15	80	750	0·5	380	0·017	0·020%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 90 TO 105m DATE 20/10/81 PAGE 7 OF 20

839348

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
106·8	40	340	1100	0·5	450	0·025	0·26%									
109·5	50	390	325	1·5	400	BLD	0·66%									
112·5	25	310	1800	0·5	580	BLD	0·26%									
115·8	30	85	325	0·5	150	BLD	0·010%									
118·2	50	495	265	0·5	160	BLD	0·005%									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB1

ASSAYED BY Analabs FROM 105 TO 120.0m DATE 20/10/81 PAGE 5 OF 20

839349

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
121·3	100	2000	3·1%	6·5	360	BLD	3·05%									
124·0	60	1450	2500	2·0	310	BLD	3·75%									
126·7	50	420	450	1·0	250	BLD	1·90%									
129·4	50	480	510	1·0	260	BLD	1·90%									
131·88	60	960	955	2·0	250	BLD	1·65%									
134·4																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 120 TO 135m DATE 20/10/81 PAGE 9 OF 20

839350

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
	65	490	690	1·5	230	BLD	1·75%	
137·2	65	320	490	1·0	200	BLD	1·65%	
140·0	50	215	715	1·0	190	BLD	1·80%	
142·78	50	195	860	1·0	190	BLD	1·80%	
145·8	65	105	350	1·0	210	BLD	2·10%	
148·8	70	300	735	1·0	200	BLD	1·85%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 135 TO 150 m DATE 20/10/81 PAGE 10 OF 20

839351

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
151.5	80	65	220	0.5	170	BLD	2.80%	
154.0	65	100	210	1.0	200	BLD	2.40%	
157.4	70	55	140	1.0	230	BLD	2.40%	
160.4	60	40	140	1.0	220	BLD	1.95%	
163.5	35	20	105	0.5	250	BLD	0.96%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 150 TO 165m DATE 20/10/81 PAGE 11 OF 20

839352

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
165																
166	168.5															
167		80	65	225	0.5	190	BLD	1.90%								
168																
169	168.3															
170		135	565	1550	1.5	180	0.025	3.50%								
171	170.7															
172		80	230	455	1.5	230	BLD	2.60%								
173	172.18															
174		85	535	1700	2.0	230	0.008	3.40%								
175																
176	175.2															
177		35	315	1750	1.0	260	BLD	1.30%								
178																
179	178.8															
180		20	355	1650	0.5	280	BLD	0.56%								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB1

ASSAYED BY Analabs FROM 165 TO 180m DATE 20/10/81 PAGE 12 OF 20

839353

Metres	Cu	Pb	Zn	Ag	Ba	Au	S.	SAMPLE NUMBER
180								
181								
181-25								
182								
183	40	1050	2250	0·5	130	BLD	0·26%	
184								
184·5								
185								
186	40	1800	4350	1·0	130	BLD	0·40%	
186·4								
187								
188	90	550	6500	1·0	130	BLD	0·54%	
188·7								
189								
190	35	280	1300	1·0	180	BLD	0·69%	
191								
191·1								
192								
193	20	150	345	1·0	160	BLD	0·96%	
193·4								
194								
194	20	240	1000	0·5	660	BLD	0·28%	
195								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB1

ASSAYED BY Analabs FROM 180 TO 195 m DATE 20/10/81 PAGE 13 OF 20

839354

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
196.8	25	695	240	1.0	200	BLD	0.44%	
200.8	20	290	820	BLD	240	BLD	0.27%	
204.3	65	490	1450	1.0	220	BLD	0.22%	
207.0	65	260	1950	0.5	120	BLD	0.25%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 195 TO 210 m DATE 20/10/81 PAGE 14 OF 20

839355

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
210								
210·5	40	285	1700	0·5	120	BLD	0·21%	
213·6	60	1750	8600	1·0	9500	BLD	0·60%	
217·5	50	345	3950	1·0	3300	BLD	0·20%	
220·2	50	510	620	1·0	340	BLD	0·070%	
222·3	280	2550	330	10·0	230	BLD	0·090%	
224·6								
225								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB1

ASSAYED BY Analabs FROM 210 TO 225m DATE 20/10/81 PAGE 15 OF 20

839356

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
	270	1850	785	10·0	230	BLD	0·10%	
225·98	195	1300	2650	7·0	250	BLD	0·16%	
228·9	150	2800	3750	2·0	260	BLD	0·34%	
231·1	55	80	260	BLD	180	BLD	0·30%	
233·7	85	470	2400	0·5	190	BLD	0·24%	
236·7	105	70	345	BLD	300	BLD	1·50%	
238·5	70	10	160	BLD	550	BLD	0·14%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 225 TO 240 m DATE 20/10/81 PAGE 16 OF 20

839357

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
241·8	75	20	230	BLD	1200	BLD	0·090%	
244·5	75	BLD	130	BLD	440	BLD	0·020%	
247·5	35	10	105	BLD	300	BLD	0·030%	
250·5	65	5	130	BLD	270	BLD	0·020%	
253·5	60	5	90	BLD	420	BLD	0·015%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 240 TO 255 m. DATE 20/10/81 PAGE 17 OF 20

839358

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
256·5	70	25	250	BLD	280	BLD	0·020%									
259·5	35	130	420	BLD	650	BLD	0·035%									
262·5	65	10	155	BLD	230	BLD	0·020%									
265·5	60	10	120	BLD	190	BLD	0·020%									
268·5	70	5	140	BLD	190	BLD	0·020%									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 1

ASSAYED BY Analabs FROM 255 TO 270m DATE 20/10/81 PAGE 18 OF 20

839359

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
270																
271																
271·5																
272																
273	35	10	130	BLD	300	BLD	0·035%									
274																
274·5																
275																
276	65	35	200	BLD	340	BLD	2·40%									
277																
277·5																
278																
279	60	40	185	BLD	360	BLD	1·60%									
280																
280·3																
281																
282	80	505	2900	1·0	320	BLD	1·75%									
283																
283·5																
284																
284	60	40	195	BLD	320	BLD	2·05%									
285																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB1

ASSAYED BY Analabs FROM 270 TO 285 m DATE 20/10/81 PAGE 19 OF 20

839360

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
286·5	100	20	300	BLD	250	BLD	1·35%	
289·5	80	55	460	BLD	310	BLD	1·25%	
292·5	50	80	200	BLD	390	0·008	1·20%	
295·5		End of DDH ; EAB 1 at 295·5m						

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB1

ASSAYED BY Analabs FROM 285 TO 295·5m DATE 20/10/81 PAGE 20 OF 20

EAB 2

DRILL ADVANCE / LITHOLOGY

E39:C1

5 cm

TRICONED

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					4.00	Lithic-crystal tuffite or coarse epiclastic sandstone of reworked lithic and crystal clasts in ash to carbonaceous matrix. Lithic clasts are of lapilli size. Become more carbonaceous with decrease in vitric lapilli clasts down hole.	Pale yellow brown - due to weathering sericitised matrix.		Poorly sorted, clastic with rafts or blebs of shale.	fg dusem Py in sericite, carbonaceous mtx. Dusem crypt blebs fg and Sp/fg in f-g rhyolite lithic clasts	2%
					5.70	Tuffaceous carbonaceous siltstone. light grey increasing to dark grey siltstone with 60% decreasing to 10% pyroclasts, ash, lithic-lapilli and crystal clasts	Pale waxy yellow sericite replaces lithic and/or vitric clasts		35° Shearing sheared gradational clumped - rapid deposition	Dusem Py in sericitised vitric clasts crypt Py in carbonaceous shale blebs crypt blebs Py in siltst. Dusem fg Py in sericitic tuffaceous clasts	3% 5%
					6.70	Carbonaceous silty shale grey with black fine vitric-calcitic veins. Rare lithic lapilli clast of recrystal tuff	Pyroclastic lapilli are totally sericitised with remnant crystal outline - ? crypt tuff?		6.45 35° B - slumping. gradational finely bedded	fg Py conc in vugs and blebs	3%
					7.35	lithic or vitric lapilli-ash tuff. Clasts of pale yellow-green sericitic ? dacite composition scatt corroded plag plan in v fg ground mass, also rare fg siliceous rhyolitic ash or lava. Mainly coarse ash to coarse lapilli size. Set in light grey-green groundmass of felsic material. with alteration to sericite giving a soft crumbly texture. Sections also convey scatt plag and rare quartz crystals.	Pyroclasts of dacitic comp. thoroughly sericitised. Sericite developed in ashy sections of matrix, infilling shears, fractures and along possible flow banding. Dark green chlorite? along shears. Minor weathering along the continuous veins and fractures		7.10 65° Fol. mixed coarse ash and lapilli clasts. 7.75 coarse dacitic lapilli in fg ash matrix 10.00 10.60 30° Sh mixed coarse ash and lapilli clasts 11.95 55° Fol - bedding minor fracturing	finely dusem Py in sericitised pyroclasts, ash matrix and bands Blebs Py in siliceous clasts and in matrix. Dusem Py in q-sericite sections of matrix	5%
					13.75	grades into Bedded fine to coarse ash tuff with crystal-lithic pyroclasts. Pale green to grey layered aggregate tuff or sandstone. Scatt lithic and crystal pyroclasts	Sericitised in matrix and along fractures.		14.15 50° B 14.30 50° B gradational bedded minor to moderate fracturing.	Finely dusem crypt Py	1%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH EAB 2

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VOL 8 APPENDIX 2

839362 LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
15.10	Interlayered crystal-lithic and lithic crystal coarse ash tuffs with fine-medium aqueous ash tuffs or sandstone. Intermixed coarse tuff with reworked or finer tuff units — redeposition of previously extruded pyroclasts	Intense sericite alteration in lithic/crystal tuff units.		15.10 irregular contact 15.60 45° B massive coarse tuffs finely bedded 15.85 massive red coarse tuffs 15.95 finely bedded 16.35 80° Bedded Contact	Abdt Sp ± Ga minor Py coarse ± fracture fills finely dissem Py Sp ± Ga/Py in veined fracture finely dissem Py	2% 1% 2% 1%
16.35	Crystal-lithic ash to lapilli dacitic tuff Pale yellow green sericitised massive unsorted pyroclastic. Coarse ash and lapilli clasts of sericitised plag por dacite, chloritised andesite, grey siliceous tuffaceous sandstone, grey fractured cherty siltstone. Crystal clasts are plag. — from 19.50 lapilli-ash tuff - a coarse granular texture is progressively decreases	Heavily sericitised in granular coarse ash matrix and in certain plag phenocrysts by lithics		Massive, unsorted	finely disseminated crystalline Py throughout. Abdt brown-grey Sp+Ga rare. Minor dissem Ga crystl	3%
20.70	Lithic lapilli-ash aqueous dacitic tuff Layered unsorted-redeposited pyroclastic debris with rafts or slumped remnants of light grey tuffaceous siltstone. Prominent lapilli are of grey tuffaceous sandstone, q-f fine-grained altered? Matrix is yellow-green sericitised ash with occasional wisps of carbonaceous matter.	Matrix is heavily sericitised xenocrystic lithics of fg ash also sericitised. Silicate on fracture planes Cream silica cement in fractured siltstone sections		21.70 50° fol 23.00 45° layering or fol.	layered. grey siltstone remnants heavily fractured	
23.65	Interbedded coarse ash dacitic tuff and tuffaceous sandstone. Sandstone unit are well bedded grey to yellow-green fine-medium grained siliceous, with rare lithic pyroclastic clasts. Tuff units are coarse ash yellow green granular massive beds overbulls of quartz-siliceous composition	saussuritised in fg ash siltstone-fg sst layers heavily sericitised in tuff unit saussuritised in fg sst layers heavily sericitised in tuff particularly in matrix	Sedimentary Apparatus	well bedded sediment 24.15 50° B 24.30 massive 25.50 25.65 50° B well bedded medium 26.60 massive	finely sugt Py sugt fg Py rare blebs Sp/Ga Core of 10% Py in grey carbonaceous -tuffaceous laminae. fg Py Cp rare Sp/Ga disseminated in crystalline fmass	1% 3% 3% 2%
28.15	Alternating tuffaceous sandstone and finely bedded tuffaceous siltstone and shale with black shale units Tuffaceous sandstone is coarse lithic/pathic green massive grading to laminated, one 80 cm thick	tuffaceous sandstone and siltstone units, both ash and fine laminae are sericitised Black shale units crumbly and weathered.		28.15 shale well bedded 28.50 65° B moderately veined with light brown SiO2 or BaSO4	fine Py in black unit dissem sugt Py in tuffaceous laminae. fine Py in carbonaceous fine laminae	1% 2% 2%

SCALE 1:100 (1cm = 1 m)

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839363

DRILL ADVANCE

LOST CORE | DEPTH | DRILL ADVANCE INTERVAL | CORE RECOVERY | PERCENT RECOVERY

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
3	interbedded with very finely layered 'striped' cream/maroon lithicum siltstone and carbonaceous silty shale 30-40 cm thick with individual layers 0.5-2 mm. Carbonaceous shale units are laminated and pyritic 5-25 mm thick. Crystal hyaloclasts occur in coarse sections of lithicum sandstone - evidence of contemporaneous acid volcanism with sedimentation			30.50 60° B well bedded and finely interlayered units; slight sediment distortion apparent; 32.20 70° B; 33.30 slump breccia; 34.10 55° B	Diffuse fg cryst Py, blebs Py 2%; 32.60 fg Py in carbonaceous units and fine layers. Pyrite Py in lithicum layers 2%; 34.00 Scatt Py cryst in lithic sst 1%; 34.65 fg Py in carb. layers. 2%; 34.90 Scatt Py in tuff 1%; 35.05 Py as cryst clusters & diffuse in shale 5%; 35.60 Py as cryst clusters in shale layers 1%; 35.85
6 35.85	Lithic-ash aggregate or redeposited tuffs Variable in composition and grain size :- 35.85 - 36.60 lithic lapilli-ash dacite tuff 36.60 - 37.10 lithic-crystal, lapilli-coarse ash rhyolite tuff 37.10 - 37.85 lithic ash-lapilli dacite tuff 37.85 - 38.05 fine ash tuff 38.05 - 38.90 crystal-lithic ash lapilli aggregate tuff with a grey sl. carbonaceous matrix	35.85 Patchy sericite alt. developed in dacitic ash matrix and lithic clasts.		35.85 65° B shale unit; 36.60 40° contact; 37.10 60° Fault contact irregular; 37.25 15° S102 vn; 37.85 fine grained irregular; 38.05; 38.90 50° Rubbly contact	coarse blebs Py 1%
9 38.90	Carbonaceous silty shale grey finely bedded shale unit minor lithicum siltstone, Tuff layers come in from 39.60	sericite alteration in lithicum layers		39.60 80° B; gradually increasing - fine ash sections may be layered. moderately fractured	Diffuse Py in silty sh. bedded Py core along bedding where tuff layers are interbedded 38.90; 38.95
40 39.75	lithic lapilli-ash aggregate tuffs Variable in composition and grain size (cf 35.85) 39.75 - 42.05 fine to coarse ash predom with sections of lapilli and crystal-lithic hyaloclasts lapilli are of plag por dacite, shale & sc coarse pyroclast. - at 42.05 fg lt-green siliceous ash tuff or sandstone - at 42.25 i.e. Lithic ash-lapilli tuff of dacitic composition light grey siliceous lithic ash matrix to polymodal lithic population - sericitised plag por dacite, shale & sc plag porphyroblasts?, cream fg rhyolite	Dacite lapilli have a green sericitised matrix Soft white fg clay mineral in 50% of rock. Dark green chlorite in other 50%		fine grained marine to layered; 43.50 5° Fract	Coarse Py along fine fractures and & sericite in some. Py in matrix to lithic clasts and coarse. Py Sp Ga complex and & intersecting fractures Tr Cp 3%; 42.25 Diffuse blebs Py in lithic matrix Cp Ga Sp along fract 2%
45 44.10	Fine ash aggregate tuffs with interbedded lithicum siltstone and minor lapilli tuff unit	Carbonate veins baccinate core. Tuffaceous units are sericitised		44.55 70° Cbt vns bedded but deformed by soft sediment def.	Cp Sp Ga along thin fract and as complex blebs in cbt veins 2%

SCALE 1:100 (1cm = 1 m)

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839364

DRILL ADVANCE

LOST CORE | DEPTH | DRILL ADVANCE INTERVAL | CORE RECOVERY | PERCENT RECOVERY

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
6	Green ash siliceous tuffs predominates with gradations via increased carbonaceous content to silty shale. Cream lithic ash-lapilli clastic units occur as subordinate interlayers.			47.00 70° B 47.60 75° B well bedded	Isolated pockets Py + dusting Py in matrix	
7	gradational					
8 47.80	Coarse ash aggregate tuffs pale green-orange mottled siliceous tuff composed of gravity with sections of orange stained feldspar. Minor interbeds of light grey f.g gravity siltstone	Sporadic alteration of feldspars and felsic matrix		layered.	Scatt dusting Py	47.80 1%
9		48.00 increase in sericitic alt.		49.20 55° B		
50						
50.45	Crystal-lithic ash-lapilli clastic tuff coarse ash to fine lapilli of felsic lithics in cream-grey siliceous matrix decrease in grain size down hole			marine	fine dusting crystl Py	Tr
1						
51.25	Finely interbedded tuffaceous sandstone, siltstone and carbonaceous silty shale. Accretionary units are light green med to fine grained ash. Finely to marginally bedded. Beds become more massive and thicker down hole.	fine sericitic alteration		51.60 80° B finely bedded.	Crystalline blebs Py + Tr Ga in Sh sh. Leasy dusting Py in tuffaceous sandstone	1%
2				52.50 73° B basin - fractured core fine quartz vein and micro fault cut core 54.15 55° B 54.80 70° B		
3						
4						
5						
6	From 55.65 fine aggregate bedded tuffs or tuffaceous sandstone. No carbonaceous shale matter (cf 44.10 type)					55.65
7				56.70 65° B	Crystl Py Cp + Tr Ga along fine fractures. Crystals of Sp Ga in minor brecciated bands Rare dusting crystl Py.	1%
8				58.25 80° B 59.15 70° B 59.75 Calcite breccia @ 75°		
9						
60						

SCALE 1:100 (1cm = 1 m)

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DRILL ADVANCE

839365

LITHOLOGY

5 cm

SCALE 1:100 (1cm = 1 m)

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				NQ BQ	60.15	Interlayered fine grained ash tuff and lithic rhyolite tuffs. Ash tuff units are green grading, when fine grained, to grey; siliceous - quartz-sericite composition. Massive to finely bedded where fine ash is redeposited. Rhyolite units are cream lithic tuffs grading to fine ash clasty units.	Ash tuff units are patchily sericitised		60.40 clastic ash tuff / rhyolite; 61.15 fg clasty tuff; 61.70 / 61.75 70° Qa in bed rhyolite; 62.45 moderately veined with quartz and carbonate; 64.15 / 64.50 carbonate heavily veined breccia; fg grey ash tuff; 65.25 rhyolite; 65.60 60° banding; 66.40 / 66.55 60° bedding fg grey ash tuff; 67.15 rhyolite; 67.60 65° Contact	Diffuse Py & stratiform silt sized blebs crystalline Py; v fg sized diffuse Py; Crystl cg blebs Py. Borders Qa along Cracks or amor crystl Py; Crystl blebs Py Tr Cp, Qa & Sp in carbonate and quartz veins; Qa & Sp along Calcite vns. Blebs diffuse Py	3%; 1%; Tr; 5%; 2%; 3%
						—at 64.15 Carbonaceous breccia, carbonaceous matrix —to 64.50 is matrix to rhyolite and siliceous clasts					
					67.60	gradational Interbedded tuffaceous sandstones with minor tuffaceous siltstone cf 60.15 with greater sedimentological properties, and cf 55.65. Predominantly grey green siliceous fg ash tuff sandstone with rounded lenses and stringers of yellow cg lithopathic ash, with cream rhyolitic tuff or sandstone cg to fg crystal ash and minor lithic tuff units.	Silicified ? patchily sericitised in lithopathic sections		67.60 moderately quartz fracture in fg clasty tuff or sandstone; 69.20 75° contact rhyolite tuff; 69.85 70.15 65° B interlayered tuffs sheared, fractured and quartz veined	Py in narrow stringers along fractures. Diffuse pitchy pisolitic Py. Tr Qa Sp amor quartz vein; Crystl Py Cp in fractures & sandy diffuse blebs. Tr Qa.	3%; 2%
						From 71.60 Well bedded sediments of same composition as above.	Strongly developed along shear planes		71.60 75° B well bedded disturbed by slight sediment slumping; 72.70 70° B; 73.10 65° B	Fine sc. diffuse Py. Rare blebs Py, Cp Qa	2%
					74.20	Crystal-vitric grading down to crystal-lithic ash grading down to lapilli rhyolite tuff			74.20 75° B	Crystl blebs Py & Cp. Scatt. v fg Py Qa Sp in dk grey siltstone	5%

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	79.50			coring
	89.70			coring

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
76	Grey gradually grading to cream siliceous tuff. Mottled texture from partially corroded earth crystal pyroclasts in vitric? ash matrix.	epidote-green calcite along fract.		75 to 45° Subplanar		
7	From 77.05 lithic-crystal Lapilli ash tuff with distinctive basal set stained felsic crystals. lapilli of chl. adacite, alt'd shale with plag plag, recrystal porph dacite, q-f abyolite in green ash matrix			77.05 65° contact marked	dissem Py + cryst blebs Py + Ga	2%
8	Tuffaceous sandstone. Cream to green grading Com Ps ash to cg ash dom lithic.			79.40-40° Fract + qtz vn well bedded.	dissem scatt cryst Py	1%
78.40						
9				79.20 65° bedded contact broken	scatt blebs Py Ga basal along veined Fract.	5%
79.20	Carbonaceous shale Black siliceous silty shale with interlayered finely bedded tuffac silts at contacts	Weathering suggests a pyrite.		79.80 75° B well bedded cut by thin hairline meso-fractures	Py in hairline Fract. Tr Ga along Fract	2%
80 79.80	Interbedded tuffaceous sandstones cf 67.60 Predominantly fine grained chalky grey ash tuff grading into light cream ash lapilli, C, and qtz crystal clasts. Possibly aqueous falls in part	calcite-epidote dated on Fract.		81.05 62° B		
1	From 81.80 Siliceous grey chalky sandstone in normally bedded - brecciated and cut by thin calc zones			81.80 quartz veined and brecciated	v fine scatt dissem Py	Tr
2				82.75 15° Sh'd fractured - brittle deformation	blebs Ga minor Py	2%
3		82.75 Granite on shear zone 83.05				
4 83.85	Crystal vitric dacitic tuff or brecciated tuff - lava Fine grained quartzose igneous rock with basal set phenocrysts or pyroclasts in patches of fg chl. ground mass.			heavily fractured	cryst stringers, patches Py along Fract and hairline. Ga in hairline Fract and on blebs	10%
5		heavily sericitised in sheared section		84.70 85 to 8° Sh'd sheared	c. patches Py around E Fract cryst blebs Ga in Fract	5%
6 85.65	Interbedded tuffaceous sandstones pale green to cream dacitic tuffaceous c-mg ash	Sericitised		85.65 85.90 70° B bedded	Py in Fract v fg Ga conc in dk grey dacitic bands	2%
7 86.65	Crystal-vitric c-f ash tuff v.c.w. Cream med gr ash dacite to flow banded and brecciated welded? tuff c scatt basal set crystals	Sericite + epidote in wispy alt. matrix of ? welded ash pulsing chloritic alt.			dissem Py in chloritic and sericitised patches	1%
8 87.70	Finely bedded tuffaceous sandstones chalky grey to light green fg. sst.			88.15 45° B well bedded cut by thin calcite veins	fg Py conc along dark layers	2%
9 88.65	Crystal-lithic ash - grading down to lapilli-ash tuffs. Fine rock is composed of quartz-sericite granular matrix with irregular patches			88.65 55° Contact	Py as scatt dissem cryst. fg Ga c bk calcareous patches and matrix	2%
90				90.0 80° Calcite vn		

SCALE 1:100 (1cm = 1 m)

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DRILLHOLE LOG FOR DDH .....

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
C	92.00			coring
C	92.40			coring

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
91	of black carbonaceous material. Tr in crystal fragments from 89.50 of bleached crystl. Lapilli tuffs from 90.25 of pumiceous-rich ash matrix with fg lenses gm.			90.50 30° Shd contact ε fg ash tuff.		
91.30	Porphyritic rhyodacite or crystal-vitric tuff. Light orange pheno or pyroclastic in fg lt green g-f matrix	Sericitised along Cracture planes.		strongly Cracktured	Py in sericitised fractures and in stringers along Crack	91.30 5%
92.25	Interlayered crystal-lithic ash, lapilli-ash and fg vitric ash tuffs redeposited into sedimentary layers in sections. Highly siliceous sequence with irregular contacts between varying rock types. Includes bacreated wispy blocks or bacreated and displaced minor units, of orange play porph dacite	Silicious, sericite developed in sheared sections Calcite ± Pyrite in tension veins.		92.70 25° Flow banding 93.50 50° bedded contact micro fractured, sheared and quartz veined 95.00 30° bedding	Rare patches of Py anoc ε sericitic alteration along fractures Cryst Py ε calcite in tension gashes	92.25 Tr
96		heavily sericitised core along shear planes				96.30 1%
98.05	Tuffaceous sandstone grading to redeposited tuff Fine grained highly siliceous, light grey-cream mottled texture. Faintly bedded, obscured by silicification.	Sericite infilling in bacreated sections calcite veined, silicified		98.05 60° contact Micro fractured and moderately sheared. Cut by calcite and quartz 99.70 40° B	Rare crystl brown Sphalerite along Cracktures	Tr
100 99.80	Crystal-vitric rhyolitic tuff. Strongly foliated crystals of plag felds are heavily altered ε sericite infd by fg vitric matrix. Rare irregular felsic crystl	Sericitised along foliation planes and as replacement of felds. Pyroclasts		100.30 35° bedding foliation gradational	Lenses crystl Py. Patchy Py along Crack	1%
1 100.85	gradational contact on lithology, textural style, texture; sharp contact on alteration, colour, hardness.	Silicified generally		foliated ε clear bordered	Rare disseminations Py	Tr
2	Plagioclase crystal-vitric tuff or a glassy porphyritic lava. Texturally it is a crystal tuff with a vitric matrix. Scattered to dense concentrations of red-brown oxide stained plagioclase crystals occur in a fine grained flow textured devitrified	Matrix is patchily sericitised with fine disseminated Pyrite Chlorite alteration in sections. Patches of pervasive				
3				102.15 50° foliation 102.30 30° vol		
4				104.00 15° Shd ε chlorite		
105						

SCALE 1:100 (1cm = 1 m)

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DRILLHOLE LOG FOR DDH .....

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839368 LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
106	glassy matrix. Plagioclase phenocrysts are angular, vary from holocrystalline to fragmental. Iron oxide dust is pervasive, varies from concentrated along steam fractures in crystals to a pervasive cloudiness which can extend outside of the crystal into the matrix. Matrix is dark green to grey, fabric with possibly some chlorite alteration. Flow textured or devitrified with small microlites scattered throughout. Rare v scattered chloritised lithic fragments occur. Chemical composition: dacite, or if K field present in matrix: rhyodacite	Sericite alteration affects plagioclase crystals altering them to green v fg mineral. Calcite veins moderate intensity cut core. Carbonate mineral also in matrix. Epidote on calcite on margins				
7						
8						
9				109.25 35° fol cut by calcite vein		
110						
11						
12		112.10 Calcite-epidote vein breccia		112.10 20° vein breccia 112.60 25° fol 113.80 ↑ to rapilli grade plag. phyric		
13						
14						
15				114.90 22° flow banding		
16						
17					117.10 Cpy Sp. Ga in calcite veinlets	
18						
19						
120						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

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5 cm

DRILL ADVANCE

839369

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					121	Pkg crystl. vitreous dacite tuff (cont)				120.8 Calcite diversely associated with sericitic alteration of matrix and core along chloritic fract. Tr Sp ε calcite veinlets	2%
					2						
					3						
					4	Common Lithic crystal pyroclastic fragments. Lithics of pink rhyolite and green dacite tuff or lava.					
					5						
					6						
					7				127.20 25° fol.		
					8						
					9					~129.0	1%
					130				129.6 10° chl Chor. + crystl calcite		
					1						
					2				131.8 20° fol.		
					3						
					4				slight inc to mod calcite veining, chl-calc vns ε fract.		
					135						

SCALE 1:100 (1cm = 1 m)

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DRILLHOLE LOG FOR DDH .....

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LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
136	Plag cryst-vitroc dacitic tuff (cont)			135 x 10° chl-calc vn'd fract		
7						
137.60	as above but with only rare iron staining of plag crystals				137.60 blebs Py amor fract. Dissem Py in silicified matrix	2%
8						
9						
140						
1						
2						
3						
143.10	as 100.85 Plag cryst-vitroc tuff, iron stained				143.10 Dissem cryst Py in silicified matrix cryst Py along chl-calc vns	1%
4						
5						
6						
7						
8				148 x 30° Fol		
9						
150						

SCALE 1:100 (1cm = 1 m)

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DRILLHOLE LOG FOR DDH .....

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DRILL ADVANCE

LOST CORE | DEPTH | DRILL ADVANCE INTERVAL | CORE RECOVERY | PERCENT RECOVERY

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
156.50	Flow banded plagioclase crystal-vitric dacitic (or andesitic?) tuff. Similar to 137.60 section but more intermediate in composition. Goes to faint orange when staining. White, light green and orange plagioclase and fabric ? sheets in light to dark green devitrified matrix. Include heavily chloritised lithic clasts of plag phenocrysts in chloritic matrix.	Matrix sericitised, and in part chloritised.		gradational gradational	160.30 carb blebs throughout with Sp in calc veinlet and along thin fracture Cp+Sp+Py core in fract 162.25 Py in fract, ± chloritic alt and in blebs	2% 1%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

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839372

LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
166	Vitric-crystal dacitic tuff (cont)			166.9 10° Sulphide on cts Cont @ 15°		
7				168.4 25° Fol.	Sp, Sp in calcite vn. 166.9	
8					Py along veins Cont	1%
9						
170				170.50 40° calc vn breccia		
1 170.90	Vitric-plag. crystal, dacitic c-g ash tuff interlayered with subordinate crystal-vitric dacitic f-g ash tuff units. Generally of 156.80 type except for fg units and an increase in dk green irregular, chloritised pyroclasts.	Mod-w sericitised. Dark green chloritised dacitic/andesitic fiamme type clasts, lithic clasts or alteration along fractures.		170.90 35° fg ash tuff-unit 170.90 becomes increasingly foliated & blue banded 171.40 35° Fiamme down hole	v fg dissem Py in sericitised matrix, and concentrated in dk green chloritic fiamme? Rare ovoid blebby coarse Py 170.90	2%
2				173.30 15° qp-calc-sulphide veins	cpy+ Sp Cpy in qp-calc veins 178.3	5%
3				173.50 48° Foliation 173.85 hangwing due to slitting or blue banding structures	dissem Py in chloritised regions 173.85	1%
4 173.70	Lithic-crystal dacitic hyalli-ash tuff = blue banded and/or welded, xenomorphic textures. Scattered lithic clasts of fg ash dacitic tuff, dk green porphyritic chloritised andesitic material and diffuse recrystallised felsic zones, occasionally concentrated in otherwise homogeneous lithic-crystal tuff matrix.	Chloritised in shears and irregular patches.		175.35 72° 30 cm brecciated amygdaloidal dacite lava unit	Sp Py Po in amygdales in Cont 176.35 175.45	5%
5					Scatt blebs Sp in calcite veins	1%
6						
7						
8				178.10 50° Foliation		
9						
180		light green bleached alteration appearance.				

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE ../../.. PAGE ..... OF .....

5 cm

DRILL ADVANCE

839373

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
181						
181-10	Crystal-lithic andesitic ash-lapilli tuff Lithic pyroclasts of plag-porphyritic vesicular andesite and ? silicified augite-poph andesite in densely granular fragmental matrix. Pyroclasts unsorted but sub to well rounded. Dull green in colour generally. Matrix & clasts is light green - probably recrystrd	Silicified matrix Highly varying to purely calcareous.		181-20 Fragmental & brecciated Pyroclastic texture.	180-90 Py in lithic clasts 181-10 Dimem Py core in andesite lithic clasts. Py as blebs in matrix associated with fractures	25/0 1-2%
2						
3						
4						
185				Exmas 30° calcite vein ± Py	184-95 Py along calcite vns and in frack. Dimem Py concentrated in Py andesitic tuff & rounded lithic Pyroclasts. Dimem cpy blebs in matrix Rare finely blebs Sp in calcite veins	3%
6						
7						
8						
9	from 188·60 increase in % and size of Plag-poph andesitic lava clasts, to block size = a coherent andesitic lava unit.					
190	189·80					
1				190·50 cream calcite mineral in vesicles		
2						
3						
4						
195						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE ../../.. PAGE ..... OF .....

5 cm

DRILL ADVANCE

839374

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
196						
7						
	From 197.50 increase in vesicular porphyritic andesite lava clasts.					
8						
198·8	**Vesicular plagioclase porphyritic andesite lava**	Patchy K-feldspar clasts in brecciated sections is silicified. Highly calcareous.		198·80 Massive Calcite veining common.	198·80 Crystalline blebs Py & Tr Cp.	1%
200	Sparsely vesicular massive to brecciated lava with green and white amygdales - chlorite and calcite.					
1						
201.05	**Lithic andesitic agglomerate-lapilli tuff**	Chlorite and yellow epidote developed in ashy matrix.		201·05 Brecciated texture	201·05 Disseminated crystalline Py	Tr
2	Rounded blocks of plag porphyritic vesicular andesite lava in matrix of lapilli-ash pyroclastic material: or possibly a lava flow breccia. Calcareous.	Carbonate in vesicles and in cross cutting veins				
3						
4						
5						
205.40	**Lithic andesitic lapilli-ash tuff**	Generalised silicification with flecks yellow epidote		205·40	205·40 Blebs Py, Tr Po concentrated in dacitic lithic clasts	2%
6	Rounded lithics of porphyritic andesite and ? dacite scattered in an andesitic granular sparse mass. Calcareous.					
7	Increase in size of lithic clasts down hole.					
207.80	Vesicular andesite lava this unit as bomb				207·80	
208.15	**Andesitic pyroclastic breccia or block-lapilli tuff.** Angular lithic clasts of porphyritic andesite and vesicular andesite in a fine to medium grained granular					
9						
210						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE ../../.. PAGE ..... OF .....

5 cm

DRILL ADVANCE

LITHOLOGY

839375

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	cgs undrmars					
211 210·70	Vesicular andesitic lava breccia. Blebs of banded vesic lava in an ash tuff matrix			210·70	210·70 Py along fract	1%
2 211·95	Crystal-lithic andesitic ash-lapilli tuff? with brecciated vesicular andesitic lava bombs of irregular size. lava clasts are densely vesicular light green to cream in colour. Matrix has a crystalline psephitic a crystal clastic texture and may represent a plutonic rock ∴ and could be a tuff-lava.			211·95	211·75 Fine grained Py concentrated in scattered round dacitic lithic clasts. Stringers Py arsen. Pyrite blebs Sp, Ga assoc ± calcite in veins and fractures. Rare blebs angl Cp in matrix	2%
3						
4						
215						
6						
7						
8						
9						
220						
1 220·75	Vesicular andesitic lava and lava breccia large calcite filled amygdales dominant in clusters or scattered in brecciated aphanitic lava-like porphyritic matrix.				220·75 Patches fine grained dissem Py	Tr
2						
3						
4				223·85 20° calc vn + fract.		
224·10	Lithic-crystal andesitic lapilli-ash tuff distinctly pyroclastic texture with sparsely	Orange - iron? staining in lithic and crystal clasts		224·30 15° " " "	224·10 Sp + Trace Ga in calcite veined sections	1%
225						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE ../../.. PAGE ..... OF .....

839376

5 cm

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					226	Fractured, vaguely cemented lithics of finely vesicular dacite and obsidian material. Quartz-plag porphyritic clasts predominant					
					7						
					8						
					9				228.7° 75° calcite vn		
	end of hole										

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH .....

LOGGED BY ..... FROM ..... TO ..... DATE ../../.. PAGE ..... OF .....

839377

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
4·5	90	380	1350	1·0	1300	0·019	0·76%	
7·5	40	85	350	BLD	760	BLD	0·45%	
10·5	45	115	140	BLD	600	BLD	0·40%	
13·0	30	40	265	BLD	1200	BLD	0·14%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 4·5 TO 15m DATE 30/10/81 PAGE 1 OF 16

839378

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
15								
16								
16·0	35	30	240	BLD	660	BLD	0·17%	
19								
19·5	70	160	1650	BLD	630	BLD	0·40%	
22								
22·7	20	60	395	BLD	520	0·008	0·24%	
25								
25·5	20	510	810	0·5	640	BLD	0·30%	
28								
28·5	20	1400	3150	0·5	450	BLD	0·63%	
30								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 15 TO 30 m DATE 30/10/81 PAGE 2 OF 16

839379

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
31·4	220	165	660	0·5	410	BLD	0·44%	
34·3	90	170	1200	0·5	240	BLD	0·46%	
37·5	80	285	1750	0·5	270	BLD	0·70%	
39·9	65	70	385	BLD	270	BLD	0·25%	
42·4	50	210	1400	0·5	250	BLD	0·54%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 30 TO 45 m DATE 30/10/81 PAGE 3 OF 16

839380

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
45								
46								
46·5	15	100	255	BLD	270	BLD	0·18%	
47								
48								
48·5	30	405	565	0·5	300	BLD	0·24%	
49								
50								
51								
51·5	160	435	900	1·5	260	0·008	0·57%	
52								
53								
54								
54·0	70	405	905	2·0	210	0·008	0·30%	
55								
56								
56·3	25	170	445	0·5	190	0·008	0·24%	
57								
58								
59								
59·3								
60								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 45 TO 60 m DATE 30/10/81 PAGE 4 OF 16

839381

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
	95	230	375	3·0	280	BLD	0·24%	
62·7	25	720	955	0·5	280	BLD	0·26%	
64·5	110	630	1200	3·0	240	BLD	0·52%	
67·5	165	125	135	0·5	300	0·012	0·38%	
70·5	25	115	105	0·5	190	BLD	0·32%	
72·4	70	85 -	205	BLD	210	BLD	0·28%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 60 TO 75 m DATE 30/10/81 PAGE 5 OF 16

839382

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
75·4	45	40	180	BLD	120	BLD	0·16%									
71·0	30	45	235	BLD	220	BLD	0·15%									
79·5	35	56	145	0·5	210	0·017	0·31%									
81·8	30	135	245	BLD	240	0·017	0·42%									
85·0	30	115	460	BLD	260	0·008	0·27%									
88·5	30	35	400	0·5	240	BLD	0·16%									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 75 TO 90 m DATE 30/10/81 PAGE 6 OF 16

839383

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
91·6	20	60	155	0·5	230	BLD	0·18%									
95·5	30	35	105	0·5	280	BLD	0·24%									
98·2	10	5	65	BLD	240	BLD	0·11%									
100·5	15	10	55	BLD	230	BLD	0·080%									
103·5	15	5	75	0·5	240	BLD	0·030%									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 90 TO 105 m DATE 30/10/81 PAGE 7 OF 16

839384

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
106.5	25	BLD	50	BLD	270	BLD	0.035%	
109.5	30	BLD	55	BLD	230	0.008	0.045%	
112.5	15	BLD	65	BLD	260	0.008	0.030%	
115.5	35	BLD	65	BLD	260	0.008	0.045%	
118.5	40	5	75	BLD	220	0.008	0.025%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 105 TO 120m DATE 30/10/81 PAGE 8 OF 16

839385

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
120·8	30	BLD	65	BLD	220	0·008	0·035%	
123·8	15	5	65	BLD	210	0·008	0·035%	
126·8	30	BLD	70	BLD	360	0·008	0·040%	
129·3	15	BLD	55	BLD	270	BLD	0·025%	
133·8	15	BLD	65	BLD	220	BLD	0·030%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 120 TO 135 m DATE 30/10/81 PAGE 9 OF 16

839386

Metres	Cu	Pb	Zn	Ag	Ba	Au	S	SAMPLE NUMBER
136·5	25	10	95	BLD	150	BLD	0·040%	
139·5	35	25	160	BLD	160	0·008	0·030%	
142·5	30	20	95	BLD	180	0·008	0·035%	
145·5	25	15	90	BLD	170	0·008	0·040%	
148·5	30	35	175	BLD	160	BLD	0·040%	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 135 TO 150m DATE 30/10/81 PAGE 10 OF 16

839387

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
150																
151																
151.5																
152																
153	20	65	200	BLD	220	0.008	0.025%									
154																
154.5																
155																
156	50	40	185	BLD	260	BLD	0.030%									
157																
157.5																
158																
159	35	45	220	BLD	220	0.008	0.035%									
160																
160.5																
161																
162	20	70	295	BLD	185	BLD	0.070%									
163																
163.5																
164																
165	15	60	200	BLD	220	BLD	0.050%									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB1

ASSAYED BY Analabs FROM 150 TO 165m DATE 30/10/81 PAGE 11 OF 16

839388

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
165																
166																
166-5																
167																
168	20	45	220	BLD	410	BLD	0.075%									
169																
169-5																
170																
171	20	35	170	BLD	240	BLD	0.065%									
172																
172-5																
173																
174	30	50	130	BLD	270	BLD	0.10%									
175																
175-5																
176																
177	45	300	1800	0.5	420	BLD	0.26%									
178																
178-5																
179																
180	60	205	265	BLD	360	BLD	0.085%									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 165 TO 180m DATE 30/10/81 PAGE 12 OF 16

839389

Metres	Cu	Pb	Zn	Ag	Pa	Au	S	SAMPLE NUMBER
180								
181								
181-5								
182								
183	60	20	150	BLD	250	BLD	0·12%	
184								
184·5								
185								
186	65	35	200	BLD	120	BLD	0·30%	
187								
187·5								
188								
189	85	80	305	BLD	250	BLD	0·24%	
190								
190·5								
191								
192	70	65	370	BLD	260	BLD	0·10%	
193								
193·5								
194								
194	40	35	215	BLD	160	BLD	0·16%	
195								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 180 TO 195 m DATE 30/10/81 PAGE 13 OF 16

839390

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
195																
196																
196·5																
197																
198	45	20	205	BLD	260	BLD	0·20%									
199																
199·5																
200																
201	50	10	245	BLD	160	0·008	0·12%									
202																
202·5																
203																
204	35	5	175	BLD	110	BLD	0·16%									
205																
205·5																
206																
207	35	10	175	BLD	230	BLD	0·070%									
208																
208·5																
209																
209	30	20	190	BLD	160	BLD	0·060%									
210																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

ASSAYED BY Analabs FROM 195 TO 210 m DATE 30/10/81 PAGE 14 OF 16

839391

Metres	Cu	Pb	Zn	Ag	Ba	Au	S									SAMPLE NUMBER
211·6	55	30	100	0·5	220	BLD	0·030%									
214·5	75	50	275	0·5	160	BLD	0·035%									
217·5	65	55	615	BLD	110	BLD	0·13%									
220·5	50	155	180	0·5	120	BLD	0·14%									
223·5	60	60	185	0·5	570	0·008	0·12%									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB2

ASSAYED BY Analabs FROM 210 TO 225 m DATE 30/10/81 PAGE 15 OF 16

839392

Metres	Cu	Pb	Zn	Ag	Ba	Au	S								SAMPLE NUMBER
225															
226															
226.5															
227															
228	60	70	275	0.5	260	0.008	0.065%								
229															
229.5		End of	DDH:	EAB 2	at 229.5 m.										

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH EAB 2

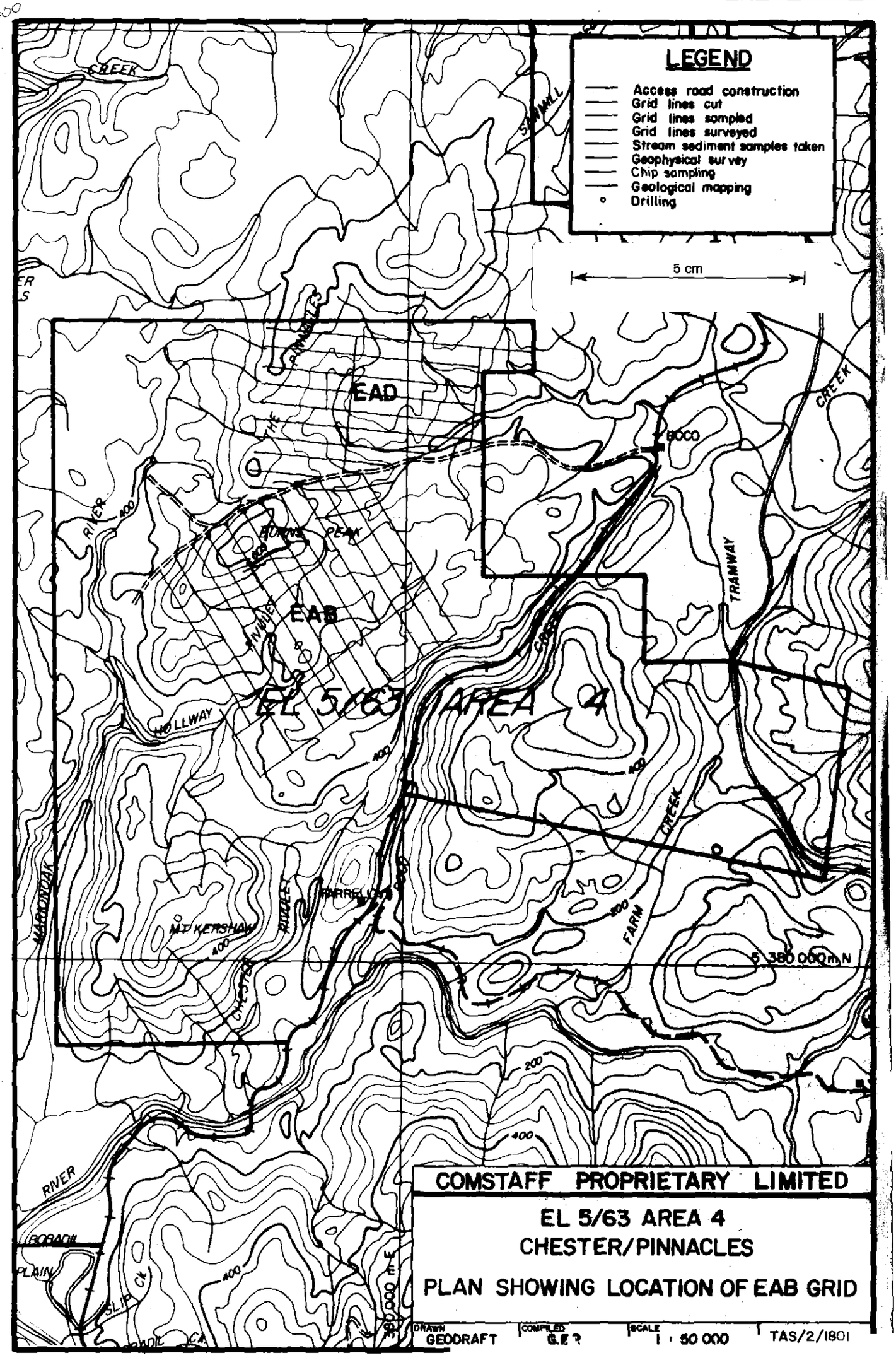
ASSAYED BY Analabs FROM 225 TO 229.5 m. DATE 30/10/81 PAGE 16 OF 16

LIST OF PLANS

TAS-2-1801	Location of East Chester area EL 5/63 Part 4 1:50 000
TAS-2-1565	East Chester Grid EAB Detailed Geological Plan 1:5 000
TAS-2-1698	East Chester Grid EAB Geological Interpretation 1:5 000
TAS-2-2656	East Chester Grid EAB Location of EAB1 and EAB2 1:2 500
TAS-2-2806	East Chester Grid EAB Plan of Costean 2950S and Trenches 1 and 2 Geological Observations 1:500
TAS-2-2807	East Chester Grid EAB Ao Soil Sample Results for Cu 1:5 000
TAS-2-2808	East Chester Grid EAB Ao Soil Sample Results for Pb 1:5 000
TAS-2-2809	East Chester Grid EAB Ao Soil Sample Results for Zn 1:5 000
TAS-2-2765	East Chester Grid EAB Plan of Costean 2950S and Trenches 1 and 2 Geochemical Results for Cu, Pb, Zn, Ag, Mn, Ba and Au 1:500
TAS-2-2428	East Chester Grid EAB Contoured Chargeability Plan n=2 1:5 000
TAS-2-2511	Section Along Line 2340S DDH EAB1 Geochemical Soil Profiles 1:2 500
TAS-2-2766	Section Along Line 2340S DDH EAB1 Geological Details 1:500
TAS-2-2767	Section Along Line 2340S DDH EAB1 Cu, Pb, Zn, Ag Results 1:500
TAS-2-2768	Section Along Line 2340S DDH EAB1 Ba, Au, S Results 1:500
TAS-2-2512	Section Along Line 2950S DDH EAB2 Geochemical Soil Profiles 1:2 500
TAS-2-2769	Section Along Line 2950S DDH EAB2 Geological details 1:500
TAS-2-2770	Section Along Line 2950S DDH EAB2 Cu, Pb, Zn, Ag Results 1:500
TAS-2-2771	Section Along Line 2950S DDH EAB2 Ba, Au, S Results 1:500

538000

839394





COMSTAFF PROPRIETARY LIMITED

EAST CHESTER - EAB

DETAILED GEOLOGICAL PLAN

DRAWN: GEODRAFT
COMPILED: C.S.H.
DATE:
SCALE: 1 : 5000

TAS/2/1565

N 384 000 N

E 378 000 E

N 383 000 N

E 379 000 E

E 380 000 E

N 382 000 N

E 381 000 E

N 383 000 N

N 384 000 N

Annacles Anticline

Burns Peak Syncline

East Chester Anticline

glacial cover

0 50 100 200 300 400 500
Metres

Ch/Sed	Cherty sediments or silicified rocks
Sh	Black grey shales, interbedded arenaceous units
Qz/f/py	Quartz feldspar porphyry extrusive ?
A/tu	Tuffs acid, crystal, lithic, lapilli (altered)
An	Andesite vesicular, flow textured, tuffaceous
An/tu	Andesite tuff chlantic, pyritic
Tu	Tuff water - lain, bedded, interbedded siliceous sandy units
Rh	Rhyolite - flow textured, vesicular ?
Avo	Sub aerial acid volcanics flow banded, brecciated, ashfall tuffs, trachyandesites, ignimbrites ? fiamme
Pcl	Coarse pyroclastic, volcanic breccia
	Geological boundary
F	Fault, fault inferred
	Glacial cover
	Caldeon

839396

5 cm

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER - EAB

GEOLOGICAL INTERPRETATION

DRAWN	C B
COMPILED	D B H
DATE	Jan 79
SCALE	1 5000
	TAS/2/1698

COSTEAN 1

COSTEAN 2

COSTEAN 3

COSTEAN 4

COSTEAN 5

COSTEAN 6

ACCESS TRACK

2340

DDH EAB 1

DDH EAB 2

S 384 000 m N

E 379 000 m E

E 39397

5 cm

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
PLAN OF NORTH-WEST PORTION OF GRID

DETAILED GEOLOGICAL PLAN

COMPILED	G F P
DRAWN	G F P
DATE	9/7/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2656

L 2750 S

L 2950 S

5 384 400 m N

5 384 300 m N

5 384 200 m N

5 384 100 m N

378 400 m E

378 300 m E

5 cm

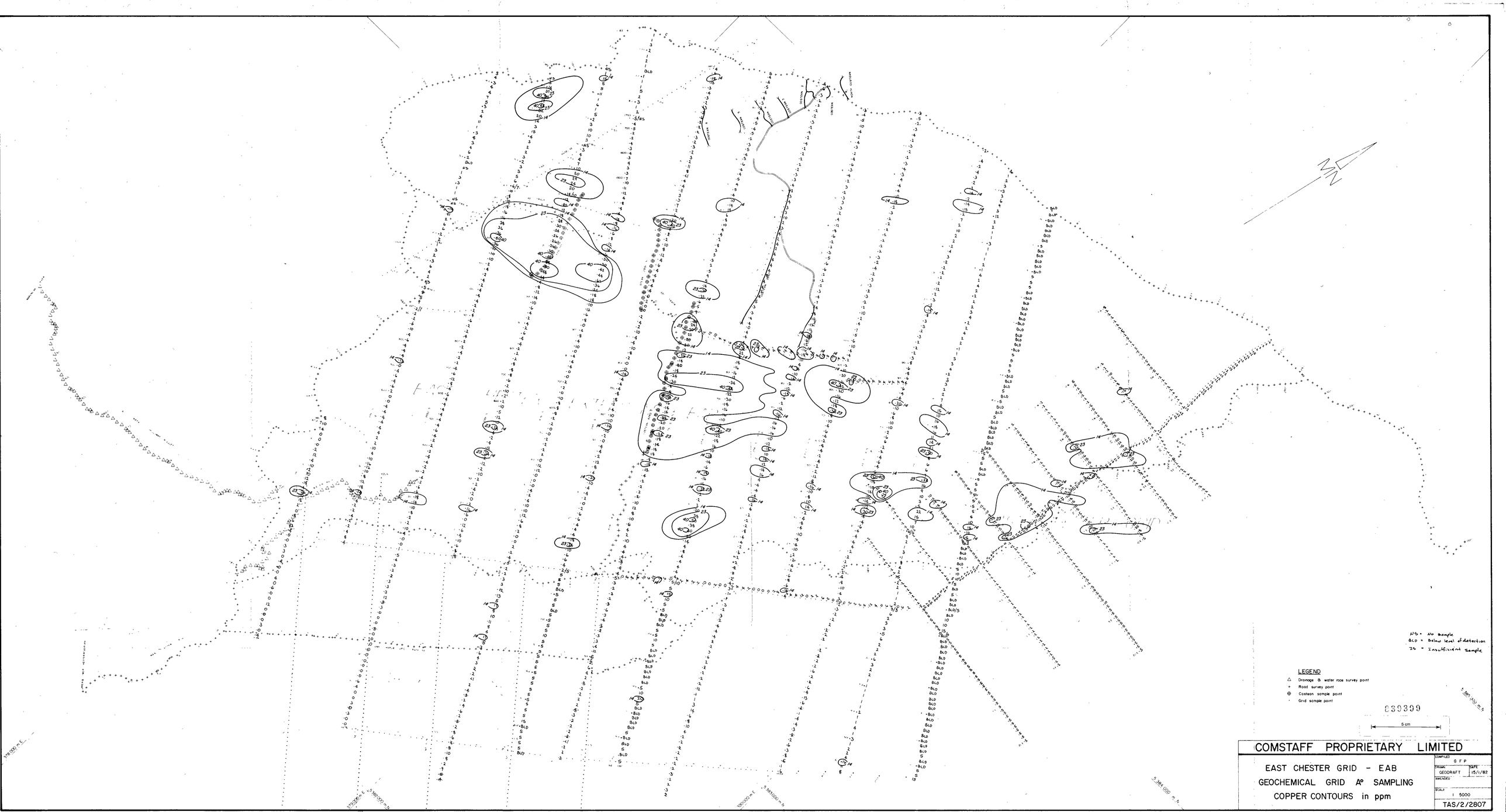
839398

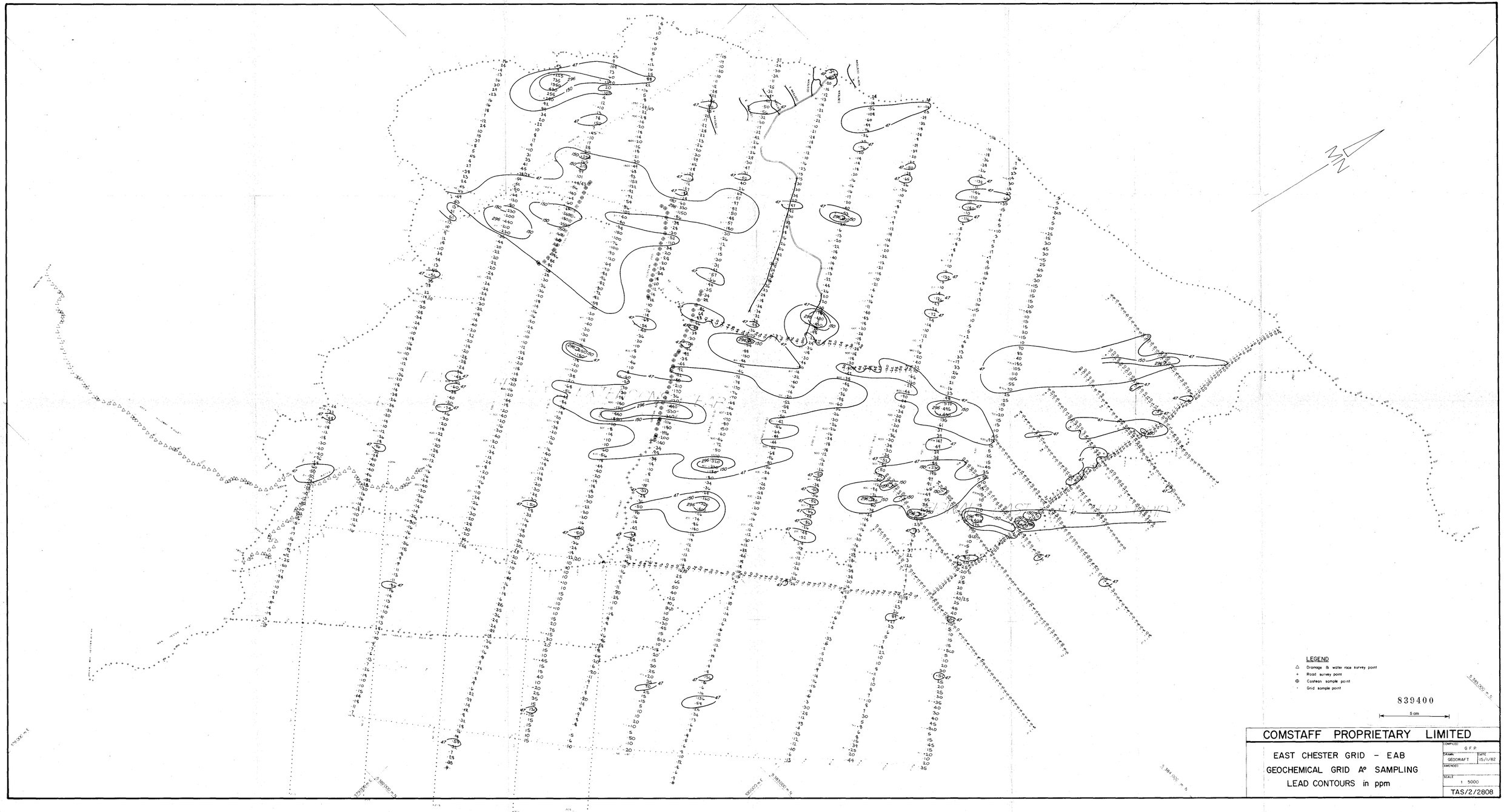
COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
PLAN OF COSTEAN 2950 S & TRENCHES 1&2

GEOLOGICAL DETAILS

COMPILED	G F P
DRAWN	GEODRAFT
DATE	18/1/82
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2806


N/S = No sample
BLD = Below level of detection
3% = Insufficient sample
LEGEND
Drainage & water race survey point
Road survey point
Costean sample point
Grid sample point
5 cm
COMSTAFF PROPRIETARY LIMITED
EAST CHESTER GRID - EAB
GEOCHEMICAL GRID A° SAMPLING
COPPER CONTOURS in ppm
COMPILED G F P
DRAWN GEOGRAFT
DATE 15/1/82
AMENDED
SCALE 1 : 5000
TAS/2/2807



COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
GEOCHEMICAL GRID Aº SAMPLING
LEAD CONTOURS in ppm

COMPILED	G.F.P.
DRAWN	GEODRAFT
DATE	15/1/82
AMENDED	
SCALE	1 5000

TAS/2/2808

EAST CHESTER EXTENSION EAB

LEGEND

- Drainage & water race survey point
- + Road survey point
- ⊕ Costean sample point
- · Grid sample point

839401

5 cm

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
GEOCHEMICAL GRID A° SAMPLING
ZINC CONTOURS in ppm

COMPILED	G. F. P.
DRAWN	DATE
GEODRAFT	15/1/82
AMENDED	
SCALE	1 : 5000

TAS/2/2809

L 2750 S

L 2950 S

TRENCH 2

TRENCH 1

5,384,400 m N

5,384,300 m N

5,384,200 m N

5,384,100 m N

378,400 m E

378,300 m E

5 cm

839402

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
PLAN OF COSTEAN 2950 S & TRENCHES 1&2
GEOCHEM VALUES FOR TRENCH SAMPLING

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	18/9/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2765

EAST CHESTER EXTENSION (EAB)

ORIGINAL EAST CHESTER GRID

CAN[illegible] GRID

10m/sec

15m/sec

40m/sec

30m/sec

20m/sec

minor anomaly

minor anomaly on small n numbers

possible anomaly at end of line

small (amplitude & size) anomaly at depth

chargeability anomaly due to black shales

minor anomaly at surface

minor anomaly on n=4 separation

COSTEAN

LEGEND

△ Drainage & water race survey point

\+ Road survey point

⊕ Costean sample point

· Grid sample point

839403

5 cm

378 000 m E

5 380 000 m N

COMSTAFF PROPRIETARY LIMITED

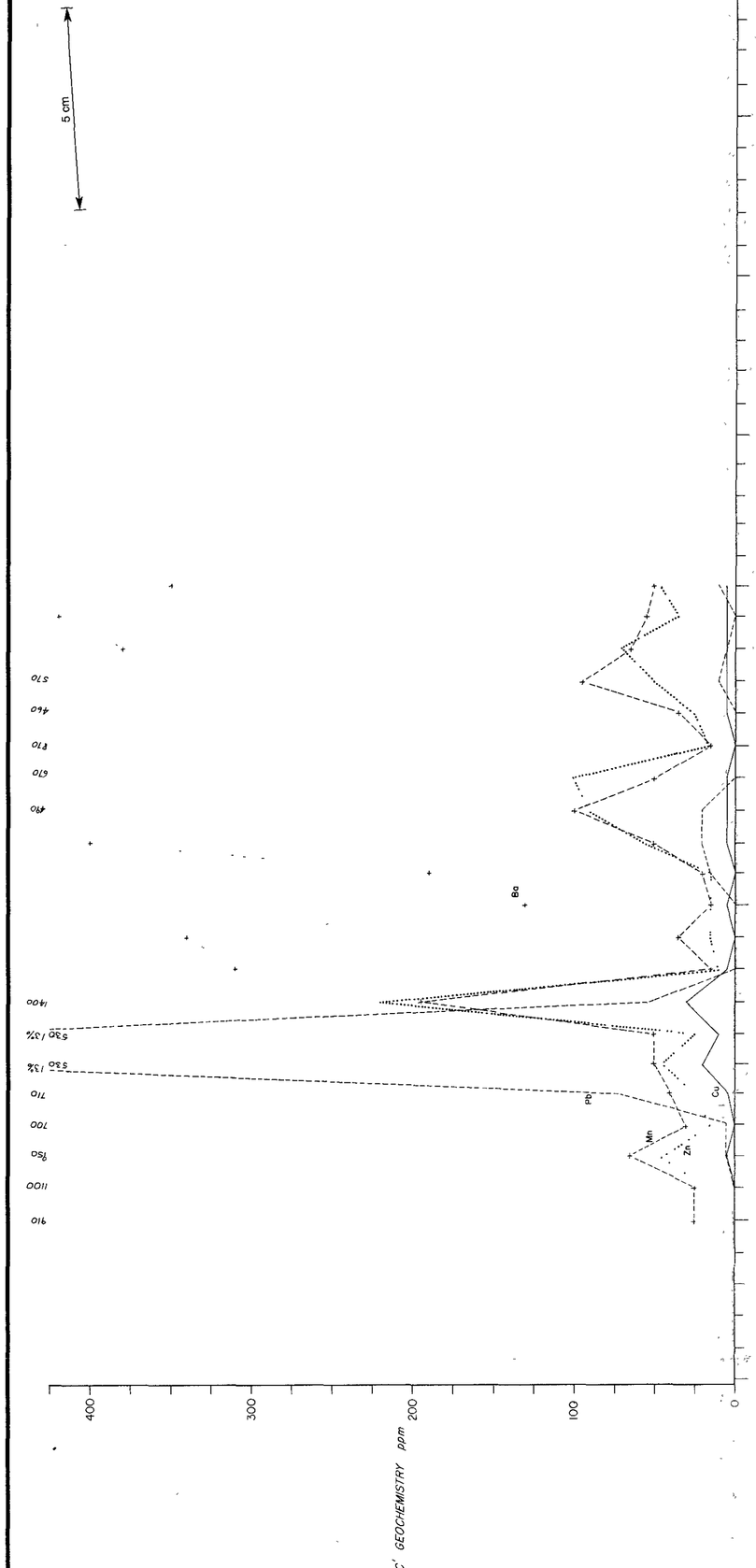
EAST CHESTER GRID - EAB

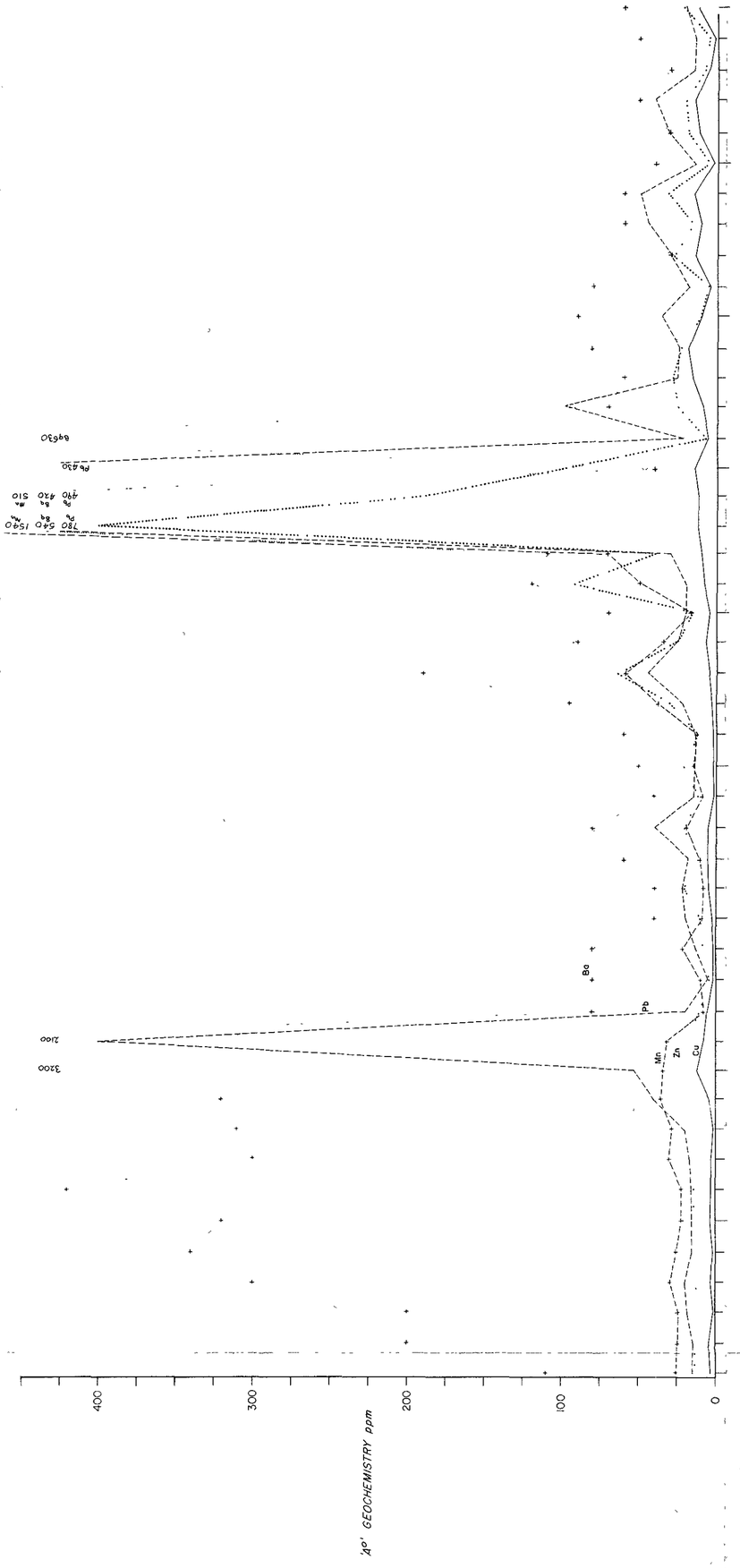
CONTOURED CHARGEABILITY PLAN OF n = 2

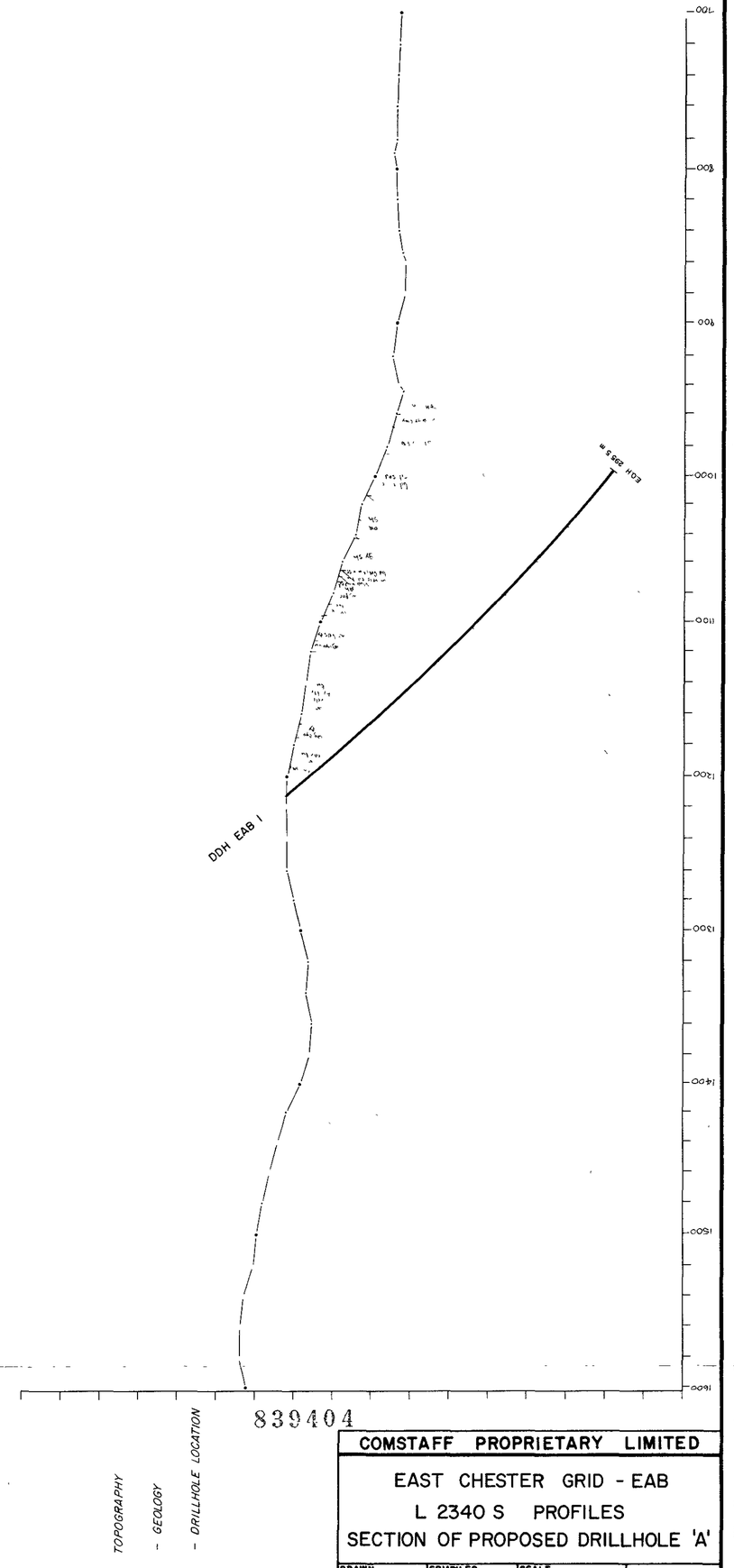
SHOWING DISTINCTIVE ANOMALIES

COMPILED	D B T
DRAWN	GEODRAFT
DATE	5/3/81
AMENDED	
SCALE	1 5000
	TAS/2/2428

5 cm







COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB

L 2340 S PROFILES

SECTION OF PROPOSED DRILLHOLE 'A'

DRAWN	COMPILED	SCALE	
GEODRAFT 3/81	G F P	1 2500	TAS/2/2511

W

323° MN

E

DDH EAB 1
(SECTION)

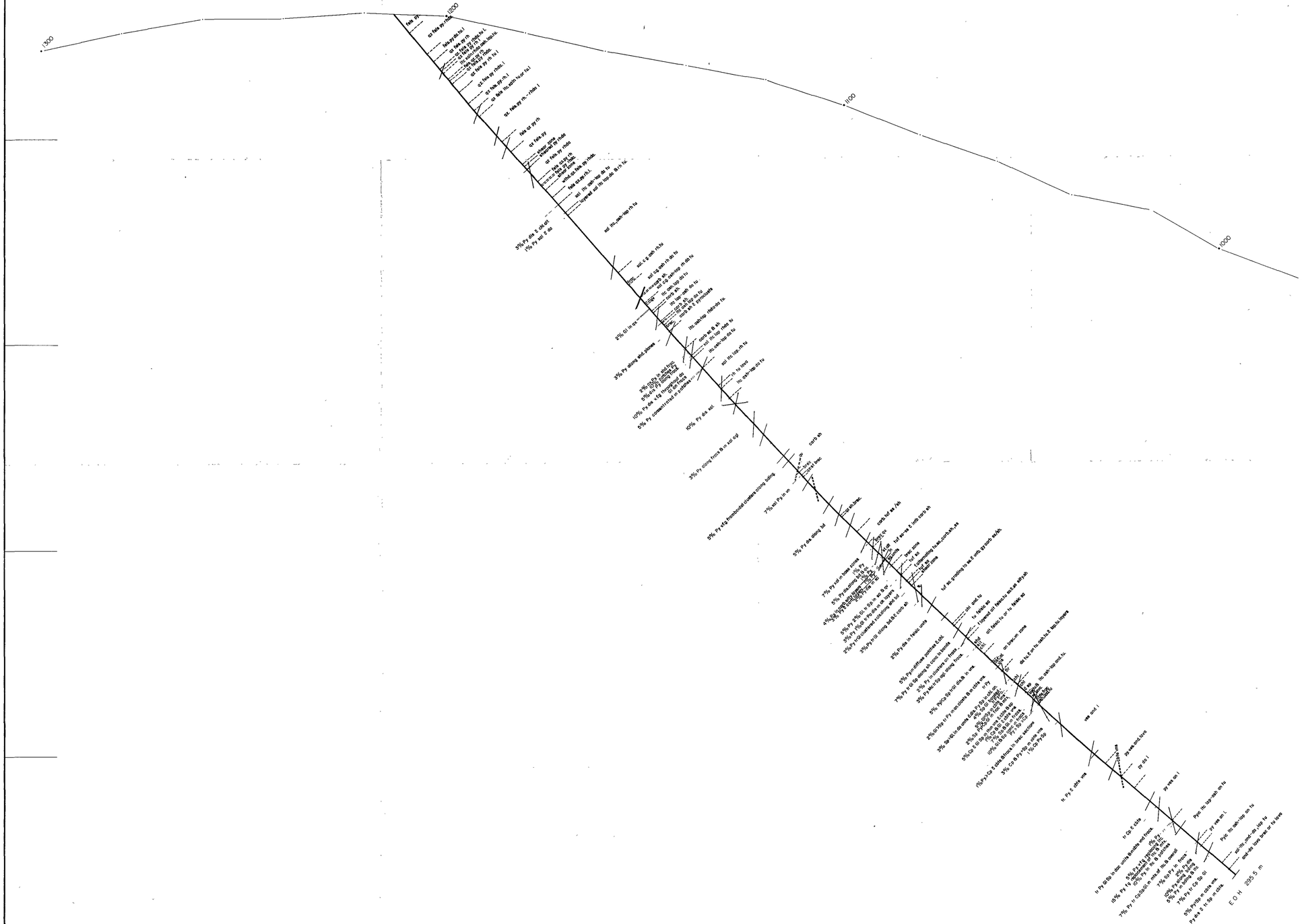
1300

1200

1100

1000

900


fele py
cz fele py rhde
fele py dis tu
cz fele py rh
cz fele py rhde tu
fele py dis rhde tu
cz fele py rhde
cz fele py rhde i
cz fele py rh i
cz fele py rhde i
cz fele tic-actin tuff tu i
cz fele py rh - rhde i
fele cz py rh
cz fele py
chlor py
cz fele py rhde
fele cz py rh
cz fele py rhde
fele cz py rh i
cz fele py rhde i
whit cz fele py rhde
fele cz py rh i
sil tic cab-top sh tu
sil tic cab-top rh tu
3% Py dis E dis dil
1% Py dis E dis
sil c g cab rh dis tu
sil cg cab rh dis tu
sil cg cab-sap rh tu
2% Py dis in qtz
3% Py along sed planes
sil tic cab sap dis tu
sil tic cab sh dis tu
sil tic cab sh tu
sil tic sh tu
cons sh & pyrrhotite
tic cab-top rhde tu
cons sh & sh
sil tic tuf rhde tu
sil tic cab-top dis tu
sil tic tuf rh tu
rh tu inco
tic cab-top rh tu
10% Py dis sil
3% Py along fracs & in sil cg
cons sh
5% Py dis sil
7% sil Py in rh
cons tuf sh / sh
5% Py in fracs
cons tuf sh
tuf sh-sw & carb cons sh
7% Py in fracs
5% Py dis in fracs
5% Py dis tuf sh
5% Py dis in fracs
5% Py in fracs
5% Py dis in fracs
5% Py dis in fracs
5% Py dis

W

323° MN

E

DDH EAB 1
(SECTION)

ppm Zn Ag
Cu Pb ppb
ppm ppm

1300

1200

1100

1000

900

EOH 285.5 m

5 cm

839406

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
SECTION ALONG LINE 2340 S
SECTION OF DRILLHOLE DDH EAB 1
GEOCHEMICAL RESULTS FOR Cu,Pb,Zn,Ag

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	4/12/81
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2767

W

323° MN

E

DDH EAB I
(SECTION)

ppm | ppm | %
Ba | Au | total S

1300

1200

1100

1000

900

E.O.H. 235.5 m

839407

5 cm

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
SECTION ALONG LINE 2340 S
SECTION OF DRILLHOLE DDH EAB I
GEOCHEMICAL RESULTS FOR Ba, Au, total S

COMPILED: GEODRAFT
DRAWN: GEODRAFT | DATE: 5/12/81
AMENDED:
SCALE: 1 : 500
PLAN NO.: TAS/2/2768

5 cm

Ba 460
Pb 660
Mn 855

Zn
Mn
Pb
Cu
Ba

Ba 240
Pb 1150
Ba 480

Cu
Zn
Mn
Pb
Ba

229 m

'C' GEOCHEMISTRY ppm

'A' GEOCHEMISTRY ppm

TOPOGRAPHY
– GEOLOGY
– DRILLHOLE LOCATION

839408

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
L 2950 S PROFILES
SECTION OF PROPOSED DRILLHOLE 'B'

DRAWN	COMPILED	SCALE	
GEODRAFT 3/81	G F P	1 2500	TAS/2/2512

320° MN

DDH EAB 2
(SECTION)

1500

1300

1500

1100

EOH 229.5 m

LEGEND

- Bedding plane showing facing
- Vein
- Geological boundary
- Mineralization
- Fault

For abbreviation explanation see TAS/2/1566

5 cm

839409

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
SECTION ALONG LINE 2950 S
SECTION OF DRILLHOLE DDH EAB 2
GEOLOGICAL DETAILS

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	20/1/82
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2769

320° MN

1500

1400

1300

1200

1100

DDH EAB 2
(SECTION)

Cu ppm	Pb ppm	Zn ppm	Ag ppm
90	360	1380	1.0
40	65	340	BLD
45	115	740	BLD
30	40	695	3.0
35	30	240	BLD
70	160	1650	BLD
25	60	395	BLD
30	510	810	0.5
50	1400	3150	0.5
50	265	690	0.5
220	165	1800	0.5
50	170	1750	0.5
80	285	345	BLD
65	70	1400	0.5
50	810	225	BLD
15	100	285	0.5
30	430	900	1.5
160	405	905	2.0
70	170	445	0.5
35	230	375	3.0
35	730	955	0.5
55	830	1300	3.0
110	125	135	0.5
155	125	105	0.5
25	85	205	BLD
70	40	190	BLD
45	45	235	0.5
30	55	445	0.5
35	125	265	BLD
50	115	480	BLD
30	35	400	0.5
30	80	185	0.5
20	35	105	0.5
20	5	65	BLD
10	10	55	BLD
15	5	75	0.5
15	BLD	50	BLD
25	BLD	55	BLD
20	BLD	65	BLD
15	BLD	65	BLD
35	5	75	BLD
40	5	55	BLD
30	BLD	65	BLD
30	5	70	BLD
15	BLD	55	BLD
30	BLD	65	BLD
15	BLD	55	BLD
15	BLD	95	BLD
15	10	190	BLD
25	25	35	BLD
25	20	35	BLD
30	15	90	BLD
25	35	175	BLD
30	65	200	BLD
20	40	185	BLD
50	45	225	BLD
25	70	250	BLD
30	60	250	BLD
30	45	170	BLD
20	30	130	0.5
30	300	1850	BLD
40	205	265	BLD
60	35	200	BLD
45	80	205	BLD
55	85	270	BLD
70	85	215	BLD
40	30	205	BLD
45	10	265	BLD
60	5	175	BLD
35	10	175	BLD
25	20	190	BLD
30	20	200	0.5
25	20	275	0.5
75	50	605	BLD
65	55	185	0.5
55	85	180	0.5
90	80	185	0.5
60	70	275	0.5

EOH 229.5m

839410

5 cm

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
SECTION ALONG LINE 2950 S
SECTION OF DRILLHOLE DDH EAB 2
GEOCHEMICAL RESULTS FOR Cu, Pb, Zn, Ag

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	5/12/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2770

320° MN

1500

1400

1300

1200

1100

DDH EAB 2
(SECTION)

ppm
Ba Au total S

1800 0.09 0.76%
760 BLD 0.45%
600 BLD 0.40%
1200 BLD 0.17%
860 BLD 0.49%
630 0.008 0.74%
520 BLD 0.86%
640 BLD 0.63%
460 BLD 0.44%
450 BLD 0.46%
540 BLD 0.70%
370 BLD 0.28%
370 BLD 0.64%
250 BLD 0.18%
270 BLD 0.34%
290 0.008 0.67%
260 0.008 0.90%
210 0.008 0.64%
190 BLD 0.24%
280 BLD 0.62%
240 BLD 0.62%
300 0.008 0.58%
190 BLD 0.49%
210 BLD 0.16%
120 BLD 0.15%
250 0.017 0.91%
210 0.017 0.48%
240 0.008 0.67%
280 BLD 0.16%
240 BLD 0.18%
250 BLD 0.24%
280 BLD 0.11%
250 BLD 0.08%
230 BLD 0.08%
240 BLD 0.08%
270 0.008 0.08%
230 0.008 0.06%
280 0.008 0.06%
250 0.008 0.08%
220 0.008 0.08%
210 0.008 0.04%
260 0.008 0.08%
270 BLD 0.02%
220 BLD 0.04%
230 0.008 0.09%
250 BLD 0.08%
180 0.008 0.08%
170 0.008 0.04%
BLD 0.04%
240 0.008 0.08%
220 0.008 0.08%
250 0.008 0.20
185 BLD 0.0078%
210 BLD 0.0078%
410 BLD 0.06%
240 BLD 0.10%
270 BLD 0.24%
280 BLD 0.06%
340 BLD 0.12 %
300 BLD 0.40%
150 BLD 0.24%
250 BLD 0.10%
280 BLD 0.08%
180 BLD 0.10%
280 BLD 0.08%
180 0.008 0.16%
110 BLD 0.19%
250 BLD 0.060%
220 BLD 0.030
160 BLD 0.08%
110 BLD 0.14%
180 BLD 0.14%
270 0.008 0.12%
280 0.008 0.06%

EOH 229.5m

839411

5 cm

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
SECTION ALONG LINE 2950 S
SECTION OF DRILLHOLE DDH EAB 2
GEOCHEMICAL RESULTS FOR Ba, Au, total S

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	7/12/81
AMENDED	
SCALE	1 : 500
PLAN NO	TAS/2/2771

839412

82-1690

Dept of M | A.O. | C.G. | E.O. | D.S.M.E
Received - 4 FEB 1982
Answered
DEPT. OF MINES
REF: No. 960/82

aac

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR PERIOD ENDED 30TH DECEMBER 1981

STAGE REPORT - GAR FENTONS

EL 5/63 PART 6

VOL 9|9

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheet: Queenstown K55-05

COMMODITY/IES: Sn, Ag-Pb-Zn, Cu

TEXT PAGES NO: 13

PLAN NOS: See attached list

TABLE NOS: 1, 2, 3

APPENDICES: I, II, III, IV, V

AUTHOR/S: S R Yardley

DATE: 26th January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

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2.3 Access and Infrastructure
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COMSTAFF PROPRIETARY LIMITED

SIX MONTHLY REPORT TO TASMANIA DEPARTMENT OF MINES FOR PERIOD ENDED 30TH DECEMBER 1981

STAGE REPORT - GAR FENTONS

EL 5/63 PART 6

1. SUMMARY

The principal exploration objective of the Renison East GAR Fentons programme was to ascertain the potential and nature of the tin mineralisation observed in the old workings and to establish prime target areas for stanniferous fault zones similar to the Bassett Federal fault and possible massive sulphide carbonate replacement beds adjacent to such a fault zone.

Detailed ground work combining geochemistry, geophysics, geological mapping of creeks, lines and old workings in the Fentons and X Proprietary areas, led to the choice of the Fentons area.

This initial investigation provided the impetus for detailed drilling of Fentons area.

The GAR Fentons structurally controlled tin and silver/lead/zinc mineralised fissure fill vein system has now been diamond drilled over a continuous strike length of 1.4 kilometres. The corridor of drilling extends from just south of the Pieman River in the north (DDH XI) to the PMG road in the south (RBE 27). Since November 1979 to November 1981 a total of 27 drill holes comprising 8,808 metres of drilling have been completed.

The structure is currently open ended both to the north and south and consists of a number of distinct veins of varying mineralogy, which in places are superimposed upon each other.

The best mineralised intersections to date are as follows:-

Hole No	Interval	True Width	% Sn	% Pb	% Zn	ppm Ag
RBE 16	271.0-273.35	1.80m	1.3	0.04	0.22	1.5
RBE 5	156.50-168.10	4.9m	-	13.10	2.48	454.

The drilled GAR Fentons structure in the north is the down dip expression of the old Railway and Main lodes - the latter also known as Salmons lode.

...2.

The vein system strikes north south in the centre, curves to the north north west adjacent to the Pieman River and to the south south west towards the PMG road. Dips are steep to the west and east.

A subsidiary tin vein system bifurcates from the centre of the main zone and strikes south south east along the western flank of Exe River across the Murchison Highway to form the northerly strike extension of the old X Proprietary Mine tin workings. During 1980/81 two diamond drill holes (RBE 13 and 29 totalling 545 metres) have investigated the potential of this zone.

Geochemical, geophysical and geological surveys were expanded mainly to the south across the Murchison Highway to accommodate encouraging drill results which showed greater potential for base metal vein concentrations than the main target of tin mineralisation.

Mapping suggests a north south striking synclinal sequence of Upper? Crimson Creek cyclic tuffaceous sandstones siltstones and shales.

The area is structurally complex and not fully understood at this stage but it would appear to be an intermediate but continuous zone between the Huskisson syncline in the north and the Dundas syncline to the south which has been uplifted and deformed by the later east south east trending and plunging Renison Antiform. (See plan TAS-2-2804).

The upper Crimson Creek sediments lack defined marker horizons - a calcareous mudstone and tuffaceous sandstone sequence is the only horizon that can be correlated with any degree of confidence on both west and east limbs of the syncline. The basal Dundas conglomerate (Red Lead) was not intersected in any of the drilling although it does exist just north of the PMG road and probably plunges off to the south.

Ultramafic complexes intrude a structural suture along the western flank of the syncline and along its axis in places. Alteration is variable but in the drilled structure the ultamafic has been incipiently to pervasively converted to talc carbonate with erratic semi massive sulphide replacement bearing very patchy tin concentrations. Subsequent galena sphalerite bearing quartz carbonate veins of the Zeehan type have been squeezed in along or adjacent to the massive and vein pyrrhotite.

Breccia and shear textures along the mineralised fault suture suggest recurrent comminution.

...3

Metasomatic alteration - hornfelsing - of the sedimentary pile is evident at depth from the drilling and reaches the surface in the X Proprietary area. A buried Devonian granite body is implied.

Recent and past exploration along the western boundary of EL 5/63 Part 6 to the north and south of the Murchison highway in GAT and old GAP gridded areas and including recent geological discussions on the regional mapping interpretation of the area all point towards a concerted summer/autumn exploration programme for massive sulphide fault and carbonate replacement bodies of the Renison Bell type in this area.

2. INTRODUCTION

2.1 General

This report relates to diamond drilling of the GAR grid area (north and south) in the central sector of the EL and abutting onto the previously explored GAP grid area to the south. In addition surface exploration of the GAT grid (a westerly extension, to the EL boundary, of the GAR grid) is briefly discussed as this is an ongoing follow up programme in its early stages and will form the backbone of exploration efforts for the 1982 season.

2.2 Location

The area is located to the west of Rosebery and to the east of Renison between the Exe River to the east and the Ring River to the west. To the north the Pieman River forms a natural barrier while to the south the area is open. It is typically forested, not particularly rugged, with intersposed areas of flat glacial till with a veneer of peat and swampy depressions.

Besides the northerly flowing Ring and Exe Rivers, the Colebrook creek and the tributaries bisect the area.

2.3 Access and Infrastructure

The Murchison Highway straddles the area and numerous four wheel drive tracks lead off to the north and south of the highway. The Emu Bay railway follows the Pieman River to the north, then across the Ring River to Renison.

...4

Two 44,000 volts power cables cross the EL to Renison.

Rain falls throughout the year (2000 mm) with December to March being the driest months.

An on site temporary core shed was used between January-September 1981 and a base camp established in Rosebery caravan park. Thereafter a permanent core shed and office was established in Zeehan.

2.4 Exploration Objectives

To locate a body or bodies of one or more of the undermentioned styles of mineralisation that could be profitably mined:

(a) Stratabound stanniferous massive sulphide replacement mineralisation and/or its feeder zone,

(b) tin bearing quartz vein stockwork and

(c) silver/lead/zinc vein style mineralisation with or without accompanying tin vein mineralisation

3. WORK COMPLETED

3.1 Diamond Drilling (See tables 1 and 2)

Over a period of two years from November 1979 to November 1981, 29 holes were drilled for a total of 9354 metres. Drilling was undertaken on a one shift basis by Longyear with a 38 machine producing NQ and BQ core. An hiatus in drilling occurred between November 1979 and May 1980, thereafter the drilling was continuous. An overall rate of 16.75 metres per shift was achieved. Drilling on an annual basis is listed below:-

Hole No's	Year	Metres
RBE 3 & 5	1979	307
RBE 7-19	1980	3893.6
RBE 20-32	1981	5153.4

Core recovery was excellent - in excess of 95%.

Triconing was used to penetrate the blanket of glacial till covering the collar of many holes.

A preliminary elemental scan of every hole was achieved by continuous grinding of 3 metre samples and analyses for Cu, Pb, Zn, Ag, Ni, As by AAS and Sn and W by XRF.

...5

Selected mineralised intervals were split and + 1% Pb, Zn samples check analysed and their specific gravity determined.

All samples were analysed by Analabs (in Cooee and Perth).

High grade (Pb, Zn, Ag) samples from RBE 5 and 10A were submitted to AMDEL for preliminary ore dressing mineralogy and metallurgical testing.

All drill holes were geologically logged.

3.2 Geochemical Grid Lines and Access Tracks

52 line kilometres of gridding were cut by contractors and Comstaff field staff. The breakdown for the various gridded areas is as follows:-

X Proprietary Area	3,020 metres
GAR north and south	30,270 metres
GAT	18,720 metres
TOTAL	52,010 metres

Grid line spacings varied from 60 to 240 metres depending on the degree of fill in geochemistry required. Lines were cut on a 78° magnetic bearing with the exception of the X Proprietary area.

A number of drill access tracks were bulldozed with care taken at all times to minimise erosion and to avoid unnecessary felling of trees.

3.3 Surveying

Control grid lines, drill access tracks and drill collars were surveyed professionally and levelled by Peacock Darcy and Anderson.

All grid lines and minor tracks were tape, compass and clinometer surveyed at 20 metre intervals, flagged, reduced to horizontal and plotted.

The Pieman River, the Emu Bay Railway and the Murchison Highway between the Exe and Ring Rivers, and Colebrook creek were tape and compass surveyed.

3.4 Geochemical Surveys

C Horizon soil samples were collected by hand screw augers from all lines on the GAR north and south and GAT grids at 20 metre intervals along lines. In addition samples previously collected in 1978 from the northern most lines of the GAP grid (lines 3200N-4000N) and forming a contiguous part of the above grids, but not previously analysed, were retrieved from storage and submitted with the other grid samples for analyses.

...6

All samples were analysed for copper, lead, zinc, nickel, silver, arsenic by AAS and for tin by XRF.

Large blanket areas of glacial till were not sampled.

A total of approximately 1800 soil samples have been submitted for the gridded areas to date.

Only a limited amount of rock chip sampling has been undertaken due to the general lack of outcrop in key areas.

3.5 Geophysical Surveys

A ground magnetic survey using a Proton Precession Magnetometer was carried out over the GAR and GAT grids by contractors and our own staff. A total of 52 line kilometres were covered.

Mise a la masse drill hole surveys were undertaken on the following holes:-

RBE 3, 5, 7, 10A, 11, 12, 14, 16, 17, 18 and 19.

3.6 Geological Mapping

All GAT and GAR south grid lines (GAR lines south of highway), the Pieman and Ring Rivers, Colebrook creek and the Emu Bay railway line were mapped. Check mapping was carried out along the PMG road, Murchison highway and at selected points on the GAP grid.

3.7 Photogeological Survey

A preliminary check ground survey was completed by M Hussey and S Douglas of the Research and Technical Services Division as follow up to their recently completed structural interpretation of colour air photo and Landsat coverage of the Renison and Renison East areas. A helicopter aerial survey was subsequently undertaken.

The purpose of this survey was to establish a regional structural framework on which to build from existing field data.

...7

4. RESULTS ACHIEVED

4.1 Diamond Drilling

Initial diamond drilling of RBE 3, 5, 7, 8, 9 determined that tin mineralisation was associated with quartz, and quartz,- pyrrhotite-arsenopyrite veins, while lead,- zinc,-silver mineralisation occupied a separate system of quartz-carbonate (ankerite/siderite) veins. The section of holes RBE 5, 7 and 9 established the vein attitudes. All subsequent drilling was designed to intersect the main mineralised zones at mean sea level and an along strike between hole spacing of 60 metres was adopted.

The significant tin and base metal intersections have been summarised on tables. (Appendix 4).

Holes RBE 22, 23, 24 and 32 were deep holes, targeted to intersect the tin and base metal vein zones at approximately - 150 metres below datum of mean sea level.

Holes RBE 30 and 31 were planned so as to intersect the main base metal vein system 100 metres above mean sea level in holes RBE 10A and 12 respectively.

The individual veins emplaced along the Fentons' structure have been projected on Plan TAS-2-2803 to mean sea level.

The vein names are as follows:-

Salmons lode	-	Pb, Zn, Ag
Copper vein		Pyrrhotite,
Tin vein		"
Western vein		Pb, Zn, Ag
Gossan vein		Mixed Pyrrhotite/Pb,Zn,Ag
Fentons vein		Pyrrhotite

Tin intersections in excess of 1% and a true width of greater than 1 metre are confined to RBE 25 and 16.

A base metal zone of 230-300m in strike exists between holes RBE 5 and 14. The vein system here occupies a dilated breccia zone.

Deep holes RBE 22, 23, 24 and 32 indicate that the base metal vein zone persists with depth but lead, zinc, silver values do not persist which suggests a component of vertical zoning.

...8.

The details of tin values with depth are inconclusive (no results for RBE 32) but the overall distribution of tin along the Fentons structure suggests that + 1% values are confined to quartz veins ± pyrrhotite which occupy a favoured plumbing system (gabbro contacts ?) along which rapid flow of hydrothermal fluids at high temperature has taken place. Massive pyrrhotite in quartz veins, as semi-massive replacements of talc carbonate and minor replacement of calcareous tuffaceous sandstone and siltstone horizons in holes RBE 16, 17, 27 and 28 contain enhanced background tin values of up to 100 ppm average. The bulk of tin values in excess of 0.15% are confined to very narrow quartz veins which in themselves are probably of no commercial value.

Drill holes RBE 13 and 29 along strike of the X Proprietary workings intersected weak quartz pyrrhotite pyrite, chalcopyrite veining in sediments and narrow zones (less than 3.0 metres) of carbonated gabbro with disseminated pyrrhotite and pyrite.

4.1.1 Styles of Vein Mineralisation and Possible Paragenesis.

(a) North-south tensional rift suture/fault in Crimson Creek sedimentary pile.

(b) Ophiolite injection, compressional ? fragmentation - serpentinisation - hydrothermal carbonation. Recurrent movement along suture.

(c) Quartz vein pyrrhotite and semi massive replacement of talc carbonate and porous calcareous sediments adjacent to talc carbonate ± arsenopyrite pyrite, chalcopyrite.

(d) Injection into and adjacent to above veins by aggregates and dissemination of sphalerite and galena in a quartz ankerite/siderite gangue. Cocks comb textures common.

(e) Rare veins of quartz, fluorite and calcite.

(f) Late stage barren massive vein quartz stoping all phases above.

...9

4.1.2 Metallurgy

Preliminary ore-dressing mineralogy and metallurgical testing for high grade samples from drill holes RBE 5 and 10A are summarised below:-

Recoveries - Lead 98%) + 78% lead
Silver 95%) concentrate.

Zinc 80% - 44% concentrate (contains significant pyrite and arsenopyrite).

Principal Non Sulphide Gangue Minerals:-

Quartz, iron-manganese carbonate and dolomite.

Principal Sulphide Gangue Minerals:-

Pyrite; pyrrhotite; arsenopyrite; lead in galena; zinc in sphalerite (5-6% iron); copper in chalcopyrite; tin in cassiterite and stannite; silver in tetrahedrite, galena. Not all silver has been located.

Liberation

Excellent at flotation sizes.

4.2 Geochemical Surveys

Grid soil geochemical contour plans have been compiled for tin, lead, zinc, copper and arsenic. For the purposes of this report only the tin contours (plans TAS-2-2801/2802) are included here. The others are presented as separate plans.

A marked degree of anomalous elemental coincidence is displayed paralleling the Fentons and X Proprietary vein systems of the GAR north and south grids. A major portion of the Fentons anomaly is masked by glacial till. The extensive old workings along the precipitous western bank of the Exe River provide a substantial contamination factor.

The tin anomaly in the form of tuning fork or inverted Y exhibits the narrow nature of the tin vein mineralisation.

The GAT grid area is devoid of any substantial tin anomalies except on line 6250W between 0 and 100N where a peak value of 410 ppm tin is present. Arsenic is very subdued while copper, lead and zinc values are of very low order and reflect probably narrow (< 1.0 metre) quartz carbonate lead zinc veins.

...10

4.3 Geophysical Surveys

Ground Magnetics

Plans Tas-2-2798; 2799; 2800 have been compiled to incorporate previous magnetic trends highlighted on the GAP grid, the northerly extensions of which continue into the GAR and GAT gridded areas. (Anomalies C, K, J, N, and M).

The results for the GAT grid area are only preliminary and substantial infill lines are to be surveyed before an assessment can be made.

Anomalies A, B, C, D, F, G can be correlated with massive pyrrhotite replacement of the talc carbonate along Fentons structure and less altered zones within the talc carbonate that retain some remnant magnetite. This has been highlighted by magnetic susceptibility measurements along the drill core. Appendix 1 - Interpretation of Ground Magnetic Data, GAR GRID by Dr D B Trussell is attached.

Mise A La Masse (Plans TAS-2-2397/2398)

The various hole surveys would appear to demonstrate the patchy nature of base metal veins between holes RBE 3 and 11.

Massive pyrrhotite zones within the talc carbonate exhibit a greater degree of electrical continuity between holes RBE 16 to 19.

The pyrrhotite replacement of the calcareous siltstones in holes RBE 16 and 17 were also highlighted.

Appendix II - 1980 Mise a la Masse Program by Dr D B Trussell is attached.

4.4 Geological Mapping (Table 3)

The Renison area falls within the Cambrian Dundas trough - an accretional basin developed along the western margins of the Precambrian Tyennan geanticline. The trough initially filled with Success Creek Group sediments comprising sandstones, shales and carbonate beds (Renison Bell replacement ore bodies) to be followed by mudstone, lithic wacke of basic to intermediate origin and basalt of the Crimson Creek formation. The next phase of sedimentation belonged to the Dundas Group with the mudstone, lithic wacke conglomerate sequence being derived from intermediate to felsic rocks of Mt Read volcanic age which developed to the east on the western flanks of the Tyennan geanticline.

...11

North south longitudinal rifts developed during early basinal sedimentation with subsequent ophiolote emplacement.

Compressional east-west Dundas movement fragmented and thrust serpentinised ophiolite slabs high into the sedimentary pile.

The Mid Devonian Tabberabberan orogeny introduced two phases of folding and faulting and post tectonic granitoid intrusions - the sources of tin bearing hydrothermal fluids close to the granite and lead/zinc veins of the Zeehan type further away from the source centre.

Mapping of the GAR and GAT grids (see plans TAS-2-2796; 2797; 2798) and the creeks draining the area substantiate previous mapping (1978) by G F Pigott in the GAP grid area. Aided by the drill core data, the area is seen to be underlain by a sequence of north-south, to north north west and south south west striking monotonous sequence of tuffaceous sandstones with lesser siltstone and minor black pyritic carbonaceous shale of Crimson Creek age. These units almost exclusively dip steeply to the east but in the Exe River dip steeply to the west, suggesting a synclinal axis along the western side of the river. This synclinal structure is verified by some facing directions in the drill holes.

The axis of the syncline forms the locus for ultramafic and gabbroic intrusions and probably corresponds with a longitudinal rift developed during early sedimentation. The main ultramafic zone (Fentons structure) has been altered to talc carbonate and preferentially mineralised by tin and base metal hydrothermal fluids.

The tuffaceous sandstone and siltstone are of mainly basic to intermediate volcanic origin over most of the mapped area but along the axis of the syncline the sediments are of more arkosic shelf origin (see appendix III - Summary of Drill Hole Petrological Descriptions).

Also interbedded with these sandstones are calcareous mudstones and sandstones which is more akin to upper sections of the Crimson Creek Formation.

The basal Dundas conglomerate is clearly visible on the PMG road within the GAR south grid but is at no stage intersected in the most southerly drill holes (RBE 27 and 28). The basal Dundas conglomerate is also present to the north of the Pieman River in the northerly plunging Huskisson syncline.

...12.

Structure

In gross terms the GAR Fentons area is the junction point of two major regional structures:-

(a) The north-south trending Huskisson Dundas syncline.

(b) The later east south east trending and plunging Renison antiform which abutts against and has warped and domed the above syncline between the Pieman River and the PMG road. (see plans TAS-2-2792; 2804; 2805).

Normal block faulting along north to north west trends (Bassett Federal, Ring River, Colebrook and Fentons faults) as well as east northeast trends have fragmented the area.

Vertical displacement along the Bassett Federal fault in the Renison mine area is reported to exceed 700 metres with the Crimson Creek Formation down faulted to the east against the Success Creek Group.

4.5 Photogeological Survey

see Appendix V.

5. FORWARD PROGRAMME

5.1 A combination of recent structural interpretation, anomalous magnetic and IP trends and some encouragement from tin soil geochemistry all lead towards a possible upfaulted repetition of the Success Creek/Lower Crimson Creek stratigraphy along the western boundary of the EL between the Ring River and Colebrook faults. (See Plan TAS-2-2805 Cross Section A-B).

Detailed infill grid line cutting, soil sampling, ground magnetics and geological mapping will be carried out between GAP line 3200N in the south and GAT line 4640N in the north on the western boundary of the EL.

17 line kilometres will be cut and the grid soil sampling interval reduced to 5-10m where lines straddle the surface trace of the Colebrook and Cole-Ring fault zones.

A shoot back EM survey will be carried out over the two main magnetic anomalies on GAT grid lines

4880N - 6200W - 6700W
4640N - 6000W - 7000W

...13

Deep stratigraphic drilling should start in the latter half of the six-month period to test the inferred occurrence of massive tin bearing sulphides along major faults and in carbonate beds in the GAT grid area.

5.2 A test down the hole SIROTEM survey will be carried out on hole RBE 28 within the sulphide zone replacing calcareous tuffaceous sandstones.

5.3 A grade and tonnage estimate of the vein mineralisation at GAR Fentons is being undertaken. Further infill drilling will be implemented if necessary to determine the limits of grade confidence from hole to hole.

for S R Yardley
Senior Geologist

Approved by

R J Kernick
Exploration Manager

SRY:pmck
26th January 1982

REFERENCES

G F Pigott	Interim Report on Renison East GRID GAP.
"	Report on Diamond Drilling in the Renison East Area EL 5/63 Part 6.
R A Both and K L Williams	Mineralogical Zoning in the Lead-Zinc Ores of the Zeehan Field Tasmania Part I.
M Solomon	An introduction to the Geology and Metallic Ore Deposits of Tasmania. ECON. GEOLOGY VOL 76 No 2
M Solomon H Ohamoto D J Patterson	Geologic Setting and Genesis of Cassiterite-Sulphide Mineralisation at Renison Bell, Western Tasmania. ECON GEOLOGY VOL 76 No 2

DRILL HOLE NO.	GRID AREA	COLLAR CO-ORDINATES EAST	NORTH	RL	AZI-MUTH MN	DEC-LIN-ATION	END OF HOLE METRES	TRI-CONED METRES	NQ METRES	BQ METRES	START DATE	END DATE	NUMBER DAYS DRILLING	METRES PER DAY AV	NO. OF DELAY DAYS	COMMENTS
RBE 1*	GAR SOUTH	373496.1	5371606.7	150.3												) Exe work-
RBE 2*	GAP	372323.0	5370777.0													) ings
RBE 3*	GAR NORTH	373105.0	5372905.0	105.7	257.5°	-50°	134.0	0- 5.7	50.60	134.0	26/10/79	2/11/79	8	16.75		) Holes
RBE 4*	GAS	372612.0	5371060.0													) drilled
RBE 5*	GAR NORTH	373045.0	5372795.0	115.49	257.5°	-45°	173	0- 5	108.50	173.0	3/11/79	12/11/79	10	17.3		) prior to
RBE 6*	GAP	373169.29	5369952.67	220.68												) 1980
RBE 7	GAR NORTH	372956.0	5372794.7	127.1	258°	-45°	193.5	0- 5	193.5		15/ 5/80	28/ 5/80	4	13.82		
RBE 8	GAR NORTH	372729.5	5372957.7	176.5	78°	-45°	307.0	0-27	156.0	307	29/ 5/80	14/ 6/80	17	18.05		
RBE 9	GAR NORTH	373025.0	5372775.0	110.0	258°	-47°	219.0	0- 1	90.0	219	15/ 6/80	30/ 6/80	16	13.68	2	Drill Pad tight
RBE 10	GAR NORTH	372755.0	5372730.0	175.0	78°	-45°	228.0	0-51	228.0		1/ 7/80	15/ 7/80	15	15.2	3	Fishing for casing
RBE 10A	GAR NORTH	372755.0	5372730	175.0	78°	-45°	295.5	0-54.7	295.0		16/ 7/80	28/ 7/80	13	22.69		
RBE 11	GAR NORTH	372774.6	5372672.6	177.1	78°	-45°	274.5	0-49.0	274.5		29/ 7/80	12/ 8/80	15	18.3		
RBE 12	GAR NORTH	372766.4	5372591.0	179.1	78°	-45°	303.5	0-69.0	117.0	303.5	13/ 8/80	6/ 9/80	25	12.14	2	Mechanical casing pull-ed from 10A
RBE 13*	GAR SOUTH	373318.1	5371.664.7	200.8	216°	-70°	151.8	0-2.6	54.0	151.8	18/ 8/80	25/ 8/80	8	18.97		Exe work-ings Parry rig
RBE 14	GAR NORTH	372723.3	5372547.0	178.2	78°	-45°	291.5	0-45	93.0	291.5	7/ 9/80	22/ 9/80	16	18.21		
RBE 15	GAR NORTH	372723.3	5372486.9	174.5	78°	-45°	303.8	0-39	95.8	303.8	23/ 9/80	6/10/80	14	21.70		
RBE 16	GAR NORTH	372706.5	5372426.8	159.4	78°	-45°	364.0	0-30	90.0	364.0	7/10/80	28/10/80	22	16.54		
RBE 17	GAR NORTH	372722.8	5372366.9	159.1	78°	-45°	283.5	0-30	78.0	283.5	29/10/80	13/11/80	16	17.71		
	TOTALS RBE 7-17 from 15/5/80-13/11/80						3063.8						183	16.74	7	

* NB Holes RBE 1-6 and 13 excluded from calculation

DIAMOND DRILLING AND DRILL RATE SUMMARY MAY - MID NOVEMBER 1980

TABLE 1

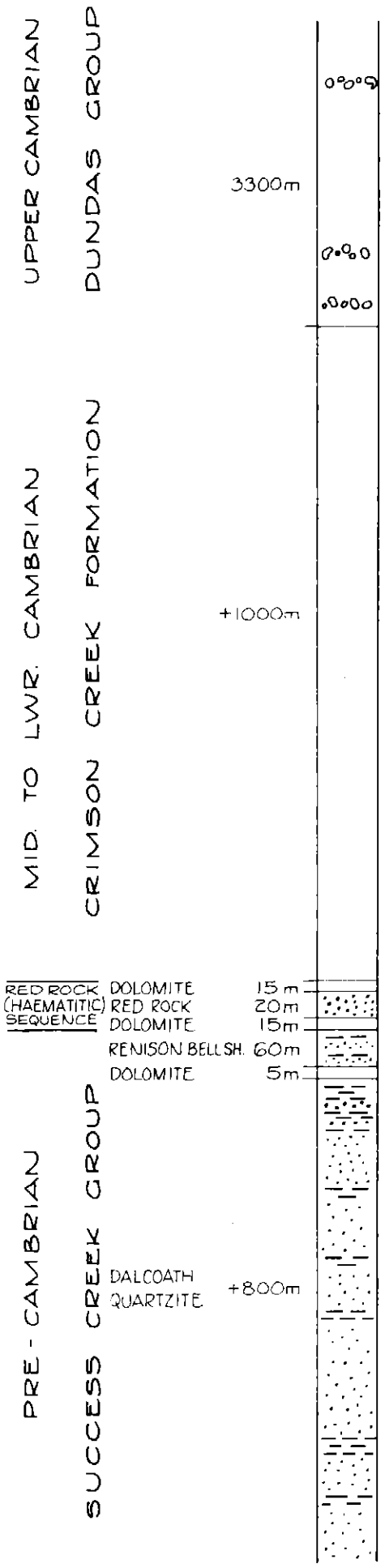
DRILL HOLE NO.	GRID AREA	COLLAR CO-ORDINATES EAST	NORTH	RL	AZIMUTH MN	DEC-LINATION	END OF HOLE METRES	TRI CORED METRES	METRES	BOX METRES	START DATE	FINISH DATE	NUMBER DRILLING	METRES PER DAY AV.	NO. OF DAY	COMMENTS
RBE 18	GAR NORTH	372713.0	5372307.1	147.9	78°	-42°	313.0	0-18	60.0	313.0	14/11/80	29/11/80	16	19.56		
RBE 19	GAR NORTH	372713.0	5372307.1	147.9	99°	-45°	365.0	0-15	60.0	365.0	30/11/80	16/12/80	17	20.27		Christmas break
RBE 20	GAR NORTH	372689.6	5372843.1	175.2	78°	-45°	391.0	0-57.0	108.0	391.0	12/ 1/81	6/ 2/81	26	15.03	4	Pulling casing RBE 11 19
RBE 21	GAR SOUTH	373037.2	5372127.1	144.0	258°	-45°	361.0	0-51.0	92.60	361.0	7/ 2/81	9/ 3/81	31	11.64	4	No bulldozer Rig to Godkin
RBE 22	GAR NORTH	372600.0	5372780.6	176.6	77°	-45°	500.2	0-42.3	146.80	500.2	30/ 3/81	24/ 4/81	26	19.23		Rig returned from Godkin
RBE 23	GAR NORTH	372604.5	5372600.5	173.7	75°	-46°	502.0	0-51.3	122.70	502.0	25/ 4/81	22/ 5/81	28	17.92		
RBE 24	GAR NORTH	372638.5	5372420.5	147.5	77.5°	-47°	475.0	0-27.2	64.0	475.0	23/ 5/81	26/ 6/81	35	13.57	3	3 days sick
RBE 25	GAR NORTH	372600.1	5373018.9	177.9	78°	-45°	356.40	0-21.0	75.0	356.40	27/ 6/81	15/ 7/81	19	18.75	1	Pull casing from RBE 20
RBE 26	GAR SOUTH	372614.5	5372000.4	154.0	78°	-45°	340.30	0-18.0	53.90	340.30	16/ 7/81	29/ 7/81	14	24.30		
RBE 27	GAR SOUTH	372457.3	5371697.4	155.6	78°	-45°	436.40	0-18.0	87.10	436.40	30/ 7/81	31/ 8/81	33	13.22	10	6 fishing casing 4 dozers bogged
RBE 28	GAR SOUTH	372469.8	5371833.5	163.5	78°	-45°	481.0	0-12.0	92.90	481.0	1/ 9/81	25/ 9/81	25	19.24		Shift drilling record of 72m
RBE 29	GAR SOUTH	373199.4	5371898.8	180.32	78°	-45°	394.0	0-15	131.70	394.0	26/ 9/81	25/10/81	30	13.13		Exe workings
RBE 30*	GAR NORTH	372844.6	5372725.2	175.46	78°	-45°	209.20	0-30	92.80	209.20	23/10/81	1/11/81	10	20.92		2nd rig shallow holes
RBE 31	GAR NORTH	372851.6	5372599.5	180.0	78°	-45°	186.90	0-48	108.0	186.90	2/11/81	11/11/81	10	18.69		2nd rig relinquished
RBE 32	GAR NORTH	372493.4	5373022.0	176.56	78°	-45°	520.0	0-36	212.60	520.0	26/10/81	17/11/81	23	22.60		Rig transferred to Godkin
TOTAL RBE 18-32 from 14/11/80-17/11/81							5435.3						325	16.77	22	
XI *	GAR NORTH	372878.1	5373111.5	110.2	213°	-10°	185.47		5.72	185.47	SEP '66	DEC '66				Drilled from Railway Line

* NB Holes RBE 30,31 & XI excluded from calculations

DIAMOND DRILLING AND DRILL RATE SUMMARY MID NOVEMBER 1980 TO MID NOVEMBER 1981

839423

839430



Slate

Greywacke

Conglomerate

Razorback Conglomerate

Red Lead Conglomerate

Turbiditic cycles of :-

black shale

red-brown siltstone and

tuffaceous sandstone

grading up into

grey green rocks

of same composition

Rare calcareous siltstones - banded

and calcareous tuffaceous sandstones -

porous - favourable replacement hosts

towards top of succession

Minor DOLOMITE BEDS

towards base.

NO. 1 DOLOMITE and detrital silicates; calcite veining
Chert pellet sandstone, qtz sandstone, conglom, thin dolomite
NO. 2 DOLOMITE
Black shales and grey banded siltstone, qtz sandstone
NO. 3 DOLOMITE : occasional shaley interbeds.

Chert pellet sandstone
thin limestone and dolomite
calcareous siltstone / shale

Quartz sandstone

Quartz siltstone

Grey to black shale

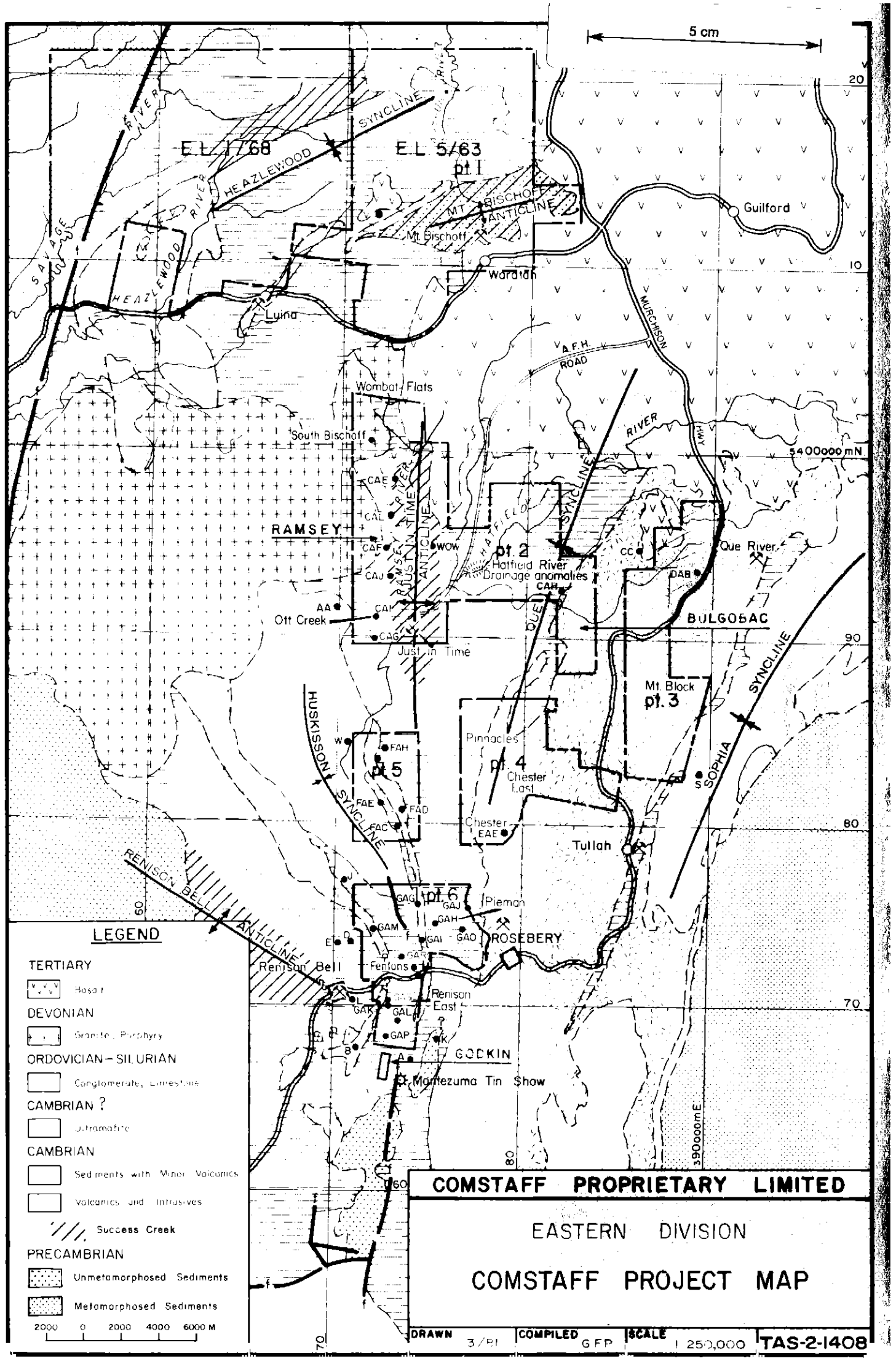
GAR - RENISON AREA GEOLOGICAL SUCCESSION

TABLE 3

LIST OF PLANS AND SECTIONS INCLUDED IN TEXT

COMSTAFF PROJECT MAP	1:250,000	TAS-2-1408
RENISON GRIDS		
Location of Drill Holes	1:10,000	2-2093
Geological Interpretation	1:5,000	2-2797 2-2796 2-2795
Geological Summary	1:10,000	2-2804
Geological Summary of Cross Section A-B	1:10,000	2-2805
Geological interpretation at Mean Sea Level	1:10,000	2-2803
Geochemical Grid Auger Sampling Tin anomalies	1:5,000	2-2801 2-2802
Magnetic Anomalies	1:5,000	2-2798 2-2799 2-2800
Renison Grid GAR	1:5,000	2-2397
Mise-a-la-Masse Survey Results Summary of Results	(Reduction from 1:2,500)	2-2398
Longitudinal Section on 372875mE	1:2,500	2-2257

839432



LEGEND

TERTIARY
- Basalt

DEVONIAN
- Granite, Porphyry

ORDOVICIAN – SILURIAN
- Conglomerate, Limestone

CAMBRIAN ?
- Ultramafics

CAMBRIAN
- Sediments with Minor Volcanics
- Volcanics and Intrusives
- Success Creek

PRECAMBRIAN
- Unmetamorphosed Sediments
- Metamorphosed Sediments

2000 0 2000 4000 6000 M

COMSTAFF PROPRIETARY LIMITED

EASTERN DIVISION

COMSTAFF PROJECT MAP

DRAWN	COMPILED	SCALE	
3/81	GFP	1:250,000	TAS-2-1408

839433

82-1690 VOL 9 PART 1 OF 6

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION OF COMSTAFF LEASE EL 5/63 AREA 6

RENISON GRIDS

LOCATION OF DRILLHOLES

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	14/3/80
AMENDED	9/12/81
SCALE	1 10000
PLAN No.	TAS/2/2093

371 000 m E

372 000 m E

373 000 m E

374 000 m E

5 369 000 m N

5 368 000 m N

5 367 000 m N

glacial till

bk sh/gw

cg/lw

Css

ta

gd

Dss

bs

ar

um

cg

EL 5/63 AREA 6

ML 62 M/75

PINE HILL

PINGVILLE

MONTEZUMA

COSTEAN

WILBUR

GOANNA

NORTHERN

TAS/2/2795

TAS/2/2796

For legend see TAS/2/2795

5 cm

GN

839434 82-1690 Vol 9 PART 1 OF 6.

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION EL 5/63 AREA 6 : ML 62M/75

GEOLOGICAL INTERPRETATION

COMPILED GFP/JDC

DRAWN HR DATE 1/82

AMENDED

SCALE 1 5000

PLAN No TAS/2/2797

371 000 mE
372 000 mE
373 000 mE
374 000 mE
5 371 000 m N
5 370 000 m N

tu sa
sh
bt
um
gw
Csh
Css
glacial
till
tu sa
glacial
till
dl
tca
ss/sh
tu sa
ss/sh
tu sa
ss/sh
lw
cg
cg
tu/sa
tu sa
um
sh
tu sa
Css/ar
um
glacial
till
lw
cg
tu sa
Csh
tu sa
glacial
till
lw
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Css
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Css/ar
um
um
glacial
till
um
bs
cg
ar
glacial
till
Css
Css
Css/ar
bk sh / gw

MURCHISON RIVER HIGHWAY
SOLEBERRY CREEK
TRACK
DRAIN
1607 EXE RIVER
EXT 300 40x40
SOLEBERRY CREEK

839435 82-1690 Vol 9 Part 10-6.

TAS/2/2795
TAS/2/2797
For legend see TAS/2/2795

5 cm

GN

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION EL 5/63 AREA 6 : ML 62M/75

GEOLOGICAL INTERPRETATION

COMPILED	GFP / JDC
DRAWN	HR
DATE	1/82
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2796

371 000 m E | 372 000 m E | 373 000 m E | 374 000 m E

5 374 000 m N | 5 373 000 m N | 5 372 000 m N

GEOLOGICAL LEGEND

CAMBRIAN ? Intrusive rocks	gd	Granodiorite
	tca	Talc carbonate
	um	Gabbro serpentinite
UPPER - MIDDLE CAMBRIAN Dundas Group	Dss	Black/grey siltstone
	ta	Acid tuff
	bksh/gw	Black shale/greywacke
	or	Hornfels
	cg/lw	Conglomerate/lithwacke
	cg	Conglomerate (Red Lead ?)
	bs	Basalt, intercalated with conglomerate
	Css ar	Undifferentiated mix of sandstone, siltstone, shale hornfelsed
	Css	" " " " " "
	tu sh	Tuffaceous sandstone and shale
	ss/sh	Siltstone and shale
MIDDLE - LOWER CAMBRIAN Crimson Creek Formation	dl	Calc pelites and rare dolomite
	bt	Basaltic tuff
	sh	Black shale
	tu sa	Tuffaceous sandstone
	Csh	Purple green shale/siltstone
	gw	Greywacke (angular)

TAS/2/2796
TAS/2/2797

5 cm

GN

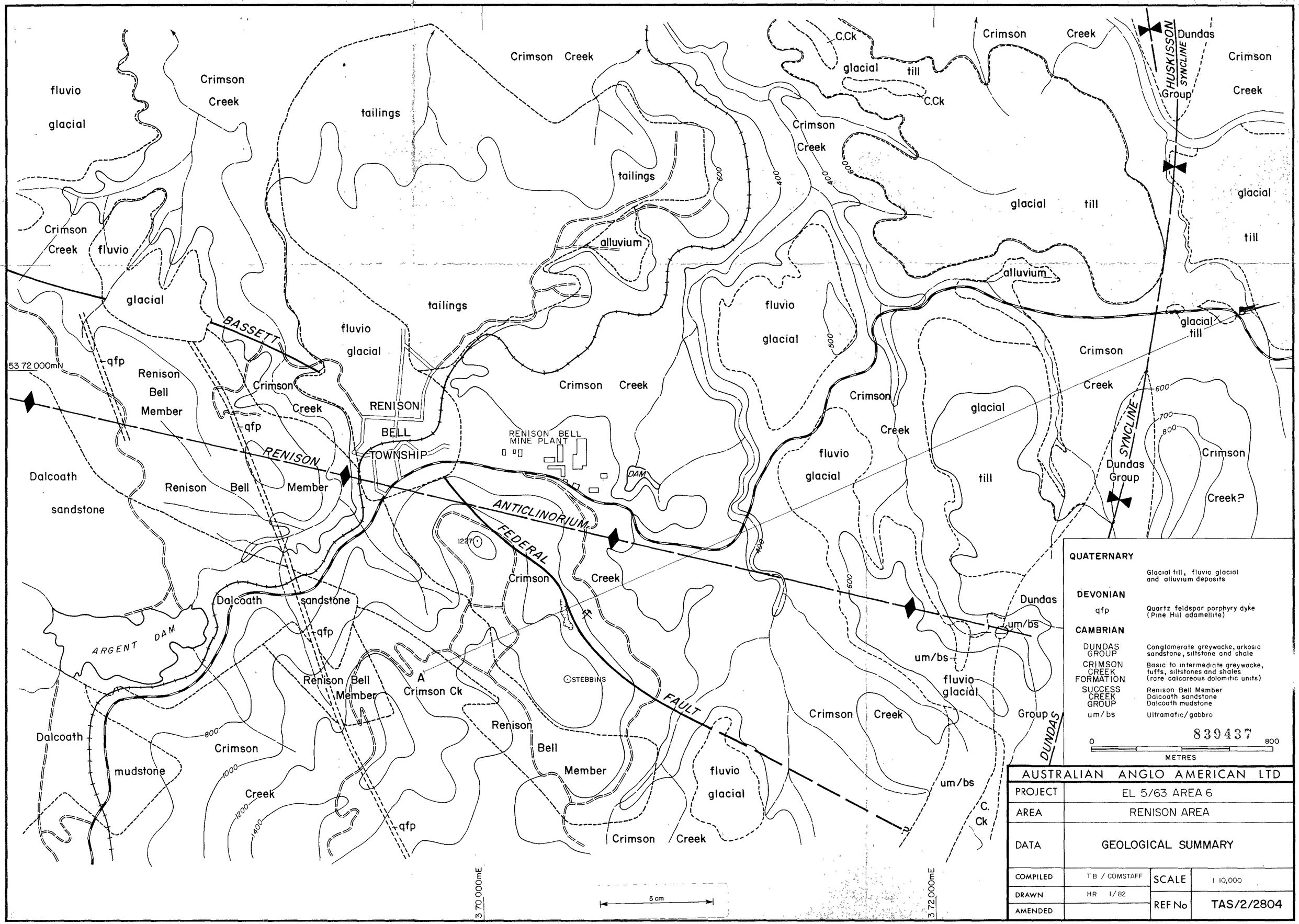
839436 82-1690 Vol 9 PART 1 OF 6.

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION E.L 5/63 AREA 6 : M.L 62M/75

GEOLOGICAL INTERPRETATION

COMPILED	GFP/JDC
DRAWN	HR
DATE	1/82
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2795



QUATERNARY

Glacial till, fluvio glacial and alluvium deposits

DEVONIAN

qfp — Quartz feldspar porphyry dyke (Pine Hill adamellite)

CAMBRIAN

DUNDAS GROUP — Conglomerate greywacke, arkosic sandstone, siltstone and shale

CRIMSON CREEK FORMATION — Basic to intermediate greywacke, tuffs, siltstones and shales (rare calcareous dolomitic units)

SUCCESS CREEK GROUP — Renison Bell Member; Dalcoath sandstone; Dalcoath mudstone

um/bs — Ultramafic/gabbro

839437

0 800 METRES

AUSTRALIAN ANGLO AMERICAN LTD			
PROJECT	EL 5/63 AREA 6		
AREA	RENISON AREA		
DATA	GEOLOGICAL SUMMARY		
COMPILED	TB / COMSTAFF	SCALE	1 10,000
DRAWN	HR 1/82	REF No	TAS/2/2804
AMENDED			

SW

NE

RENISON HILL FAULT

CRIMSON CREEK FORMATION

BASSETT FEDERAL FAULT

Road cutting

Road cutting

RING RIVER

RING RIVER FAULT

I P ANOMALY

BOUNDARY OF E L 5/63

MAGNETIC ANOMALY

MAGNETIC ANOMALY

COLEBROOK CREEK

COLEBROOK FAULT

Undifferentiated tuffaceous sandstone

RBE 28

Impure to calcareous (pelites) mudstones

Calcareous tuffaceous sandstone

Undifferentiated intercalated tuffaceous sandstone and siltstone

Talc carbonate

Remnant of Dundas conglomerate?

FENTONS FAULT

Impure to calcareous (pelites) mudstone

RBE 21

Undifferentiated tuffaceous sandstones and siltstones - minor shale

Gabbro

MURCHISON HIGHWAY adjacent to EXE RIVER

approx upper limit of hornfelsing

1 35 kilometres

semi-massive pyrrhotite replacement

minor incipient pyrrhotite replacement

CRIMSON CREEK FORMATION

SUCCESS CREEK GROUP

1 kilometre

700 m

SUCCESS CREEK GROUP?

Sheared +/or brecciated quartz carbonate lead-zinc veined talc carbonate sediment interface Lead zinc veining often overprints an initial phase of quartz pyrrhotite veining

Quartz pyrrhotite (+ py, cp and aspy) veins

Stringers, aggregates and incipient to massive pyrrhotite replacement of talc carbonate

839438

5 cm

Possible

Known

massive sulphide replacing dolomite horizons and emplacement along major fault zones

APOPHYSES / CUPOLAS OF GRANITE BATHOLITH

FOR LOCATION SEE TAS/2/2804

AUSTRALIAN ANGLO AMERICAN LIMITED

EL 5/63 AREA 6
RENISON AREA

GEOLOGICAL SUMMARY OF CROSS SECTION A-B

COMPILED	DRAWN	SCALE	
SRY	HR 1/82	1 10,000	TAS/2/2805

3 73 000 mE

53 73 000mN

53 72 000 mN

DDH X1

GABBRO

RBE 32

DDH RBE 25

1·37m of 1·14% Sn

DDH RBE 8

SALMON'S LODE

COPPER VEIN

TIN VEIN

DDH RBE 3

1·73m of 0·61%Sn

DDH RBE 20

DDH RBE 22

DDH RBE 7

DDH RBE 5

DDH RBE 9

FENTONS VEIN

DDH RBE 10/10A

DDH RBE 30

DDH RBE 11

DDH RBE 23

DDH RBE 31

DDH RBE 12

DDH RBE 14

DDH RBE 15

DDH RBE 16

DDH RBE 24

1·75m of 1·4% Sn

SILTY LIMESTONES

DDH RBE 17

FENTON'S VEIN

DDH RBE 18

DDH RBE 19

f

DDH RBE 21

WESTERN VEIN

DDH RBE 26

5·5m of 0·29%Sn

DDH RBE 29

DDH RBE 28

UNASSIGNED VEINS

DDH RBE 27

DDH RBE 13

DDH RBE 1

PYROXENITE

BASALT

0 300

METRES

5 cm

TALC CARBONATE

AUSTRALIAN ANGLO AMERICAN LTD

PROJECT EL 5/63 AREA 6

AREA RENISON GRID – GAR

DATA **GEOLOGICAL INTERPRETATION AT MEAN SEA LEVEL**

COMPILED JDC / SRY

DRAWN HR 1/82

AMENDED

SCALE 1:2,500

REF No **TAS/2/2803**

839439

82-1690 Vol 9 Part 1 of 6

371 000 m E

372 000 m E

373 000 m E

374 000 m E

5 374 000 m N

5 373 000 m N

5 372 000 m N

Glacial till

PIEMAN RIVER

EMU BAY

RAILWAY

TRACK

GAMMA

PEATEL

GAT GRID

GAR GRID

GAR SOUTH GRID

STREET

HIGHWAY

ROAD

RING CREEK

GOLEBROOK

MURCHISON

L 5600 N

L 5340 N

L 5120 N

L 5300 N

L 5240 N

L 5180 N

L 5060 N

L 5000 N

L 4940 N

L 4820 N

L 4760 N

L 4700 N

L 4580 N

L 4520 N

L 4460 N

L 4340 N

L 4280 N

L 4220 N

L 4160 N

L 4000 N

L 4040 N

L 3980 N

L 4880 N

L 4640 N

L 4400 N

L 6250 W

L 5250 W

5000 W

4750 W

1000+ ppm Sn

105+ ppm Sn

TAS/2/2802

GN

5 cm

839440 82-1690 Vol 9 Part 1 of 6.

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION EL 5/63 AREA 6

GEOCHEMICAL GRID AUGER SAMPLING

TIN ANOMALIES

COMPILED	JDC/SRY
DRAWN HR	DATE 1/82
AMENDED	
SCALE	1 5000
PLAN No	TAS/2/2801

371,000 mE

372,000 mE

373,000 mE

374,000 mE

5 371 000 m N

5 370 000 m N

Glacial till

RIVER HIGHWAY

MURCHISON

COLEBROOK CREEK

ROAD

TRACK

RIVER

CREEK

L 4000 N

L 3860 N

L 3800 N

L 3740 N

L 3680 N

L 3620 N

L 3600 N

L 3400 N

L 3200 N

L 2700 N

L 2500 N

L 2400 N

L 2300 N

L 2200 N

L 2100 N

L 2000 N

L 1452 EXE RIVER

L 1607 EXE RIVER

L 1760 EXE RIVER

L 1960 EXE RIVER

1000+ ppm Sn

105+ ppm Sn

TAS/2/2801

5 cm

GN

839441

82-1690 VOL 9 PART 1 OF 6.

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION EL 5/63 AREA 6

GEOCHEMICAL GRID AUGER SAMPLING

TIN ANOMALIES

COMPILED	JDC/SRY
DRAWN	HR
DATE	1/82
AMENDED	
SCALE	1 5000
PLAN No	TAS/2/2802

371 000 m E

372 000 m E

373 000 m E

374 000 m E

5 374 000 m N

5 373 000 m N

5 372 000 m N

L 6250 W

L 5250 W

L 5000 W

L 4750 W

L 5600 N

L 5340 N

L 5120 N

L 5300 N

L 5240 N

L 5180 N

L 5060 N

L 5000 N

L 4940 N

L 4820 N

L 4760 N

L 4700 N

L 4580 N

L 4520 N

L 4460 N

L 4340 N

L 4280 N

L 4220 N

L 4160 N

L 4000 N

L 4040 N

L 3980 N

L 3920 N

PIEMAN RIVER

EMU BAY

RAILWAY

TRACK

PENTIL

GUMMA

RING BAY

CREEK

HIGHWAY

ROAD

MURCHISON

COLEBROOK

GAT GRID

GAR GRID

GAR SOUTH GRID

LAKE

A

B

C

C'

D

E

F

G

H

H'

I

J

K

L

f

Preliminary survey axis (follow-up targets)

Axis of magnetic high (annotated in text)

Fault

TAS/2/2799

TAS/2/2800

GN

5 cm

839442

82-1690 Vol 9 PART 1 OF 6.

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION E.L.5/63 AREA 6 : M.L. 62M/75

MAGNETIC ANOMALIES

COMPILED DBT

DRAWN HR

DATE 1/82

AMENDED

SCALE 1 5000

PLAN No TAS/2/2798

371 000 mE
372 000 mE
373 000 mE
374 000 mE
5 371 000 m N
5 370 000 m N

'M' 'N' 'R' 'J' 'K' 'C' 'P' 'H' 'D' 'U' E. E F G K. f

L 3860 N L 3800 N L 3740 N L 3680 N L 3620 N L 4000 N L 3800 N L 3600 N L 3400 N L 3200 N L 3000 N L 2900 N L 2800 N L 2700 N L 2600 N L 2500 N L 2400 N L 2300 N L 2200 N L 2100 N L 2000 N L 1452 EXE RIVER L 1607 EXE RIVER L 760 EXE RIVER L 1960 EXE RIVER

700 ROAD 800 ROAD 900 ROAD 1000 ROAD 1100 ROAD 1200 ROAD 1300 ROAD 1400 ROAD 1500 ROAD 1600 ROAD 1700 ROAD 1800 ROAD 1900 ROAD 2000 ROAD 2100 ROAD 2200 ROAD 2300 ROAD 2400 ROAD 2500 ROAD 2600 ROAD 2700 ROAD 2800 ROAD 2900 ROAD 3000 ROAD 3100 ROAD 3200 ROAD 3300 ROAD 3400 ROAD 3500 ROAD 3600 ROAD 3700 ROAD 3800 ROAD 3900 ROAD 4000 ROAD 4100 ROAD 4200 ROAD 4300 ROAD 4400 ROAD 4500 ROAD 4600 ROAD 4700 ROAD 4800 ROAD 4900 ROAD 5000 ROAD 5100 ROAD 5200 ROAD 5300 ROAD 5400 ROAD 5500 ROAD 5600 ROAD 5700 ROAD 5800 ROAD 5900 ROAD 6000 ROAD 6100 ROAD 6200 ROAD 6300 ROAD 6400 ROAD 6500 ROAD 6600 ROAD 6700 ROAD 6800 ROAD 6900 ROAD 7000 ROAD 7100 ROAD 7200 ROAD 7300 ROAD 7400 ROAD 7500 ROAD 7600 ROAD 7700 ROAD 7800 ROAD 7900 ROAD 8000 ROAD 8100 ROAD 8200 ROAD 8300 ROAD 8400 ROAD 8500 ROAD 8600 ROAD 8700 ROAD 8800 ROAD 8900 ROAD 9000 ROAD 9100 ROAD 9200 ROAD 9300 ROAD 9400 ROAD 9500 ROAD 9600 ROAD 9700 ROAD 9800 ROAD 9900 ROAD 10000 ROAD

MURCHISON RIVER HIGHWAY COLEBROOK CREEK RING GRID RIVER ROAD WESTERN TIE LINE

839443

82-1690 Vol 9. PART 1 OF 6.

A Axis of magnetic high (annotated in text)

f f Fault

TAS/2/2798

TAS/2/2800

5 cm

GN

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION EL 5/63 AREA 6 : ML 62M/75

MAGNETIC ANOMALIES

COMPILED	DST
DRAWN	HR
DATE	1/82
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2799

371 000 mE

372 000 mE

373 000 mE

374 000 mE

5 369 000 mN

5 368 000 mN

5 367 000 mN

'R' H Q Q f L_1 E L_2 U 'D'

EL 5/63 AREA 6

ML 62 M/75

COSTEAN 1700 N

COSTEAN 1900 N

COSTEAN 2000 N

L 2400 N

L 2200 N

L 2000 N

L 1800 N

L 1600 N

L 1400 N

L 1000 N

L 6000 N

L 5900 N

L 5800 N

L 5700 N

L 5600 N

L 5500 N

L 5400 N

L 5300 N

L 5200 N

L 5100 N

L 5000 N

RIVER

CREEK

ROAD

GROVE

MYRTLE

CONFIDENCE

TIN

WILBUR

NORTHERN

GREAT

MONTEZUMA

RINGVILLE

PINE HILL

839444

92-1690 Vol 9 PART 1 OF 6.

A Axis of magnetic high (annotated in text)

f Fault

TAS/2/2798

TAS/2/2799

5 cm

GN

COMSTAFF PROPRIETARY LIMITED

SOUTHERN PORTION EL 5/63 AREA 6 : ML 62M/75

MAGNETIC ANOMALIES

COMPILED	DBT
DRAWN	HR
DATE	1/82
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2800

372 000 m E

373 000 m E

9 373 000 m N

9 373 000 m N

Axis of mise-a-la-masse

Amplitude equal to or greater than 85% maximum amperage

Plan position of mise-a-la-masse electrode

5 cm

TAS/2/2397

TAS/2/2398

SHEET INDEX

TN

839445

82-1690 Vol 9 Part 1 of 6

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

SUMMARY OF RESULTS

COMPILED D.B.T.

DRAWN GEODRAFT DATE 31/1/81

SCALE 1 : 2500

PLAN No. TAS/2/2397

Loss on the side of 17-235 m
Due to erroneous readings ?

17-235m

18-234m

19-245m

17/18/19

16

16-100m

5,372,000 m N

5,372,000 m N

839446

5 cm

372,000 m E.

373,000 m E.

TAS/2/2397

TAS/2/2398

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

SUMMARY OF RESULTS

D.B.T.

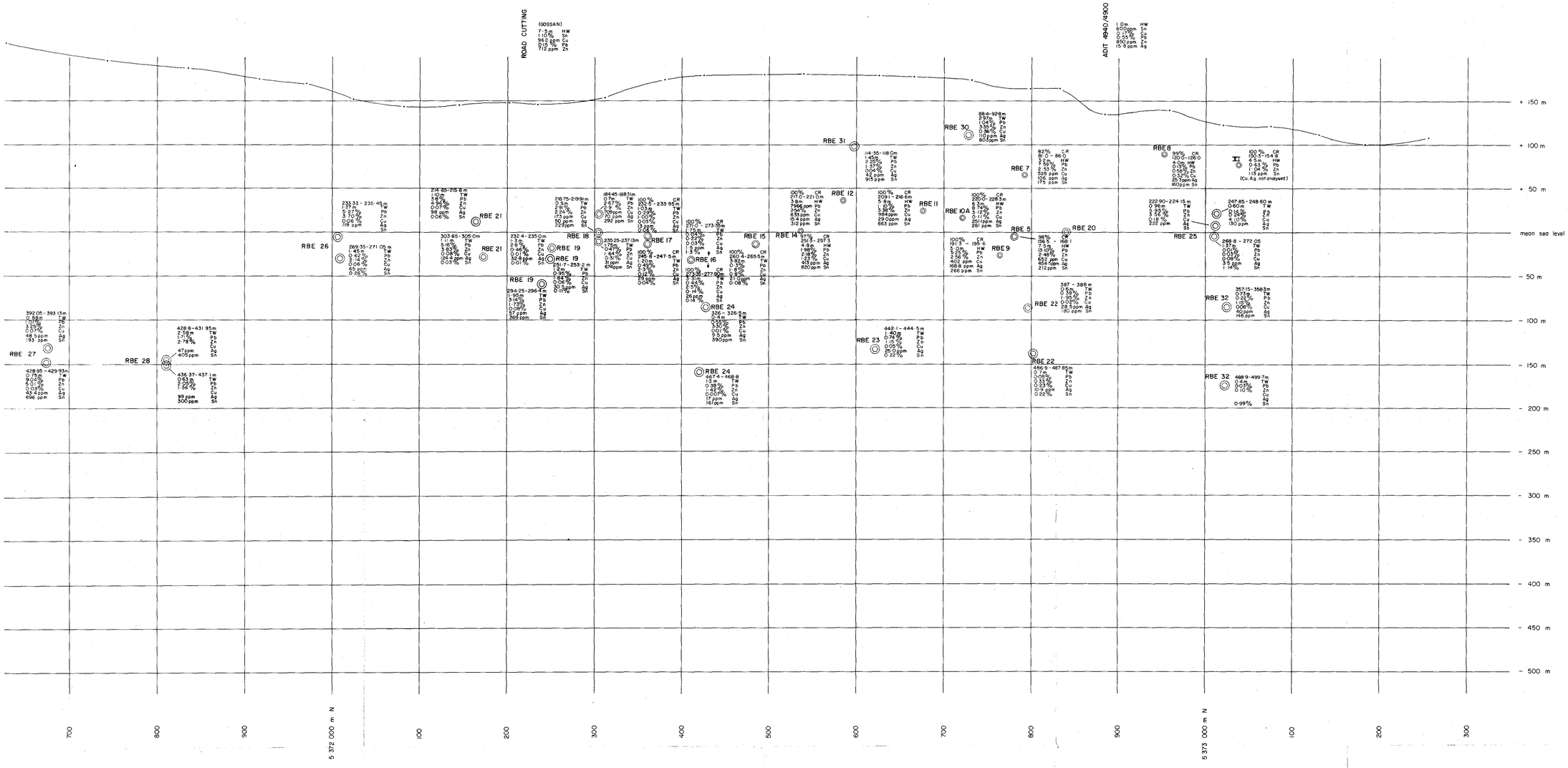
GEOCRAFT 31/1/81

1 : 5000

TAS/2/2398

S

N



839447

5 cm

82-1690, Vol 9

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
LONGITUDINAL SECTION ON 372875 m E
ALONG THE LEAD/ZINC/SILVER/TIN LODE
FROM LINE 1760 ER TO LINE 5300 N

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	26/9/80
AMENDED	29/1/82
SCALE	1 : 2500
PLAN No.	TAS/2/2257

839448

APPENDIX I

PROJECT NAME: GAR - FENTONS

TITLE: INTERPRETATION OF GROUND MAGNETIC DATA - GAR GRID

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Scale Sheet: Queenstown, K55-05

COMMODITY/IES: Sn, Ag-Pb-Zn

TEXT PAGES NO: 3

PLAN NOS: TAS-2-2117, 2118, 2635, 2636

TABLE NOS:

APPENDICES:

AUTHOR/S: D B Trussell

DATE: 3 August 1981

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

1. INTRODUCTION

Three earlier reports dated 9th July 1980, 2nd September 1980 and 12th February 1981, by G O Dickson & Associates, have been prepared on portions of the GAR ground magnetic survey. This report summarises the findings in these reports and also provides additional comments.

The ground magnetic contours in this report have been re drafted to include all data from 3620N to line 5300N. Also the revised grid plan has been used to plot all the data. Consistant with the work by G O Dickson & associates a 100 nT contour interval was used. A smaller contour interval would obscure the magnetic features of interest and would not provide additional information of value.

2. PREVIOUS INTERPRETATION

Dickson selected six anomalies for comment:

Anomaly A (line 4820N, 4780W). This is a near surface body of limited dimensions and high susceptibility. It occurs only on a single line. For this reason and the proximity of anomaly B it cannot be accurately modelled.

Anomaly B (line 4820N, 4840W). This anomaly is modelled accurately by a 20m wide dyke dipping west at 75^{o} and centered on line 4820N, 4840W at 30m depth. The source has a magnetic susceptibility of 11 000 cgs units.

Anomaly C (4940N, 4810W). This anomaly was not quantitatively interpreted by Dickson. Contrary to Dicksons comments the anomaly occurs on more than one line. It continues to at least 5060N and thus extends over 3 lines. The data on 5060N and 5000N is however too erratic to make detailed interpretation worth while. Inspection of the data indicates the source dips steeply to the east and plunges to the north.

There is a good possibility that this anomaly and another located 100m to the west are cut off to the south by a fault in the vicinity of 4880N. It is also possible that anomaly A is due to a faulted off portion of the same source as that generating anomaly C. Anomaly B is approximately 100m west of anomaly A so in this hypothesis it correlates with the anomaly located west of anomaly C.

Anomaly D (line 4520N, 4820W). The anomaly has been modelled on lines 4400N and 4520N. However the source is not closely approximated by a two dimensional dyke. This can be concluded from the fact that the models results on these two lines are not in close agreement with respect to width, depth or dip of the causitive body. Part of the problem of interpretation is a relatively large regional anomaly must be removed. The source comes within 30m of the surface, is 50m wide, and has a steep dip. It has a magnetic susceptibility of 3000 cgs units.

...2.

Anomaly E (line 3980N, 4660W). This anomaly extends over 5 lines (3860N through 4100N). It changes character from one line to the next so quantitative interpretation would not give reliable results. The dip of the conductor is steep and to the west. The source is within 20m of the surface. Its width is about 20m.

Anomaly F (line 3292N, 4980W). This anomaly is modelled accurately by a 25m wide dyke dipping steeply east. It is buried 15m. The source has a magnetic susceptibility of 5000 cgs units.

3. ADDITIONAL INTERPRETATION

An interpretation of the revised contour maps has been prepared as overlays. These show the principal magnetic anomalies and major faults which are deduced from the magnetic data. Five additional anomalies G, H, I, J and K have been selected for study. Comments on these follows:-

Anomaly G. This anomaly consists of only 3 or 4 points (line 3740). The lack of detail in the observed data makes it pointless to attempt a very precise modelling. The data are in agreement with that generated by a vertical dyke source on line 3740N at 4660W at 5m depth having a width of 15m and a susceptibility of 3900 cgs units.

Anomaly H. This anomaly is modelled by a vertical dyke on line 4040N, 5540W at 25m depth having a width of 65 m and a susceptibility of 3000 cgs units.

Anomaly I. This anomaly is modelled by a vertical dyke on line 3980N, 5380W at 20 m depth having a width of 50 m and susceptibility of 1600 cgs units.

Anomaly J. This anomaly is modelled by a dyke on line 4160N, 5220W at 20m depth having a width of 50 m and a susceptibility of 1250 cgs units. The dip is 50^{o} to the west.

Anomaly K. This anomaly is modelled by a dyke on line 3920N, 4360W at 40 m depth having a width of 80 m and a susceptibility of 1600 cgs units. The dip is 70^{o} to the east. Due to interference from adjacent anomalies and regional effects the anomaly source may be as much as 200 m wide and buried 100 m.

4. GEOLOGICAL CORRELATION

Only a very small amount of geological information for this area was made available. It is therefore not possible to integrate the geophysics with geology until a more detailed map is produced. The two faults observed in the field are also revealed in the magnetic data. (These are the two most northerly faults on the southern sheet). This indicates that confidence should be placed in the other faults interpreted from the magnetics. The major discrepancy between the magnetic data and the preliminary geologic map is the strike direction in the northeast quarter of the southern sheet. The mapping has suggested a strike of $N30^{o}$ W. The magnetics in this area strike $N20^{o}$ E.

5. FURTHER WORK

Dickson's comment that a NNE fault system controls the setting of magnetic anomalies A B C D & F appears to be valid. The known mineralisation is associated with these anomalies. Therefore, all anomalies A through K should be investigated to ascertain their source. Those not explainable as uninteresting by surface examination should be traversed with transient EM. If conductors are found then drilling should be carried out.

Compilation of the GAR data with that on adjacent grids should be carried out. This will enable the results to be assessed further and assist in the planning of EM follow up. As evidenced by the very low productivity and poor data quality of the March-April 1981 programme ground EM work should be carried out only in December, January and February.

There is a prominent anomaly on the far eastern end (4500W) of line 5000N. It is not fully defined but is similar in character to anomaly K. The line should be extended further east and parallel lines 100m (approximately) away should also be covered with ground magnetics.

D B TRUSSELL

RENISON GRID - GAR

1980 MISE A LA MASSE PROGRAM

WORK DONE

In 1980 the following drill holes were utilized on the Renison East grid for mise a la masse surveys -

Hole RBE 3 depth 89m
5 depths 127m, 165m
7 depth 68m
10A depths 223m and 251m
11 depths 215m and 234m
12 depths 221m and 233m
14 depth 254m
16 depths 277m and 300m
17 depth 235m
18 depth 234m
19 depth 245m

All field work was done under contract by Geoterrex. The location of the infinite potential and current electrodes for the survey is shown on a separate plan.

GENERAL REMARKS

The dip, strike direction, and strike extent of conductive mineralisation intersected in a drill hole can be qualitatively determined by examination of mise a la masse data. Usually the most useful information derived from these surveys is whether or not conductive mineralisation is continuous between intersections in the same or different holes.

DISCUSSION

A summary of results is shown on the accompanying plans. Also included are contour plots of the data from each hole.

For convenience in the discussion that follows results will be refered to in a two number format where the first number is the hole number and the second number is the depth down the hole at which the current electrode is placed (eg. 16-277 refers to data on hole 16 with the current electrode at 277m).

The axis of the mise a la masse anomaly from each survey is shown on the summary plan. Cross bars have been drawn where the anomaly amplitude drops to 85% of the maximum. This although not directly related to strike extent does give a qualitative indication of the length of the source of the anomaly. The separate mise a la masse bodies will now be discussed in turn.

...2.

RBE 3 - A very short strike length source with near vertical dip. Strike direction is N 153°E. The source may plunge north.

RBE 5 - 127m. The source has a strike length of about 200m. The dip is near vertical. Strike direction is N 153°E. The Source may plunge north.

RBE 5 - 165m. The source has a strike length of about 150m. The dip is near vertical. The source may plunge north. The Strike direction is N 160°E.

RBE 7 - The source has no appreciable strike length.

RBE 10A - 223m. The source has a strike length of 100m. The dip is to the east. Strike direction is N 173°E. The source may plunge north.

RBE 10A - 251m. The source has a strike length of 200m. The dip is steep and to the west. Strike direction is north-south. The source may plunge north.

RBE 11 - 216m. The source has a strike length of 75m. The dip is easterly. Strike direction is north-south. There is little evidence for a plunge.

RBE 11 - 234m. The source has a strike length of nearly 200m. The dip is steep and to the west. Strike direction is north-south. The source may plunge north.

RBE 12 - 221, 12 - 233, 14 - 255. The anomalies from these surveys are essentially coincident. Therefore all these intersections are in the same electrical conductor. It has a strike length of about 250m. The dip is to the east. The overall strike of the source is N 5°E.

RBE 16 - 300m. The source has a strike length of 225m. The dip is to the west. The overall strike of the source is N 10°E.

RBE 16 - 277, RB 17, RB 18, RB 19. The anomalies from this survey are essentially coincident. Therefore all these intersections are due to the same source. The strike length is over 400m. The conductor should extend south to at least line 4040N. The dip is to the east.

SUMMARY

The mise a la masse surveys have been effective in showing the electrical continuity (or absence there of) between drill intersections. The indicated strike extent of intersections in the northern part of the grid (north of 4640N) are much more limited in extent that in the south part. The most obvious explanation of the results is that the conductors occur within a linear zone but are continuous for distances generally less than 200m. The conductors in the north are particularly patchy in nature.

...3.

There is no conductor which passes between lines 4580N and 4640N. A major east-west structural break must occur at this location.

D. Trussell

D B Trussell

27.1.81.

APPENDIX III

SUMMARY OF PETROLOGICAL DESCRIPTIONS

DRILL HOLE	SAMPLE NO	DEPTH m	LITHOLOGY	
RBE 3	T8222	6.5	Silicified graphitic sediment.	PONT 75/61. 30.1.80
RBE 3	T8223	32.60	Vein quartz traversing talc cassiterite, pyrrhotite, pyrite ± chalcopyrite scattered through talc and some in quartz. Trace galena and sphalerite in qtz.	
RBE 3	T8224	35.20	Sheared/foliated magnesium - carbonate talc rock - minor fine magnetite ± sphalerite.	
RBE 3	T8225	39.75	Sheared meta pelitic dolomite/ meta basalt.	
RBE 3	T8226	59.0	Tectonised mix of felsic crystal tuff and calcic limestone.	
RBE 3	T8227	91.50	Massive coarse vein pyrrhotite and sphalerite. Quartz Mg-carbonate gangue (ankerite). Trace cassiterite.	
RBE 4	T8228	91.55	Pebble conglomerate - clasts of chert, andesite, basaltic andesite + *disseminated magnetite. Matrix of* andesitic derivatives + magnetite.	
RBE 5	T8229	31.45	Schistose andesitic tuff - altered.	
RBE 5	T8230	88.70	Magnesium-carbonate-talc rock. Disseminated, sphalerite, pyrite chalcopyrite (on strike from T8223).	
RBE 5	T8231	119.80	Shale (meta pelite) micro fractured.	
RBE 5	T8232	163.00	Magnesium-carbonate rock with vein quartz + aspy, sp, py, ga	
RBE 9	T8271	163.4	Microschistose impure carbonate sediment	CMS 80/66. 1.10.80
RBE 10A	T8361	224.0	Quartz carbonate vein plus galena and sphalerite. Zeehan type carbonate vein.	
RBE 10A	T8362	225.10	Talc-carbonate-quartz rock - altered micro gabbro.	
RBE 10A	T8363	256.0	Talc-dolomite rock - altered ultramafic.	
RBE 10A	T8364	266.35	Intraformational carbonaceous chert breccia	
RBE 10A	T8365	278.65	Pervasively altered micro gabbro : Relict primary microscopic pyrite and chalcopyrite.	
RBE 16	T9382	241.90	Tuffaceous mudstone (pelite) hornfelsed.	CMS 80/12/16. 23.1.81
RBE 16	T9503	272.10	Quartz carbonate chlorite vein (traversing talc carbonate). Coarse cassiterite (0.3 mm) and pyrrhotite concentrated in vein carbonate.	PONT 81/11. 26.2.81
RBE 16	T9504	272.40	Quartz pyrrhotite vein traversing chloritised talc carbonate. Coarse cassiterite confined to chloritised zone.	" " "

...2.

DRILL HOLE	SAMPLE NO	DEPTH m	LITHOLOGY	
RBE 16	T9383	330.25	Altered tremolite rock.	CMS 80.12.16. 23.1.81
RBE 16	T9502	327.70	Dislocated, chloritised and metamorphosed dolomite?	PONT 81/11. 26.2.81
RBE 17	T9384	232.4	Chlorite, carbonate, quartz rock - altered gabbro.	
RBE 17	T9385	233.4	Bustamite vein - manganiferous high temperature variant of Zeehan vein mineralisation.	
RBE 17	T9386	281.0	Tuffaceous siltstone-hornfelsed.	
RBE 18	T9387	193.55	Bustamite vein.	
RBE 18	T9388	288.70	Pervasively altered micro gabbro.	
RBE 18	T9389	301.25	Pervasively altered gabbro.	
RBE 18	T9390	306.25	Tuffaceous mudstone (pelite) hornfelsed.	
RBE 18	T9391	199.45	Brecciated pervasively altered micro gabbro.	
RBE 19	T9505	186.30	Weakly siliceous-lithic and feldspathic quartz sandstone with a fine biotite sericite-graphitic matrix. Coarse grained tuffaceous sandstone.	PONT 81/11. 26.2.81
RBE 19	T9506	234.70	Weakly siliceous and pelitic dolomite? - hornfelsed.	" "
RBE 21	T9560	51.0	Microfractured altered 'Quartz Monzonite"	CMS 81/4/19
RBE 21	T9569	165.95	Altered calcareous? silty tuffaceous sandstone.	
RBE 21	T9565	183.30	Carbonaceous dolomite	
RBE 21	T9567	192.95	Tuffaceous mudstone with incipient pyritised pyrrhotite (low detrital quartz).	
RBE 21	T9563	195.60	Tuffaceous greywacke/sandstone (low detrital quartz).	
RBE 21	T9570	202.55	Altered micro gabbro	
RBE 21	T9571	219.20	Quartz-carbonate vein Zeehan type. Disseminated sphalerite - minor pyrrhotite.	
RBE 21	T9572	233.10	Brecciated labile silty mudstone.	
RBE 21	T9562	235.25	Laminated pelitic ash incipiently hornfelsed.	CMS 81/4/19
RBE 21	T9568	249.30	Tuffaceous mudstone hornfelsed.	
RBE 21	T9566	256.55	Brecciated hornfelsed tuffaceous mudstone.	
RBE 21	T9573	302.20	Micro fractured altered micro gabbro.	
RBE 21	T9564	304.05	Quartz ankerite epidote vein with coarse granulate sphalerite.	
RBE 22	T9574	107.0	Altered micro gabbro	CMS 81/4/19
RBE 24	Z0408	392.50	Altered micro gabbro	CMS 81/10/21
RBE 25	T5892	271.85	Altered micro gabbro	CMS 81/8/32

...3.

DRILL HOLE	SAMPLE NO	DEPTH m	LITHOLOGY	
RBE 25	T5893	273.30	Carbonaceous calc-mudstones (pelite) arkosic - reworked intermediate - acid tuffaceous.	
RBE 25	T5894	275.85	Altered microgabbro	CMS 81/8/32
RBE 25	T5895	279.60	Altered microgabbro	" "
RBE 25	T5896	311.20	Carbonaceous calc-mudstone (pelite) and carb impure limestone. Un metasomatised. Minor detrital qtz.	" "
RBE 25	T5897	311.90	Carbonaceous calc-mudstone (pelite) minor dolomite - ankerite as replacement of calcite.	" "
RBE 27	T5898	83.70	Calc-siltstone; minor clastic quartz. Late diagenetic dolomitisation.	" "
RBE27	T5899	92.60	Dolomitic mudstone (pelite) - silt sized quartz and alkali feldspar.	
RBE 27	T5900	99.30	Tuffaceous siltstone-traces clastic quartz, muscovite, diagenetic dolomite (felsic intermediate)	
RBE 27	Z0401	103.0	Dolomitic siltstone - minor clastic quartz-marked diagenetic dolomitisation.	
RBE 27	Z0402	113.80	Carbonaceous calc-mudstone (pelite) Disseminated pyrite pyrrhotite. Clastic quartz & feldspar.	
RBE 27	Z0403	124.40	Carbonaceous mudstone (pelite) - silt sized clastic feldspar and quartz.	
RBE 27	Z0404	141.00	Tuffaceous calc-mudstone (pelite) varying "syngenetic" pyrite - pyrrhotite.	
RBE 27	Z0405	176.50	Carbonaceous mudstone (pelite) "Syngenetic" pyrite partly replaced by pyrrhotite.	
RBE 27	Z0406	219.40	Altered hornfelsed (metasomatic) tuffaceous greywacke/sandstone.	
RBE 27	Z0407	239.20	Altered hornfelsed tuffaceous sandstone/siltstone. Pervasive tremolite-actinolite-subsequently chloritised-carbonated.	
RBE 27	Z0409	375.70	Altered ultra mafic with minor tremolitisation marginal to Schorl veins.	CMS 81/10/21
RBE 27	Z0408	392.50	Altered micro gabbro-hornfelsed with subsequent 'retrogressive' chlorite-calcite alteration.	" "
RBE 29	Z0419	40.00	Tuffaceous sandstone-subarkose. Contact altered - detrital quartz with subordinate sericitised/ chloritised feldspar. (EXE CREEK area).	

APPENDIX IV a(i)

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 25	222.90	225.10	2.2	1.68	82°E	+21	Sp, Ga	Py, Cp, Aspy	Quartz/carbonate tu sa	3.42	2.13	132	0.2	0.03
RBE 8	98.0	101.0	3.0	2.46	85°E	+106	Py, Aspy	Po, Cp	Quartz/carbonate tu sa	0.13	0.41	12.2	0.13	0.04
RBE 20														
RBE 7	81.0	86.0	5.0	3.5	86°E	+67	Ga, Sp,	Cp, Py	Quartz/carbonate ss/tu sa	7.59	2.53	106	0.05	0.01
RBE 5	156.50	-168.10	11.6	4.9	78°W	-5	Ga, Sp	Cp, Aspy	Quartzcarbonate and quartz sh.	13.10	2.48	434	0.06	
RBE 9	191.30	195.6	4.3	3.3	78°W	-26	Ga, Sp,	Py, Cp, Aspy	Quartz breccia and quartz/carb ss/tu sa.	5.25	2.56	168.8	0.04	0.002
RBE10A	220.00	226.9	6.9	5.1	86°E	+17	Ga, Sp, Py	Cp, Aspy, Po	Breccia zone siderite matrix tu sa.	10.51	3.75	301.5	0.14	0.003
RBE 30	88.40	92.80	4.4	2.97	85°E	+113	Po, Py, Sp GA, Cp	Aspy	Quartz/carb sh.	1.04	3.35	109.7	0.36	NR
RBE 11	209.10	216.60	7.5	5.7	80°W	+28	Sp, Ga, Aspy Po	Py Cp	Vuggy quartz/carb. Massive vein quartz tu sa.	1.10	3.38	29.0	0.09	0.06

SALMON'S LODE - SIGNIFICANT LEAD, ZINC, SILVER DRILL HOLE INTERCEPTS

839458

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 12	217.0	221.0	4.0?	3.76?	82°W?	+25	Sp, Ga, Cp, low overall.	Po	Quartz carb. veins. Mass quartz, Po veins. Mixed seds.	0.79	2.54	15.4	0.08	0.03
RBE 31	114.55	118.0	3.45	2.75	82°W	+98	Sp, Ga	Py	Quartz carb. vein. Stoped by late vein quartx. TC to east.	2.25	1.37	42	0.04	NR
RBE 14	252.8	257.30	4.5	3.45	84°W	+1	Ga, Sp, Po, Aspy, Cp	Po, Py, Aspy Ga, Sp	Mixed quartz carb. and quartz Po Aspy vein W flank TC.	1.98	2.18	413	1.23	0.08
RBE 15	260.40	265.50	5.10	4.07	85°W	-14	Po, Aspy, Sp, Cp	Py	Mixed quartz carb. and quartz Po Aspy vein TC contained.	0.30	1.80	21.0	0.8	0.08
RBE 16	273.35	277.80	4.45	2.86	80°E	-33	Po, Py	Sp, Py, Ga,	Mixed quartz and quartz carb. vein. Semi-massive Po replacing TC.	0.44	2.5	26	0.14	0.14

SALMON'S LODE - SIGNIFICANT LEAD, ZINC, SILVER DRILL HOLE INTERCEPTS

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 17	245.80	247.50	1.70	1.44	81°W	-14	Sp, Po	Aspy, Py, Cp, Ga	Mixed quartz and quartz carbonate veins. East flank of TC.	0.49	2.4	28.9	0.12	0.04
RBE 18	249.45	250.05	0.60	0.48	63°W	-20	Po	Sp, Py	Mixed quartz and quartz carbonate veins. East flank of TC.	0.1	0.8	8	0.13	0.02
RBE 19	294.25	296.40	2.15	1.73	85°W	-59	Po,Py,Sp,Ga	Aspy	Mixed quartz and quartz carbonate veins. Sed flanked.	3.14	1.73	67	0.08	0.03

SALMON'S LODE - SIGNIFICANT LEAD, ZINC, SILVER DRILL HOLE INTERCEPTS

839460

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 17	232.50	233.95	1.45	1.23	81°W	-5	Sp, Ga, Po, Aspy	Aspy,Py,Cp	Multiple mixed veins mainly quartz carb. Gabbro TC contact.	0.29	1.06	13.1	0.03	0.06
RBE 18	235.25	237.13	1.88	1.33	89°E	-10	Po, Aspy	Cp,Py,Ga,Sp	Multiple quartz pyrrhotite veins within TC.	0.47	1.64	31	0.31	0.06
RBE 19	251.70	253.20	1.5	1.18	84°W	-28	Po	Py,Ga,Sp	Multiple quartz pyrrhotite veins replacing TC. Minor Bustamite vein.	0.95	1.84	30.5	0.06	0.11
RBE 21	214.65	215.80	1.15	1.10	78°E	+12	Ga, Sp	Po	Quartz carb. veins on E flank of TC.	3.8	4.96	98	0.07	0.06
RBE 11	253.90	254.70	0.8	-	83°E	-2	Po, Py	Cp	Quartz veins gabbro	<0.1	<0.1	4.0	0.15	0.34
RBE 12	230.70	233.90	3.20	2.26	80°W	+15	Sp, Ga, Aspy Po, Cp	Py, Po, Cp Aspy, Py	Mixed quartz carb. and quartz Po veins West flank of TC.	0.24	1.16	21.9	1.23	0.11
RBE 31	137.55	139.75	2.20		80°W	+83	Po, Py	Aspy, CP	Pyrrhotite replacement of TC.	0.04	0.12	35	1.48	NR
RBE 14	261.90	262.8	0.90	0.74	77°W	-3	Aspy, Cp, Po		Massive quartz vein within TC.	0.01	0.10	48.5	2.9	0.03
RBE 15	271.30	272.00	0.70	0.56	85°W	-19	Po, Sp, Py		Quartz vein plus minor carb. East flank of TC.	0.05	1.35	5.0	0.03	0.63
RBE 16	271.0	273.35	2.35	2.01	80°W	Po, Py	Cp, Aspy, Sp		Quartz/Po veins and aggregates within TC.	0.04	0.22	1.5	0.03	1.3

FENTONS VEIN:- SIGNIFICANT LEAD - ZINC - SILVER DRILL HOLE INTERCEPTS

839461

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 15	248.80	249.80	1.00	0.82	82°W	-4	Sp, Po	Ga, Py Cpy	Mixed veins west flank of TC.	1.76	2.78	106	0.10	0.01
RBE 16	246.00	247.00	1.00	0.90	75°W	-13	Ca, Sp, Po	Cp, Aspy, Py	Mixed quartz with quartz/carb. vein on west flank of TC.	1.25	1.7	59	0.32	0.07
RBE 17	219.30	220.7	0.70	0.58	81°W	+5	Po, Py Sp	Ga, Aspy Cp	Mixed veins breccia zone. TC	* 0.15	* 0.29	* 45	* 0.01	* 0.006
RBE 18	218.75	219.91	1.16	0.87	88°E	0	Sp, Ga, Py	Aspy	Mixed quartz carb. and Bustamite veins west flank TC.	2.91	2.24	50	0.01	0.02
RBE 19	234.25	235.0	0.75	0.35	73°E	-20	Sp, Ga	Po, Py	Bustamite vein within TC.	2.5	1.25	29	0.01	0.01
RBE 21	230.50	231.75	1.25	1.17	84°E	+5	Po, Sp	Aspy Ga	Mixed quartz pyrrhotite and quartz carb. west flank of TC.	0.04	3.50	12	0.12	0.007

GOSSAN VEIN - SIGNIFICANT LEAD, ZINC, SILVER DRILL HOLE INTERCEPTS

* Ground core results.

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 18	184.45	188.30	3.85	0.80	54°E	+22	Sp, Ga, Py	Aspy	Mixed quartz carb. and bustamite veins. Sed. flanked.	2.67	2.90	70	0.07	0.02
RBE 19	166.0	169.0	3.0	0.52	54°E	+28	Sp, Ga	Aspy, Py	Mixed narrow quartz carb. and bustamite veins. Sed flanked.	3.50*	1.40*	114*	0.05*	0.01*
RBE 21	303.65	305.15	1.50	1.23	83°W	-28	Ga, Sp, Po	Py, Cp	Mixed narrow quartz carb. and bustamite veins. Sed flanked	4.60	3,22	120	0.08	0.02

*Ground core

WESTERN VEIN - SIGNIFICANT LEAD, ZINC, SILVER DRILL HOLE INTERCEPTS

839463

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 25	247.85	248.60	0.75	0.48	82°E	+7	Cp Aspy	Py, Po, Sp	Quartz and quartz carb sh.	0.14	0.24	130	4.1	0.05
RBE 8	123.0	126.0	3.0	2.12	85°E	+89	Po, Py	Sp, Cp, Ga	Quartz tu sa/ss	0.16	0.85	32.5	0.53	0.02
RBE 20										No significant results				
RBE 7	63.0	73.0	10.0	7.10	83°E	+80	Po, Aspy Py Cp	Ga, Sp	Ss/ tu sa	0.07	0.30	10	0.19	0.19
RBE 5	126.0	131.95	5.95	4.56	85°E	+20	Po, Aspy	Cp, Py, Sp Ga	Quartz carb. tu sa	?	?	10	0.16	0.003
RBE 9	157.5	161.0	3.6	2.8	85°E	0	Aspy, Po, Cp	Sp, Py, Ga	Quartz veined breccia ss/tu sa.	1.56	2.53	68.3	0.34	0.002
RBE 10A	243.7	246.3	2.6	1.8	87°W	+3	Aspy, Po	Cp, Py	Quartz carb. ss/sh	0.08	0.19	7.5	0.18	0.19
RBE 30	128.35	131.50	2.15	?	87°W	+85	Ga, Sp, Cp	Aspy, Py	Mass. quartz and carbonate tu sa.	No results				
RBE 11	209.10	220.10	1.7	1.3	89°E	+22	Ga, Sp	Py	Quartz stoped quartz carb. vein.	0.93	0.98	40.4	0.01	0.01
RBE 12	254.30	256.10	1.80	1.16	83°W	+1	Sp (low sulphide)	Aspy, Py	Quartz siderite stockwork in Tu sa.	0.22	2.04	16.8	0.01	0.01
RBE 31	153.6		1.00		85°W	+71	Py		No	No results				

COPPER VEIN - SIGNIFICANT LEAD, ZINC, SILVER DRILL HOLE INTERCEPTS

839464

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 25	268.80	272.05	3.25	1.37	62°E	-5	Po	Py, Cp	Massive vein quartz	0.01	0.03	3.5	0.08	1.14
RBE 8	160.0	163.0	3.00	2.12	84°E	+64	Aspy, Cp	Sp, Ga	Vein quartz and quartz/carb.	0.04	0.15	7.0	0.2	0.34
RBE 20										No significant results.				
RBE 7	10.7	16.5 approx.	Hole collared in vein		80°E	+116	Oxidised	Oxidised	Tc/ss	Oxidised zone.				
RBE 5	82.50	84.70	2.20	1.56	78°W7	+53	Po, Py, Aspy Cp	Sp	Tc			6.3	0.26	0.007
RBE 9	116.20	117.2	1.00	0.65	83°W	+25	Po, Cp, Aspy	Py	Fractured ss/tu sa	0.001	0.28	16.5	2.9	0.09
RBE10A	260.70	262.5	1.80	1.30	82°W	-8	Aspy, Po, Cp	Py	Massive vein quartz within TC.	0.001	0.13	27.0	1.39	0.04
RBE 30	153.60	155.40	1.80	?	82°W	+67	Aspy, Cp	Po, Sp, Py	Quartz/carb. Breccia		No results			
RBE 11	233.60	235.5	1.90	1.30	87°E	+12	Aspy, Py	Cp, Sp	Quartz plus minor carbonate W flank of TC.	0.06	0.18	14.0	0.84	0.32

TIN VEIN - SIGNIFICANT LEAD, ZINC, SILVER DRILL HOLE INTERCEPTS

839465

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb %	Zn %	Ag ppm	Cu %	%Sn
RBE 12	272.75	274.9	2.15	1.86	60° (84°W Dip)	-10	Po, CP massive	Aspy, Py	Massive milky vein quartz Patches of carbonate.	0.01	0.07	46.8	1.71	0.10
RBE 31	171.40	173.30	1.90		40° (84°W Dip)	+57	Low Sulphides	Py	Quartz carb. vein-cocks combed tex. Stoped by late quartz vein.	0.55	0.71	81	0.01	NR

TIN VEIN - SIGNIFICANT LEAD, ZINC, SILVER DRILL HOLE INTERCEPTS

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	R L M S L DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb ppm	Zn ppm	As ppm	Cu ppm	%Sn
DDH XI	110.64	112.77	1.53	1.25	55°	90	Py, Cp, Aspy		Quartz veined shales.	-	No analyses		-	0.84
DDH XI	121.31	122.83	1.52	1.16	50°	87	Cp, Aspy, cassiterite		Quartz veined calcareous siltstones and tuffaceous sandstone.	-	No analyses		-	0.38
DDH XI	127.41	130.45	3.04	1.52	30°	84	Cp, Po, Py, trace cassiterite		Quartz veined calcareous siltstones and tuffaceous sandstone.	-	No analyses		-	0.4
RBE 25	268.80	272.05	3.25	1.37	25°	-6	Po, Py, Aspy		Massive quartz vein abutting quartz carbonate vein zone along tuffaceous sandstone, gabbro contact.	138	389	9135	889	1.14
RBE 3	24.10	25.85	1.75		50°	+82	Po Cp Py		Quartz veined shale.	220	435	290	205	0.41
	31.75	32.85	1.10		50°	+76	Po Aspy Cp		Sulphide stringers in talc carbonate (TC).	50	475	1440	625	1.1
	91.00	92.00	1.00		35°	+24	Cp Aspy Sp		Quartz & quartz carb. veined sediments.	2050	2.91%	460	2075	0.41
RBE 20										No significant results.				
RBE 5	18.00	19.00	1.00		65°	+102	Py		Quartz veined siltstone.	300	380	8800	545	0.18
RBE 7	63.00	65.00	2.00		35°	+80	Py, fluorite		0.6m quartz vein in siltstone.	135	485	800	2650	0.65
RBE 7	67.00	68.00	1.00		50°	+77	Po, Aspy, pycp		Quartz (carb.) veining in black shale.	105	170	3.3%	1850	0.38
RBE 8	160.00	163.00	3.00		40°	+63	Aspy, pypo, cp		1.2m quartz vein in siltstone.	430	1550	1.5%	2850	0.34
RBE 9	154.00	155.00	1.00		20°	0	Po		Massive po and vein quartz + po in TC.	670	2300	1040	1950	0.17
RBE 10A	244.50	245.30	0.80		45°	+ 3	Py, Aspy, Po		Quartz vein with semi massive py and aspy - minor quartz carb. vein material.	570	2000	15.0%	1150	0.25
RBE 30										No results to hand.				
RBE 11	233.60	235.50	1.90		40°	+12	Aspy, Py, Cp		Massive vein quartz + sulphide minor quartz carb. veining Host - TC.	600	1800	28.3%	8400	0.31
RBE 11	253.90	254.70	0.80		40°	- 2	Po Py		Quartz veined TC	20	75	1300	1500	0.34
RBE 11	259.00	259.30	0.30		55°	- 6	Py (trace)		Quartz veined TC gabbro contact.	550	2500	950	1900	1.1%

TIN DRILL HOLE INTERCEPTS - 0.15% SN AND GREATER

839467

[redacted] IV [redacted]i)

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb ppm	Zn ppm	As ppm	Cu ppm	%Sn
RBE 12	230.70	231.30	0.60		60°	+17	Po, Aspy, Py Sp		Quartz and quartz carb. veining on west flank of TC.	3600	1.3	2700	205	0.25
RBE 12	244.50	244.95	0.45		50°	+ 8	Po, Cp, Py		Quartz sulphide vein within TC.	320	1000	1000	2900	0.15
RBE 31										No results to hand.				
RBE 13	87.8	88.40	0.60		30°		Po Cp Aspy		Quartz sulphide vein in siltstones and sandstone.	25	20	140	540	0.23
RBE 14	254.0	254.5	0.50		50°	+ 2	Po, Cp, Aspy Sp		Mixed quartz and quartz carb. vein zone.	3900	7300	6500	1500	0.16
RBE 14	259.4	260.25	0.85		50°	- 2	Po, Aspy, Cp Sp		Quartz vein stock work on west flank of TC.	710	2050	1.8	260	0.35
RBE 15	260.40	260.90	0.50		?60°	-11	Po, Aspy, Cp Sp		Mixed quartz and quartz carb. vein zone in TC.	7200	4.25	7000	3250	0.21
RBE 15	263.75	263.90	0.15		?	-13	Po, Aspy, Cp Sp		Mixed quartz and quartz carb. vein zone in TC.	2900	1.55	3400	560	0.26
RBE 15	271.30	272.0	0.70		55°	-18	Po, Aspy, Cp Sp		Mixed quartz and quartz carb. vein zone in TC.	580	1.35	2600	360	0.63
RBE 15	276.35	276.60	0.25		45°	-22	Py, Po, Sp		Quartz vein in tuff sandstone host.	5400	1.7	300	475	0.55
RBE 16	271.00	273.35	2.35		30°	-30	Po, Py, Sp		Quartz po py veined, chlorite altered TC - part of mixed vein system.	400	2200	3500	300	1.3
RBE 17	235.15	235.80	0.65		?60°	- 6			Quartz po, aspy veins within TC, as above.	230	640	4.8	9500	0.15
RBE 18	241.35	241.87	0.52	? 0.47	55-80°	-13	Po, Sp, Aspy		Mixed quartz and quartz carb. veins on flank of sed. TC contact.	3050	1.1	5000	650	0.27
RBE 19	236.75	237.05	0.3	0.19	40°	-21	Py, Po, Cs?		3 cm quartz vein and minor carb. within TC.	105	6750	480	275	0.21
RBE 21	82.0	85.0	3.0	2.71	65°	+85	Py, Sp		20 cm quartz carb. vein incipiently silicified carb. shale.	143	510	750	87	0.17*
RBE 26	264.65	271.05	6.4	?	?		Po, Py, Sp		Quartz carb. and quartz po veining on west flank of TC.	1%	5100	-	400	0.29

*Ground core result.

839468

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb ppm	Zn ppm	As ppm	Cu ppm	%Sn
RBE 28	429.85	430.40	0.55				Po, Py, Aspy		Mixed quartz and quartz carb. vein zone on west flank of TC.	1075	3325	4700	575	0.07
RBE 27	403.19	404.0	0.81	0.73	65°		Aspy, Cp		40cm massive quartz, carbonate, arsenopyrite vein within. TC	4600	9900	7.1%	5550	0.11
RBE 29	235.45	235.95	0.50	0.35	45°	24	Py, Po		Quartz pyrrhotite vein in horn-felsed tuffaceous sandstone. Carbonated and quartz veined gabbro.	-	65	580	140	0.15
	289.90	290.30	0.40	0.28	45°	-25	Py, Po		" " " "	210	180	1800	230	0.21
	291.60	291.90	0.30	0.21	45°	-25	Py, Po, Cp		" " " "	425	285	9.4%	1.10%	0.66

DRILL HOLE NO.	INTERVAL - METRES FROM	TO	DRILLED WIDTH	TRUE WIDTH	CIA	RSL MSL DATUM	PRINCIPAL SULPHIDES	MINOR SULPHIDES	GANGUE/ASSOCIATION	Pb ppm	Zn ppm	As ppm	Cu ppm	%Sn
RBE 32	488.60	491.10	2.5	1.25	30°	-165	Po, Py		Mixed massive vein quartz and quartz carbonate veins on gabbro dyke/ sediment contact.	No results to hand.				
RBE 22	486.90	487.85	0.95	0.67	45°		Po, Py fluorite.		Quartz vein zone with massive pyrrhotite - flanked by dolomite? and tuffaceous sandstone.	530	3300	6800	2300	0.22
RBE 23	442.10	444.50	2.40	1.47	38°		Po, Py		Massive quartz vein with minor ankerite within hornfelsed sediments.	7400	1.15	6600	540	0.21
RBE 24									No Tin values in excess of 0.09%					

DRILL HOLE TIN INTERCEPTS 0.15% Sn and greater
(at approximately -150 metre Mean Sea Level)

839470

APPENDIX V

PROJECT NAME: RESEARCH AND TECHNICAL SERVICES DIVISION

TITLE: PHOTOGEOLOGY AND REMOTE SENSING SECTION

PHOTOGEOLOGICAL INVESTIGATION OF THE RENISON EAST AREA, COMSTAFF TENEMENTS, TASMANIA

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheet K55-05 (Queenstown)

COMMODITY/IES: Sn

TEXT PAGES NO: 3

PLAN NOS: See attached list

TABLE NOS:

APPENDICES:

AUTHOR/S: M C Hussey

DATE: 11 January 1982

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

RESEARCH AND TECHNICAL SERVICES DIVISION

PHOTOGEOLOGY AND REMOTE SENSING SECTION

PHOTOGEOLOGICAL INVESTIGATION OF THE RENISON EAST AREA, COMSTAFF TENEMENTS, TASMANIA

1. INTRODUCTION

Twelve 1:13 000 scale colour aerial photographs which cover the East Renison area were interpreted. The Landsat image of the area was also examined on the DIPS system and a fracture analysis carried out for the region.

The main objective of the exercise was geological mapping of the area with emphasis on faulting.

To assist with this exercise a helicopter overflight of the area was made.

Field work in the area was curtailed by heavy rainfall.

Compilation of the final map from aerial photographs was undertaken using the EDBS system digitiser and plotter which removed the severe distortions occurring in the aerial photographs of this area. This part of the exercise was time consuming and as it was experimental not all of this time was charged to the Project.

The Project was completed over a period of two months though only eight man days were actually involved.

2. INTERPRETATION

2.1. Lithological

No marker horizons can be distinguished within the sedimentary rocks on the aerial photographs. This is due to the nature of the rocks in the area and the exceedingly dense and uniform vegetation cover.

For the purposes of this interpretation lithologies distinguished on the accompanying maps are:

...2

Glacials - usually distinguished as flat grassy plains.

Intrusives (mainly basic) - distinguished by strong vegetation anomalies.

Conglomerate - identified in the field.

Undifferentiated Sediments - which underlie the remainder of the area.

It is concluded from the study that photogeological and/or other remote sensing techniques cannot add significant information to the mapping of lithologies in this area, on any other but a regional basis.

3. STRUCTURE

3.1. Faulting

It is not possible to accurately determine the dip direction and value for the various sedimentary units in the area from these aerial photographs. Furthermore, trend (strike) lines are only vaguely defined on the 1:13 000 scale photographs. However, on an earlier interpretation using 1:40 000 black and white aerial photographs strike directions were more apparent and indicated a fold closure (E-W trending antiform?) plunging and closing to the east of the Renison Mine area.

Ground checking did not yield a great deal of structural information of the attitude and azimuth of the various lithologies present in the area, probably due to the massive nature of most of the sediments and the degree of weathering.

4. FAULTING

This investigation located a number of faults in the area, some of which were identified on the ground. Most of the faults located on the 1:13 000 scale photographs used in this investigation had previously been identified on the 1:40 000 scale photographs and were also apparent on the Landsat imagery of the area. Main fault/fracture trends are N-S, NE and SE. The Bassett- Federal fault which trends southeast through the Renison Mine area and the Argent fault which trends east-west to the south, cannot be clearly identified on these 1:13 000 scale photographs. However, the Bassett-Federal fault is clearly discernable on smaller scale imagery of the area.

Examination of the photographs does not reveal the movement on the faults or their attitude. However, in a road cutting east of the Ring River bridge slickensides on the Ring River fault plane indicates that movement has had both horizontal and vertical components.

5. CONCLUSION AND RECOMMENDATIONS

Geologically the examination of the 1:13 000 scale colour photographs does not add significantly to the findings of earlier photo-interpretations using larger scale (1:40 000 photographs). It is only in the location and delineation of faulting that photo-interpretation can provide significantly useful data in this area, at this stage in the exploration project. If, as is probable, the Ring River and Colebrook Creek faults are gravity faults, they may uplift the Renison ore horizons in the Comstaff tenement area. Furthermore, these faults may have been loci for mineralisation in this area.

It is suggested that the interpretation map produced is used as the basis for a synthesis of all other geological and geophysical data to assess the potential for the occurrence of Renison type ore horizons in the western part of the tenement (EL 5/63 area 6).

As the cross section presented shows there is a distinct lack of data on the style and location of folds in the area. Photo-geology cannot assist in producing more data on the folding of rocks in this area.

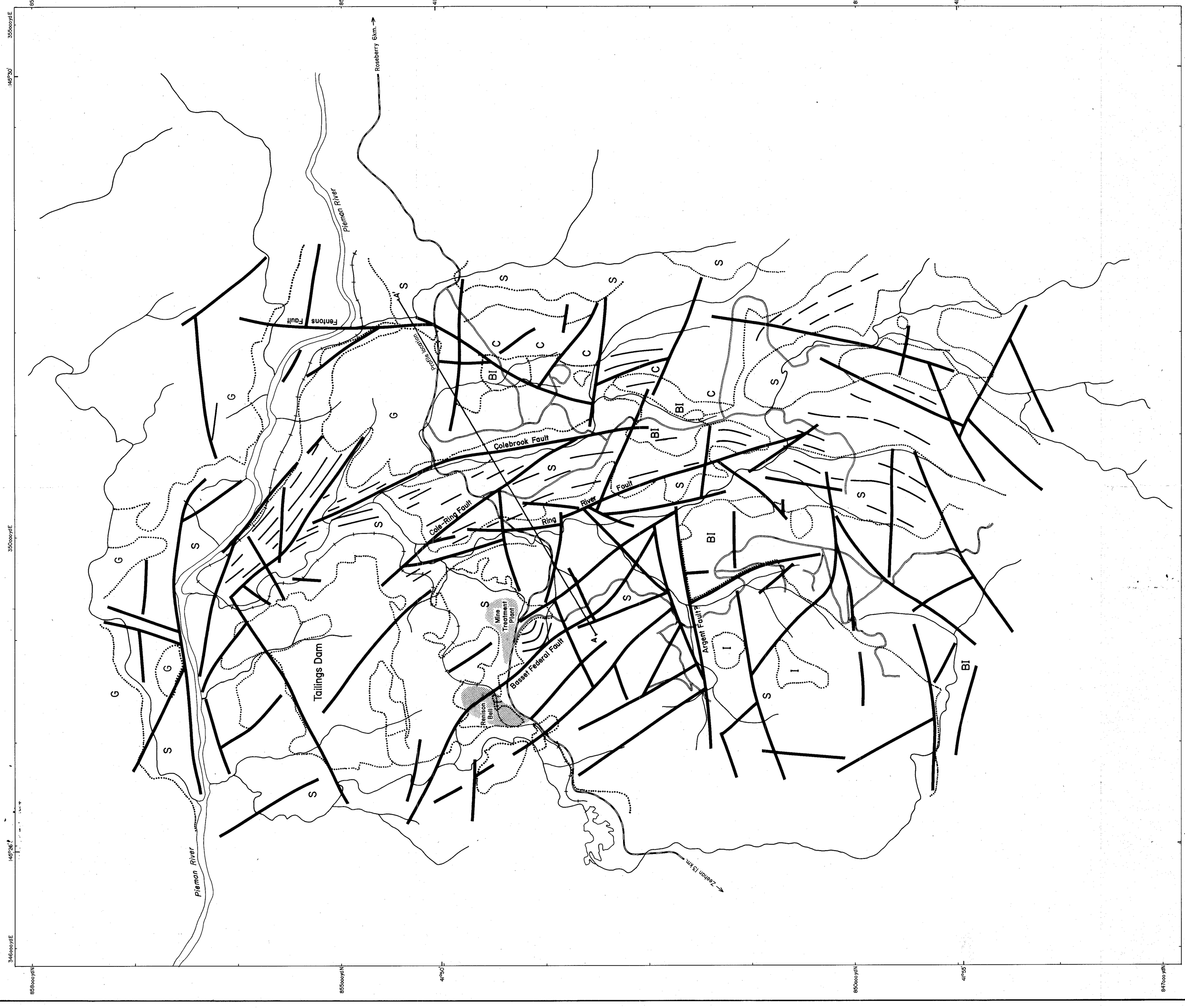
M C Hussey
Photogeologist

MCH:AML

11 January 1982

ILLUSTRATIONS

PLANS	Photogeological Interpretation of Renison Area (TAS-2-2792a, 2794)
PROFILE 1	Sketch Profile across Renison/Renison East Area (TAS-2-2793)



839476 82-1690 Vol 9 Part 1 of 6.

AUSTRALIAN ANGLO AMERICAN LTD			
PROJECT	COMSTAFF PTY. E.L.5/63, AREA 6		
AREA	EAST RENISON GRID GAR, GAT, GAP		
DATA	RESEARCH & TECHNICAL SERVICES DIVISION PHOTO-GEOLOGICAL INTERPRETATION OF EAST RENISON AREA		
COMPILED	M. Hussey	SCALE	1:15840
DRAWN	January 1982	REF No	TAS-2-2792a
AMENDED			



5 cm

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RESEARCH & TECHNICAL SERVICES DIVISION

E.L.5/63 - EAST RENISON GRID

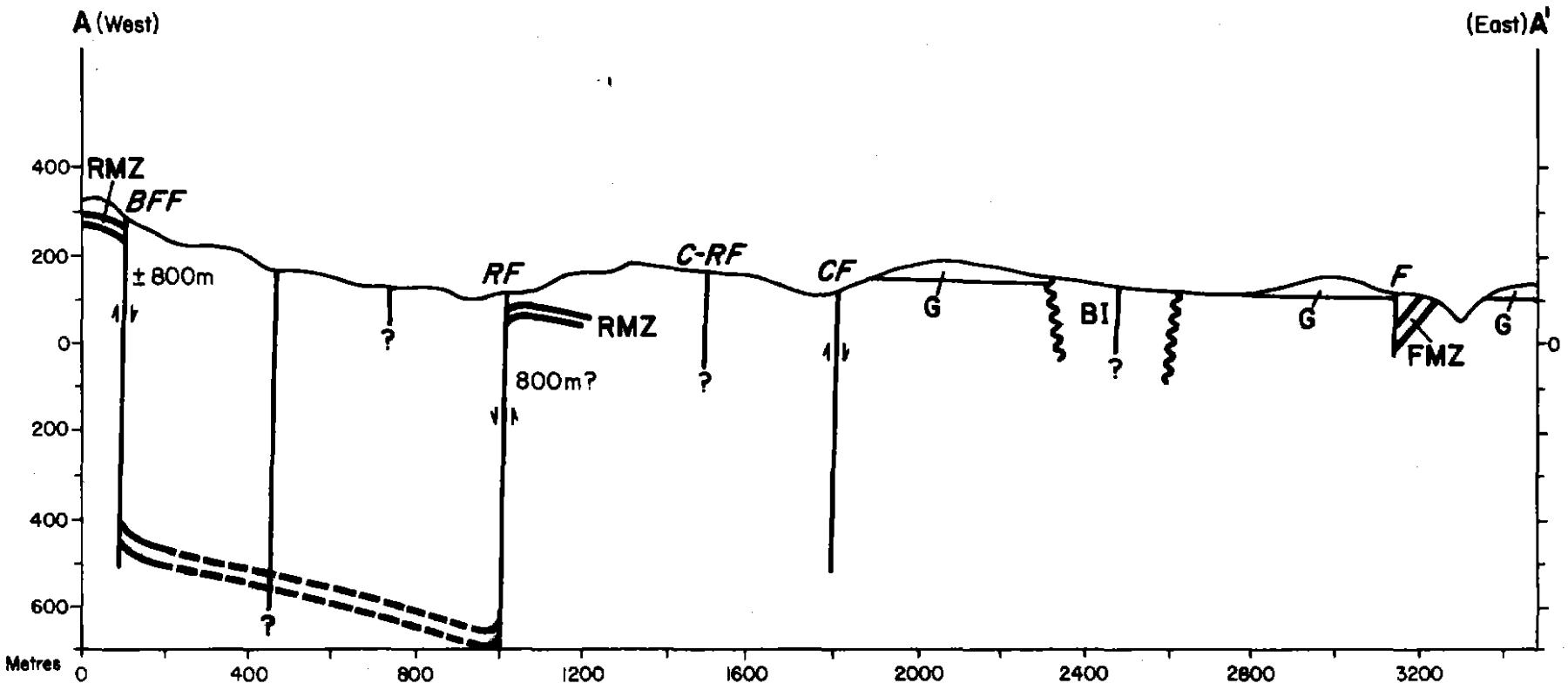
LANDSAT IMAGE FAULT TRENDS

Faults

Photo-Geology Map Boundary

0 2 4 6 8 Kilometres

COMPILED	DRAWN	SCALE	
M. Hunter	January 1982	Approx. 1:166 700	TAS-2-2794



BFF	Bassett Federal Fault	G	Glacials
RF	Ring Fault	BI	Basic Intrusive
C-RF	Cole-Ring Fault	RMZ	Renison Mineralized Zone
CF	Colebrook Fault	FMZ	Fentons Mineralized Zone
F	Fentons Fault		

5 cm

AUSTRALIAN ANGLO AMERICAN LIMITED

RESEARCH & TECHNICAL SERVICES DIVISION

E.L.5/63 – EAST RENISON GRID

GEOLOGICAL PROFILE FROM RENISON MINE TO FENTONS PROSPECT

COMPILED M Hussey | DRAWN January 1982 | SCALE V=H=1:15840 | TAS-2-2793

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839479

- 4 FEB 1982

Dept. of Mines | A.O. | G.G. | E.O. | D.&W.
Received - 4 FEB 1982 | E & T.
Answered
DEPT. OF MINES
REF. No.

DTT
Jul

photocopy

GAR. DDH: RBE 22

OPEN FILE

82-169 (Vol 9)
Part 2 of 6
(RBE 22)

8390/11

839480

AUSTRALIAN ANGLO AMERICAN LIMITED
DRILLHOLE LOG
Summary Sheet

PROJECT Renison	AREA GAR		DRILLHOLE TYPE DDH
CO-ORDS 372601·2 / 5372780·6	DEC LN -45°	AZIMUTH 77° MN	RL 176·5 m	DH No. RBE 22
DATE COMMENCED	DATE COMPLETED 2·5·81	DRILLED BY Longyear	DRILL RIG Longyear 38
Non Coring to: 42·3 m	HQ Core to:	NQ Core to:	BQ Core to: 500·2	EOH 500·2 m

SURVEY DATA
Instrument: downhole camera

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH
61 m		-44·25°	75·5° MN	211 m		-45·0°	72·5° MN
91 m		-44·25°	75·5° MN	241 m		-43·25°	71·5° MN
121 m		-46·25°	80·0° MN	271 m		-41·75°	70·5° MN
151 m		-46·75°	79·0° MN	304 m		-40·0°	71·5° MN
181 m		-46·5°	73·5° MN	331 m		-38·75°	72·5° MN

LOG SUMMARY

ROCK TYPE	MINERALIZATION Style	Grade	Intersection width (Corr)
0-42·3m : tricored			
42·3-50·0 : intc pu/rz fg-cg tuf sa é pu/rz ss		tr Py	
50·0-67·8 : intc gy fg-cg tuf sa é gy ss		tr Py	
67·8-79·7 : intc→intb. fg-cg. gy. gr/gy tuf sa→ss		tr Py. AsPy	
79·7-106·6 : intc. fg-cg. gy. dk gy tuf sa. intb gy dk gy ss.	Cal vns	tr Py	
106·6-120·1 : alt gr-wh. mg-cg vm			
120·1-131·5 : intc→intb gy (bleached?) fg-mg tuf ss→ss.			
131·5-132·2 : alt gr gb?			
132·2-132·8 : gy. mg. tuf sa é dk gy ss			
132·8-133·5 : alt gr gb?			
133·5-134·8 : intb gy→dk gy ss			
134·8-136·4 : qtz cbte vn		Sp. Py. AsPy 2%	
136·4-145·7 : intc→intb. gy→dk gy ss é minor gy tuf sa→bk sh	qz vns	Py. AsPy 1%	
145·7-151·8 fg-mg gy. dk gy tuf sa→minor ss			
151·8-176·1 : intc gy. fg-mg. tuf sa é intb gy→dk gy ss	Cal vns	Py. AsPy. Gl tr	
176·1-182·7 : alt br tuf sa?		Py 2%	
182·7-230·0 : intc→intb. gr-gy. mg tuf sa→ss→ tr bk sh		Py tr	
230·0-240·0 : intc→intb. gy tuf sa. gy ss→carb bk sh		Py 1%	
240·0-278·0 : intc→intb. gy tuf sa→gy ss		Py 1%	
278·0-289·4 : intc→intb. gy→dk gy ss→carb bk sh é minor mag tuf sa units		Py 2%	
289·4-298·1 : mixed sediments		Py 2%	
298·1-303·2 : carb bk sh é calc dk gy ss		Py 3%	
303·2-309·3 : mixed sediments		Py 4%	
309·3-323·0 : alt mg. br→gr/gy. tuf sa		Py tr	

(continued page 2)

Signature

Date:

1x

839481

AUSTRALIAN ANGLO AMERICAN LIMITED
DRILLHOLE LOG
Summary Sheet

PROJECT Renison	AREA GAR				DRILLHOLE TYPE DDH
CO-ORDS 372601·2 / 8372780·6	DEC^{LN} -45°	AZIMUTH 77° MN	RL 176·5		DH No. RBE 22
DATE COMMENCED	DATE COMPLETED 2·5·81	DRILLED BY Longyear	DRILL RIG Longyear 38		
Non Coring to: 42·3m	HQ Core to:	NQ Core to:	BQ Core to: 500·2	EOH 500·2m	

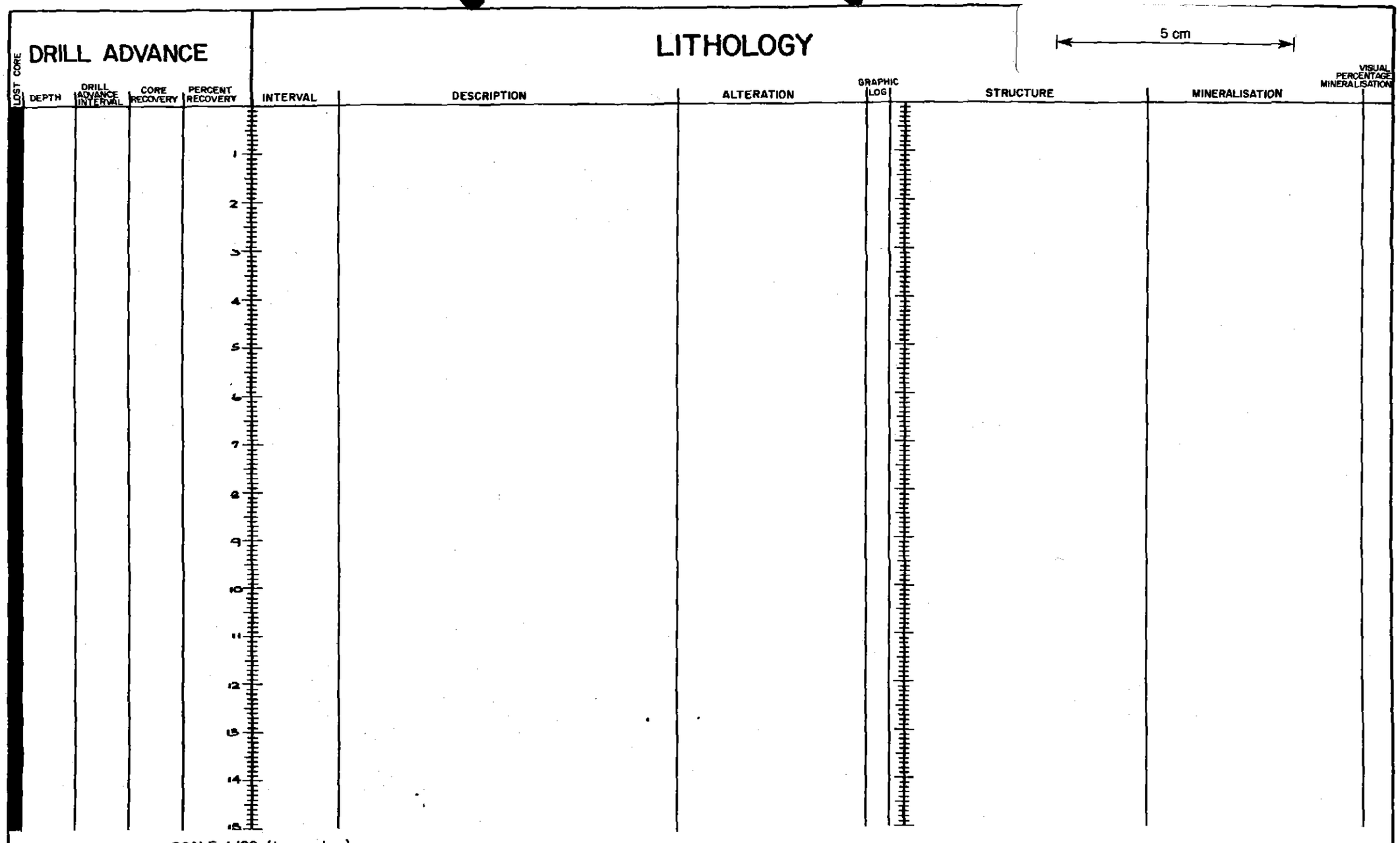
SURVEY DATA
Instrument: downhole camera

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH
361m		-36·75°	71·5° MN	500m		-30·75°	75·0° MN
391m		-35·75°	72·0° MN				
421m		-33·75°	67·5° MN				
451m		-34·79°	76·0° MN				
481m		-34·0°	76·0° MN				

LOG SUMMARY

ROCK TYPE	MINERALIZATION Style	Grade	Intersection width (Corr)
323·0-324·8: intb + intc carb bk sh & minor gy ss		Py 4%	
324·8-351·6: intc gy + dk gy ss & fg-mg tuf sa		Py tr	
351·6-361·1: mixed sediments		Py 5%	
361·1-369·8: intb + intc, gy, dk gy + minor br ss, & fg-mg, gy, br tuf sa		Py tr	
369·8-375·0: mixed sed			
375·0-382·0: intc + intb gy, dk gy ss & gy, fg-mg tuf sa		Py 4%	
382·0-388·0: mixed sed + qz-cbte vns		PoPy, Cp, AsPy	Sp. Gl · 12%
388·0-394·2: gabbro		Py tr	
394·2-414·7: alt mixed sed	qz vns	Sp, Py 3%	
414·7-454·0: gr, wh + gy cbte + talc	sweated out	Mt 5%	
454·0-483·1: intc + intb, carb bk sh & minor gy, tuf sa + ss	Cal vns	Py 3%	
483·1-486·8: gy-wh, brec dm	dis + Cal vns	Py 2%	
486·8-487·8: qz, cbte, Po vns	mas Po	Po, Py, AsPy 20%	
487·8-500·2: intc + intb fg-mg, gr, gy + br gy tuf sa + ss		Py tr	

Signature J. Crimeen Date April 1981



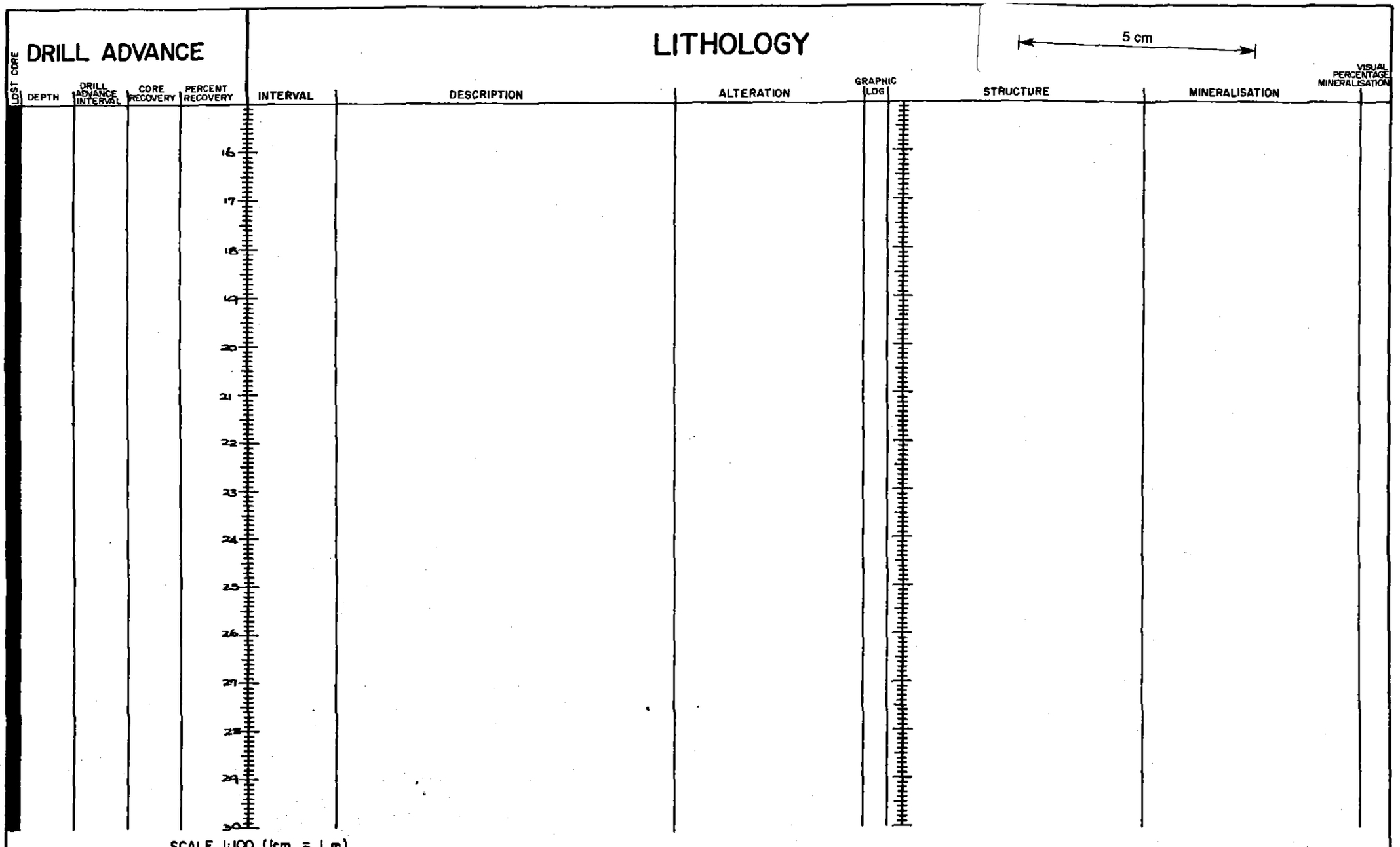
SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C. FROM 0 TO 15m DATE 12/4/81 PAGE 3 OF 36

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COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C FROM 15 TO 30 m DATE 12/4/81 PAGE 4 OF 36

8393463

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Triconed					
	42·3	0·7	0·68	97·1%	42·3	Start of NQ coring tuffaceous sandstone + siltstone intercalated purple/red, fine to coarse grained (mainly cg) tuf sa & pu/re ss.	minor carbonate along fractures & tension gashes. dark green		unit generally heavily disrupted with tension gashes	very minor amounts of v.f. disseminated Pyrite	tr
	43·0	2·8	2·72	97·1%							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C. FROM 30 TO 45 m DATE 12/4/81 PAGE 5 OF 36

8303484

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						tuffaceous sandstone & siltstone. intercalated purple section			core highly broken	minor Pyrite	
	45·5	0·5	0·5	100%	46						
	46·3	2·4	2·27	94·6%	47						
					48						
	48·7	1·3	1·3	100%	49				49·5 B at 35° (ss)		
	50·0	0·6	0·6	100%	50	50·0 units change from pu to grey			50·0 distinct contact at 20°		
	50·6	0·8	0·8	100%	51				51·4 B at 36° (ss/tuf sa)		
	51·4	1·0	1·0	100%	52						
	52·4	1·1	1·1	100%	53		53·1 tension gashes filled & vuggy quartz (minor)		52·9 B at 20° (tuf sa/ss) cyclic?		
	53·5	1·5	1·4	93·3%	54				54·0 B at 20° (ss)		
	55·0	2·5	2·1	84·0%	56						
					57	57·0 dark gy units with the gy units	increasing carbonate veins		56·7 B at 26° (ss) core less broken but still high breakage. increasing amount of tension gashes		
	57·5	2·1	2·1	100%	58				58·7 B at 27° (tuf sa)		
					59						
	59·6	2·0	1·99	99·5%	60						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C FROM 45 TO 60m DATE 12/4/81 PAGE 6 OF 36

839485

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated & interbedded (minor) fine to coarse grained grey & dark gy tuffaceous sandstone & gy, dk gy siltstone	common carbonate minor quartz veining disrupted & smooth		core with minor disruption; sa mostly massive 61·2 B at 45° (tuf sa/ss)	trace mineralisation & cbte vns; AsRy, Ry	tr
	61·6	1·5	1·5	100%							
	63·1	0·7	0·5	71·4%							
	63·8	1·7	1·5	88·2%			64·1 qv over 300 mm & chloritised sads.				
	65·5	1·4	1·4	100%					decrease in core "brokenness"		
	66·9	3·1	2·99	96·5%			66·8 cbte vn & minor brec sads over 100 mm; 66·9 cbte vn over 120 mm				
						67·8 sediments change to green/gy			68·0 B? at 35° (ss/tuf sa)		
	70·0	3·0	3·0	100%					70·6 B at 54° (ss/tuf ss)		
									72·3 B at 70° (tuf sa)		
	73·0	2·0	2·0	100%							
	75·0					74·9 0·7m of dk gy tuf sa					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.D.C FROM 60 TO 75m DATE 13/4/81 PAGE 7 OF 36

83486

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	75·0	1·0	1·0	100%		green-grey tuffaceous sandstone and siltstone with gy bands to 79·7m	common carbonate veins, mostly disrupted. increase in number of vns. generally small (<2mm)		gr-gy units have minor disruption; moderate disruption in gy /dk gy units. common microfaulting 76·9 bd contact? at 33°	trace mineralisation & cbte vns. Py.	tr
	76·0	3·0	2·75	91·7%		76·9 0·9m of dk gy tuf sa & minor ss.					
	79·0	3·0	3·0	100%		79·7 units all change to gy & dark gy. equal amounts of intercalated fine to coarse grained tuf sa & bedded to laminated grey & dk gy ss & rare black shale	minor quartz veining usually small vns (<2 mm)		78·8 B at 15°? banding across bedding. contact marked by cbte vn (along bd) at 25° 81·5 B at 23° (ss)		
	82·0	3·0	2·91	97·0%					84·6 B at 15°-35° (ss) mcrF		
	85·0	3·0	3·0	100%			85·5 qz-cbte vn. 40mm at 62°		87·5 B at 47° (ss/tuf-ss)	85·5 vn has Sp 3%, Py 1%, As?y? tr	4%
	88·0	3·0	2·92	97·3%					89·8 B at 25° (ss)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RDE 22

LOGGED BY JDC FROM 75 TO 90m DATE 13/4/81 PAGE 15 OF 36

8339

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					91	interbedded & intercalated grey and dark gy siltstone with minor black shale & sandstone	common carbonate mostly ε ss/sh. smooth & disrupted		moderate disruption. mostly in ss/sh units sa generally massive	barren	
	91·0	3·0	3·0	100%	92						
					93						
					94				93·7 B? at 28° (ss)		
	94·0	3·0	2·41	80·3%	95				95·0 B at 25° (ss/sh)		
					96				96·8 B? at 50° (gy ss/dk gy ss)		
	97·0	2·4	2·4	100%	97						
					98				98·6 B? at 52° (tuf sa/ss)		
					99				99·0 B at 51° (ss)		
	99·4	0·6	0·6	100%	100	99·5 gy. fine to medium grained tuffaceous sa & gy ss (slightly more sand than silt). intc units	minor calc veining usually small (vnlets) & smooth		minor disruption. mostly mas calated units	barren	
	100·0	3·0	2·95	99·2%	101						
					102						
	103·0	3·0	3·0	100%	103						
					104						
					105						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C. FROM 90 TO 105 m DATE 13/4/81 PAGE 9 OF 36

8033488

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	106·0	3·0	3·0	100%
	109·0	3·0	2·9	96·7%
	112·0	3·0	2·85	95·0%
	115·0	3·0	3·0	100%
	118·0	3·0	3·0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intercalated grey tuffaceous sandstone and siltstone	minor carbonate veining		minor disruption massive units	barren	
				sharp contact at 44°		
106·6	Ultrabasic altered? green-white (predominantly wh) medium to coarse grained ub c common pale or talc? a very common feldspars? has gritty feel but no/v. little quartz present, unit is fairly soft. gabbro?	common black alteration product? along vns; increasing downhole.		massive unit	barren	
	slight yellow tinge?					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C. FROM 105 TO 120m DATE 15/4/81 PAGE 10 OF 36

8339489

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	121·0	3·0	3·0	100%
	124·0	3·0	2·7	90·0%
	127·0	3·0	3·0	100%
	130·0	3·0	2·75	91·7%
	133·0	3·0	3·0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
120·1	tuffaceous sandstone ± siltstone interclated ± minor interbedded gray (bleached?) fine to medium grained tuf sa with gy (bleached?) ± dark gy ss & rare black shale	very minor carbonate veining usually & dk gy units		Sharp contact at 40° moderate disruption & dk gy ss 121·6 B at 26° (ss)	barren, except for minor zone of bleached ss & blebs of Pyrite between 120·6 ± 120·7 m.	
125·2 to 126·3	microfaulted ± intb ss, B varies 20° to 65°					
127·5	2·5m of predominantly dk gy ss, including completely broken zone			moderate to heavy disruption 126·8 B varies 28°-40° 129·8 200 mm of broken core		
131·5	ultrabasic (gabbro?) altered green gabbroic unit			soft ± broken core		
132·2	tuf ss ± ss gy mg tuf sa & dk gy ss	minor cbte				
132·8	ub (gb?) alt gr gabbroic unit			soft ± broken core		
133·5	ss intb gy. ± dk gy ss	minor cbte ± quartz veining		moderate disruption 134·4 ? B at 28° contact? at 70°		
134·8						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 22

LOGGED BY J.C. FROM 120 TO 135 m DATE 15/4/81 PAGE 11 OF 36

036938

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
				136
	136·0	3·0	3·0	100%
				137
				138
	139·0	3·0	3·0	100%
				140
				141
	142·0	1·8	1·74	96·7% 142
				143
	143·8	3·0	3·0	100% 144
				145
				146
	146·8	1·2	1·16	96·7% 147
	148·0	3·0	3·0	100% 148
				149
				150

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	quartz-carbonate vein siderite/q.v. with minor brecciated sediments			vein at 31°? contact at 44°? (61°?)	very minor sphalerite, pyrite and arsenopyrite	2%
136·4	siltstone intercalated = interbedded grey & dark grey ss. & minor gy tuffaceous sandstone & black shale	minor to moderate calcite veining. minor qz veining		moderate disruption bedding variable, but generally shallow to core axis in top section	barren except for q.v at 141·9 m	
		141·9 highly broken core & common vuggy qz to 143·0. & minor chlte.		core highly broken	common Py. minor Asy?	10%
				144·1 B at 44° (ss/sa)		
		145·1 chlte/q.v.s over 60 mm at 68°			145·1 vns contain Py	5%
145·7	tuffaceous sandstone fine to medium grained gy & dk gy tuf sa, minor clasts of bk ss in some sections. parts & brownish tinge	slight alteration throughout? minor Cal vning throughout.		sharp contact at 70° minor disruption. massive unit	barren	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.D.C. FROM 135 TO 150m DATE 22/4/81 PAGE 12 OF 36

83941

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						massive tuffaceous sandstone					
	151·0	3·0	3·0	100%	151·6	tuf sa ↔ siltstone intercalated gy fine to medium grained tuf sa. with interbedded gy & dark gy ss.	minor qz /Calcite veining		minor to moderate disruption 152·7 B at 28° (ss)	trace pyrite in Calvns	0·5%
	154·0	3·0	3·0	100%					154·6 B at 31° (ss)		
	157·0	2·7	2·7	100%			157·2 barren qv. over 120 mm at 54° & minor Cal 158·0 barren q.v's over 200 mm & minor Cal 159·3 qz /Ankerite/ Siderite vn. 140 mm at 65°		157·5 B at 55° (ss/tuf sa) 158·7 B at 35° (ss)	159·3 vn contains AsPy 4% Py 2%. Gl tr	6%
	159·7	3·1	3·1	100%					160·3 B at 32° (ss/tuf sa) 161·3 B at 39° (ss)		
	162·8	3·0	3·0	100%					162·4 B at 49° (ss)		
									164·9 B at 64° (ss)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 150 TO 165m DATE 22/4/81 PAGE 13 OF 36

83493

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	165·8	3·0	3·0	100%	166	intercalated grey (minor green-gy and pale brown) fine to medium grained tuffaceous sandstone with interbedded gy & dark gy siltstone. massive altered sa to 170·0m. ss often contain clasts of dk (or light) gy ss.	common carbonate veining, disrupted & smooth. veins are usually small (<5mm) (sa all slightly alt?)		moderate disruption. mostly in the ss. sa is generally massive. bedding in ss contorted & microfaulted but generally shallow to intermediate to core axis	minor pyrite in veins & patches, mainly in ss. occasionally in sa	2%
					167						
					168						
	168·8	3·0	3·0	100%	169						
					170	– 170·0m: mixed sa & ss (described above)					
					171						
	171·8	3·1	3·1	100%	172						
					173				173·8 B? disrupted at 47° (ss)		
					174						
	174·9	3·0	3·0	100%	175						
					176	– 176·1 mas alt dk gy-br f.g tuf? sa					
					177						
	177·9	3·0	3·0	100%	178						
					179						
					180						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.D.C FROM 165 TO 180m DATE 24/4/81 PAGE 14 OF 36

8339493

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						massive dark gray-brown sandstone (altered) continues.	minor disrupted calcite veining 3%		massive unit. no? disruption	trace pyrite + sphalerite in veinlets	tr
	180.9	3.1	3.1	100%	182	lightens to gray over bottom 1 metre					
					183	182.1 intercalated green-gy medium grained tuffaceous sa & gy & dk gy siltstone.	moderate disrupted Cal veining 4%		moderate disruption in ss, sa is mas.	tr Py & Cal vns	tr
	184.0	3.0	3.0	100%	184						
					185						
						185.6 mas slightly alt gr-gy mg tuf sa	minor Cal veining, mostly disrupted 2%		mas unit, undisturbed	barren	
					186						
	187.0	3.0	3.0	100%	187						
					188						
					189	189.0 intc gr-gy mg alt tuf sa and gy & dk gy ss.	moderate Cal vning (50mm vn at 189.8 m) 5%		moderate disruption in ss: sa mas, shallow dip in sa?	barren	
	190.0	3.0	3.0	100%	190						
						190.3 mas alt gr-gy fine to mg tuf sa	minor Cal veining. mostly disrupted 2%		minor disruption. sa mostly mas, sometimes bedded	tr Py & Cal vns	tr
					191						
					192						
	193.0	3.0	3.0	100%	193	193.0 minor ss					
					194						
						194.4 minor bd ss?			194.5 B? at 43° (tuf ss)		
					195						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.D.C FROM 180 TO 195m DATE 24/4/81 PAGE 15 OF 36

8304404

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					196	massive tuffaceous sandstone continues					
	196·0	3·0	3·0	100%		196·5 intercalated green-grey tuf sa & gy & dark gy siltstone	196·5 Calcite vns (smooth) over 90 mm at 54°. moderate Cal veining mostly disrupted, 4%		moderate to heavy disruption, mainly in ss bedding present is variable	trace Pyrite in patches & vns & Cal	tr
					197						
					198						
	199·0	3·0	3·0	100%	199						
					200						
					201	201·4 undisturbed (though microfaulted) interbedded gy & dk gy ss & gy medium grained tuf sa	minor (mainly smoky) Cal veining 1%		very common microfaulting, rare contortion 202·0 B at 20° (ss)	tr amounts Py	tr
	202·0	3·0	3·0	100%	202						
					203				203·7 B at 28° (ss/tuf sa)		
					204	204·5 gy. fine to m.g. tuf sa intc & minor gy & dk gy ss	minor Cal veining & very minor quartz/ siderite veining 1%		moderate disruption	tr Py	tr
	205·0	3·0	3·0	100%	205						
					206				205·9 B at 16° (tuf sa/ss)		
					207						
	208·0	3·0	3·0	100%	208				208·2 B at 16° (tuf sa/ss)		
					209	209·5 mixed unit (See next page)	209·5 Cal vns over 160 mm at 25° & 55°				
					210						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 195 TO 210 m DATE 24/4/81 PAGE 16 OF 36

CC 4338

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					211	mixed unit of intercalated & interbedded. grey. fine to medium grained tuffaceous sandstone with gy & dark gy siltstone & very minor black shale	moderate calcite & minor quartz / siderite veining. disrupted & smooth 4%		moderate to heavy disruption. mostly & ss	minor Pyrite & Cal	1%
	211·0	3·0	3·0	100%	212						
					213				212·6 B at 21° (ss/tuf sa)		
	214·0	3·0	3·0	100%	214				214·4 B at 20° (ss)		
					215				215·8 B at 19° (ss)		
	217·0	3·0	3·0	100%	216						
					217				217·7 B at 17° (ss)		
					218						
					219				219·5 B at 15° (ss)		
	220·0	3·0	3·0	100%	220						
					221				221·1 B at 22° (ss)		
					222						
					223				222·7 B at 19° (ss/tuf sa)		
	223·0	3·0	3·0	100%	224	-223·2 mostly undisturbed intb & minor intc ss & sa (predominantly ss)			224·5 B at 22° (ss/tuf sa)		
					225						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 22

LOGGED BY JDC FROM 210 TO 225 m DATE 24/4/81 PAGE 17 OF 36

033498

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					226	siltstone with minor tuffaceous sandstone	minor calcite and quartz veining 3%		minor disruption mostly intb units	trace Pyrite	tr
	226.0	3.0	3.0	100%					226.3 B at 31° (ss)		
					227				227.5 B at 32° (tuf sa/ss)		
					228				228.2 B at 37° (tuf sa/ss)		
	229.0	3.0	3.0	100%	229				229.3 B at 33° (tuf sa/ss)		
					230	-230.0 intercalated grey & dark gy ss with gy tuf sa & black carbonaceous shale	common Cal veining (smooth & disrupted vns) 12%		moderate to heavy disruption	common Py/Pyrrhotite & Cal in bk sh Py 2% . Po 1%	3%
					231	-231.6 intc gy ss & gy medium grain tuf sa (very minor dk gy ss)	very minor cal <1%		minor disruption	tr Py	tr
	232.0	3.0	3.0	100%	232						
					233						
					234						
	235.0	3.0	3.0	100%	235	-236.1 intc & (minor) intb calcareous gy & dk gy ss & calc gy m.g. tuf sa & carb. calc bk sh.	common Cal veining 10%		heavy disruption	common Pyrite	4%
					236				236.2 B at 44° (ss)		
					237						
	238.0	3.0	3.0	100%	238						
					239	-238.9 intc & (minor) intb gy m.g. tuf sa & gy & dk gy ss	common Cal veining 4%		heavy disruption & contortion	minor Py	1%
					240						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 225 TO 240m DATE 24/4/80 PAGE 18 OF 36

8339

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						disrupted tuffaceous sandstone and siltstone (continued)					
	241·0	3·0	3·0	100%							
									242·2 B? at 40° (ss)		
	244·0	3·0	3·0	100%		-244·5 interbedded light grey, fine to medium grained tuf sa with gy + dark gy ss (sa calcareous)	minor calcite veining -2%		mostly well bedded minor contortion	minor pyrite. trace sphalerite in Cal vns	1%
									245·9 B at 61° (tuf sa/ss)		
	247·0	3·0	3·0	100%					247·2 B at 54° (tuf sa/ss)		
									248·6 B at 62° (ss)		
	250·0	3·0	3·0	100%					250·6 B at 60° (tuf sa/ss)		
							-251·3 quartz/siderite + qz/fluorite vns: each 25 mm. qz/st at 70°, qz/fl: 40° minor Cal veining			-251·3 vns contain Py	5%
						-262·1 gy. fg to mg. tuf sa & minor gy ss	-252·6 qz/st vn, 50mm at 65°		moderate disruption. mostly 'massive' sa	minor Py/pyrrhotite -252·6 vn contains Pb	1% 2%
	253·0	3·0	3·0	100%							

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.D.C FROM 240 TO 255m DATE 26/4/81 PAGE 19 OF 36

83498

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					256	gray tuffaceous sandstone with minor gy siltstone (continued)	minor calcite veining		minor to moderate disruption	trace pyrite	tr
	256.0	3.0	3.0	100%							
					257						
					258						
					259						
	259.0	3.0	3.0	100%							
					260	-260.0 intercalated gy & dark gy fine to medium grained tuf sa & minor gy ss & dk gy ss	common cal (& dk gy ss (4%) minor quartz		heavy disruption massive sa	minor Py & Cal	1%
					261						
					262						
	262.0	3.0	3.0	100%							
					263						
					264						
					265						
	265.0	3.0	3.0	100%							
					266						
					267	-261.0 intc & (minor) interbedded gy & dk gy fg to mg tuf sa & gy & dk gy ss .	-266.8 Cal & fluorite minor cal veining 1%		moderate to heavy disruption	minor Py	0.5%
	268.0	3.0	3.0	100%	268						
					269						
					270						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 255 TO 270m DATE 26/4/81 PAGE 20 OF 36

83949

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					271	intercalated / minor interbedded grey tuffaceous sandstone with gy & dark gy siltstone (continued) & minor black shale)	minor calcite veining - 1%		moderate to heavy disruption	minor pyrite	0.5%
	271.0	3.0	3.0	100%	272				272.6 B at 65° (ss/tuf sa)		
					273						
	274.0	3.0	3.0	100%	274						
					275	-275.0 contorted unit of gy (minor) & dk gy ss & carbonaceous bk sh.	minor Cal veining mostly disrupted 2%		moderate to heavy disruption & contortion	minor Py	2%
					276						
	277.0	3.0	3.0	100%	277						
					278	-277.6 intc gy & dk gy medium grained tuf sa & gy & dk gy ss	very minor Cal vning		moderate to heavy disruption 278.4 B° at 40° (tuf sa/ss)	trace Py	tr
					279						
	280.0	3.0	3.0	100%	280	-279.8 intc & intb dk gy & carb bk sh. minor gy ss	minor Cal, common siderite, mostly smooth vns - 10%		moderate contortion	common Py & Cal - 4% & sphalerite & Sl - 1%	5%
					281						
					282				282.2 B at 33° (bk sh/ss)		
	283.0	3.0	3.0	100%	283		-283.5 Sl/qz/Cal 150mm i50°		283.8 B at 56° (bk sh/ss)		
					284				284.6 B at 60° (bk sh/ss)		
					285						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.D.C FROM 270 TO 285m DATE 26/4/81 PAGE 21 OF 36

83500

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					285	285.6 interbedded and intercalated gray medium grained tuffaceous sandstone & gy (& minor dark gy) siltstone.	very minor calcite veining (< 1%)		moderate disruption. ss mostly massive	barren	
	286.0	3.0	3.0	100%	286						
					287				287.2 B at 48° (ss)		
					288				288.5 B at 30° (ss)		
	289.0	3.0	3.0	100%	289	289.4 intc dk gy ss & carbonaceous black shale. minor gy ss & gy tuf ss	common Cal veining mostly disrupted · 5%		heavy disruption	common Pyrite	2%
					290						
					291				291.1 B at 75°? (bk sh)		
	292.0	3.0	3.0	100%	292				292.6 B at 48° (bk sh)		
					293						
					294						
	295.0	3.0	3.0	100%	295				295.0 B at 65° (bk sh)		
					296				296.5 B at 56°? (bk sh/ss)		
					297						
	298.0	3.0	3.0	100%	298	298.1 intb carb bk sh & calcareous dk gy ss	common Cal veining · 5%		minor disruption. well bedded units	common Py	3%
					299				299.5 B at 65° (bk sh/ss)		
					300						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 22

LOGGED BY JDC FROM 285 TO 300m DATE 27/4/81 PAGE 22 OF 36

10838

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					301	interbedded carbonaceous black black shale and calcareous grey siltstone (continued)	common calcite veining		minor disruption 301·2 B at 65° (ss/bk sh)	common pyrite	
	301·0	3·0	3·0	100%	302				302·6 B at 74° (ss)		
					303	-303·2 intercalated a intb (minor) gy a dark gy ss with carb bk sh a gy medium grained tuffaceous sandstone units commonly calc.	minor Cal veining -3%		moderate to heavy disruption	common Py & bk sh	4%
	304·0	3·0	3·0	100%	304						
					305						
					306				305·8 B? at 53° (ss)		
	307·0	3·0	3·0	100%	307						
					308				308·0 B at 56° (bk sh/ss)		
					309	-309·3 gy ss a ss altered					
	310·0	3·0	3·0	100%	310						
					311						
					312						
	313·0	3·0	3·0	100%	313				313·5 B at 54° (ss/tuf ss)		
									314·9 B at 55° (ss/ss)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 300 TO 318 m DATE 27/4/81 PAGE 23 OF 36

80550

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	316.0	3.0	3.0	100%	316	-316.3 highly altered tuffaceous sandstone? green-grey. fine to coarse grained? (downhole) common black blebs unit calcareous?	very common pervasive carbonates. towards bottom c.g? section also has siderite throughout in discontinuous, disrupted stringers & wavlets, minor smooth calcite, quartz & St vns, common ? disrupted Cal? vns & bk alteration zones.		"massive" unit, commonly cut by disrupted Cal? vns & 317.2 qz/fluorite/Cal vn 40mm at 52° bk alteration products	minor pyrite, pyrrhotite & sphalerite & qz/St vns	tr
	319.0	3.0	3.0	100%	319						
					320						
					321						
	322.0	3.0	3.0	100%	322	-322.7 unit of intercalated pale brown & gy f.g tuf ss & pale br & gy siltstone	minor Cal veining unit slightly hornfelsed?		moderate to heavy disruption	minor Py	1%
					323	-323.4 interbedded & intc. carbonaceous calc bk shale & minor gy ss.	V. minor Cal veining		moderate contortion 323.4 B at 65° (bk sh)	common Py	4%
					324						
	326.0	3.0	3.0	100%	325	-324.8 intc & intb (minor) gy (minor pale brown) & dark gy ss. & gy & pale br f.g to medium.g. tuf ss	minor Cal veining, mainly & dk gy ss (2%)		moderate disruption ss mostly mas.	minor Py & Cal	0.5%
					326						
					327						
	328.0	3.0	3.0	100%	328						
					329				329.2 B? at 62° (tuf ss/ss)		
					330						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 315 TO 330m DATE 28/4/81 PAGE 24 OF 36

839503

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					331	intercalated & minor interbedded, grey pale brown & dark grey, fine to medium grained tuffaceous sandstone with av pale br & dk gy siltstone (continued)	minor calcite veining mostly & dark gy SS. unit slightly hornfelsed		moderate to heavy disruption SS mostly "massive"	minor pyrite	0.5%
	331·0	3·0	3·0	100%	332						
					333						
	334·0	3·0	3·0	100%	334						
					335						
					336		336·0 increase in Cal veining; minor quartz & siderite veining		336·4 B at 33° (ss/tuf sa)		
	337·0	2·3	2·3	100%	337						
					338						
					339						
	339·3	3·1	3·1	100%	340						
					341				340·7 B at 63° (tuf sa/ss)		
					342				341·8 B at 46° (tuf sa/ss)		
	342·4	3·0	3·0	100%	343						
					344		343·6 qz/ss vns over 150 mm at ~80°			343·6 vns contain Sp 8%, Py 2% & Cp 1%	8%
					345						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 330 TO 345 m DATE 28/4/81 PAGE 25 OF 36

80 3304

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	345·4	0·6	0·6	100%		intercalated + minor interbedded gray. pale brown + dark gy, fine to medium grained tuffaceous sandstone with gy. pale br + dk gy siltstone	minor calcite veining slightly hornfelsed sediments		core from 345·4 to 348·8 is highly broken moderate disruption	minor pyrite	
	346·0	2·7	2·7	100%							
									347·9 B? at 57° (tuf sa/ss)		
	348·7	3·1	3·1	100%							
									350·3 B at 53° (tuf sa)		
						-351·6 intc + intb carbonaceous black shale & gy + pale br m.g. tuf sa. & dk gy ss	common Cal veining		heavy contortion	common Py	4%
	351·8	3·1	3·1	100%			-352·5 quartz/siderite veins over 250mm at 55°			-352·5 vns contain Py 18%, Arsenopyrite 2%	20%
	354·9	3·1	3·1	100%		-356·0 last 1·5m mainly br.sa + ss					
						-357·5 intb calcareous dk gy + gy ss & blk carb.sh + minor gy f.g. tuf sa	very common Cal veining (5-10%)		generally well bedded minor contortion	common Py	4%
	358·0	3·0	3·0	100%					358·4 B at 63° (ss)		
									359·6 B at 53° (ss)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 345 TO 360 m DATE 28/4/81 PAGE 26 OF 36

033908

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	361·0	2·7	2·7	100%
	363·7	2·5	2·5	100%
	366·2	0·8	0·8	100%
	367·0	3·0	3·0	100%
	370·0	3·0	3·0	100%
	373·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	361·1 interbedded & intercalated grey, dark gy & minor pale brown siltstone with gy & minor pale br. fine to medium grained tuffaceous sandstone	minor calcite veining (<1%)		minor disruption 362·9 B at 40° (ss) 364·3 B at 53° (ss/tuf ss) 365·5 B at 50° (ss/tuf ss) 366·8 B at 49° (ss/tuf ss) 368·0 B at 50° (ss/tuf ss)	minor pyrite	tr
	364·8 same as above, including black carbonaceous shale	increase in cal· veining		increase in disruption 370·2 B at 50° (ss) 371·9 B at 45° (ss/tuf ss) 372·8 B at 70° (ss)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.D.C FROM 360 TO 375 DATE 28/4/81 PAGE 27 OF 36

090538

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				376		intercalated & interbedded grey & dark gy siltstone with gy fine to medium grained tuffaceous sandstone	minor calcite vaining to 379.0 m		minor disruption to 379.0	common pyrite	4%
	376.0	3.0	3.0	100%					376.5 B at 44° (tuf ss)		
				377							
				378					378.8 B? at 38° (tuf ss)		
	379.0	3.0	2.87	95.7% 379			-379.0 common Cal / quartz vaining		increased disruption		
				380							
				381					381.7 B at 62° (ss)		
	382.0	3.0	3.0	100% 382		-382.0 intc green-gy altered ss & tuf ss & common qz & qz/siderite veins, mixed & disrupted, showing coxcomb texture	-382.4 q.v. 500mm at 70°		moderate to heavy disruption	common sphalerite in -382.4 vn has AsPy 50%, Cp 2% Small veinlets throughout. Arsenopyrite in large vn & minor disseminated; same for Py & pyrrhotite, trace galena & chalcopyrite ... -384.8 vn has Po 4%, Py 1% AsPy 6%, Py 3%, Sp 2%, Po 1% Gl tr, Cp tr -386.1 vns & AsPy 9%, Py 5%, Sp 4% Po 2%, Gl tr	52% 12% 15% 12% 20%
				383							
				384			-384.8 q.v. 250mm at 65°				
	385.0	3.0	3.0	100% 385							
				386			-386.1 qz/St vns 2.1m at 47° minor Cal & fluorite at base		386.5 vn at 36°		
				387					387.5 vn at 36°		
	388.0	3.0	3.0	100% 388	388.0	highly alt tuf ss?? gr-gy, f.g to coarse grained, hard unit. (possibly gabbro?)	pervasive qz alteration? common qz & Cal vning (6%)		massive unit showing no clear structure	minor Py	1%
				389							
				390							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 375 TO 390 m DATE 29/4/81 PAGE 28 OF 36

10338

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					391	highly altered green-gray tuffaceous sandstone	common calcite / quartz veining		"massive"	trace pyrite	tr
	391·0	3·0	3·0	100%							
					392						
					393						
	394·0	3·0	3·0	100%	394	-394·2 intercalated & interbedded (minor) alt gr-gy fine to coarse grained tuf ss with gr-gy siltstone & black carbonaceous shale (minor)	common qz? veinlets in bk sh minor cal veining		indistinct & gradual contact moderate to heavy disruption 395·3 B? at 34° (bk sh/ss)	common Py & sphalerite & vnlets in bk sh. Py 2%. Sp 1%	3%
					395						
					396						
	397·0	3·0	2·95	98·3%	397				predominantly mas ss		
					398						
					399						
	400·0	3·0	3·0	100%	400						
					401				401·5 B at 60° (bk sh/ss)		
					402						
	403·0	1·5	1·5	100%	403						
					404				404·3 B at 60° (ss)		
	404·5	1·5	1·5	100%							

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.D.C FROM 390 TO 405 m DATE 29/4/81 PAGE 29 OF 36

8 33508

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated green-grey medium grained tuffaceous sandstone with gr-gy & dark gy siltstone & minor black shale	minor calcite veining		heavily disrupted unit mostly massive but disrupted	minor pyrite	tr
	406·0	3·0	3·0	100%							
	409·0	3·0	3·0	100%			409·6 quartz/cal vn; over 200 mm at 44°, disrupted				
	412·0	3·0	3·0	100%					413·3 B? at 35° (ss) 414·4 B? at 40° (ss)		
	415·0	3·0	3·0	100%	414·7	talc carbonate small section of green-white cbte/talc 416·4 monotonous unit of dk gr talc cut by veins, veinlets & patches of milky wh cbte.	highly veined by cbte veinlets minor smooth cbte vns (>5mm). very highly veined by vnlets of cbte, sometimes mottled.		contact unclear, marked by broken core & increasing talcose to talc cbte 416·2 vn at 54° foliation? if present is generally steep to core axis. 415·4 fol? at 65° 419·8 vn at 60°	very common magnetite especially & talc	7-8%
	418·0	3·0	3·0	100%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 405 TO 420m DATE 29/4/81 PAGE 30 OF 36

C03593

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	421·0	3·0	3·0	100%
	424·0	3·0	3·0	100%
	427·0	3·0	3·0	100%
	430·0	3·0	3·0	100%
	433·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
421	section is predominantly talc cut by vainlets of milky white carbonate	increasing amount of wh cbte, giving a mottled appearance		foliation & veining generally steep to intermediate to core axis 421·8 fol at 45°	very common magnetite & wh cbte	7-8%
422						
423				423·1 ?fol at 67°		
424				424·4 vn at 47°		
425						
426				426·0 vn at 57°		
427	427·5 0·4 mgf wh & dark gray cbte (dk gy colouration due to Mt.?) 427·9 unit of dk green talc & equal amount of milky wh cbte	slight mottling wh cbte in large patches & numerous vainlets.		427·8 fol at 65° 429·3 fol at 70°	v.common Mt	12%
428						
429						
430	430·7 gr, wh & blue-wh cbte with common small black blebs of Mt & Py	minor later phase veining		431·8 vn at 55°	common Mt, minor Py 1%	7%
431						
432						
433	433·0 mixture of dk gr talc, wh, gr-wh & gy cbte	cbte in patches, vns, vainlets & blebs		varying degrees of fol. 434·0 fol at 45°	common Mt	6%
434						
435						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 22

LOGGED BY JDC FROM 420 TO 435m DATE 29/4/81 PAGE 31 OF 36

8 8 9 5 1 0

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					436	white, grey carbonate in varying amounts with minor talc at the top commonly coarse mottling. vainlets of milky wh cbtes, patches + blebs	numerous smooth wh cbte veins & Mt		varying degree of foliation (from none to strongly fol)	common magnetite	5%
	436·0	3·0	3·0	100%	437						
					438				438·1 fol at 57°		
	439·0	3·0	3·0	100%	439				439·6 fol at 55°		
					440				440·7 fol at 65°		
					441						
	442·0	3·0	3·04	100%+	442				442·4 fol at 65°		
					443				443·6 fol at 62°		
					444						
	445·0	3·0	3·0	100%	445				445·4 vn at 47°		
					446						
					447				447·4 fol at 45°		
	448·0	3·0	2·96	98·6%	448	448·5 section of non-foliated, lightly veined green + gr-gy cbte + minor talc ?	not so heavily veined as other sections not mottled		not fol?	very minor Mt	tr
					449						
					450						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 435 TO 450m DATE 29/4/81 PAGE 32 OF 36

89514

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	451·0	3·0	3·0	100%
	454·0	3·0	2·99	99·6%
	457·0	3·0	3·0	100%
	460·0	3·0	3·08	100%+
	463·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	green & gray-gr carbonate with minor talc	minor white cbte veinlets		not foliated	trace magnetite	tr
454·0	intercalated & interbedded black carbonaceous shale & dark gy siltstone & minor gy ss & medium grained gy & gr-gy (altered) tuffaceous sandstone.	minor calcite & minor quartz veining		contact not clear ~67° marked by light gr cbte veinlets minor to moderate disruption & contortion 456·2 B at 41° (tuf sa/ss) 457·8 B at 42° (bk sh) 460·2 B at 86° (bk sh) 462·5 B at 55° (bk sh)	common pyrite	3%
463·7	2·7m of massive alt. gr-gy tuf sa.	& pervasive Cal?		massive		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 450 TO 465 m DATE 29/4/81 PAGE 33 OF 36

8339512

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					466	interbedded and intercalated black carbonaceous shale & dark grey siltstone with minor gy medium grained tuffaceous sandstone & gy ss	common calcite veining ~3% & minor quartz veining		moderate to heavy contortion	common pyrite & Cal	4%
	466·0	3·0	3·04	100%+							
					467				467·3 B at 60° (bk sh)		
					468				468·5 B at 65° (bk sh)		
					469				469·3 B at 60° (bk sh)		
	469·0	3·0	3·06	100%+							
					470				470·3 B at 63° (bk sh)		
					471	-470·8 intc & intb gy fine to mg tuf sa & gy & dk gy ss	very common Cal veining - mostly large veins ~20%		moderate disruption	minor Py	2%
	472·0	3·0	3·02	100%+							
					473				472·6 B at 60° (ss)		
					474		-474·1 Cal vn. 120 mm at 70° -474·5 Cal vn. 120 mm at 65°		474·3 B at 60° (ss)		
	475·0	2·2	2·29	100%+	475	-475·0 120 mm of silicified grayish-white sediment (& stylolitization?)(possibly dolomite?)					
					476	-476·4 sil gyish-wh sed (dm?) & minor intc ss at bottom of unit.	-476·2 qz/Cal/siderite vns over 300 mm v. common Cal veining - mostly large vns ~15%		475·9 B at 50° (ss) massive unit, but very common stylolitization; heavy disruption	Common Py	4%
	477·2	0·8	0·8	100%	477						
	478·0	1·5	1·61	100%+	478	-478·5 intb & minor intc gy & dk gy ss & carb bk sh & minor gy-brown tuf sa (& dm?). units calcareous	common Cal veining. small vns, unit is calc ~8%		478·1 B at 60° (ss) moderate disruption. beds thin to laminations. contorted	Common Py	5%
					479						
	479·3	1·3	1·3	100%					479·7 B at 60° (ss)		

SCALE 1:100 (1cm = 1m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 22

LOGGED BY J.D.C FROM 465 TO 480m DATE 30/4/81 PAGE 34 OF 36

CCS 03 05 13

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						interbedded & intercalated (minor) grey & dark gy siltstone with black carbonaceous shale. & minor gy tuffaceous sandstone (unit calcareous)	very common calcite veining. mostly small 10% 482.1 Cal vns over 260 mm. silicified at top		minor disruption & contortion. beds thin to laminated 481.9 B at 60° (ss)	common pyrite	4%
	481.0	3.0	3.0	100%	481						
					482						
					483				contact marked by Cal vn at 60°		
					483.1	dolomite? grey-white. partly silicified, slightly calc., bracciated. & common stylolitization. dm?	minor Cal veining - 2% increases towards bottom contact		massive, bracciated unit	minor Py, disseminated & & Cal vns; increases towards bottom contact	2%
	484.0	1.0	1.0	100%	484						
	485.0	3.0	3.01	100% +	485						
					486						
					487				contact unclear, mixed zone of vns & seds 487.0 qvs at 35° & 45°		
					486.6	quartz. carbonate, pyrrhotite veins qz. siderite, Cal. Po & fluorite & mixed sed	vns generally shallow to intermediate to c.a.			mas Pb 16%, minor Py 3% & AsPy 1%	20%
					487.6				contact unclear at 53°?		
	488.0	3.1	3.1	100%	488	tuf sa & ss intc & minor intb, predominantly fine to medium grained, gy, green-gy & brown-gy tuf sa & gy, gr-gy & dk gy ss.	minor cal/qz veining, mostly large vns. unit slightly hornfelsed?		& very common qvs to 488.2 minor to moderate disruption; sa mostly mas 489.4 B at 54° (ss)	very minor Py	0.5%
					489						
					490						
	491.1	3.1	3.09	99.7%	491				491.6 B at 55° (ss)		
					492						
					493				493.1 B at 56° (ss)		
					494				494.1 B at 50° (ss)		
	494.2	3.0	2.97	99.0%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 480 TO 495m DATE 30/4/81 PAGE 35 OF 36

83514

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					496	interbedded (minor) & intercalated green-grey & brown-gy medium grained tuffaceous sandstone, with gr-gy, gy & dark gy siltstone. (ss predominant)	minor calcite veining mainly large vns. minor quartz veining		moderate disruption ss mostly mas	very minor pyrite	0.5%
					497				497.1 B at 44° (ss)		
	497.2	3.0	3.0	100%	498						
					499						
					500		500.1 Cal vns over 100mm at 90°				
						End of DDH. RBE 22 at 500.2 m					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JDC FROM 495 TO 500.2 DATE 30/4/81 PAGE 36 OF 36

8 3 5 1 5

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
42·3	9	100	BLD	20	660	1·0	88	.125						Ground	Core ↓	
43·0	7	55	BLD	20	450	0·5	4	130								

42 43 44 45

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooee FROM 42·3 TO 45m DATE 15/5/81 PAGE 1 OF 32

839516

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
45·8	BLD	75	BLD	20	730	0·5	9	115	
46·3	BLD	80	BLD	20	355	0·5	3	115	
48·7	5	75	BLD	20	390	0·5	3	115	
50·0	9	65	15	220	550	1·0	16	110	
51·4	80	10	BLD	25	240	BLD	34	110	
52·4	100	10	15	15	200	BLD	22	90	
53·5	25	1500	BLD	80	475	4·0	25	100	
55·0	100	140	BLD	95	465	1·0	33	95	
57·5	10	45	BLD	170	385	0·5	27	120	
59·6									

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooee FROM 45 TO 60 m DATE 15/29/5/81 PAGE 2 OF 32

8382

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni							SAMPLE NUMBER
	5	160	BLD	25	390	40·0	20	145							
61·6	15	90	BLD	55	420	1·5	41	110							
63·1	230	65	30	75	530	21·5	69	145							
63·8	10	50	BLD	40	365	1·0	21	140							
65·5	15	65	BLD	90	915	0·5	34	130							
66·9	10	85	BLD	155	320	0·5	14	125							
70·0	7	90	BLD	45	275	0·5	9	125							
73·0	10	110	BLD	25	250	0·5	12	135							
75·0															

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs. Coore FROM 60 TO 75m DATE 15/29/5/81 PAGE 3 OF 32

839548

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
76·0	5	115	BLD	25	295	0·5	42	125	
76·0	BLD	90	BLD	25	215	0·5	28	125	
79·0	10	80	15	20	600	0·5	23	115	
82·0	10	260	BLD	35	260	0·5	38	115	
85·0	35	85	BLD	415	1050	1·0	29	115	
88·0	5	80	BLD	10	160	0·5	20	125	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooze FROM 75 TO 90 m DATE 15/29/5/81 PAGE 4 OF 32

83819

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
91·0	3	80	BLD	5	150	BLD	11	95								
94·0	10	60	BLD	150	380	0·5	20	100								
97·0	7	95	BLD	40	265	2·5	16	90								
99·0	5	130	BLD	20	250	BLD	14	95								
100·0	6	85	BLD	10	165	4·5	5	120								
103·0	5	75	BLD	5	165	BLD	5	125								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooma FROM 90 TO 105 m DATE 15.29/5/81 PAGE 5 OF 32

839520

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
106·0	BLD	85	BLD	35	265	BLD	12	160								
109·0	BLD	60	BLD	10	190	1·0	19	150								
112·0	BLD	60	BLD	15	250	BLD	11	120								
115·0	BLD	65	BLD	20	280	BLD	10	125								
118·0	3	90	BLD	40	210	0·5	7	170								

5 cm

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 22

ASSAYED BY Analabs - Cooee FROM 105 TO 120 m DATE 15/29/5/81 PAGE 6 OF 32

8395 21

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
121·0	7	80	BLD	10	270	BLD	24	115								
124·0	5	105	BLD	5	175	BLD	15	95								
127·0	5	85	BLD	15	215	BLD	20	125								
130·0	BLD	80	BLD	15	185	0·5	67	215								
133·0	140	235	15	210	1700	6·5	1900	190								

5 cm

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 22

ASSAYED BY Analabs - Cooee FROM 120 TO 135m DATE 15/29/5/81 PAGE 7 OF 32

830522

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
136.0	85	90	BLD	195	2100	0.5	260	100								
139.0	7	70	BLD	35	255	BLD	30	100								
142.0	10	45	BLD	20	435	BLD	68	100								
143.8	6	75	BLD	35	290	BLD	23	100								
146.8	8	110	BLD	10	400	BLD	240	60								
148.0	4	115	BLD	20	180	BLD	14	70								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Copper FROM 135 TO 150m DATE 15/2/6/81 PAGE 8 OF 32

839523

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
151·0	BLD	100	BLD	35	200	BLD	21	75								
154·0	5	65	BLD	10	280	BLD	10	100								
157·0	6	120	BLD	40	230	6·0	850	100								
159·7	3	75	BLD	5	155	0·5	55	100								
162·7	BLD	65	BLD	10	180	BLD	48	85								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooma FROM 150 TO 165 m DATE 5/29/5/81 PAGE 9 OF 32

830524

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
165																
166	166·8															
167		BLD	135	BLD	20	250	1·0	79	70							
168																
169	168·8															
170		BLD	70	BLD	10	185	4·0	20	80							
171																
172	171·8															
173		BLD	95	BLD	10	130	BLD	8	100							
174																
175	174·9															
176		BLD	75	BLD	10	175	BLD	14	80							
177																
178	177·9															
179		BLD	105	BLD	15	150	BLD	6	60							
180																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooma FROM 165 TO 180 m DATE 15/29/5/81 PAGE 10 OF 32

83 0568

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
180																
181	180.9															
182		4	115	BLD	30	340	BLD	10	80							
183																
184	184.0															
185		3	65	BLD	5	145	BLD	5	115							
186																
187	187.0															
188		5	60	BLD	5	185	BLD	7	115							
189																
190	190.0															
191		4	75	BLD	5	145	1.0	3	115							
192																
193	193.0															
194		7	100	BLD	15	195	BLD	4	115							
195																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooee FROM 180 TO 195 DATE 15/29/5/81 PAGE 11 OF 32

839529

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
196·0	BLD	80	25	5	200	11·5	6	160								
199·0	7	70	10	5	155	BLD	23	110								
202·0	4	75	BLD	10	170	BLD	13	115								
205·0	5	60	BLD	5	180	BLD	11	120								
208·0	8	80	BLD	70	260	1·5	24	100								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs-Cooee FROM 195 TO 210m DATE 15/29/5/81 PAGE 12 OF 32

COMSTAFF

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
211·0	4	60	BLD	20	290	BLD	72	100								
214·0	BLD	45	BLD	5	170	5·5	17	105								
217·0	BLD	115	BLD	5	130	0·5	4	105								
220·0	4	70	BLD	5	155	2·0	12	75								
223·0	30	100	15	35	315	8·5	22	120								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooma FROM 210 TO 225 m DATE 15/29/5/81 PAGE 13 OF 32

8 3 6 5 6 8

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
226.0	10	145	30	5	250	6.5	20	140								
229.0	15	85	BLD	40	465	1.0	32	100								
232.0	3	75	BLD	10	220	BLD	15	125								
235.0	BLD	80	BLD	15	110	BLD	7	75								
238.0	BLD	50	BLD	5	165	BLD	4	95								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooma FROM 225 TO 240m DATE 15/29/5/81 PAGE 14 OF 32

83929

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
241·0	BLD	45	BLD	20	155	BLD	19	95								
244·0	6	35	BLD	50	200	0·5	470	60								
247·0	BLD	45	BLD	60	200	0·5	180	60								
250·0	60	115	BLD	250	1250	1·0	88	85								
253·0	45	25	25	235	500	0·5	68	120								

5 cm

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 22

ASSAYED BY Analabs : Cooca FROM 240 TO 255 m. DATE 15.29/5/81 PAGE 15 OF 32

039530

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
255																
256																
256·0																
257	30	30	25	100	260	BLD	160	120								
258																
259																
259·0																
260	7	105	BLD	10	160	BLD	360	115								
261																
262																
262·0																
263	3	65	BLD	15	160	BLD	24	125								
264																
265																
265·0																
266	6	50	BLD	10	150	BLD	13	105								
267																
268																
268·0																
269	8	60	BLD	15	170	BLD	10	100								
270																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooee FROM 255 TO 270 m DATE 15/29/6/81 PAGE 16 OF 32

CONFIDENTIAL

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
271·0	BLD	45	BLD	15	200	0·5	32	105								
274·0	5	85	BLD	15	160	BLD	10	95								
277·0	6	50	BLD	30	240	BLD	16	95								
280·0	25	165	BLD	575	1700	16·5	51	70								
283·0	55	155	25	1150	4350	3·5	370	85								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs - Cooee FROM 270 TO 285m DATE 15/29/5/81 PAGE 17 OF 32

830532

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
285																
286	286·0															
287		10	75	BLD	75	1150	3·5	10	115							
288																
289	289·0															
290		7	55	BLD	40	280	BLD	19	105							
291																
292	292·0															
293		BLD	85	BLD	30	150	BLD	8	80							
294																
295	295·0															
296		10	85	BLD	210	710	1·0	39	90							
297																
298	298·0															
299		BLD	70	BLD	25	195	BLD	11	75							
300																

5 cm

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 22

ASSAYED BY Analabs - Cooma FROM 285 TO 300 m DATE 15/29/5/81 PAGE 18 OF 32

83963

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
301·0	BLD	55	BLD	30	245	BLD	15	70								
304·0	5	1450	BLD	85	160	0·5	19	175								
307·0	20	155	BLD	365	1200	0·5	47	105								
310·0	20	200	BLD	105	480	1·0	26	65								
313·0	6	110	BLD	80	240	0·5	19	105								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs : Coora FROM 300 TO 315 m DATE 15/29/5/81 PAGE 19 OF 32

82/0654

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
316·0	4	185	BLD	50	240	BLD	200	80								
319·0	BLD	205	BLD	90	650	5·0	17	65								
322·0	5	80	BLD	115	505	2·0	5	90								
325·0	BLD	95	BLD	20	190	0·5	14	130								
328·0	5	105	BLD	55	260	0·5	23	125								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs-Cooee FROM 315 TO 330 m DATE 15/29/5/81 PAGE 20 OF 32

83838

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
330									
331									
331·0									
332	BLD	75	BLD	15	190	2·5	6	130	
333									
334									
334·0									
335	8	75	BLD	25	260	0·5	9	120	
336									
337									
337·0									
338	4	85	BLD	30	250	0·5	20	110	
339									
339·0									
340	7	70	BLD	68	355	BLD	86	100	
341									
342									
342·0	*		*				*		
343	5	90	BLD	25	370	BLD	14	95	
344									
345									
345·0									

*Intervals for Sn, As, W given as: 339-342·4 + then to 345·4 m.

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs-Cooee FROM 330 TO 345 m DATE 15/29/5/81 PAGE 21 OF 32

83956

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
345.0	* 8	50	* BLD	10	250	BLD	* 12	95					* see previous page.			
346.0	10	90	BLD	20	200	BLD	19	110								
348.7	4	65	BLD	80	615	BLD	9	105								
351.8	45	180	30	765	3650	2.5	67	90								
354.9	7	70	BLD	290	525	BLD	72	100								
358.0	5	60	BLD	40	145	BLD	9	65								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 345 TO 360 m DATE 15/20/5/81 PAGE 22 OF 32

CONFIDENTIAL

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
361·0	BLD	95	BLD	25	150	BLD	10	115	
363·2	BLD	75	BLD	15	140	BLD	5	110	
366·2	3	55	BLD	25	155	BLD	3	110	
367·0	7	70	BLD	135	2200	0·5	64	120	
370·0	BLD	70	BLD	205	1150	BLD	32	215	
373·0	5	60	10	140	205	0·5	11	85	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 360 TO 375m DATE 5.29/5/81 PAGE 23 OF 32

830533

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
376·0	BLD	110	BLD	105	500	BLD	4	85								
379·0	5	45	BLD	220	920	BLD	11	85								
382·0 (+386·0)	120	835	15	1000	2250	6·0	2500	90						Ground	Core ↑	
382·4	770	5500	BLD	94	400	22·0	11·0%	390						Split	Core ↓	Tq575
382·9	35	104	BLD	68	380	1·0	300	132								Tq576
384·8	90	650	15	250	1300	2·6	300	187								Tq577
386·0	980	380	30	1020	4000	6·5	1·1%	161								Tq578
387·0	180	225	BLD	3900	1·95%	28·5	100	172						Split	Core ↑	Tq579
388·0	180	220	35	1350	6850	10·5	5500	65						Ground	Core ↓	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 375 TO 390m DATE 15/5/5/6/81 PAGE 24 OF 32

839539

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
390																
391																
391·0																
392	BLD	70	BLD	40	140	BLD	19	140								
393																
394																
394·0																
395	50	160	BLD	450	1450	2·0	78	115								
396																
397																
397·0																
398	BLD	165	BLD	30	135	BLD	23	100								
399																
400																
400·0																
401	7	90	BLD	165	455	BLD	18	80								
402																
403																
403·0	BLD	60	20	615	3050	0·5	20	70								
404																
404·5																
405																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 390 TO 405m DATE 15/29/5/81 PAGE 25 OF 32

839540

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	4	55	10	80	255	BLD	18	70								
406.0	3	85	15	135	245	1·0	16	80								
409.0	4	75	BLD	90	460	1·0	38	150								
412.0	3	5	BLD	10	140	BLD	19	290								
415.0	BLD	BLD	BLD	20	115	BLD	93	1700								
418.0	3	BLD	BLD	10	185	BLD	1	2000								

405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 405 TO 420 m DATE 15/29/5/81 PAGE 26 OF 32

839541

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
421·0	BLD	BLD	BLD	5	95	BLD	2	1750	
424·0	—	—	—	No	sample	submitted	—	—	
427·0	BLD	5	BLD	15	85	BLD	BLD	1350	
430·0	10	BLD	BLD	10	70	BLD	1	730	
433·0	5	BLD	BLD	10	75	BLD	1	1050	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 420 TO 435m DATE 15/29/5/81 PAGE 27 OF 32

839542

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
436·0	BLD	BLD	BLD	15	160	BLD	BLD	1350								
439·0	BLD	BLD	BLD	10	80	BLD	BLD	660								
442·0	BLD	BLD	BLD	15	495	BLD	BLD	870								
445·0	10	BLD	BLD	10	90	BLD	1	1050								
448·0	BLD	15	BLD	15	60	BLD	15	1950								

435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 435 TO 450 m DATE 15/29/5/81 PAGE 28 OF 32

839549

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
451·0	BLD	15	BLD	20	105	BLD	39	1250	
454·0	6	85	BLD	40	245	BLD	1	85	
457·0	4	105	BLD	25	105	BLD	5	115	
460·0	3	105	BLD	15	120	BLD	4	125	
463·0	3	115	BLD	15	125	BLD	11	120	

450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 450 TO 465 m DATE 15/29/5/81 PAGE 29 OF 32

83954A

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
466.0	3	120	BLD	25	130	5.0	22	120	
469.0	3	95	BLD	40	260	BLD	5	95	
472.0	BLD	85	BLD	25	105	BLD	12	110	
475.0	8	50	BLD	30	125	BLD	250	85	
477.2	7	140	40	30	295/275*	0.5/2.0*	130	125	
478.0	5	120	40	BLD	100	0.5	7	100	
479.5									

* Base metals repeated only as shown

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 466 TO 480m DATE 15/29/5/81 PAGE 30 OF 32

839545

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	BLD	80	15	5	105	BLD	10	80								
481·0	6	60	BLD	55	255	BLD	27	75								
484·0	BLD	65	10	65	360	BLD	23	85								
485·0 (→ 488·0)	430	1550	BLD	210	990	5·0	2500	70						ground	core ↑	
486·3	85	300	10	660	2400	2·2	600	164						split	core →	Tq580
486·9	2200	2300	10	530	3300	10·9	6800	154						split	core →	Tq581
487·85	as at	485·0m												ground	core →	
488·0	10	70	10	25	210	BLD	100	120								
491·1	25	80	10	25	225	BLD	59	120								
494·2																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 480 TO 495 m DATE 15/5/6/81 PAGE 31 OF 32

89316

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	15	65	10	20	215	BLD	26	115								
497.2	6	95	BLD	BLD	170	BLD	27	135								
500.2		End of DDH:		RBE 22	at 500.2 m											

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY ..... FROM 495 TO 500.2 m DATE 15/29/5/81 PAGE 32 OF 32

839541

839548

- 4 FEB 1982

D of M | A.G. | E.C. | D.S.A.C.
Received - 4 FEB 1982
Answered
DEPT. ... REG.
REF. No.
E & E
DST
file

Photocopy :

GAR DDH : RBE 23

OPEN FILE

82-1690 (Vol 9) part 3 of 6

(RBE 23)

839c/12

839549

AUSTRALIAN ANGLO AMERICAN LIMITED
DRILLHOLE LOG
Summary Sheet

PROJECT Ranison	**AREA** GAR		**DRILLHOLE TYPE** DDH
CO-ORDS E 372604·5 N 5372600·5	**DEC^{LN}** -46°	**AZIMUTH** 075° MN	**RL** 173·7m	**DH No.** RBE 23
DATE COMMENCED 26/4/81	**DATE COMPLETED** 22/5/81	**DRILLED BY** Longyear	**DRILL RIG** Longyear 38
Non Coring to: 51·3m	**HQ Core to:**	**NQ Core to:**	**BQ Core to:**	**EOH** 502·0m

SURVEY DATA
Instrument: downhole camera

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH
61m		-46°	075° MN	361 m		-41°	074·5° MN
91m		-47·25°	075° MN	391 m		-39·75°	075·5° MN
121 m		-46·75°	073° MN	421 m		-39·5	076·5° MN
151 m		-46·5°	072° MN	451 m		-38·25	081° MN
181 m		-45°	072·5° MN	481 m		-37·5°	083° MN
211 m		-44·5°	076° MN	502 m		-36·5°	084·5° MN
241 m		-44·25°	072·5° MN				
271 m		-44·25°	068° MN				
301 m		-43°	068·5° MN				
331 m		-42°	073° MN				

LOG SUMMARY

ROCK TYPE m	MINERALIZATION Style	Grade	Intersection width (Corr)
0-51·3: triconed through glacials, wthd seds			
51·3-109·0: intc ◂ intb gy.dk gy ss ◂ m.g tuf sa	minor q.v's	Py 1%	
109·0-132·5: intc ◂ intb calc.gy.fg-mg tuf sa & gy-dk gy ss	Cal vns	Py 3%	
132·5-138·0: dm? (calc ◂ carb ss)	common Cal vns	dis Py 4%	
138·0-140·3: calc mix	common qz/St vns	Pb (Sp Gl) 2%	
140·3-150·0: calc ss ◂ gy fg calc tuf sa	Cal vns	Pb, Py 2%	
150·0-160·0: mix	Cal vns	Pb, Py	
160·0-172·7: intc ◂ intb. gy fg-mg tuf sa & gy ss	Cal vns	Py 2%	
172·7-180·0: intc ◂ intb. gr-gy ◂ gy ss & gr-gy ◂ gy mg tuf sa	minor Cal vns	Py 2%	
180·0-192·0: intc ◂ intb. gy. dk gy ss & gy fg-mg tuf sa	minor Cal vns		
192·0-196·0: intc ◂ intb. dk gy ss & minor mg gy. dk gy tuf ss ◂ gy ss	minor Cal vns	Py 4%	
196·0-202·1: mix	minor Cal vns	Pb, Py 5%	
202·1-210·0: intc ◂ intb gy tuf sa ◂ gy. dk gy ss	minor Cal vns	Pb, Py 0·5%	
210·0-245·0: intc ◂ intb gy-dk gy ss & minor tuf sa ◂ carb bk sh	minor Cal vns ◂ qz/St vns	Pb, Py 6% Pb, Ry, Sp, Gl, Cp 5%	
245·0-290·0: intc ◂ intb alt gr. gy ◂ br ss ◂ tuf sa	minor Cal vns	Pb, Py 3%	
290·0-388·0: ho. dk br. minor gr. gy ss ◂ tuf sa.	290-315 minor cal vns; 315-345 mod cal vns, minor St/q.v.'s; 345-388 common Cal vns, alt/ft, minor St/q.v.'s	Pb, Py 2%; Pb, Py 2%; Pb, Py 4%, tr Sp/Gl	
388·0-402·1: mixed alt seds ◂ cbte vns	& cbtes	Py 20%, Pb 3%	
402·1-425·0: talc cbte	q.v.'s ◂ cbte vns	Pb, Ry 1%, Mt 5%	
425·0-432·3: alt seds (ho br ss ◂ tuf ss)	q.v.'s	Py, Pb 5%	
432·3-436·3: alt gb	minor q.v.'s	Py tr	
436·3-442·1: alt seds (ho br ss ◂ tuf sa	common q.v.'s	Ry, Pb 7%, Sp Gl.	
442·1-444·5: q.v. (± minor St)		Ry, Pb 20%, Sp & St 2%	
444·5-455·7: intc ◂ intb dk br. gy. gr ss ◂ f-mg tuf sa.	common qz ◂ minor act/ft vns	Pb, Py 3%	
455·7-477·7: intb bk sh, br ss, calc ss ◂ dm	mod qz ◂ Cal vns, minor St	Py 3%, Sp 1%	
477·7-502·0: intc ◂ intb hn dk br ◂ dk gy ss ◂ mg. tuf sa	common q.v.'s	Py, Pb 1%	

Signature John Crimeen **Date** 28·5·81

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						No core recovered. tricored through glacials					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J. Crimeen FROM 0 TO 15m DATE 30/4/81 PAGE 2 OF 35

893050

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					16–30	No core recovered. tricored through glacials.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY JDC FROM 15 TO 30m DATE 30/4/81 PAGE 3 OF 35

CONFIDENTIAL

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					31–45	No core recovered. tricored through glacials					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY JDC FROM 30 TO 45 m DATE 30/4/81 PAGE 4 OF 35

8393

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						tricored through glacials					
	51·0	0·7	0·7	100%	51·3	tuffaceous sandstone ± siltstone intercalated ± interbedded (minor) grey ± dark gy ss with gy medium grained tuf sa	very minor quartz veining (small vns)		core highly broken, ss generally massive minor disruption	minor pyrite & qv's	1%
	52·0	1·0	0·7	70·0%							
	53·0	0·8	0·7	87·5%							
	5·8	1·2	0·62	51·6%							
	55·0	1·3	1·0	76·9%							
	56·3	0·3	0·3	100%					56·1 Bat 42° (ss)		
	56·6	1·1	1·1	100%					57·3 Bat 32° (ss)		
	57·7	0·7	0·7	100%							
	58·4	0·5	0·44	88·0%							
	58·9	1·5	0·63	42·0%							

SCALE 1:100 (1cm = 1m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY JDC FROM 45 TO 60m DATE 30/4/81 PAGE 5 OF 35

8 3 3 5 5 3

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	60·4	0·6	0·6	100%		intercalated & interbedded (minor) grey & dark gy siltstone with gy medium grained tuffaceous	very minor quartz veining (small vns)		core highly broken massive ss minor disruption	trace pyrite & thn qz	tr
	61·0	0·3	0·3	100%							
	61·3	0·5	0·5	100%							
	61·8	1·4	1·4	100%					61·8 B at 40° (ss)		
	63·2	0·8	0·8	100%							
	64·0	1·1	1·1	100%					64·3 B at 65° (ss/tuf ss)		
	65·1	1·2	1·2	100%							
	66·3	1·0	0·97	97·0%					67·0 B at 36° (ss)		
	67·3	0·9	0·73	81·1%							
	68·2	1·0	1·0	100%					68·3 B at 43° (ss/tuf ss)		
	69·2	0·8	0·8	100%							
	70·0	0·8	0·8	100%					70·2 B at 38° (ss)		
	70·8	0·7	0·7	100%							
	71·5	0·9	0·9	100%							
	72·4	0·6	0·6	100%					72·5 B at 36° (ss)		
	73·0	1·2	1·2	100%							
	74·2	0·6	0·6	100%							
	74·8	1·2	1·2	100%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 60 TO 75m DATE 30/4/81 PAGE 6 OF 35

8933574

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						interbedded & interbedded (minor) grey, fine to medium grained tuffaceous sandstone & grey siltstone. very minor dark gy ss	minor quartz-carbonate veining 1%		core generally highly broken heavy disruption common tension gashes 77.0 ?B at 30° (ss/tuf ss)	minor pyrite & qz-calcite vns	tr
76.0	1.1	1.25	100% +								
77.1	1.2	1.3	100% +								
78.3	0.5	0.8	100% +								
78.8	0.7	0.9	100%						78.9 B at 36° (tuf ss/ss)		
79.6	1.6	1.7	100% +								
81.2	0.6	0.7	100% +						80.7 B at 55° (tuf ss/ss)		
81.8	1.5	1.6	100% +								
83.3	0.3	0.4	100% +						core v. highly broken		
83.6	0.6	0.89	100% +								
84.2	0.8	0.8	100%								
85.0	1.0	1.0	100%			~88.0 slight increase in amount of dk gy ss.	increase in number broken q.v's.				
86.0	0.8	0.9	100% +								
86.8	0.7	0.7	100%								
87.5	1.1	1.1	100%						massive ss.		
88.6	0.6	0.6	100%								
89.2	1.0	1.0	100%								

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 75 TO 90 m DATE 4/5/81 PAGE 7 OF 35

823558

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	90·2	0·6	0·67	100%		interbedded & intercalated grey (and minor dark gy) fine to medium grained tuffaceous sandstone with gy & dk gy ss	minor quartz & qz/carbonate veining		core generally highly broken to 100m moderate disruption ss generally massive	minor pyrite & qz/calcite vns	tr
	90·8	0·8	0·8	100%	91						
	91·6	2·2	2·2	100%	92						
					93				93·2 B at 36° (tuf ss/ss)		
	93·8	1·7	1·7	100%	94						
					95				94·8 B at 20° (ss/tuf ss)		
	95·5	1·3	1·3	100%	96				96·2 B at 17° (ss)		
	96·2	0·7	0·57	81·43%	97						
	97·8	2·0	1·62	81·0%	98						
					99						
	99·5	1·8	1·44	96·0%	100				100·0 B at 17° (ss)		
	101·0	2·0	2·0	100%	101				101·4 B at 17° (ss)		
					102						
	103·0	3·0	3·0	100%	103				103·2 B at 14° (ss)		
					104						
					105						

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C FROM 90 TO 105m DATE 4/5/81 PAGE 8 OF 35

96988

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	106·0	0·4	0·4	100%	106	intercalated & minor interbedded grey. fine to medium grained tuffaceous sandstone with gy & dark gy siltstone.	rare quartz veins		core moderately to heavily broken to 109·8m sa mostly massive	minor pyrite	tr
	106·4	2·6	2·48	95·38%	107						
					108						
	109·0	0·8	0·36	45·0%	109	109·0 intc & intb calcareous gy. fg to mg tuf sa & gy & dk gy calc ss	common calcite vns · 5%		highly disrupted core generally highly contorted bedding	common Py & cal	3%
	109·8	2·2	2·2	100%	110						
					111						
	112·0	3·0	3·07	100%+	112				112·3 B at 45° (ss)		
					113						
					114						
	115·0	3·0	3·0	100%	115						
					116						
					117						
	118·0	3·0	3·0	100%	118				118·7 B at 36° (ss)		
					119						
					120						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 105 TO 120m DATE 4/5/81 PAGE 9 OF 35

CSR 8838

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	121·0	1·7	1·7	100%	121	intercalated & interbedded grey & dark gy calcareous siltstone with gy. fine to medium grained, calc tuffaceous sandstone. minor calc black shale	common calcite veining (disrupted & smooth) generally small. 5%		moderate to heavy disruption bedding mostly contorted	common pyrite & Cal & disseminated? trace pyrrhotite	3%
					122				122·0 B at 21° (CS)		
	122·7	1·3	1·22	93·8%	123						
	124·0	3·0	3·0	100%	124				124·6 B at 46° (SS)		
					125						
						128·7 2·5m of massive tuf sa					
	127·0	3·0	3·0	100%	127						
					128						
					129				129·0 B at 24° (SS)		
	130·0	3·0	3·0	100%	130						
					131				131·1 B at 59° (SS)		
					132						
						132·5 highly calc crystalline dk gy ss	primary carbonate. also very common Cal vns. disrupted & smooth: size variable 8% minor siderite/ ankerite veining		highly disrupted to brecciated (slumped)	common dis Py	4%
	133·0	3·0	3·03	100%+	133						
					134						
					135						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 120 TO 135 m DATE 5/5/81 PAGE 10 OF 35

83983

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	136·0	3·0	3·0	100%
	139·0	3·0	3·03	100% +
	142·0	3·0	3·03	100% +
	145·0	3·0	3·0	100%
	148·0	3·0	2·99	99·67%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	highly calcareous crystalline? grey siltstone with minor gy fine grained calc tuffaceous sandstone	very common calcite veining 8%		135·2 B? at 32° (ss) moderate to high disruption	common pyrite, minor pyrrhotite	4%
		136·2 quartz/siderite/cal/ankerite vns over 200 mm at 44°.			136·2 vns contain sp	5%
				137·2 B at 37° (ss)		
	138·0 dark gy & minor gy calc ss & black shale & minor gy f.g. calc tuf sa	138·4 qz/sl vn 15mm at 25°			138·4 vn contains Sp 6% Gl 1%	7%
	140· . gy. highly calc ss & minor dk gy ss & minor gy f.g. calc tuf sa	v. common Cal veining smooth & disrupted, mostly small . 6%		moderate to high disruption	common Py	
				145·4 B at 28° (ss)		
				148·1 B at 26° (ss/blk sh)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C FROM 135 TO 140 m DATE 11/5/81 PAGE 11 OF 35

8999559

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	151.0				151	intercalated & interbedded gray & dark gy siltstone & gy fine to medium grained tuffaceous sandstone (slightly calcareous units) & minor carbonaceous black shale.	minor to common calcite, smooth and disrupted, generally small veins - 4%		moderate to high disruption bedding moderately to highly contorted	minor pyrite 1% & pyrrhotite 1%	2%
	154.0	3.0	3.0	100%	152				152.3 B at 23° (ss)		
					153						
					154				154.4 B at 25° (ss)		
					155						
					156	156.1 3.8 m of gy ss intc & gy m.g. tuf sa. which has common blk sh clasts (very small) dispersed throughout.			155.6 B at 32° (ss)		
	157.0	3.0	3.0	100%	157						
					158						
					159				159.9 B at 27° (ss/tuf ss)		
	160.0	2.6	2.81	100% + (108.1%)	160						
					161						
					162						
	162.6	3.1	3.21	100% + (103.5%)	163						
					164		164.3 Siderite/Cal vn 40mm at 70°			164.3 vn has AsPy 10%, Sb 7% Py 7% & Sp 3%	27%
					165						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C FROM 150 TO 165 m DATE 12/5/81 PAGE 12 OF 35

8305610

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	165·7	3·1	3·12	100%+
	168·8	3·2	3·29	100%+
	172·0	3·0	3·01	100%
	175·0	3·0	3·0	100%
	178·0	3·0	3·14	100%+ (104·7%)

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intercalated & interbedded grey, fine to medium grained tuffaceous sandstone with gy (& less common dark gy) siltstone	minor to common calcite veining to 172·0m mostly small veins, smooth & disrupted includes siderite from 169·0 m		highly disrupted & mostly contorted bedding	minor pyrite associated & Cal vns	2%
				167·9 ?B at 24° (ss)		
		171·3 quartz/Cal vn disrupted over 500 mm at 41°		171·4 ?B at 26° (ss)	171·3 vn contains Sp	2%
	172·4 intc & intb green-gy & gy ss & gr-gy & gy mg. tuf ss (minor brown tinges)	172·0 minor Cal/Si vns, mostly smooth		minor to moderate disruption, minor ant bd.	trace Py & Cal & in ss	tr
				173·3 B at 40° (ss)		
				174·3 B at 30° (ss/tuf ss)		
				175·5 B at 44° (tuf ss)		
				177·7 B at 34° (ss)		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 165 TO 180m DATE 13/4/81 PAGE 13 OF 35

839561

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	181·0	3·0	3·19	100%+ (106.3%)
	184·0	3·0	3·0	100%
	187·0	3·0	3·01	100%
	190·0	2·9	2·93	100%
	192·9	0·7	0·78	100%+ (111.4%)
	193·6	1·4	1·41	100%
	195·0			

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	interbedded & intercalated gray and dark gy siltstone (with minor brown sections) & gy fine to medium grained tuffaceous sandstone, (which contains clasts of dk gy ss to finely disparsed ss)	minor calcite veining (usually ≤mooth & large :- 10-30mm) 2%		highly disrupted bedding moderately - contorted core mod. broken 180·5 to 181·9 181·5 m B at 25° (tuf ss) 184·1 B at 25°-34° (ss) 186·3 B at 39° (ss) 190·0 B variable but generally shallow to core axis ~10°	barren	
		190·8 quartz/siderite/Cal Vn. 120 mm at 40°				
	192·0 dk gy ss, intc & intb & minor m.g. gy & dk gy tuf ss & gy ss (units slightly calcareous)	minor cal veining (small & disrupted)		mod. disruption bd heavily cnt. 193·4 B at 40° (ss)	very common pyrite & cal vns & disseminated in lighter units. Pb-tr	5%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 23

LOGGED BY J.C FROM 180 TO 195 m DATE 25/5/81 PAGE 14 OF 35

8339682

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	195.0	1.0	1.1	100% (110%)		interbedded + intercalated black carbonaceous shale + dark grey siltstone, with minor gy ss + rare gy calcareous tuffaceous sandstone	minor calcite veining mostly small		moderate to heavy contortion of bedding (generally shallow) 196.4 B at 18° (ss/tuf ss)	common pyrite, 5%, disseminated in calc ss + ∈ cal vns; minor Pb, 1%.	6%
	196.0	2.7	2.7	100%							
	198.7	3.1	3.1	100%		198.3 intb + intc gy ss + gy fine-grained tuf ss ∈ dk gy ss + carb bk sh at the bottom (mix)	minor Cal veining ∈ dk gy ss + bk sh.		moderate to heavy disruption moderate contortion. 200.6 B at 27° (ss/ss)	common Py + Pb in gy silt + sand + ∈ Cal. Py 3%, Pb 3%	7%
	201.8	3.1	3.07	99.0%		202.1 intc + intb gy f.g. tuf ss + gy-dk gy ss.	very minor Cal veining		mod. to heavy disruption 204.8 B at 27° (ss/tuf ss)	minor Py, rare Pb & Cal.	0.5%
	204.9	3.1	3.09	99.6%					207.8 B at 32° (ss/tuf ss)		
	208.0	3.0	3.0	100%					209.2 B at 28° (ss)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 195 TO 210 m DATE 11/5/81 PAGE 15 OF 35

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	211.0	3.0	3.02	100%	211	intercalated & interbedded gray & dark gy siltstone with gy fine-grained tuffaceous sandstone (ss decreases downhole, increasing dk gy ss & black carbonaceous shale).	minor quartz and calcite veining to 217.7		mostly heavily disrupted & bedding heavily contorted 211.0 B at 64° (ss)	common pyrrhotite 2% & pyrite, 4%, & cal & q.vs.	6%
					212		212.2 siderite/cal vns & cockscomb texture over 110 mm at 62°			213.2 Vn contains Py	5%
	214.0	3.0	3.0	100%	213				213.3 B at 45° (ss)		
					214						
					215				215.1 B at 39° (ss)		
					216				216.4 B? at 27° (ss)		
	217.0	3.0	2.99	99.67%	217						
					218		217.7 common disrupted cal veining to 222.3 m. minor quartz veining & chlorite? veining at ~ 45°				
					219						
	220.0	3.0	3.0	100%	220						
					221						
					222						
	223.0	3.0	3.1	100%+ (loss 3%)	223				223.8 B at 18° (ss)		
					224						
					225		224.7 several small q.v's (<5 mm)			224.7 q.v's contain: Sp 10%, Cp 5% + Gl 1%	16%

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 210 TO 225 m DATE 11/5/81 PAGE 16 OF 35

8396364

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	226·0	3·0	3·0	100%
	229·0	3·0	3·06	100%+
	232·0	3·0	3·01	100%
	235·0	3·0	3·04	100%+
	238·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intercalated (minor) & interbedded dark gray & gy siltstone (with minor brown altered ss) & gy (bleached?) fine to medium grained tuffaceous sandstone & black shale.	minor discreet calcite vaining; some sections are mottled & lighter Cal (along beds)		moderate to minor disruption. little contortion of beds (from 229.0m down) minor microfaulting bd generally shallow to Core axis to 229.0m 228·2 B at 17° (ss) 229·6 B at 45° (ss) 230·5 B at 48° (ss) 231·6 B at 23° (ss) 232·9 B at 47° (ss) 234·0 B at 41° (ss) 235·3 B at 57° (ss) 236·8 B at 57° (ss) increased disruption & contortion 238·8 B at 34° (ss)	small quartz/siderite vns & Sp 20%. Py 5%. Po 5% Gl 2% & Cp 2%. 228·2 Po 5 % + Py 10% very common & Cal vns, in patches, disseminated & most commons in bands (beds) & the bd.	3% 15%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C FROM 225 TO 240m DATE 25/5/81 PAGE 17 OF 35

8305C5

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	241·0	3·0	3·01	100%
	244·0	3·0	3·02	100%
	247·0	3·0	3·0	100%
	250·0	3·0	3·02	100%
	253·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	interbedded & intercalated grey and dark gy siltstone (with minor altered brown ss) + minor gy (bleached?) medium grained tuffaceous sandstone and rare black shale?.	minor calcite veining (small). minor quartz veining also.		heavy disruption and contortion 243·1 B at 32° (ss)	very common Py 6% + Po 6%. & Cal vns: in patches, disseminated + mostly banded. decrease in alt. units, except for highly disrupted sections.	12%
	245·0 predominantly ss units & increasing tuf ss, all alt (hornfelsed) to br/dk br/gy units. darker units are sometimes calcareous. ss mostly massive.	minor cal veining, small (<2mm) + smooth		244·9 B at 25° (ss) 249·5 ? B at 52° (tuf ss) 250·0 B at 20° (ss)		
	252·7 mostly highly disrupted silts (alt)			253·3 B at 37° (ss)		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 240 TO 255 m DATE 25/5/81 PAGE 15 OF 35

8 39666

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	256·0	3·0	3·0	100%	256	altered, intercalated & interbedded, light & dark brown, grey & predominantly green & gr-gy siltstones and tuffaceous sandstones.	minor calcite veining disrupted & smooth, up to 20 mm (3%). a few cal vns have alteration zones.		moderate to heavy disruption & contortion bedding indistinct due alteration 257·2 B at 34° (ss) 258·6? B at 31° (tuf sa/ss) 260·5 B at 25° (ss)	minor Py & Po & cal vns	2%
	259·0	3·0	2·87	95·67%	259						
	262·0	3·0	3·0	100%	262	core predominantly sa to 268·0 m					
	265·0	3·0	2·95	98·33%	265						
	268·0	3·0	3·0	100%	268						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 255 TO 270m DATE 25/5/81 PAGE 19 OF 35

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	271·0	3·0	3·0	100%
	274·0	3·0	3·0	100%
	277·0	3·0	3·0	100%
	280·0	3·0	3·02	100%+
	283·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	altered, intercalated & minor interbedded grey, pale & dark brown and predominantly green & gy-gr siltstones with gr & dk br, fine to medium grained tuffaceous sandstone.	minor to moderate quartz/calcite veins (& siderite to 271·0m), small, disrupted & -271·9 qz/cal/bf/ankerite vn showing cockscomb texture 240mm at 72° large, smooth (<30mm) -5%		heavy disruption of ss. ss generally massive bedding covered by alteration 278·4 B at 53° (tuf-ss) 280·8 B at 42° (ss) 281·8 B at 46° (ss)	minor Ba, Py & Sp & qz/cal vns -271·7 vn contains Sp 6% & Py 4%	2% 10%

SCALE 1:100 (1cm = 1m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 270 TO 285m DATE 26/5/81 PAGE 20 OF 35

89566

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	286.0	3.0	3.02	100%	286	altered (hornfelsed) intercalated and interbedded (minor) mostly green-pale & dark brown siltstones & gr-dk br fine to medium grained tuffaceous sandstone.	minor calcite veining, sometimes & quartz, mostly small, smooth veins. (<35 mm) 2%		ss highly disrupted. ss mostly massive with moderate disruption.	minor Py-Po & Cal/(qz) VNS	1%
					287		287.6 qz/cal vn. 35 mm at 65°			287.6 Pb 30%, Py 5%, Cp 2% in vn	37%
	289.0	3.0	3.0	100%	288				289.2 ?B at 22° (ss)		
					289						
					290	290.0 units change to predominantly dk br & lesser green.					
	292.0	3.0	3.0	100%	291						
					292				292.0 B at 38° (ss)		
					293						
					294						
	295.0	2.0	1.97	98.5%	295						
					296				296.3 B at 30° (ss/tuf ss)		
	297.0	1.0	1.0	100%	297						
	298.0	3.0	2.91	97.0%	298						
					299				299.0 B at 35° (ss)		
					300						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 285 TO 300m DATE 26/5/81 PAGE 21 OF 35

69838

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					301	altered (hornfelsed) intercalated and interbedded pale & dark brown with minor green siltstones & fine to medium grained dk br & gr tuffaceous sandstone.	minor calcite veining mostly large & smooth (>25mm) 4% minor tremolite/ actinolite & some Cal vns		moderate to heavy disruption, greater in ss.	common Po. 4%. + Py 1% & Cal vns	5%
	301·0	3·0	3·0	100%	302				302·2 B at 35° (ss)		
					303						
	304·0	3·0	3·0	100%	304						
					305						
					306				306·0 highly disrupted ss (intb)		
	307·0	3·0	3·15	100%	307				307·6 B at 65° (tuf ss)		
					308						
					309						
	310·0	3·0	3·0	100%	310				310·5 B at 25° (ss)		
					311						
					312						
	313·0	3·0	2·88	96·0%	313				313·6 B at ~20° (ss)		
					314						
					315						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RDE 23

LOGGED BY J.C. FROM 300 TO 315 m DATE 26/8/81 PAGE 22 OF 36

83954

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					316	altered (hornfelsed) intercalated & minor interbedded . predominantly dark brown with minor pale br. gray & green siltstones & fine to medium grained tuffaceous sandstone .	minor quartz/siderite /calcite veining, mostly smooth (< 35mm) 3% rare tremolite / actinolite? or altered sediment within vn.		moderate to heavy disruption heavy bedding contortion	minor pyrite & vns	1%
	316·0	2·1	2·02	96·19%	317						
	318·1	2·9	2·7	93·1%	318				318·0 sads showing soft sed deformation & mixing		
					319						
					320						
	321·0	3·0	3·0	100%	321						
					322				322·8 B at 23° (bs)		
					323						
	324·0	1·0	1·2	100% + (no rec)	324						
	325·0	3·0	3·0	100%	325				325·6 B? at 30° (bs/tuf ss)		
					326						
					327						
	328·0	3·0	2·99	99·67%	328						
					329				329·9 B at 45° (bs)		
					330						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 315 TO 330m DATE 27/5/81 PAGE 23 OF 36

T 1 6 8 8

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					331	predominantly dark brown altered (hornfelsed) siltstone with pale br & green-gray ss & dk br. minor gr-gy fine to medium grained tuffaceous sandstone	moderate calcite veining, smooth & disrupted (<45 mm). Vns also contain minor quartz/siderite		330.4 B at 41° (ss) moderate to heavy disruption moderate contortion of bedding	moderate Po 3% & Py 2% & Cal Vns trace Sp & Sk	5%
	331.0	2.4	2.35	97.9%	332						
					333						
	333.4	3.0	3.0	100%	334						
					335						
					336						
	336.4	3.0	3.0	100%	337						
					338						
					339				335.6 B? at 67° (ss)		
	339.4	3.0	3.0	100%	340						
					341				340.8 B at 44° (ss)		
					342						
	342.4	0.6	1.01	100%+ (126.28%)	343						
	343.2	2.8	2.9	100%+ (103.57%)	344						
					345						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C FROM 330 TO 345m DATE 27/5/81 PAGE 24 OF 35

83/88

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					346	intercalated and minor interbedded altered (hornfelsed) dark brown & minor pale br & green siltstone & tuffaceous sandstone	common calcite vaining & minor quartz/ siderite/actinolite/ tremolite, mostly smooth, but some large		moderate to heavy disruption	common Po 5% & Py 2% & cal/qz/St/act/tt vns & trace Sp & AsPy in separate vns	7%
	346·0	3·0	3·0	100%	347		-347·3 disrupted qz/tt/act? vn over 50mm at 15°			347·3 Po 10% & Py 2% in Vn	10%
					348		disrupted zones - 8%			348·2 10 mm qz/cal vn & AsPy smaller vns nearby & AsPy	8%
	349·0	3·0	3·0	100%	349						
					350						
					351		-350·6 qz/cal/act/tt vn 200mm at 11°			350·6 Po 10% & Py 2% in Vn	12%
	352·0	3·0	3·0	100%	352						
					353						
					354						
	355·0	3·0	3·0	100%	355						
					356		-356·6 Cal/tt/act vn. 45mm at 70°			356·6 Po 15% & Py 5% in Vn	20%
					357						
	358·0	3·0	3·0	100%	358						
					359						
					360						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY T.C FROM 345 TO 360m DATE 27/5/81 PAGE 25 OF 35

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	361·0	3·0	2·97	99·0%
	364·0	3·0	2·93	97·67%
	367·0	1·3	1·3	100%
	368·3	3·1	3·1	100%
	371·4	1·6	1·64	100%+
	373·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intercalated & interbedded altered (hornfelsed) dark & pale brown & grey & green-grey siltstone & tuffaceous sandstone	360·8 several cal/qz/st/tt/act vns over 1·75m moderate calcite veining, & minor quartz/siderite/tremolite/actinolite? usually smooth-5%. some vns have mixed in sediment		360·8 200mm vn at 28° moderate to heavy 361·2 480mm vn at 50° disruption 362·1 75mm vn at 55° 362·7 B? at 70° (ss) ss mostly massive	360·8 common Po+Py & vns 361·2 Po 17% ; Py 3% + Cp tr in vn 362·1 Po 17% + Py 5% in vn total mineralisation :- Po 8% ; Py 2% ; AsPy Cp Sp tr	10% 20% 20% 10%
		368·7 q.v & mixed sads, 110mm at 60°		368·9 ? B at 60° (ss/q.v)	368·7 Po 7% + Py 1% in vn	2%
				369·0 ss thin bedded to laminar down to 371·0 m 370·9 B at 54° (ss)		
		373·3 qz/cal/tt/act vn 450mm at 64°			373·3 Po 30% + Py 10% in vn	40%

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 360 TO 375 m DATE 27/5/81 PAGE 26 OF 35

83957

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	376·0	3·0	2·82	94%		intercalated & interbedded altered (hornfelsed) (slight decrease in degree of alteration?) dark & pale brown, gray, dk gy & green siltstone & tuffaceous sandstone.	common calcite veining & minor tremolite/ actinolite? mostly small smooth vns.		slightly contorted, thin bedded to laminar ss 377·2 B at 50° (cs) 377·3 moderate to heavy disruption & contortion. 379·4 B? at 62° (cs) 381·8 B at 45° (cs) 383·6 ?B at 30° (cs)	minor Pb 2% + Py 1% & Cal vns. tr Gl	3%
	379·0	3·0	3·0	100%							
	382·0	3·0	3·0	100%							
	385·0	3·0	3·0	100%							
	388·0	3·0	3·0	100%	388·0	mixed zone :- carbonate / sediments alt seds mixed & disrupted, mineralised cbte vns (siderite? minor cal). seds very dk gr-dk br; cbtes white & yellow or gr tinge.	note: alt (ho) seds further alt on contact & cbtes.		first vn contact at 30° cbte veining in all directions to core axis, but generally intermediate to steep.	very common Py 20% & common Pb 3%	23%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 23

LOGGED BY J.C. FROM 375 TO 390m DATE 26/5/81 PAGE 27 OF 35

C.C.S.S. 8338

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						mixed zone of mineralized carbonates, sediments and quartz. (± tha cbte)(con)	probably several phases of vns: several smooth calcite ± qz/siderite vns not affected + sometimes cross disrupted vns.		vns + sads highly disrupted, but generally vning intermediate to steep to core axis.	from 390 m: little Po, Py still very common	2%
	391.0	3.0	3.0	100%	391	from 391.0: small specks of dark green talc? from altered sads? - common ± cbte vns.			392.2 vns at 45°		
	394.0	3.0	2.9	96.7%	394		394.1 Cal vn ± fluorite (greish tinge)? + rhodocrosite (pink tinge)? 140 mm at 45°		394.5 vn at 48°		
	397.0	3.0	2.9	96.7%	397	398.4 yellow cbte ± qz, has cockscomb texture, down to 402.1 m.				398.4 Sp comes in ± Stl + qz vns - 10%, decrease in Py to 7%, trace Gl.	17%
	400.0	2.4	2.4	100%	400	400.0 zone of talc cbte (little talc), cbte vining, qz + altered minor sads, mixed zone to 402.1 m	cbte pale grey + milky white ± Sp blebs. St/ankerite present in vns.		talc cbte shows strong foliation, generally steep as is vining ~60°		
					402.1	talc carbonate zone	minor (later phase?) smooth, wh cbte vining		slight to moderate fol.	barren?	
	402.4	3.0	3.05	100% + (lost)	402	pale gy, wh + gr cbtes ± black streaks + blebs (sometimes magnetitite?)			403.4 fol at 54°		
					404	404.3 1.4 m of alt (talcose?) gy mixed sads + minor qz vining			404.2 fol at 56°		
					405						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 23

LOGGED BY J.C FROM 390 TO 405m DATE 26/5/81 PAGE 28 OF 35

9 0 6 3 8

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	405·4	0·6	0·68	100% + (13·3%)		talc carbonate zone (con) (rare talc) milky white, pale brown, pale gray, yellow/wh & pale green cbtes. & black & gy streaks, patches & blebs. fine to coarse (mostly c) mottling of cbtes.	minor later phase? (cross-cutting) quartz veins.		slight to strong foliation stronger fol zones have more magnetite & are usually darker.	minor Po + Py ~1% & q.v's common Mt ~5% in vns & streaks.	6%
	406·0	3·0	3·0	100%	406		406·6 q.v. 30mm at 65°			406·6 Po 20% & Py 5% in vn	25%
					407				407·4 fol at 54°		
					408						
	409·0	3·0	3·03	100% + (cm)	409				409·2 fol at 67°		
					410		410·2 q.v. 45 mm at 20°				
					411				410·4 fol at 54°	410·2 Pb 50% & Py 5% in vn	55%
	412·0	3·0	3·0	100%	412				411·6 fol at 50°		
					413				413·2 fol at 50°		
					414				414·4 fol at 60°		
	415·0	3·0	3·0	100%	415						
					416	416·0 0·3 m of talc? (dark gr cbte?)			416·0 fol at 45°		
					417				417·6 fol at 64°		
	418·0	3·0	3·0	100%	418						
					419				419·5 fol at 64°		
					420						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 405 TO 420m DATE 21/5/81 PAGE 29 OF 35

A 33828

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	421·0	3·0	2·99	99·6%
	424·0	3·0	3·0	100%
	427·0	3·0	3·0	100%
	430·0	3·0	3·0	100%
	433·0	3·0	2·98	99·3%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	talc carbonate zone (con) white, pale green, pale grey cbtes with common black or gy streaks, patches or blebs (Mt)	medium to coarse mottling. very minor later phase cross-cutting cbte/quartz veins.		moderate to strong foliation 421·2 fol at 72° 422·8 fol at 56° 424·5 fol at 56°	common magnetite	6%
425·0	altered sediments alt (hornfelsed) intercalated & interbedded dark & pale brown, gr & gy siltstone with fine to m.grained tuffaceous sandstone	silicified & talcose? zones & cbte vns to 426·0; common disrupted mixed-in q.v's & minor calcite/actinolite/tremolite.		contact (between talc/sil zone) at 38° moderate to high disruption moderate contortion 428·4 B at 57°(ss) 430·7 B at 51° (ss)	common Py 5% & minor Pb 1% & q.v.s. 426·4 Py in one vn. 6mm at 50°	6% 5%
432·3	altered gabbro? massive, m.g. gr-gy alt (indistinct crystal boundaries) gb?	v.minor small, smooth q.v.'s		contact distinct but uneven at 77° mas. unit.	trace Py & q.v.s	tr

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 420 TO 435 m DATE 27/5/81 PAGE 30 OF 35

CS 0330

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered gabbro. (con't)	common actinolite/ tremolite				
	436·0	3·0	3·0	100%	436·3	altered sediments alt (hornfelsed) pale + dark brown siltstones & minor br fine grained tuffaceous sandstones	very common quartz veining & minor calcite/siderite both disrupted + smooth		indistinct contact over 100 mm moderate to heavy disruption 437·7 q.v. 250 mm 438·1 B? at 60° (ss)	v. common mineralisation & q.v.'s. Py 3·5%, Pb 4%, + towards bottom of unit Sp 0·5% + Gl tr	8%
	439·0	1·5	1·5	100%							
	440·5	3·1	3·05	98·39					440·7 vns at 40° (qz/ss)		
					442·1	quartz vein q.v. & minor St, ankerite + alt sads.	St usually in small, smooth cross-cutting		contact at 38° massive vn	v. common Pb 10% + Py 10% especially in bottom half Sp & St 2% + Gl tr	22%
	443·6	3·1	3·07	99·03%					440·0 vn at 32° (qz)		
					444·5	altered sediments alt (ho) intercalated + interbedded pale + dk br, grey + green ss + dk br + gy fg to medium grained tuf ss	v. common qz veining & minor St/act/tt to 449·4 m		contact at 30° moderate disruption + contortion	common mineralisation & q.v.'s Pb 5%, Py 4% + Sp tr.	9%
	446·7	1·3	1·27	97·67%					447·5 B at 42° (ss)		
	448·0	2·8	2·77	98·92%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 425 TO 450m DATE 28/5/81 PAGE 31 OF 35

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LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	450·8	3·1	3·08	99·3%
	453·9	2·8	2·72	97·4%
	456·7	3·0	3·0	100%
	459·7	3·1	3·2	100%+
	462·8	3·1	3·1	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	altered (hornfelsed) intercalated and interbedded pale & dark brown & minor grey siltstone & tuffaceous sandstone.	common quartz veining & minor actinolite / tremolite		moderate to heavy disruption mod. contortion. 451·3 B at 54° (ss) 452·7 B at 69° (ss) 454·1 B at 74° (ss)	minor Pb 2% & Py 2% & qz.	4%
455·7	siltstone, black shale & dolomite? intb & minor intc laminae of bk sh. pale br ss & light gy calcareous ss & & thicker beds of dm? (minor & sometimes silicified.)	common siderite. minor qz & calcite veining		contact over >40mm minor to moderate disruption minor contortion 458·6 B at 72° (ss) 460·2 B at 76° (ss) 461·6 B at 70° (ss) 462·8 B at 72° (ss) 464·8 B at 69° (ss)	common Py 4%. minor Pb & Sp 1% & St vns	5%

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RDE 23

LOGGED BY J.C. FROM 450 TO 465m DATE 28/5/81 PAGE 32 OF 35

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						interbedded carbonaceous black shale + grey siltstone + minor thicker beds (up to 200mm) of dolomite. bedding between sh + ss very thin to laminar.	minor quartz and calcite veining + 5-10 3m of qz/st vns mixed in & sediment		moderate disruption minor contortion	common Py 5% & vns + bk sh	5%
	466.9	1.5	1.28	85.33%					466.1 core mostly broken up	466.1 sp 5% + Py 3% at top of vns	8%
	467.4	3.1	3.1	100%							
						-469.7 0.9m of predominantly dm			468.9 B at 66° (ss)		
	470.5	3.2	3.16	98.78%					471.1 B at 63° (ss)		
									472.6 B at 63° (ss)		
	473.7	3.1	3.1	100%					474.0 B at 64° (ss)		
									475.6 B at 65° (ss)		
	476.8	3.1	3.1	100%					477.2 B at 64° (ss)		
									contact sharp at 67°		
					477.7	altered sediments intercalated + intb alt (hornfelsed) dark br + dk gy ss & dk br medium grained tuffaceous sandstone	common qz veining mostly disrupted		moderate disruption + contortion	minor Pb + Py & qz	2%
	479.9	3.0	3.07	100% + 2.3% (102.3%)							

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY JC FROM 465 TO 480m DATE 28/5/81 PAGE 33 OF 35

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					482	intercalated & interbedded dark brown & dk grey altered (hornfelsed) siltstone & medium grained tuffaceous sandstone	common quartz veining		moderate disruption & contortion 481·3 B at 66° (ss)	minor Py & Pb & qz	2%
	482·9	1·1	1·1	100%	483				482·8 B at 67° (ss)		
	484·0	3·0	3·0	100%	484				484·0 B at 44° (ss)		
					485				485·6 B at 60° (tuf ss)		
					486						
	487·0	3·0	3·0	100%	487				487·0 B at 50° (ss)		
					488	488·5 1·0 m of gy, well bedded calcareous ss			488·6 B at 63° (ss)		
					489						
	490·0	3·0	2·75	91·67%	490		490·0 qz/actinolite/ tremolite vn 400mm at 31°		490·6 B at 54° (ss).		
					491						
					492				492·1 B at 52° (ss)		
	493·0	3·0	3·0	100%	493				493·5 B at 63° (ss)		
					494						
					495				494·93 at 65° (ss)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 23

LOGGED BY J.C. FROM 450 TO 495 m DATE 28/5/81 PAGE 34 OF 35

29 38 08

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
				496
	496·0	3·0	3·03	100%+
				497
				498
				499
	499·0	3·0	3·02	100%+
				500
				501
				502

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	altered (hornfelsed) interclated and interbedded dark brown, pale br, pale grey & green siltstone & medium grained tuffaceous sandstone 496? 1·4 m of gy calcareous well bedded ss	minor quartz & calcite veining		moderate disruption minor contortion 497·3 B at 70° (cc) 498·5 B at 61° (cc) 500·4 B at 64° (cc)	minor Po & Py & Cal	2%
	END OF DDH: RBE 23 AT 502·0m.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 23

LOGGED BY J.C. FROM 496 TO 502 m DATE 30/5/81 PAGE 35 OF 35

8 6 6 5 8 6

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
51·3	3	48	BLD	9	290	0·1	14	104	
52·0	8	86	BLD	8	350	0·1	5	113	
53·0	3	41	BLD	9	290	0·1	6	122	
53·8	BLD	170	10	21	410	0·4	20	113	
55·0	10	185	BLD	24	290	0·4	22	116	
56·3	80	270	15	13	285	0·9	49	91	
57·7	50	2900	20	37	795	5·6	68	93	
58·4	25	190	10	122	400	0·6	21	89	
58·9	3	900	BLD	46	470	0·5	38	94	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 51·3 TO 60m DATE 27/5/81 PAGE 1 OF 31

83954

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
60·4	4	84	BLD	10	335	0·2	10	115	
61·0	9	57	15	7	260	0·1	5	84	
61·6	3	77	BLD	5	410	0·4	3	110	
63·2	5	40	BLD	14	270	0·3	3	105	
64·0	4	36	BLD	19	270	0·2	3	103	
65·1	BLD	73	BLD	14	250	0·2	6	91	
66·3	15	34	BLD	43	455	0·3	17	100	
67·3	15	61	BLD	194	500	0·3	21	104	
68·2	4	81	BLD	15	300	0·3	800	103	
69·2	BLD	81	BLD	22	320	0·2	19	98	
70·0	15	53	15	119	715	0·3	40	108	
70·6	7	56	10	62	380	0·4	38	104	
71·5	40	10	15	39	450	0·4	660	91	
72·4	45	8	BLD	56	520	0·4	57	90	
73·0	45	99	BLD	123	950	0·3	320	88	
74·2	7	102	BLD	240	560	0·4	800	100	
74·8									

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 60 TO 75 m DATE 27/5/81 PAGE 2 OF 31

8305

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
	40	36	BLD	124	530	0·6	68	96	
76·0	75	8	10	24	430	0·2	600	90	
77·1	40	39	BLD	230	725	0·4	38	100	
78·3	55	18	BLD	66	420	0·1	36	95	
78·8	3	156	20	120	375	1·1	20	112	
79·6	5	51	BLD	21	280	0·1	10	106	
81·2	6	70	BLD	8	240	0·5	5	108	
81·8	4	74	BLD	23	300	0·1	20	103	
83·3	6	56	BLD	8	565	BLD	3	101	
84·2	BLD	70	BLD	21	300	BLD	3	111	
85·0	BLD	32	BLD	7	180	0·1	3	89	
86·0	4	40	BLD	4	170	0·3	13	67	
86·8	3	49	BLD	6	180	0·4	13	45	
87·5	6	91	BLD	4	270	BLD	9	95	
88·6	5	44	BLD	5	240	BLD	19	97	
89·2	6	77	BLD	16	250	0·2	7	87	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 75 TO 90 m DATE 27/5/81 PAGE 3 OF 31

83586

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
90																
90·2	20	22	BLD	106	600	0·2	7	91								
90·8	3	95	BLD	16	154	0·3	20	90								
91·6	3	58	BLD	27	185	0·3	22	91								
93·8	40	35	15	505	1350	0·4	900	85								
95·6	BLD	42	15	13	220	0·1	30	66								
96·8	BLD	44	BLD	8	275	0·3	9	72								
97·5	BLD	35	BLD	8	162	0·2	11	92								
99·6	6	46	BLD	6	200	0·2	12	82								
101·0	BLD	54	BLD	7	255	0·1	6	80								
103·0	BLD	43	BLD	7	145	0·2	6	89								
105																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 90 TO 105m DATE 27/5/81 PAGE 4 OF 31

8 3 9 5 8 7

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
106·0	7	56	BLD	6	154	0·1	6	91	
106·4	BLD	78	BLD	7	168	0·2	9	88	
109·0	BLD	39	BLD	11	187	0·1	4	46	
109·8	BLD	35	BLD	12	150	0·1	3	42	
112·0	6	69	BLD	12	98	0·3	2	53	
115·0	6	87	BLD	11	72	0·3	2	61	
118·0	BLD	48	10	63	315	0·1	2	55	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 105 TO 120 m DATE 27/5/81 PAGE 5 OF 31

83589

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
121·0	8	85	BLD	940	820	1·1	6	57								
122·7	4	35	BLD	42	255	0·3	20	53								
124·0	3	53	BLD	95	200	0·4	69	56								
127·0	BLD	50	BLD	61	280	0·3	8	64								
130·0	BLD	28	BLD	25	125	0·2	2	40								
133·0	BLD	29	BLD	350	860	1·3	12	40								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 120 TO 135 m DATE 27/5/81 PAGE 6 OF 31

83989

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
136·0	BLD	78	BLD	790	2500	1·3	310	71								
139·0	BLD	63	BLD	18	49	0·2	23	97								
142·0	BLD	21	BLD	19	118	BLD	3	38								
145·0	BLD	36	BLD	136	185	0·3	13	45								
148·0	3	50	BLD	20	81	0·5	7	50								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 135 TO 150m DATE 27/5/81 PAGE 7 OF 31

83939

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
151·0	BLD	55	BLD	49	400	0·3	84	81	
154·0	BLD	61	BLD	10	118	0·3	8	76	
157·0	BLD	54	BLD	10	139	0·1	17	78	
160·0	BLD	48	BLD	11	112	0·3	16	74	
162·6	5	88	BLD	260	915	0·5	930	65	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 150 TO 165m DATE 27/5/81 PAGE 8 OF 31

8305G

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
165·7	BLD	57	BLD	23	147	0·3	35	63	
168·8	15	50	15	178	1500	0·4	750	61	
172·0	15	42	BLD	170	540	0·6	50	107	
175·0	3	64	BLD	17	119	0·1	11	73	
178·0	7	59	BLD	17	129	0·1	6	76	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Anglabs FROM 165 TO 180m DATE 27/5/81 PAGE 9 OF 31

26639

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
181·0	4	56	BLD	10	126	BLD	2	73	
184·0	4	63	BLD	9	133	0·1	4	87	
187·0	9	76	15	107	420	1·3	91	95	
190·0	3	70	BLD	20	170	0·2	16	98	
192·9	30	118	15	600	1660	3·4	47	64	
193·6	BLD	87	BLD	260	430	0·9	60	62	
195·0									

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Anslabs FROM 180 TO 195 m DATE 27/5/81 PAGE 10 OF 31

89999

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
195·0	BLD	87	10	40	315	0·3	18	72	
196·0	BLD	75	BLD	21	116	0·2	8	67	
198·7	BLD	82	BLD	17	103	0·2	5	72	
201·0	BLD	57	BLD	9	97	0·1	20	74	
204·0 (OR 204·9)	3	72	15	9	185	1·8	23	85	(different nos in despatch)
208·0	10	67	10	58	370	1·5	180	74	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 195 TO 210 m DATE 27/5/81 PAGE 11 OF 31

83694

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
211.0	15	59	BLD	83	340	1.0	13	73	
214.0	10	121	BLD	17	300	0.2	3	74	
217.0	8	109	BLD	23	225	0.3	30	80	
220.0	7	99	BLD.	62	189	0.3	22	85	
223.0	45	6900	2.0	3700	1.45%	32.0	33	96	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 22

ASSAYED BY Analabs FROM 210 TO 225 m DATE 10/7/81 PAGE 12 OF 31

8305 93

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
225																
226																
226·0																
227	15	83	BLD	370	1250	1·1	20	77								
228																
229																
229·0																
230	8	76	BLD	28	131	0·3	9	86								
231																
232																
232·0																
233	6	66	BLD	26	142	0·3	20	93								
234																
235																
235·0																
236	6	67	BLD	25	180	0·2	25	88								
237																
238																
238·0																
239	BLD	69	BLD	37	112	0·5	15	84								
240																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 225 TO 240m DATE 10/7/6/81 PAGE 13 OF 31

839696

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
240																
241																
241·0																
242	9	103	BLD	13	81	0·5	9	95								
243																
244																
244·0																
245	10	120	BLD	11	91	0·7	10	82								
246																
247																
247·0																
248	15	108	8·5	155	2600	0·6	37	90								
249																
250																
250·0																
251	3	69	15	450	520	6·8	26	81								
252																
253																
253·0																
254	5	100	BLD	77	750	0·4	8	81								
255																

5cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 240 TO 256m DATE 10/17/6/81 PAGE 14 OF 31

83959

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
256·0	BLD	77	BLD	15	150	0·3	4	73	
259·0	7	73	BLD	11	200	0·7	4	84	
262·0	BLD	122	BLD	11	160	1·0	5	82	
265·0	8	57	BLD	15	166	0·2	2	90	
268·0	BLD	19	BLD	14	370	0·3	4	78	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 255 TO 270m DATE 10/17/6/81 PAGE 15 OF 31

83658

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
271·0	120	54	15	1470	1·5%	4·6	220	49	
274·0	30	57	BLD	123	520	0·4	16	41	
277·0	10	32	BLD	50	250	0·3	16	64	
280·0	15	72	BLD	73	330	0·5	210	75	
283·0	10	87	BLD	22	151	0·2	21	81	

5cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 270 TO 285 m DATE 10:17/6/81 PAGE 16 OF 31

88939

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
286·0	6	53	BLD	10	113	0·3	16	81	
289·0	BLD	18	BLD	16	112	0·7	7	84	
292·0	8	182	BLD	15	105	0·2	58	82	
295·0	10	39	BLD	10	101	0·3	81	106	
297·0	3	63	10	10	120	0·5	20	93	
298·0	3	116	BLD	21	300	0·3	4	84	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 285 TO 300 m DATE 10/17/6/81 PAGE 17 OF 31

839600

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
301·0	7	53	BLD	12	105	0·2	3	74								
304·0	10	183	15	14	102	0·3	21	101								
307·0	9	310	15	350	560	1·3	190	114								
310·0	8	36	BLD	21	160	0·5	29	80								
313·0	9	36	BLD	9	108	0·2	7	78								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 300 TO 315m DATE 10/17/6/81 PAGE 18 OF 31

839601

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
316·0	3	103	BLD	15	110	0·7	12	81								
318·1	9	81	BLD	55	103	0·5	10	77								
321·0	6	25	BLD	136	157	0·4	45	75								
324·0	20	44	15	167	560	0·9	29	78								
325·0	40	19	10	60	195	0·3	280	71								
328·0	15	20	BLD	44	230	0·5	77	82								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 315 TO 330m DATE 10/17/6/81 PAGE 19 OF 31

839602

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
330																
331																
331·0	30	135	BLD	164	1050	0·5	100	98								
332																
333																
333·4	40	63	10	18	280	0·5	98	84								
334																
335																
336																
336·4	25	143	6·0	21	360	0·4	100	113								
337																
338																
339																
339·4	45	58	BLD	132	960	1·2	250	78								
340																
341																
342																
342·4	15	15	BLD	35	164	0·2	110	76								
343																
343·2	20	20	BLD	13	460	0·1	76	71								
344																
345																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 330 TO 345m DATE 9/7/6/81 PAGE 20 OF 31

83903

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
346·0	45	38	10	46	181	0·2	2500	92								
349·0	20	73	15	49	200	0·1	78	82								
352·0	25	30	BLD	9	91	0·1	79	80								
355·0	20	33	BLD	31	240	0·1	54	88								
358·0	7	148	BLD	10	151	0·1	39	90								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 345 TO 360 m DATE 10/7/81 PAGE 21 OF 31

839604

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
361·0	45	450	BLD	90	380	0·3	220	95								
364·0	120	91	BLD	10	118	0·1	5200	107								
367·0	85	40	15	7	139	0·6	170	84								
368·3	30	78	BLD	108	1070	0·4	2500	74								
371·4	80	670	BLD	10	118	0·1	163	90								
373·0	45	350	BLD	37	480	0·9	310	71								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 360 TO 375m DATE 19/7/81 PAGE 22 OF 31

89668

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
376·0	6	91	BLD	12	400	0·1	66	115								
379·0	40	27	BLD	37	135	0·2	135	87								
382·0	95	19	BLD	650	250	0·7	170	89								
385·0	70	32	BLD	31	260	0·3	250	105						Ground	Core ↑	
388·0	180	600	BLD	63	191	0·7	1000	122						split	Core ↓	T5857

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RDE 23

ASSAYED BY Analabs FROM 375 TO 390m DATE 10/22/6/81 PAGE 23 OF 31

839606

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
390																
390·6	65	1200	BLD	60	187	1·4	5700	115								T5858
393·2	110	60	BLD	8	137	0·3	900	167								T5859
395·0	85	1140	BLD	7	118	2·7	9000	192								T5860
397·0	260	490	BLD (8·0)	790	5600	4·0	5400	230						W by 2 methods	different of analysis	T5861
399·5	100	138	BLD (17)	3900	9300	9·0	3600	900						W as above		T5862
402·1 Mineralised	70	62	3·5	3900	1·05%	9·8	2000	550						Split Ground	Core ↑ Core ↓	
402·4	9	4	BLD	24	102	0·3	190	630								
405																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 390 TO 405m DATE 10/22/6/81 PAGE 24 OF 31

83960

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
405																
405·4	20	2	BLD	14	165	0·1	110	195								
406·0	3	6	BLD	11	33	0·3	940	1040								
406																
407																
408																
409																
409·0	BLD	3	BLD	7	38	0·1	700	980								
410																
411																
412																
412·0	8	1	BLD	5	51	BLD	19	640								
413																
414																
415																
415·0	10	1	BLD	3	78	0·1	14	670								
416																
417																
418																
418·0	BLD	2	BLD	6	71	0·2	9	1140								
419																
420																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 405 TO 420 m DATE 10/17/6/81 PAGE 25 OF 31

830608

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
421·0	8	5	BLD	187	290	0·3	270	1110								
424·0	15	12	BLD	19	132	0·4	300	530								
427·0	40	118	BLD	27	460	0·7	130	100								
430·0	40	184	BLD	51	910	0·3	98	110								
433·0	40	19	BLD	10	144	1·4	79	101								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 420 TO 435m DATE 10/17/6/81 PAGE 26 OF 31

83609

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
436·0	390	172	15	66	490	0·7	190	71						Ground split	Core ↑ Core ↓	
439·0	380	181	BLD (14)	520	2600	2·4	2300	177						W by 2 different methods of analysis.		T5863
442·1	2150	540	BLD (11)	7400	1·15%	24·5	6600	205						W as above		T5864
444·5	130	280	BLD (20)	990	2200	4·5	2400	210						W as above		T5865
445·9 (from 443·6)	510	485		1840	5200	8·2	3500	162						Split Ground	Core ↑ Core ↓	
446·7	35	245	BLD	83	340	0·3	270	200								
448·0	45	59	BLD	114	650	0·4	250	109								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 435 TO 450 m DATE 10/2/6/81 PAGE 27 OF 31

839610

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
450·8	40	91	BLD	20	170	0·8	150	96	
453·9	30	121	BLD	37	145	0·7	99	74	
456·7	20	45	BLD	67	280	0·3	33	64	
459·7	40	68	4·5	2200	4400	3·1	120	81	
462·8	290	98	6·0	860	2600	2·2	1400	74	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 450 TO 465 m DATE 10/17/6/81 PAGE 28 OF 31

83961

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
465																
466																
465·9	120	85	4·5	3200	4200	3·8	6200	61								
467																
467·4																
468																
469	50	49	4·5	370	1030	1·4	600	47								
470																
470·5																
471																
472	10	63	BLD	87	350	0·3	59	63								
473																
473·9																
474																
475	15	91	BLD	34	175	0·5	45	70								
476																
476·8																
477																
478	10	36	BLD	15	110	0·8	42	70								
479																
480																
479·9																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 465 TO 480m DATE 10/17/6/81 PAGE 29 OF 31

8306612

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	25	30	BLD	16	121	0·5	52	77								
482·9	15	250	15	9	197	0·2	20	91								
484·0	20	240	BLD	118	640	1·2	190	160								
487·0	15	79	BLD	12	84	0·2	21	81								
490·0	20	45	BLD	9	103	0·7	33	71								
493·0	15	54	BLD	10	110	0·3	69	190								

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 480 TO 495 m DATE 10/17/6/81 PAGE 30 OF 31

8396

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
496·0	35	81	BLD	20	118	0·8	33	63								
499·0	15	100	BLD	12	129	0·4	100	94								
502·0	* End of DDH: RBE 23															

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 23

ASSAYED BY Analabs FROM 495 TO 502 m DATE 10/17/6/81 PAGE 31 OF 31

8396144

839615

- 4 FEB 1982

Dept. of M... A.G. ... E.G. ...
Received - 4 FEB 1982
Answered
DEPT. OF MINES
REF. No.
DST file

Photocopy : GAR . DDH : RBE 24

OPEN FILE

82-1690 (Vol 9)
part 4 of 6.
(RBE 24)

8394/13

839616

AUSTRALIAN ANGLO AMERICAN LIMITED
DRILLHOLE LOG
Summary Sheet

PROJECT Renison	**AREA** GAR		**DRILLHOLE TYPE** D.D.H
CO-ORDS E 372638·0 N 5372420·5	**DEC**^{LN} -47°	**AZIMUTH** 077·5°MN **RL** 147·5m	**DH No.** RBE 24
DATE COMMENCED May 1981	**DATE COMPLETED** June 1981	**DRILLED BY** Longyear	**DRILL RIG** Longyear 38
Non Coring to: 27·2m	**HQ Core to:**	**NQ Core to:**	**BQ Core to:** 475m **EOH** 475m

SURVEY DATA Instrument: downhole camera

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH
61m		-47°	073·5° MN	361m		-43°	082·5° MN
91m		-46·75°	074·5° MN	391m		-41·25°	085·5° MN
121m		-46·25°	070° MN	421m		-37°	081·5° MN
151m		-45·75°	075·5° MN	451m		-31·75°	082° MN
181m		-45·25°	079° MN	475m		-28·75°	082·5° MN
211m		-46°	070·5° MN				
241m		-45°	076° MN				
271m		-44·75°	079·5° MN				
301m		-44·25°	079·5° MN				
331m		-44·25°	079·5° MN				

LOG SUMMARY

ROCK TYPE	MINERALIZATION Style	Grade	Intersection width (Corr)
0 - 27·2m: Tricored through wthd ss/tuf sa			
27·2 - 97·0m: intc → intb. calc dk gy + gy ss &	dis. vn Py	3%	
gy calc mg-cg tuf sa & minor bk sh.			
97·0 - 150·0m: lt/dk pu → lt/dk gr m.g. tuf sa	Cal vns Py	0·5%	
+ ss (ho)			
150·0 - 259·1m: intc → intb. gy, gr-gy → dk gy ss &	q.v.'s Po, Py	3%	
gy, gr-gy, dk gy fg-mg tuf sa (ho)	minor mixed vns Po, Py		
259·1 - 304·6m: ho dk br → gr ss/tuf sa.	mod to common mixed vns.	Po, Py 3-5%	
304·6 - 306·4m: talc cbte	mixed vns Po, Py	10%	
306·4 - 315·0m: ho sads	mixed vns Po, Py tr Gl, Sp	7%	
315·0 - 316·5m: talc cbte/mixed vns	q.v.'s Po tr Gl, Sp.	3%	
316·5 - 322·5m: brec talc/talc sads (alt dm?)	f.g. dis Py	2%	
322·5 - 331·3m: talc cbte	dis Po → q.v's Po. tr Gl, AsPy, Sp	4%	
331·3 - 429·2m: gy, gr → br ho sads	mixed vns Py	2%	
429·2 - 431·9m: qb?			
431·9 - 466·2m: ho dk br, gr-gy sads → ash?	mixed vns Po, Py	2%	
466·2 - 468·4m: qz/st vns	Sp 3%, AsPy 1% + Py 1%	5%	
468·4 - 475·0m: ho dk br, gy ss → tuf sa.			

Signature John Crimeen Date 22·6·81

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					0–15	No core recovered : triconed through weathered siltstone + tuffaceous sandstone.					

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.crimeen FROM 0 TO 15m DATE 31/5/81 PAGE 2 OF 33

AP9668

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						No core recovered:- tricored through weathered siltstone + tuffaceous sandstone.					
	27·2	0·8	0·75		27·2	siltstone . tuffaceous sandstone intercalated + interbedded dark grey + minor gy ss & gy . medium to coarse grained tuf sa (units calcareous)	calcite veining : slight to moderate . smooth + disrupted		moderate to heavy 27·9 B at 29° (tuf sa/ss) disruption 29·3 B at 29° (tuf sa/ss)	common Py disseminated & ss : vns. -28·6 siderite/ankerite vn (6mm) & Gl 20% . Sp 10% + Py 10%	5% 4%
	28·0	3·0	3·0	100%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 15 TO 30m DATE 31/8/ PAGE 3 OF 33

95 33 08

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	31.0	3.0	3.0	100%
	34.0	3.0	3.1	100%+
	37.0	3.0	3.0	100%
	40.0	3.0	3.0	100%
	43.0	3.0	3.0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
31–45	intercalated + interbedded dark gray + minor gray siltstone & minor medium grained tuffaceous sandstone + minor black shale.	minor to moderate calcite veining. disrupted + smooth 37.6 quartz/siderite vn: 45mm at 55°		moderate disruption 31.9 B at 30° (ss/tuf ss) 33.6 B at 34° (ss) 35.4 B at 38° (ss) 37.4 B at 20° (ss) 39.1 B at 16° (ss) 40.5 B at 28° (ss) 42.1 B at 38° (ss) 43.8 B at 39° (ss)	common Py in vns. disseminated + & Cal	4%

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C FROM 30 TO 45m DATE 31/5/81 PAGE 4 OF 33

83969

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated & interbedded dark grey & minor gy siltstone & carbonaceous black shale & minor fine to medium grained tuffaceous sandstone. all units are calcareous	minor calcite veining mostly small & disrupted		moderate disruption	common Py. patches. vns. cal vns.	3%
	46.0	3.0	3.03	100%							
									47.0 B at 45° (as/bksh)		
	49.0	3.0	3.03	100%					48.9 B at 28° (ss)		
									bedding contorted		
					-51.0	2m of very common Cal veining	-51.0 Cal vn 10mm at 30°				
	52.0	3.0	3.21	100%			-52.7 Cal vn 120mm at 50°		52.0 B at 31° (ss)		
									53.4 B at 45° (ss)		
	55.0	3.0	3.05	100%					54.9 B at 55° (ss)		
									56.3 B at 29° (ss)		
									57.6 B at 21° (ss)		
	58.0	3.0	3.0	100%					59.8 B at 28° (ss)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RDE 24

LOGGED BY J.C. FROM 45 TO 60m DATE 1/6/81 PAGE 5 OF 33

8396

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					61	intercalated & interbedded dark grey & gy siltstone with carbonaceous black shale & minor gy fine-grained sandstone.	moderate calcite veining, usually small & disrupted		moderate disruption slight to moderate contortion	common Py & vns, cal vns & patches. trace Po.	4%
	61·0	1·5	1·56	100%+	62				61·5 B at 18° (ss)		
	62·5	1·5	1·8	100%	63		-62·8 quartz/siderite/ ankerite vn. 110mm at 58°				
	64·0	3·0	3·0	100%	64				64·6 B at 50° (ss/bk sh)		
					65						
					66				66·3 B at 50° (ss)		
	67·0	3·0	3·01	100%	67						
					68				68·6 B at 49° (ss)		
					69		-69·4 q.v. 40mm at 57°				
	70·0	3·0	3·0	100%	70				70·0 B at 25° (ss)		
					71				71·2 B at 47° (ss)		
					72						
	73·0	3·0	3·02	100%+	73				72·9 B at 43° (ss)		
					74						
					75						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 60 TO 75m DATE 1/6/81 PAGE 6 OF 33

8906224

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	76·0	3·0	3·03	100%	76	interbedded & interbedded dark gray & gy siltstone with minor carbonaceous black shale & gy medium-grained tuffaceous sandstone. units are sporadically calcareous.	moderate to common calcite veining, mostly small & disrupted.		moderate disruption slight to moderate contortion.	common Py in patches vns, disseminated & Ć Cal.	5%
					77				76·7 B at 30° (ss)	76·4 minor Pb	tr
					78				78·1 B at 34° (ss)		
	79·0	3·0	3·03	100%	79				79·7 B at 31° (ss)		
					80						
					81				81·1 B at 36° (ss)		
	82·0	3·0	3·0	100%	82				82·8 B at 46° (ss)		
					83		83·0 1·5 m of very common, disrupted large Cal vns.				
					84						
	85·0	3·0	3·04	100%	85				85·0 B at 41° (ss)		
					86						
					87				86·6 B at 47° (ss)		
	88·0	3·0	3·0	100%	88				88·0 B at 40° (ss)		
					89						
					90						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 75 TO 90m DATE 1/6/8 PAGE 7 OF 33

239688

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					91	intercalated & interbedded dark gray & minor gy siltstone with dk gy & gy medium grained tuffaceous sandstone	moderate calcite veining, mostly large, smooth & disrupted; minor quartz veining		moderate disruption slight to mod. contortion sa massive.	very minor Py & Cal/q v.v.s trace Cp	1%
	91.0	3.0	2.97	99.0%	92						
					93				93.6 B at 35° (ss)		
	94.0	3.0	3.0	100%	94		94.8 Cal/q v.v.s over 400 mm at 65°			94.8 vns have Py, Po	5%
					95						
	97.0	3.0	3.0	100%	97	97.0 predominantly tuf sa from here down. units are slightly altered :- lighter ones & green/brown tinges & darker units & purple tinge.			97.0 B at 34° (ss)		
					98						
	100.0	3.0	3.0	100%	100				100.0 B' at 10° (ss/tuf sa)		
					102						
	103.0	3.0	3.11	100%+	103				103.0 B at 21° (ss/tuf sa)		
					104				104.9 B at 20° (tuf sa/ss)		
					105						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 24

LOGGED BY J.C. FROM 90 TO 105 m DATE 1/6/81 PAGE 8 OF 33

8339623

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					105	intercalated & interbedded grey & dark gy siltstones & gy & dk gy fine to medium grained tuffaceous sandstone. gy units have slight green tinge; dk gy a slight purple tinge. Tinges increasing steadily downhole to 118.0m, where ss & sa are gr. followed by pu sa at 120.4m.	common calcite veining to 116.0m. mostly large & smooth. minor quartz & some vns.		moderate disruption slight to mod. contortion	minor Pb, Py & Cp & Cal vns	0.5%
	106.0	3.0	3.0	100%	106						
					107				107.6 B at 39° (ss/tuf sa)		
					108		108.0 Cal vn 50mm at 64°				
	109.0	3.0	3.01	100%+	109						
					110						
					111						
	112.0	3.0	3.0	100%	112						
					113				113.0 B at 30° (tuf sa)		
					114						
					115		114.7 Cal vn & minor qz. 70 mm at 30°				
	118.0	3.0	2.91	97.0%	116		118.3 Cal vn, 130 mm at 29°				
					117						
					118				118.7 B at 39° (ss)		
	118.0	3.0	3.0	100%	119						
					120				119.9 B at 20° (ss)		

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 105 TO 120m DATE 1/6/81 PAGE 9 OF 33

839921

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	121·0	3·0	3·13	100%+
	124·0	3·0	3·0	100%
	127·0	3·0	3·0	100%
	130·0	3·0	2·99	100%
	133·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	interbedded + minor intercalated purple + minor green siltstones + pu+ minor gr fine to medium grained tuffaceous sandstone. units altered - hornfelsed?	very minor calcite veining. occasional large smooth vns (<30 mm)		minor disruption + contortion 122·0 B at 28° (ss) 123·6 B at 29° (ss) 124·8 B at 28° (ss) 126·7 B at 27° (ss) 128·1 B at 26° (ss) 131·8 B? at 24° (ss) 134·5 B at 26° (ss)	minor Py & cal	0·5%
	130·0 decrease in colouring of units - ie becoming more grey - still ho?					

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 120 TO 135m DATE 1 / / PAGE 10 OF 33

C9698

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					136	intercalated & interbedded purple-gray & green-gy siltstone & pu-gy & gr-gy fine to medium grained tuffaceous sandstone.	moderate calcite / quartz veining - large smooth vns.		moderate disruption & contortion bedding indistinct due to alteration	minor Py. Po + Cp & cal / qz vns	1%
	136.0	3.0	3.0	100%	137				137.2 B at 34° (ss)		
					138						
	139.0	2.9	3.03	100%	139				139.3 B at 24° (ss)		
					140						
					141				141.0 B at 26° (ss)		
	141.9	2.9	3.02	100%	142				142.6 B at 28° (ss)		
					143		143.1 Cal/qz vns over 55 mm at 51°.			143.1 vns contain Po	2%
					144		143.9 Cal/qz + major gy cbte vn. 140 mm at 73°		144.8 B at 29° (ss)		
	144.8	3.0	3.0	100%	145						
					146		145.8 qz/siderite/ankerite vn. 140 mm at 56°		146.7 B at 49° (ss)		
					147						
	147.8	3.0	3.14	100%	148				148.8 B at 35° (ss)		
					149						
					150						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 135 TO 150m DATE 1/6/81 PAGE 11 OF 33

8300636

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	150·8	3·0	3·19	100%
	153·8	3·1	3·1	100%
	156·9	3·0	3·0	100%
	159·9	3·1	3·11	100%
	163·0	3·0	3·02	100%+

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
151	intercalated & interbedded grey, minor green-gy & dark gy siltstone & gy & gr-gy fine to medium grained tuffaceous sandstone.	moderate calcite veining : mostly large smooth vns		moderate to heavy disruption moderate contortion 151·7 B at 20° (ss)	minor Pb. Py & Cal vns	0·5%
152						
153				heavy contortion & disruption		
154						
155						
156						
157						
158		158·0 Cal vn 65mm at 36°				
159						
160					160·0 common Pb in vns & Cal.	3%
161		160·8 Cal vn 150mm at 74°		160·7 B? at 72° (ss)		
162				162·3 B at 34° (ss)		
163						
164						
165						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

OLE LOG FOR DDH RBE 24

LOGGED BY J.C.

PAGE 12 OF 33

8396

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					166	intercalated & interbedded grey, dark gy, minor green-gy & pale brown siltstone & gy, gr-gy & pale br fine to medium grained tuffaceous sandstone & minor black shale. (all units slightly altered-hornfelsed)	common quartz/ siderite veining to 170.0m -166.1 qz/St vn 350mm at 65 -166.8 qz/St vn 300mm at 52		moderate to heavy disruption & contortion	common Pb 4% & Py 1% & qz. in vns & patches	5%
166.0	3.0	3.0	100%								
169.0	2.3	2.3	100%				-170.0 mod. qz/St vns mostly small & smooth				
171.3	3.0	3.0	100%						-173.0 B at 52° (sc)	-173.8 50mm qz/St vn & Sp, Py + Pb	
174.3	0.7	0.7	100%						-174.8 ?B at 42° (sc)		
175.0	3.0	3.0	100%						-178.5 B at 48° (tufsa)		
178.0	3.0	3.0	100%								

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 165 TO 180m DATE 8/6/81 PAGE 13 OF 33

82/33

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					181	intercalated & interbedded grey, dark gy. psla & dk brown siltstone with gy & green -gy fine to medium grained tuffaceous sandstone.	moderate quartz/ siderite veining-small & disrupted-(mixed in). minor actinolite-(epidote?)		moderate to heavy disruption & contortion	very common Po 3% & common Py in patches. vns & ć qz.	4%
181·0	3·0	3·0	100%		182		182·0 qz/St vn over 140mm at 48°		182·2 B at 56° (ss)		
					183						
184·0	3·0	3·04	100%+	184					184·6 B at 47° (ss)		
					186						
187·0	2·7	2·75	100%+	187							
					188						
189·1	3·1	3·14	103%+	190			190·1 qz/St vns 150mm at 51°		189·9 B? at 54° (ss)		
					191						
					192						
192·5	3·1	3·12	100%+	193							
					194						
					195						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 24

LOGGED BY J.C. FROM 180 TO 195 m DATE 8/6/81 PAGE 14 OF 33

69668

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					195	intercalated & minor interbedded gray, dark gy. pale & dk brown siltstone & gy. green-gy & dk br fine to medium grained tuffaceous sandstone (all units altered-hornfelsed)	minor quartz veining with siderite/actinolite? (epidote?) mostly small & disrupted.		moderate to heavy disruption & contortion alteration masks bedding 198.3 B at 32° (ss) 200.1 B at 44° (ss) 203.0 B at 62° (ss) 205.7 B at 89° (tufsa) 209.9 B? at 12° (ss)	common Po 2% & Py 1% & vns. in patches & vns of qz.	3%
	195.9	3.1	3.12	100%+	196						
					197						
					198						
	199.0	2.1	2.2	100%+	199						
					200						
	201.1	2.9	3.01	100%+	201						
					202						
					203						
	204.0	2.5	2.5	100%	204						
					205						
					206						
	206.5	3.0	3.0	100%	207						
					208						
					209						
	209.5	3.0	3.05	100%+	210						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 195 TO 210 m DATE 8/6/81 PAGE 15 OF 33

033930

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	212·5	1·5	1·5	100%
	214·0	3·0	3·03	100%+
	217·0	3·0	3·0	100%
	220·0	2·8	2·91	100%+
	222·8	3·1	3·1	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
211–225	intercalated + minor interbedded, altered (hornfelsed) grey, dark gy (predominates), green-gy, pale + dk brown siltstone with minor br + gy medium grained tuffaceous sandstone.	210·4 qz/cbt vn 2·0 mm at 80° minor calcite + quartz veining, mostly small, smooth and disrupted.		heavy disruption moderate to heavy contortion bedding indistinct due to alteration 212·0 B at 32° (ss) 214·3 B at 64° (ss) 216·3 B at 40° (ss) 218·7 B at 24° (ss) 222·4 B at 40° (ss)	common Pb 2% + Py 1% in vns	3%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 210 TO 225 m DATE 15/6/81 PAGE 16 OF 33

39638

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	225·9	2·7	2·7	100%	226	intercalated & interbedded, altered (hornfelsed) grey, dark gy-green-gy pale & dk brown siltstone & gy-gr-gy & dk brown medium grained tuffaceous sandstone.	minor quartz veining mostly small & smooth		moderate disruption & contortion	common Po & Py in vns	2%
					227				227·4 ?B at 28° (ss)		
	228·6	3·1	3·14	100%+	228						
					229						
					230						
					231						
	231·7	3·1	3·12	100%+	232						
					233				233·7 B? at 34° (ss)		
					234						
	234·8	1·9	1·98	100%	235				235·8 B? at 24° (ss/tuf ss)		
					236						
	236·7	3·1	3·1	100%	237				237·5 B at 62° (ss)		
					238						
					239				239·5 B at 32° (ss/tuf ss)		
	239·8	1·7	1·7	100%	240						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 24

LOGGED BY J.C. FROM 225 TO 240m DATE 8/6/[illegible] PAGE 17 OF 33

29938

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					241	intercalated + interbedded gray, dark gy, pale + dk brown siltstone (+ very fine grained ash) & minor f.g. tuffaceous sandstone. units hornfelsed.	minor calcite/quartz/siderite vaining; mostly small + smooth		moderate to heavy disruption + contortion	very common Po 2% + Pv 1% in vns + & qz. patches, disseminated + bands.	3%
	241·5	2·0	2·02	100%+	242				241·8 B at 28° (cs)		
					243				243·1 B at 58° (cs)		
	243·5	3·1	3·1	100%	244				244·4 B at 35° (cs)		
					245						
					246				246·4 B at 15° (cs)		
	246·6	2·2	2·28	100%+	247						
					248				248·2 B at 25° (cs)		
	248·8	2·0	2·0	100%	249						
					250				250·1 B at 20° (cs)		
	250·8	2·2	2·26	100%	251						
					252						
	253·0	3·0	3·0	100%	253				253·0 B at 16° (cs)		
					254						
					255				254·9 B at 28° (cs)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 240 TO 255m DATE 11/6/81 PAGE 18 OF 33

8396633

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					256	intercalated & interbedded, hornfelsed predominantly grey to 259·1, then predominantly dark brown plus minor gy, dark gy & pale br siltstone (& very fine grained ash) & v. minor dk br, f.g tuffaceous sandstone.	common veining & gy units at top, less common below. quartz/calcite/apiddote /actinolite/siderite vns - mixed & altered sediments. qz/st vns are smooth, large, (<75mm), others are disrupted & smooth. -259.4 mixed vns over 800 mm steep to core axis.		moderate to heavy disruption & contortion bedding masked by alteration	common Po 3% & Py 1% & mixed vns, in bands	4%
	256·0	3·0	3·0	100%	257						
					258						
	259·0	1·3	1·24		259						
					260						
	260·3	2·4	2·4	100%	261						
					262						
	262·7	1·8	1·8	100%	263						
					264						
	264·5	3·0	2·9	97%	265						
					266				266·3 B at 42° (ss)		
					267						
	267·5	0·3	0·29	97%					267·5 core highly broken - fault zone		
	267·8	2·9	2·9	100%	268				268·3 B at 22° (ss)		
					269						
					270						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.C. FROM 255 TO 270m DATE 11/6/81 PAGE 19 OF 33

83063A

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	270·7	3·1	3·1	100%	271	intercalated & interbedded hornfelsed predominantly dark brown with green-grey & minor gray & pale br siltstone with minor gr-gy & dk br fine-grained tuffaceous sandstone.	common to minor quartz & mixed veining, decreasing downhole. mostly disrupted.		moderate to heavy disruption & contortion bedding indistinct due to alteration	minor Pb. Py a trace Sp (q.v at 273·4m). Pb 1%.	1%
					272						
					273				273·0 ? B at 60° (ss)		
	273·8	2·7	2·7	100%	274						
					275				275·1 ? B at 44° (ss)		
					276						
	276·5	2·9	2·9	100%	277						
					278				278·7 B at 20° (sa)		
					279						
	279·4	3·2	3·2	100%	280						
					281				281·6 B at 42° (aa/tuf sa)		
					282						
	282·6	2·9	3·08	100%+	283				283·1 ? B at 43° (tuf sa)		
					284						
					285						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C FROM 270 TO 285m DATE 11/6/81 PAGE 20 OF 33

8336

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	285·5	0·5	0·5	100%	286	interbedded & minor interbedded hornfelsed dark brown & gray-green with minor gy, dk gy & pale br siltstone (& very fine ash & minor gr-gy & dk tuffaceous sandstone)	moderate quartz & mixed veining mostly disrupted.		heavy disruption & & contortion	minor Py, common Po & Sp & mixed vns (2%)	
	286·0	3·0	3·0	100%	287				287·3 B at 47° (ss)		
	289·0	2·8	2·8	100%	289						
					290				290·6 B at 45° (ss)		
					291						
	291·8	2·0	2·0	100%	292				292·9 B? at 48° (ss)		
					293						
	293·8	3·0	3·0	100%	294					294·9 100 mm mixed vn & Po 45% & Py 8%	60%
					295						
					296						
	296·8	3·0	3·0	100%	297				297·3 B? at 40° (ss)		
					298						
					299						
	299·8	1·2	1·2	100%	300				[illegible] at 40° (ss)		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C. FROM 285 TO 300 m DATE 11/6/81 PAGE 21 OF 33

9333

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated + minor interbedded hornfelsed dark brown + green, with minor pale br, siltstone & minor very fine ash + fine-grained tuffaceous sandstone.	common mixed veins disrupted + mixed in		heavy disruption + contortion 301·4 B? at 65° (ss)	very common Po 6% + Py 1% in mixed vns	7%
	301·0	3·0	3·02	100%+							
	304·0	3·0	3·0	100%	304·6	talc carbonate pale gy-white, gy, gr + br cbtes & minor talc	mixed veins at top + bottom ~30%		contact indistinct but steep to core axis strongly foliated + veined at 60°.	v. common Po 5% + Py 1% & mixed vns. minor Mt.? & cbtes.	10%
					306·4	hornfelsed sedimants. intercalated + minor intb, gy, gr-gy pale + dk br siltstone & v.f.g. ash + f.g tuf ss (minor)	v. common mixed vns + 307·0 quartz/siderite vn, 2.0 mm at 65° 20%.		contact indistinct but steep to core axis. highly disrupted + contorted-often brecciated?	v. common Po 4% + Py 4% 307·0 Gl 2% + Sp 2% in vn & mixed vns.	4% 8%
	307·0	3·0	2·97%	99·0%							
	310·0	3·0	3·0	100%+					311·1 B? at 66° (ss/ash)		
	313·0	2·8	2·92	100%+					314·1 B at 54° contact at 52°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 24

LOGGED BY J.D.C. FROM 300 TO 315m DATE 11/6/81 PAGE 22 OF 33

39698

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						talc carbonate / mixed veins mixed vns → talcose sediments → quartz/siderite vns → cbte (yellow, pale gy, gr, wh)	-315.3 qz/St vns over ≈50 mm at 64°		moderate foliation at 45°	common Po & qz trace Gl, Sp	3%
315.8	3.0	3.02	100%	316							
					316.5	bracciated talc / talcose sediments dark & pale green talc + talcose seds (altered dolomite)	cut by wh cbte vns small & smooth.		contact at 54° unit bracciated in places, well-bedded in other places (talc brec) 318.3 B at 52° (talc seds)	minor Po towards bottom of section in cbte vns. very fine-grained disseminated Py	?2%
				317							
				318							
318.8	3.0	3.0	100%	319							
				320					320.6 B at 59° (talc seds)		
				321			-320.9 several barren wh qz vns over 500 mm at 72°				
321.8	3.1	2.96	95.48%	322					contact @ qv at 64°		
						talc carbonate zone talc at top & bottom of unit, ye, gy, wh, pale br, pale gr cbtes & minor magnetite, pyrite streaks & blabs.	several qz/St? vns at top		weak to mod. fol / vning	common Py, minor Po	4%
				323							
				324			-324.5 qv 130 mm at 45°		324.4 fol at 53°	-324.5 vn contains Gl 3%, Sp 3% & AsPy 2%	8%
324.9	3.1	3.1	100%	325							
				326			-326.0 qz/St? vn 190 mm at 50°			-326.0 vn has Py 8%, Sp 4%, AsPy & Bi tr	12%
				327					326.8 fol at 63°		
328.0	3.0	2.98	99.3%	328							
				329					329.0 fol at 54°		
				330							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C. FROM 315 TO 330m DATE 11/6/81 PAGE 23 OF 33

83696

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						yellow, white, green & grey carbonates with talc zone at bottom of unit					
	331·0	3·0	3·0	100%	331·3	hornfelsed sediments intercalated & interbedded gr. gy. pale & dark brown, fine to coarse grained tuffaceous sandstone (& common f. ash/siltstone clasts) & gy. gr & br ss (all units ho). clasts often aligned along bedding planes	very common quartz & mixed vaining; smooth & disrupted		contact unclear at 56°? slight to heavy disruption & contortion thin bedded to laminar brecciated in sections.	common Py, minor Po & trace sl (& a.v.s) & mixed vns.	2%
	334·0	1·0	1·0	100%					334·3 B at 46°		
	335·0	2·8	2·73	97·5%					336·1 1·5 m of brec sads.		
	337·8	2·2	2·17	98·64%					337·7 core highly broken 339·0 B at 66°		
	340·0	3·0	3·0	100%					340·2 B at 54° 341·5 B at 60°		
							342·7 qz/siderite vn 100 mm at 43°		342·7 Vn contains AsPy		20%
	343·0	2·4	2·4	100%					343·8 B at 60°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C. FROM 330 TO 345m DATE 13/6/81 PAGE 24 OF 33

839639

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	345·4	0·6	0·58	96·7%
	346·0	2·7	2·7	100%
	348·7	3·1	3·1	100%
	351·8	2·0	2·03	100%+
	353·8	1·2	1·31	100%+
	355·0	3·0	3·01	100%
	358·0	3·0	3·06	100%+

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
345·4 – 360	intercalated & interbedded, hornfelsed, brown, with minor green, grey, pale & dark br fine to medium grained tuffaceous sandstone (sometimes & ash/siltstone clasts) & predominantly br ss.	moderate to common quartz & mixed vaining; usually small, smooth & disrupted. 354·3 qz/mixed vn over 400 mm at 54°?		mod. disruption & & contortion: thin to laminar bedding 347·1 1·5 m highly broken core. 351·1 B at 64° 353·4 B at 62° 355·7 B at 62° 357·9 B at 44°	minor Po, Py & qz/mixed vns	1%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RDE 24

LOGGED BY J.D.C. FROM 345 TO 360m DATE 15/6/81 PAGE 25 OF 33

839640

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	361·0	3·0	3·03	100%+	361	intercalated & interbedded hornfelsed brown, green, grey-gr & minor pale & dark br siltstone & fine to medium grained tuffaceous sandstone.	moderate quartz & mixed veining mostly large (<100mm) disrupted vns.		moderate to heavy disruption & contortion 361·7 ? B at 40°	common Po, Py; trace Gl, AsPy, sp & mixed vns	2%
	364·0	3·0	3·08	100%+	362				363·4 B at 46°		
	367·0	3·0	3·09	100%+	363				365·0 B at 49°		
	370·0	3·0	3·0	100%	364				366·8 B at 54°		
	373·0	3·0	3·0	100%	365				369·1 B at 50°		
					366				370·8 B at 68°		
					367				373·8 B at 40°		
					368						
					369						
					370						
					371						
					372						
					373						
					374						
					375						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C. FROM 360 TO 375 m. DATE 15/6/81 PAGE 26 OF 33

83968

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	376·0	3·0	3·03	100%+	376	intercalated & interbedded, hornfelsed brown, grey & green siltstone & fine to to medium grained tuffaceous sandstone.	common quartz & & mixed veining minor qz/siderite veining		moderate to heavy disruption & contortion 376·3 B at 60°	common Po, Py (trace sp, Gl, AsPy & qz) & mixed vns. slight increase in last .5 m.	2%
	379·0	3·0	3·04	100%+	379				378·9 B at 40°		
	382·0	3·0	3·0	100%	382				381·7 ? B at 60°		
	385·0	3·0	3·04	100%+	385		386·6 qz/St vns over 130 mm at 70° (has stylolites)		384·5 B at 64° 386·1 B at 73° 387·4 B at 55°		
	388·0	3·0	3·0	100%	388	388·6 0·4 m highly altered, green microgabbro					
					390						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C. FROM 375 TO 390m DATE 15/6/81 PAGE 27 OF 33

8306429

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	391.0	3.0	3.0	100%
	394.0	3.0	3.16	100%+
	397.0	3.0	3.09	100%+
	400.0	3.0	3.0	100%
	403.0	3.0	2.9	96.6%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intercalated + interbedded dark brown, grey + minor green hornfels -ed siltstone + fine to medium grained tuffaceous sandstone (possibly contains shale units) ash present.	very common quartz veining; common mixed veining; smooth + disrupted -392.5 vn & biotite -393.3 qz/siderite vn 200mm at 80°		heavily disrupted + contorted (soft sediment brecciation) minor thin bedded to laminar 393.1 B at 65° 395.5 B at 70° (ss/ash) 398.9 B at 75° (ss/ash)	common Po, Py in vns in top section. -392.5 small mixed vn & black Po?? (Po+Ct? bi?)	2% 10%
		-399.5 q.v. (s) over 1.5m (& St at edges) at 35°				
		-402.2 qz/St/minor fluorite (& cxcomb texture) 0.7m at 32°			-402.2 vn contains AsPy 4% Sp 1%.	5%

SCALE 1:100 (1cm = 1m)

5 cm

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C FROM 390 TO 405m DATE 22/6/81 PAGE 28 OF 33

CZ9638

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	406·0	3·0	3·0	100%
	409·0	3·0	3·16	100%+
	412·0	3·0	3·2	100%+
	415·0	3·0	3·0	100%
	418·0	3·0	3·03	100%+

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	predominantly dark brown & gray a minor green intercalated and interbedded hornfelsed siltstone & fine to medium grained tuffaceous sandstone, with minor very f. ash.	common to very common quartz veining; moderate mixed veining; mostly disrupted 411·1 qz. vns over 400 mm; smooth at 20°		moderate to heavy disruption & contortion bedding masked 416·6 B at 52°	minor Pb, Py in small veinlets.	1%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C FROM 405 TO 420m DATE 22/6/81 PAGE 29 OF 33

8396-44

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					421	predominantly dark brown & green + minor grey hornfelsed, intercalated + interbedded siltstone + medium grained tuffaceous sandstone with minor light brown fine grained ash.	very common quartz + mixed veining. mostly large and disrupted (10-15%). q.v's commonly along bd planes.		heavy disruption bedding masked by hornfelsing. core commonly broken	moderate Po. Py & mixed + q.v's.	2%
	421·0	3·0	3·07	100%+	422						
					423				423·0 B 41 q.v at 46°		
	424·0	3·0	3·0	100%	424						
					425						
					426				426·0 B? at 51° (ash)		
	427·0	3·0	3·07	100%+	427						
					428				428·6 B? at 60° (ss)		
					429	429·2 0·8m altered gabbro? / possibly just mixed vn (contains actinolite / tremolite).					
	430·0	3·0	3·0	100%	430						
					431	430·8 1·1 m alt gb? / mixed vn?					
					432				432·2 ?B varies ~40°		
	433·0	3·0	3·0	100%	433						
					434						
					435						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C. FROM 420 TO 435m DATE 22/6/81 PAGE 30 OF 33

839645

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	436·0	3·0	3·1	100%
	439·0	3·0	3·0	100%
	442·0	3·0	3·0	100%
	445·0	3·0	3·07	100%
	448·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	436·0 1·5m brown siltstone with common shale/ash clasts (<5mm) hornfelsed, interbedded and intercalated, dark br & green & gray siltstone & fine to medium grained tuffaceous sandstone.	common (not as common as in last 15 m) quartz + mixed veining, usually together, disrupted		moderate disruption bedding often masked by hornfelsing 437·4 B at 55° 440·0 B at 57° 442·4 B at 65° 445·0 B at 62° 447·0 B at 65° 449·3 B at 69°	minor Po, Py & vns 436·0 common Po & vns in br ss unit	1% 3%
		442·7 q,v over 150mm, disrupted, steep to core axis.				
		447·3 mixed vn & pink carbonate? (rhodochrosite?) 130mm, steep to c.a.				

SCALE 1:100 (1cm = 1m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 24

LOGGED BY J.D.C. FROM 435 TO 450m DATE 22/6/81 PAGE 31 OF 33

96338

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					451	hornfelsed, intercalated & interbedded dark brown, grey & green siltstone & fine to medium grained tuffaceous sandstone. minor light brown ash bands.	minor quartz & mixed veins, small & smooth & disrupted.		moderate disruption bedding masked by hornfelsing	Very minor Ba, Py & vns	tr
	451·0	3·0	3·08	100%+	452				451·5 B? at 50°		
					453						
	454·0	3·0	3·0	100%	454				454·7 B at 62°		
					455						
					456				456·5 B at 64°		
	457·0	3·0	3·0	100%	457						
					458				458·7 ?B at 75°		
					459						
	460·0	3·0	3·0	100%	460						
					461						
					462				462·1 B at 65°		
	463·0	3·0	3·1	100%+	463						
					464						
					465	464·8 br ash.			465·0 B at 65°		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 24

LOGGED BY J.D.C. FROM 450 TO 465m DATE 22/6/81 PAGE 32 OF 33

8936

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					466	interbedded & intercalated yellow/brown/grey fine grained ash with minor dark br siltstone to 468·8m	common quartz veining		heavy disruption and contortion	minor mineralisation & qz/siderite	3%
	466·0	1·4	1·4	100%			466·2 qz/St vn over 2·2 m at 65°			466·2 Vn contains Sp 2%, AsPy 1% & Py 1%.	5%
					467						
	467·4	3·4	3·39	99·7%	468						
									468·5 B at 74° (ash)	468·6 10 mm vn Gl	qpf
					469	468·8 intc dk br + gy ss + medium grained tuffaceous sandstone.					
					470						
	470·8	3·0	3·0	100%	471						
					472						
					473						
	473·8	1·2	1·35	100%	474						
					475	END OF DDH: RBE 24 at 476·0 m					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 24

LOGGED BY J.D.C FROM 465 TO 475m DATE 22/6/81 PAGE 33 OF 33

830648

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
27.2	BLD	64	BLD	14	145	0.3	9.	104	
28.0	25	91	15	5000	4000	5.6	2200	106	

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 27.2 TO 30m DATE 29/6/81 PAGE 1 OF 31

C39649

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
31·0	BLD	100	BLD	143	340	0·6	60	137								
34·0	BLD	99	10	165	540	0·6	19	79								
37·0	20	92	BLD	170	415	0·9	890	66								
40·0	BLD	81	BLD	16	110	0·5	36	66								
43·0	BLD	86	BLD	47	199	0·5	10	56								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24.

ASSAYED BY Analabs FROM 30 TO 45 m DATE 29/6/81 PAGE 2 OF 31

0 0 9 9 6 9 0

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
46·0	BLD	69	BLD	56	173	0·4	7	48	
49·0	BLD	75	BLD	168	320	0·4	17	49	
52·0	10	74	BLD	40	310	0·7	5	69	
55·0	BLD	67	BLD	13	125	0·4	19	85	
58·0	BLD	87	BLD	13	186	0·7	32	98	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 45 TO 60 m DATE 29/6/81 PAGE 3 OF 31

8396

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
61·0	15	64	BLD	355	910	0·5	240	58	
62·5	20	102	BLD	415	1470	0·6	530	81	
64·0	BLD	91	15	21	240	0·2	37	114	
67·0	BLD	66	15	13	200	0·3	60	89	
70·0	10	81	25	54	240	0·4	21	78	
73·0	10	60	BLD	30	163	0·3	12	61	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 60 TO 75m DATE 29/6/81 PAGE 4 OF 31

839652

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
76·0	BLD	82	BLD	82	485	0·3	16	69								
79·0	10	71	BLD	158	310	0·4	10	54								
82·0	BLD	60	BLD	47	610	0·2	8	45								
85·0	BLD	63	BLD	24	220	0·2	7	44								
88·0	BLD	75	BLD	12	154	0·3	35	101								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 75·0 TO 90·0m DATE 29/6/81 PAGE 5 OF 31

83638

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
91·0	BLD	30	BLD	17	117	0·2	34	103								
94·0	BLD	225	BLD	39	220	0·4	37	88								
97·0	15	87	BLD	15	148	0·3	67	105								
100·0	BLD	27	10	7	90	0·2	35	96								
103·0	20	73	BLD	8	94	0·2	21	109								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 90 TO 105 m DATE 29/6/81 PAGE 6 OF 31

839654

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
106·0	BLD	26	BLD	5	154	0·1	44	104								
109·0	BLD	290	10	425	340	0·3	31	107								
112·0	BLD	176	BLD	11	103	0·1	7	102								
115·0	20	151	10	5	106	0·1	4	100								
118·0	10	80	BLD	5	103	0·1	1	103								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 105 TO 120 DATE 29/6/81 PAGE 7 OF 31

839655

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
120																
121	121·0															
122		15	5	BLD	6	101	0·1	5	96							
123																
124	124·0															
125		BLD	9	BLD	6	100	0·2	3	97							
126																
127	127·0															
128		15	9	BLD	12	97	0·1	2	104							
129																
130	130·0															
131		BLD	47	BLD	5	89	BLD	BLD	107							
132																
133	133·0															
134		45	20	BLD	168	250	0·4	BLD	106							
135																

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 24

ASSAYED BY Analabs FROM 120 TO 135 m DATE 29/6/81 PAGE 8 OF 31

83969

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
136·0	BLD	37	BLD	7	109	BLD	BLD	107	
139·0	BLD	1300	BLD	6	125	0·2	BLD	108	
141·9	BLD	240	BLD	10	129	0·4	37	108	
144·8	20	105	BLD	89	330	0·3	50	104	
147·8	20	175	BLD	3	109	0·3	31	116	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 135 TO 150 m DATE 29/6/81 PAGE 9 OF 31

8999

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
150·8	BLD	38	BLD	4	165	0·1	26	92								
153·8	BLD	47	BLD	45	174	0·3	61	66								
156·9	15	29	BLD	25	125	0·2	49	95								
159·9	30	128	BLD	148	645	0·6	96	91								
163·0	50	132	BLD	182	685	0·6	71	82								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 150 TO 165 DATE 29/6/81 PAGE 10 OF 31

83955

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
166.0	160	110	BLD	4600	6200	8·4	410	56	
169.0	100	70	BLD	189	1690	1·1	140	74	
171.0	50	146	BLD	171	1010	1·4	190	74	
174.3	80	176	BLD	265	1000	0·8	36	77	
176.0	20	45	BLD	45	270	0·8	100	67	
178.0	50	91	BLD	33	174	0·3	32	80	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 165 TO 180 m DATE 29/6/81 PAGE 11 OF 31

83968

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
181·0	35	164	15	105	1000	0·5	24	78	
184·0	50	167	15	280	1030	1·6	180	76	
187·0	30	122	BLD	94	360	0·4	27	78	
189·7	45	69	BLD	10	94	0·7	41	90	
192·8	70	58	BLD	94	380	0·4	260	93	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 180 TO 195 DATE 29/6/81 PAGE 12 OF 31

830660

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
195·9	BLD	1900	BLD	16	125	0·6	13	295	
199·0	20	136	BLD	30	153	0·3	34	89	
201·1	BLD	182	BLD	70	86	0·5	28	88	
204·0	25	88	BLD	21	99	0·3	48	87	
206·5	15	126	BLD	21	78	0·1	39	98	
209·5									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 195 TO 210m DATE 29/6/81 PAGE 13 OF 31

T9638

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
210									
211	65	74	BLD	113	1260	1·0	310	73	
212									
212·5	25	169	BLD	46	235	0·3	64	100	
214									
214·0	15	2900	BLD	12	63	2·0	11	330	
216									
217									
217·0	20	225	BLD	9	98	0·4	27	107	
219									
220									
220·0	15	67	BLD	7	69	0·2	49	86	
222									
223									
222·8	10	125	BLD	8	68	0·1	49	98	
224									
225									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 210 TO 225m DATE 29/6/81 PAGE 14 OF 31

83066

	Matrix	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
225																	
226	225·9																
227		BLD	470	BLD	12	96	0·2	20	100								
228																	
229	228·6																
230		15	69	BLD	6	70	0·1	67	91								
231																	
232	231·9																
233		40	95	BLD	10	93	0·2	35	86								
234																	
235	234·8																
236		BLD	175	BLD	9	63	0·1	33	123								
237	236·7																
238		15	85	BLD	7	88	0·3	33	92								
239																	
240	239·8																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 225 TO 240m DATE 29/6/81 PAGE 15 OF 31

83966

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	25	113	BLD	7	82	BLD	32	96								
241.5	15	310	BLD	74	530	0.3	46	117								
243.5	10	315	BLD	19	62	0.1	16	157								
246.6	25	315	BLD	13	69	0.5	16	140								
248.8	10	250	15	31	124	0.3	18	95								
250.8	25	119	BLD	16	73	0.3	41	77								
253.0	40	98	BLD	52	530	0.3	53	85								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 240 TO 255m DATE 29/6/81 PAGE 16 OF 31

83-0664

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
256·0	160	32	15	290	1170	0·8	2000	112								
259·0	65	52	BLD	93	490	0·6	800	108								
260·3	65	127	BLD	64	665	0·5	2500	143								
262·7	20	107	10	9	72	0·1	290	110								
264·3	BLD	290	BLD	13	60	0·4	45	159								
267·8	15	191	BLD	22	82	0·8	29	104								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 255 TO 270m DATE 29/6/81 PAGE 17 OF 31

830665

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
270																
270·7																
271																
272	30	146	15	235	1250	3·2	53	107								
273																
273·8																
274																
275	BLD	28	BLD	14	180	0·4	240	92								
276																
276·5																
277																
278	25	202	BLD	13	131	0·5	90	79								
279																
279·4																
280																
281	70	50	BLD	10	340	0·3	150	88								
282																
282·6																
283																
284	160	10	25	21	118	0·2	75	86								
285																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 270 TO 285 m DATE 29/6/81 PAGE 18 OF 31

999628

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
286·0	75	38	BLD	27	89	0·1	42	85								
289·0	180	10	BLD	14	94	0·3	78	99								
291·5	30	49	BLD	14	123	0·3	60	91								
293·5 (→ 296·8)	160	610	BLD	10	120	0·3	49	141							Ground	Core ↑
294·7	170	1000	BLD	36	175	1·0	28	190							Split	Core
293·1 (from 293·5)	160	610	BLD	10	120	0·3	49	141							Ground	Core ↓
296·8	120	11	BLD	15	110	0·4	93	79								
299·8																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 258 TO 300m DATE- 29/6/81 PAGE 19 OF 31

19868

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	120	37	10	15	111	0·3	290	125								
301·0 (to 304·0)	90	116	BLD	19	114	0·3	66	113							Ground	Core ↑
302·0	95	335	BLD	15	110	0·5	360	190							Split	Core
302·7 (from 301·0)	90	116	BLD	19	114	0·3	66	113							Ground	Core
304·0 (to 307·0)	65	430	BLD	2600	910	2·4	650	820							Ground	Core
304·4	90	1450	BLD	30	135	1·5	280	1250							Split	Core
305·2 (from 304·0 to 307·0)	65	430	BLD	2600	910	2·4	650	820							Ground	Core
305·8	80	610	BLD	35	125	0·5	410	760							Split	Core ↓
306·8	140	250	BLD	7000	3950	15·0	720	330							Split	Core
307·3	100	295	BLD	20	115	1·0	370	225							Split	Core ↑
308·8 (from 301·0)	100	250	BLD	48	167	0·6	300	183							Ground	Core
310·0 (to 313·0)	90	3100	BLD	78	650	0·9	200	250							Ground	Core
311·0	80	1200	BLD	100	480	0·5	58	255							Split	Core
311·7 (from 310 to 315)	90	3100	BLD	78	650	0·9	200	250							Ground	Core
312·8	55	760	BLD	15	120	1·0	43	245							Split	Core
313·9 (to 315·8) (from 313·0)	40	530	10	505	605	3·8	830	450							Ground	Core

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 300 TO 315 m DATE 29/6/81 PAGE 20 OF 31

8396

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
315																
315.3	30	100	BLD	815	1700	5.5	1300	1200							Split	Core
316																
316.25 (from 315.8)	15	9	BLD	29	163	0.4	830	660							Ground	Core ↓
317																
318																
318.8	15	22	10	30	102	0.4	590	515								
319																
320																
321																
321.8 (to 324.9)	940	74	15	620	2800	2.8	2600	770							Ground	Core ↑
322																
323																
324																
324.3	120	175	BLD	4800	9700	10.5	5400	1200							Split	Core
324.7	940	74	15	620	2800	2.8	2600	770							Ground	Core
324.9 (to 326.0)	85	13	BLD	1660	3100	1.5	410	870							Ground	Core
325																
326																
326.0	390	110	30	5500	3.3%	9.5	710	700							Split	Core
326.5 (from 324.9 to 328.0)	85	13	BLD	1660	3100	1.5	410	870							Ground	Core ↓
327																
328																
328.0	15	9	BLD	191	355	0.6	1800	1500								
329																
330																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 315 TO 330 m DATE 29/6/7/81 PAGE 21 OF 31

830660

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
331·0	100	8	BLD	74	425	0·5	450	450								
334·0	50	650	10	340	370	2·0	430	470								
336·0	40	10	BLD	18	193	0·2	290	355								
337·8	75	24	BLD	156	173	0·7	170	170								
340·0	40	147	BLD	250	370	4·2	9900	88								
343·0	55	30	15	13	110	0·4	230	87								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 330 TO 345 m DATE 29/6/81 PAGE 22 OF 31

8300820

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
345																
346	346·0															
347		30	14	50	19	260	0·3	92	84							
348																
349	348·7															
350		30	11	BLD	7	86	0·2	130	88							
351																
352	351·8															
353		15	106	BLD	9	91	0·2	44	82							
354	353·8															
355																
356		25	31	BLD	6	81	0·1	55	89							
357																
358	358·0															
359		10	36	15	9	102	0·2	36	91							
360																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 345 TO 360m DATE 2/7/81 PAGE 23 OF 31

8396

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
361·0	25	43	20	22	450	0·2	24	82								
364·0	45	42	15	10	100	0·2	340	132								
367·0	30	171	BLD	9	128	0·2	630	141								
370·0	20	131	BLD	15	80	0·2	28	90								
373·0	45	121	BLD	24	173	0·7	300	157								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 360 TO 375m DATE 2/7/81 PAGE 24 OF 31

830672

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
376·0	290	57	BLD	13	153	0·3	31	61								
379·0	25	18	10	12	105	0·2	27	90								
382·0	30	37	BLD	8	106	0·2	42	90								
385·0	110	360	20	1350	660	2·0	120	92								
388·0	100	115	25	230	1900	1·6	310	106								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 375 TO 390m DATE 2/7/81 PAGE 25 OF 31

83963

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
390																
391	391·0															
392		270	100	30	126	560	0·7	90	90							
393																
394	394·0															
395		80	63	10	50	245	0·7	28	91							
396																
397	397·0 (to 400·0)															
398		110	53	10	107	800	0·5	500	97							
399															ground	core ↑
400	399·8	260	20	BLD	35	400	1·0	980	290						split	core
401	401·0															
402		160	60	30	3900	4200	10·0	1900	140						split	core
403	402·9 403·0	110	25	25	1850	155	3·4	900	45							
404		25	32	BLD	23	153	0·4	570	93						ground	core ↓
405																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 390 TO 405 m DATE 2-16/7/81 PAGE 26 OF 31

8396 Pt 1

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
406.0	45	25	15	32	197	0.3	13	87	
409.0	30	17	BLD	18	120	0.2	31	92	
412.0	25	27	BLD	21	120	0.3	43	78	
415.0	4	86	BLD	23	159	0.2	27	92	
418.0	45	48	BLD	90	370	0.4	1500	83	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 405 TO 420 m DATE 2/7/81 PAGE 27 OF 31

83.067.5

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
421·0	25	49	BLD	26	200	0·6	90	95	
424·0	130	36	BLD	139	435	1·5	690	76	
427·0	110	42	BLD	12	100	0·3	130	99	
430·0	170	37	BLD	83	590	0·5	62	120	
433·0	20	69	BLD	13	129	0·3	28	72	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 420 TO 435 m DATE 2/7/81 PAGE 28 OF 31

83676

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
436·0	35	118	15	290	670	0·6	52	105								
439·0	30	63	BLD	41	280	0·5	93	107								
442·0	10	57	BLD	83	135	0·4	31	87								
445·0	200	57	BLD	89	110	0·6	12	79								
448·0	75	46	10	11	82	0·2	41	73								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 435 TO 450m DATE 2/7/81 PAGE 29 OF 31

8306

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
450																
451																
451·0																
452	130	23	30	32	113	0·5	160	100								
453																
454																
454·0																
455	140	19	BLD	59	115	0·9	53	80								
456																
457																
457·0																
458	25	176	BLD	7	84	0·5	61	85								
459																
460																
460·0																
461	85	93	20	3000	1020	9·6	390	86								
462																
463																
463·0																
464	35	50	10	910	360	3·9	190	79								
465																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 450 TO 465m DATE 2/7/81 PAGE 30 OF 31

83/96/3

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
466·0	20	69	55	36	104	0·8	230	38						(9467·4m)	Ground	Core ↑
466·2	15	25	BLD	25	30	1·0	680	345							Split	Core
467·4	160	70	BLD	1900	1·55%	13·0	9600	130							Split	Core
468·6	170	90	30	1·5%	6250	41·0	760	120							Split	Core
468·8 (from 467·4)	160	72	40	2·7%	5400	60·0	1800	76							Ground	Core ↓
470·8	100	17	30	480	370	2·0	850	73								
473·8	150	17	35	106	230	0·4	380	80								
475·0		End of	DDH :	RBE 24												

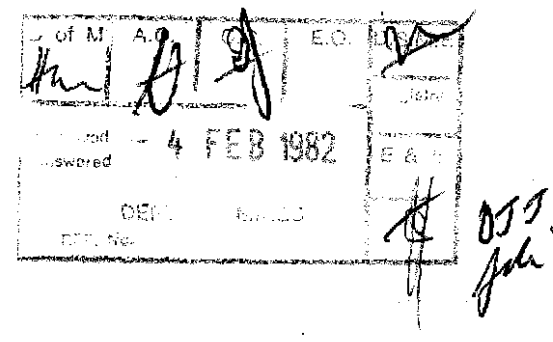
COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 465 TO 475 m DATE 2-16/7/81 PAGE 31 OF 31

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- 4 FEB 1982



Mines department's photocopy:-

DDH: RBE 25

OPEN FILE

82-1690 (Vol 9)
Part 5 of 6.
(RBE 25)

8394/14

1x

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AUSTRALIAN ANGLO AMERICAN LIMITED
DRILLHOLE LOG
Summary Sheet

PROJECT Ranison	AREA GAR		DRILLHOLE TYPE DDH
CO-ORDS 372600·1 E 8273018·9 N	DEC LN -45°	AZIMUTH 77·5° MN	RL 177·9 m	DH No. RBE 25
DATE COMMENCED	DATE COMPLETED	DRILLED BY Longyear	DRILL RIG Longyear 38
Non Coring to: 21 m	HQ Core to:	NQ Core to:	BQ Core to:	EOH 356·4 m

SURVEY DATA
Instrument: downhole camera.

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH
30 m		-45°	80° MN	180 m		-41·25°	79·5° MN
60 m		-45·75°	79·5° MN	210 m		-38°	80·5° MN
90 m		-45·25°	78° MN	240 m		-36·5°	80° MN
120 m		-47°	80·5° MN	270 m		-37·25°	80° MN
150 m		-45°	80° MN	300 m		-37·25°	77·5° MN
				330 m		-36·5°	81·5° MN
				356 m		-36·75°	82° MN

LOG SUMMARY

	ROCK TYPE	MINERALIZATION Style	Grade	
	0-22.0m TRICONE's.			
	22.0-61.20m. Soft interbedded tuffa. ss, + slt. Host units carbonaceous.	aggregates + disseminations (58.6-58.9m)	Py	30%
	61.20-124.60m. Soft cyclic units of café au lait to grey ss, lesser tuffa + blk slt.	disseminations.	Py.	Trace
	124.60-134.70. Haematitic banded ss		—	Barren.
	134.70-158.0. Banded pale grey tuffa, ss + blk slt.	Minor qtz carb. veins	Py Sp	Trace
	158.0-217.85 Grey green banded tuffa, + ss. Trace blk. carb. slt.	ditto.	Py Ga, Sp Aspy.	Trace
	217.85-222.95 Honey brown altered banded tuffa and ss.	ditto	Py	Trace
*	222.95-225.0 BASE METAL VEIN ZONE (1)	Qtz carb veins 10-15cms	Sp, Ga, Cp	10-15%
	225.0-246.0 Grey green tuffa. lesser ss + slt.	Qtz carb. veinlets	Aspy Py Po sp.	1-2%
*	246.0-248.60 Qtz + Qtz carb. vein zone (2)	Qtz carb + qtz vns 10-30cm	Aspy, Py, Cp	5-10%
	248.60-262.30 Blk pyritic carb. slt + ss.	disseminations + fracture	Py	1-2%
	262.30-268.55. Spotted grey green tuffa	minor vein	Po Py	1 %
*	268.55-270.50 QUARTZ VEIN ZONE (3)	Massive qtz + qtz Po vein	Po Py Cp.	20-30%.
	270.50-272.15. Clay chlorite alt. GABBRO.	Qtz veined	Po Aspy	Trace.
	272.15-292.90 Green grey tuffa with several narrow GABBRO dykes.	Disseminated	Po Py	Trace.
	292.90-316.50 Banded pale grey calcareous f. gr. ss. and ss.	Disseminated, aggregate + fracture	Py → Po	1%
	316.50-356.40 Predominantly grey green tuffa with lesser ss + blk carb. slt. occasional narrow GABBRO dykes.	Essentially barren.	Py	Trace.

Signature [signature] Date JAN. 1982.

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Triconed through glacial overburden and button grass plain.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R. Yardley FROM 0 TO 15 m DATE /7/81 PAGE 2 OF 25

8306882

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Tricored.					
						End Tricoring					
?	21·0	1·1	–	–	21·0 – 22·1	Glacial boulder debris.					
?	22·1	1·15	–	–	22·1 – 28·0	Intermixed shit brown & medium to dark charcoal grey sandy siltstone & ss/shale – sporadic disseminated pyrite – discrete grains.	insipient weathering		broken (weathered)	dis Py	tr to 1%
	23·15	1·48	0·32	22·07%							
?	24·8	0·9	–	–							
	25·4	1·2	0·51	42·5%							
	26·6	1·0	0·53	53·0%	26·63 – 27·03	bracciated sandstone / tuff ss.	soft & friable limonite coated & impregnated fractures at 27·0 m.			limonite	tr
	27·6	0·8	0·88	100%	28·0 – 29·7	Predominantly gy tuffaceous sandstone & lesser charcoal gy ss & sh.	soft, friable		broken (weathered)		
	28·4	1·0	1·0	100%	–				29·0 B.C.A 5-10°		Nil
	29·4	0·7	0·60	90·0%	29·7 – 30·2	dk gy / black sh & ss & vuggy quartz vein	rare, barren q.v's.		30·0 3cm vuggy q.v. V.C.A 70°	q.v's barren	Nil

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y. FROM 15 TO 30m DATE /7/81 PAGE 3 OF 25

0 0 0 0 0 0 0 0

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	30·1	1·3	1·2	92·31%	30·2 - 38·1	Pale gray green soft massive band of siltstone to sandy ss with occasional parting narrow band of dark gy ss/ shale. ss purplish in places.				rare vuggy quartz veins & trace Galena.	tr
	31·4	1·5	1·46	97·33%					32·2 q.v < 1cm & tr Gl		
	32·9	1·5	1·1	73·33%					33·1 B.C.A. 15°		
	34·4	1·65	1·4	90·32%	33·1 - 35·5	Coarse to medium grained light gy to gy soft - friable TUFFACEOUS SANDSTONE	± 1% calcite veining & fracture fillings + quartz carbonate veinlets			barren	nil
	35·95	1·45	1·45	100%	35·5 - 36·2	Grey to dk gy tuf sa & ss.					
	37·4	1·5	1·2	80·0%	36·2 - 48·2	Dark gy tuf sa & puggy comminuted zones containing fragments of mas Py & vuggy qz. At 38·6 : 38·9 alternating & lesser bands of dk gy silty sa & ss - rare narrow < 2cm of dk gy to black sh. From 41·2 to 42·2 : pale gy to buff horizon			38·6 } puggy ss & sh & comm. 38·9 } Py & qz frags.		
	38·9	1·8	1·35	90·0%							
	40·4	0·6	0·4	66·67%							
	41·0	2·4	2·38	99·17%					41·2 B.C.A 60°		
	43·4	3·0	2·97	99·0%					44·8 4cm vuggy qz/cble vn: barren: V.C.A 65°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 30 TO 45m DATE /7/81 PAGE 4 OF 25

83694

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					48·2 – 55·9	Light gray/green to buff soft beds of 0·5 – 1·0m of TUFFACEOUS SANDSTONE and SILTSTONE. COMPETANT.	<1% calcite veining		46·1 } V.C.A. 35° Vuggy qz/calc 46·3 } vn (barren) cross-cut by second phase of qz/calc vnlets. 49·5 B.C.A. 70° 50·8 B.C.A 10° 51·7 B.C.A 35° 52·4 1-2cm q.v & minor calc V.C.A. 30° 53·8 B.C.A 50°	barren	nil
	46·4	3·0	3·0	100%							
	49·4	3·0	2·99	99·67%							
	52·4	3·0	3·0	100%							
	55·4	3·0	3·0	100%	55·9 – 61·2	Dark gy carbonaceous shale, tuf ss & interbedded cyclic ss.	5% cal + quartz/ carbonate veins + vnlets + fracture infilling; generally <5mm; occasionally up to 10 mm.		55·85 B.C.A. 30° to 70° Minor soft sediment deformation giving very variable dip directions 56·8 V.C.A 65° 57·6 V.C.A. 10° // to B. 58·2 V.C.A. 40°	barren calc vns. (fluorite?)	tr py
	58·4	3·0	2·97	99·0%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RDE 25

LOGGED BY S.R.Y. FROM 48 TO 60m DATE /7/81 PAGE 5 OF 25

33668

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					61.2 - 91.2	Light gray / green to buff, soft friable in part interbedded / coarse to medium grained TUFFACEOUS SANDSTONE and + smooth chalky SILTSTONE. Rare carbonaceous partings + occasional narrow beds of dark gy carbon rich / or impregnated tuf sa + ss.	< 1% calcite + quartz / carbonate veining + fracture infillings.		61.2 B.C.A 30° 62.0 COMPETANT with variable bedding. 65.6 B.C.A 45° 66.5 69.0 B.C.A 35° 70.0 73.7 B.C.A 30°	barren to trace Py in qz. ebts veining	nil
61.4	3.0	2.95	98.33%								
64.4	3.0	3.0	100%								
67.4	3.0	3.0	100%								
70.4	3.0	2.77	92.33%								
73.4	1.6	1.6	100%								
75.0											

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY Analabs FROM 60 TO 75m DATE /7/81 PAGE 6 OF 25.

839686

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	75·0	1·3	1·3	100%	61·2-90·2 (con)	see previous page for interval description.		2dk buf sa	76·3 B.C.A 25°		
	76·3	3·0	3·0	100%				80% ss			
	79·3	3·0	3·02	100%+					80·5 B.C.A 30°		
	82·3	3·0	3·04	100%+				80% buf sa 20% ss	82·1 B.C.A 45°		
	85·3	3·0	3·0	100%					85·9 B.C.A 50°		
									86·9 B.C.A 65°		
	88·3	3·0	2·99	99·6%		At 88·4m: contact between coarser grained (grit) tuffaceous SANDSTONE + fine grained banded siltstone suggests beds are wrong way up ⇒ ↷ ||| beds grade down hole - ie inverted. Intraformational folding would also produce this effect.			88·4 B.C.A 60°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 75 TO 90m DATE 7/7/81 PAGE 7 OF 25

139668

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					91				91.0 B contact 45°		
	91.3	3.0	2.96	98.33%	91.2–97.0	Dark grey to black, banded carbonaceous SHALE – pyritic with minor (<10mm thick) beds of gy to buff tuffaceous sandstone & siltstone, sometimes as partings only in mass of shale.	2-4% calcite & quartz carbonate veining as narrow vns & vnlets & fracture infillings.		92.1 B.C.A 40°	1-2% disseminated fracture filling & veinlet pyrite as part of sh deposition environment ie syngenetic	
	94.3	2.85	2.83	99.30%	95				95.0 95.15 honey yellows & brown ANKERITE (SD vn) V.C.A 55° followed by bleached zone		
	97.15	1.2	1.17	97.5%	97.0–124.6	Buff to café-au-lait soft interbedded tuffaceous SANDSTONE & SILTSTONE – changing to pale gy/green at 101.0m		qtz SS	98.15 B.C.A 40°	barren vuggy qz/cbte veining	nil
	98.35	1.95	1.95	100%	99						
	100.3	3.0	2.99	99.67%	101		101.0 END SUPERGENE PENETRATION		100.8 5cm Ank/q.v. & AsPy. V.C.A 55°.		
					102		0.5-1.0% qz/cbte veining	102 tuff ss		0.5-1.0% qz/cbte (Ank/siderite) veining <0.5cm thick generally	
	103.3	3.0	3.0	100%	103				103.4 B.C.A 55°		
					104				104.7		
					105						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y. FROM 90 TO 105m DATE /1/81 PAGE 8 OF 25

8 3 3 6 8 3

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	106·3	3·0	3·02	100%+
	109·3	3·0	3·02	100%+
	112·3	3·0	3·03	100%+
	115·3	3·0	3·0	100%
	118·3	3·0	3·0	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	See previous page for interval description	trace Calcite veining		105·6 10cm ankerite/siderite vn 106·1 20cm Ank/Sl vn. V.C.A's 45° - 55°	barren	
			65% ss 15% tuf ss			
		trace Cal veining		108·5 B.C.A 60° 109·6 B.C.A 40° } 50° 110·5	tr to 1% qz/carbonate vning largest vn up to 2cm thick most <0·5cm	
			60% ss 20% tuf ss	118·2 B.C.A 45° 118·9 B.C.A 45° 118·5 B.C.A 50° 116·5	barren.	
			5% tuf ss 95% ss	118·0 B.C.A 55°-60°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 105 TO 120 m DATE /7/81 PAGE 9 OF 25

8396689

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	121·3	3·0	2·98	99·33%
	124·3	3·0	3·0	100%
	127·3	3·0	3·0	100%
	130·3	3·0	3·0	100%
	133·3	2·98	2·95	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
			qtz ss tuf up to 0·5m thick	microfaulting of sediment beds 122·2 B.C.A 30-45° 122·35 123·6 B.C.A. 45 - 55°		nil
124·6-134·7	Haematitic pinkish-red banded SILTSTONE with minor horizons of tuffaceous sandstone up to 10cm thick. — From 128·8m: units of graded tuf sa reach thicknesses of up to 1·20m with occasional horizon taking on pale grey-green colouration.		qtz ss tuf sa	microfaulting of sediment beds. 127·8 B.C.A 50° 128·35 123·6 B.C.A 40° 134·2	rare vuggy (leached) quartz-carbonate veinlets // to core axis.	nil
134·7-142·3	See next page for description					

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 120 TO 135m DATE /7/81 PAGE 10 OF 25

8339690

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					136						
	136.26	3.08	3.08	100%	137						
					138						
					139						
	139.3	3.0	3.04	100%+	140						
					141						
					142						
	142.3	3.0	3.0	100%	143						
					144						
					145						
	145.3	3.0	2.98	99.33%	146						
					147						
					148						
	148.3	3.0	3.0	100%	149						
					150						

142.3 - 148.0

Pale grey-green interbedded medium to coarse grained porous tuffaceous sandstone : fine grained compact tuf sa & chalky siltstone. Units up to 0.20m thick.

trace calcite.

25% tuf ss

25% f.g. tuf ss

50% ss

138.5 B.C.A 45° to 50°

140.3

141.8 V.C.A. 55°

0.5 to 1.0% carbonate (ankerite/siderite) & quartz vns up to 2cm thick, generally 0.5cm & vuggy. trace Py & Sp

tr

148.0 - 158.0

Mottled, wavey & kinked banded pale gy-gr tuf sa ; gy. more finely bedded sa & lesser dark gy to black carbonaceous shale & pellet & sa clast (5cm) texture. Roughly 35% sa, 30% ss, 35% sh. Shale component weakens towards base.

trace - 1% Cal vn & & fracture fillings.

146.3

148.5 B.C.A 60°

149.0 V.C.A 30°

1% - 2% Py associated & sh horizons. Increase in clste/(qz) & Cal veining up to 2-4% & Py. especially in sh units.

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 135 TO 150m DATE /7/81 PAGE 11 OF 25

8399

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						see previous page for interval description			151.3 B.C.A 50°		
	151.3	3.0	3.0	100%					152.3		
	154.3	3.0	3.04	100%					156.3 B.C.A 60°		
	187.3	3.0	3.0	100%	158.0-217.85	Medium grey-green interbedded, in roughly equal proportions of m.grained indurated tuffaceous sandstone and siltstone. Individual units vary in thicknesses from ± 10cm → 50cm. Carbonaceous partings are quite common but are just films between ss/ss Slithers.	Variable calcite veining overall <1% ; locally up 3%.	50% buf ss 50% ss tr sh	158.3 some soft sediment deformation associated with narrow (10cm) intb bands of ss/ss. 160.3 B.C.A 50° 160.4 qz/calc vn. V.C.A 48° 163.3 B.C.A 46° 164.4	Sporadic qz-carbonate vns only - parallel & at right angles. 160.4-160.46 : 6cm vn & sp. Gl. cp + Py	
	160.3	3.0	3.0	100%							
	163.3	3.0	3.06	100%+							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY Analabe FROM 150 TO 165m DATE /7/81 PAGE 12 OF 25

83692

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					166	Carbonaceous partings are quite common amongst intervals of narrow cyclic bands of sandstone & shale. Occasionally flakes & clasts of dark grey to black shale are caught up in intermixed deformed bands of ss & siltstone.	rare calcite veinings.		Well mixed banded ss & sa indurated compact Minor fracturing & soft sediment deformation in ss. Ss form major units.	barren	
	166·3	3·0	3·0	100%	167				166·0 B.C.A. 50°		
					168				168·5 slither of shale		
	169·3	2·95	2·89	97·97%	170				170·3		
					171						
					172						
	172·25	3·08	3·08	100%	173				172·5 4cm cal vn. V.C.A 40°	trace Py	Tr
					174				173·75 B.C.A 55°		
					175						
	178·3	3·0	2·99	99·67%	176	176·3 – 182·0 gy-green compact sa & ss former dominates, latter shows some good banding. sh as graphite partings & fracture fillings			good banding 176·3		
					177				177·1 B.C.A 60°		
					178				178·7 1cm calcite vn V.C.A. 50°		
	178·3	3·0	3·0	100%	179						
					180						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RDE 25

LOGGED BY S.R.Y FROM 165 TO 180m DATE /7/81 PAGE 13 OF 25

839693

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	181·3	3·0	2·99	99·67%
	184·3	3·0	3·0	100%
	187·3	3·0	2·99	99·67%
	190·3	3·0	3·0	100%
	193·3	3·0	3·02	100%+

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	see previous page for description			182·2 184·1 B.C.A 50° 185·5 2cm calcite/fluorite vn. V.C.A 45° 186·1 2cm Cal/Fl vn. V.C.A 45° 187·7 6cm cal/carbonate quartz vn. V.C.A 50° 190·15 B.C.A. 55° 193·0 15·0cm multiple qz/calcite vn. V.C.A. 35° 194·0 195·0 B.C.A. 50°	187·7 trace Gl.Sp 193·0 2% py tr. AsPy	tr tr

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y. FROM 180 TO 195m DATE /1 /81 PAGE 14 OF 25

8396/94

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					196				good banding	barren	
	196·3	3·0	3·01	100%+	197			65% sa, 40% ss, 55 5% sh			
	199·3	3·0	3·0	100%	198						
					199						
					200				200·0		
					201			50% ss, 33			
					202	from 202·0 - 204·0 m: some chocolate brown horizons.			202·3 Pellets of ss in sa; good banding. 202·7 B.C.A 85°		
	202·3	3·0	2·98	99·33%	203			45% ss, 35			
					204				204·0 3cm qz/carbonate vn. V.C.A 50°	1-2% Py	
					205			5% sh			
	205·3	3·0	2·96	98·67%	206	206·0 - 207·5 m: Cyclic bands of blue grey-green, gr + pale gy; fine grained tuffaceous sandstone; siltstone + f.g. ss.			208·9 Superb laminate, flaggy bedding.		
					207				207·2 B.C.A. 50°-55°		
					208			60% sa, 40% ss, 55 tr sh			
	208·3	3·0	3·0	100%	209						
					210						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 195 TO 210m DATE /1/81 PAGE 15 OF 25

8339695

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	211·3	3·0	3·0	100%	211·9 – 217·7 m	50% gray-green medium ≤ fine grained sandstone. 45% banded gy-gr ≤ dark gy siltstone. 5% intermixed carbonaceous ss ≤ shale		50% ss 45% ss 5% sh	211·9 212·9 B.C.A 50° 214·4 2cm quartz/carbonate vn. V.C.A 50° 215·9 B.C.A. 50°	trace Gl	tr
	214·3	2·85	2·83	99·3%							
	217·15	3·15	3·6	100%	217·85 – 222·95	Honey brown to gy ALTERED sandstone and banded siltstone. minor shale as bedding partings ≤ as fracture fillings. Increase in frequency of quartz/carbonate veins.	2-5% qz-cbte	45% ss 55% ss tr sh	217·7 217·85 – 218·05 20 cm qz/cbte vn zone. V.C.A 45° 218·85 2cm qz/cbte vn. V.C.A 50° 219·6 B.C.A 45° 221·8 20cm qz/cbte vn. V.C.A 40-50°	trace Py	tr
	220·3	3·0	3·01	100%+	222·2 – 222·98 dislocated.						
	223·3	3·0	3·03	100%+	222·95 – 225·0.	BASE METAL VEIN ZONE: with Galena, sphalerite, chalcopyrite, pyrite, arsenopyrite, mainly concentrated at major vein margins & associated brecciations.	qz/cbte silicification		222·95 15cm Gl/Sp. V.C.A 45° 223·1 tr 15cm qz/cbte 223·38 15cm Gl/Sp V.C.A 45° 60 cm brecciated sh ss 223·95 1·05 m mixed sediment & 10% qz/cbte veining 225·0	40% Sp, 30% Gl 5% cp, tr Py qz, 1% Sp, 1% Py 20% Gl, 5% Sp, 1% cp tr Gl, Sp, Cp, Py 5% AsPy, 2% Py, tr cp.	10% to 15%

5 cms

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 210 TO 225 m DATE /7/81 PAGE 16 OF 25

8396/96

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					225.0 – 228.45	Grey-green TUFFACEOUS SANDSTONE, SILTSTONE & minor black shale. dislocated in part. 3-5% qz/cbte vaining	quartz-carbonate vaining		sediments invaded by subsidiary qz/cbte vns adjacent to major vn zone 228.0 V.C.A 50°	1-2% AsPy, 1% Py, tr Cp, Sp, Gl associated ε vns & fractures.	1-2%
226.3	3.0	3.0	100%								
227											
228					228.45 – 230.1	qz-cbte vn STOCKWORK ZONE, Ba & Sa, terminating in blk carbonaceous shale ε barren white qz vn.	20-30% qz-cbte vns.		228.75 V.C.A. 50° 229.6 229.7 V.C.A 45°	5-8% combined AsPy, Py Cp & trace Sp, Ba. wh vn post-dates qz/cbte/sulphide phase.	
229											
229.3	3.0	3.0	100%								
230					230.1 – 240.75	grey-green TUFFACEOUS SANDSTONE comprises approximately 80% of unit, (massive beds). Lesser well banded SILTSTONE comprises approx: 15% of intervals. Minor carbonaceous SHALE intermixed with above, approx 2%. Microfaulting evident, within SS. Pellets, slices, fragments & blocks of banded ss are incorporated in ss bands. see 238 m – a form of soft sediment deformation – plastic shales flowing into less plastic soft ss. ARE BEDS RIGHT WAY UP?	rare calcite, qz-cbte vns.			BULK BARREN, locally Py/Po in vns & tr. Sp.	tr to 1%
231											
232											
232.3	3.0	3.0	100%								
233									233.0 B.C.A. 60°. good graded bedding suggests beds are wrong way up?		
234											
235											
235.3	3.0	2.97	99.0%								
236									236.65 10 cm qz/cbte vn. V.C.A 45° top 50° bottom	tr to 1% Sp, Py.	
237											
238									238.1 B.C.A. 65° 238.45 B.C.A. 80°		
238.3	3.0	3.0	100%								
239											
240											

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 225 TO 240 m. DATE /7/81 PAGE 17 OF 25

8306

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	241·3	3·0	2·9	96·67%
	244·3	1·5	1·3	86·67%
	245·8	0·5	0·38	76·0%
	246·3	1·9	1·69	88·95%
	248·2	2·05	2·05	100%
	250·25	2·95	3·02	100%+
	253·3	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION
240·75–243·8	zone of mixed. in part convoluted & contorted grey & black SHALE. siltstone. & sandstone. short sediment cycles. dominated by sh at start then sa & ss at base.	3-5% qz & quartz-carbonate vns & vnlets.
243·8–262·3	BLACK PYRITIC CARBONACEOUS SHALE & SILTSTONE with minor wispy thin beds of gy sa. whole unit could be CALCAREOUS /or weakly dolomitic. & BASE METAL QUARTZ & qz CARBONATE VEINS of 10-30 cms thickness at :- 246·0, . 246·55 , 247·3 , 248·2 m. DOMINANT SULPHIDES are :- ARSENOPYRITE / PYRITE CHALCOPYRITE MINOR SPHALERITE & GALENA CASSITERITE ??? qz. AsPy . Py . Cp vns appear to post-date qz/cbte vns of original mineralising phase of Gl+Sp or vice versa :- Gl/Sp phase squeezed in along margins of massive qz . AsPy . Cp vns.	2-3% calcite veining

GRAPHIC LOG

STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
240·75 25cm sheared q.v. V.C.A. 20-25°	10-15% Py ± Cp ± Sp	
	syngenetic Py in sh.	
243·7 B.C.A 45°		
	1-2% fracture & disseminated syngenetic Py in sh.	1% to 2%
246·0 20cm vein. C.A. 45°	qz/calcite vn 5% Py	
246·55 8 cm vn c.A .45° top & base	q.v. 8% Cp . Py	
247·3 13cm vn. 247·6 bedding C.A. 50°	q.v. 15% AsPy . Py . Po	
248·2 30 cm vn C.A 20°-30° top . 248·5 B.C.A 30°] C.A 70° base. bottom vn/wall rock contact cross-cuts bd at (approx) right angles.	q.v. 30-40% AsPy . Cp . Po	
	Two vein systems along the same plumbing : No 1 :- qz cbte + Sp + Gl No 2 :- qz + AsPy . Cp + Py .	
252·5 dm/calc sa		
253·3 dm/calc sa.		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 240 TO 253m DATE /7/81 PAGE 18 OF 25

839695

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Pods + lenses of pale grey sandstone + darker siltstone + shale + possibly calcareous or dolomitic - may be just effect of calcite veins + veinlets. Some sa horizons show a distinct enrichment in pyrite + pyrrhotite - see interval 252.5 - 262.3 - usual dislocation / brecciation evident.	2-3% calcite veining		255.6 dm/calc ss 256.0 10 cm qz/calc/chl. Py vn at 10° 256.4 20 cm GABBRO? DYKE. C.A. 45°	1-2% syngenetic pyrite tr - 1% Po in vns, fractures + disseminated.	1% to
	256.3	2.85	2.85	100%							
	259.15	3.1	3.12	100%+				dm	258.1 50 cm dm/calc ss. B.C.A 55° 259.45 B.C.A 50° - lenses of calc ss in bk sh. 261.9 20 cm dm/calc ss		
	262.25	3.08	3.05	100%	262.3 - 292.9	Zone of altered (HORNFELSED?) dk gy green mottled, spotted, granular TUFFACEOUS SANDSTONE + SILTSTONE + banded ss/SHALES: alteration has caused recrystallisation of tuf ss/ss units obliterating most primary textures - banding is most discernable relict txt.	clay, chlorite? alteration (W/R) emanating from GABBRO CONTACT. Crackling of sediments in proximity to gb.		263.9 30 cm open vein q.v. filled & Ankerite/siderite + flanked by cp. Po/Py vns // to core axis. V.C.A. 55° 265.0 40 cm massive sheeted q.v & AsPy, Po, Py V.C.A 60°	263.9 tr galena, Po, Py 265.0 10% Po, Py, AsPy.	
	265.3	3.0	3.01	100%+							
	268.3	3.0	3.0	100%					268.55 (1.05 m). mas Po/qz vn & Py + ~1% intergrown cp as aggregates dis' in Po.	268.55 - 269.6: 20% - 30% Po(Py) 1% cp	

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RJBE 23

LOGGED BY S.R.Y FROM 255 TO 270m DATE /1/81 PAGE 19 OF 23

83969

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					271	270.5-272.15 : quartz veined GABBRO CONTACT with above carbonaceous shales + siltstone. Granular anhedral crystals. 2-3mm diam. ragged, terminated & qz/clste/Po vn.	strong clay chlorite - incipient bleaching		contact + bedding C.A 35° foliation core axis 30°, at right angles to q.v.s 271.0 V.C.A 20° 271.3 V.C.A 30° 271.9 25cm qz/clste/Po/sulphide vn - 2% Po, 1% Cp, AsPy, Py. upper CA 40° ; lower CA 55°	(Po infilling vn centre. AsPy at margin - have cut out by later barren qz/clste vn phase.	tr
	271.3	3.0	2.99	99.67%	272						
					273	272.15-279.2 : interbedded + banded, greenish-grey, fine to medium grained (a) TUFFACEOUS SANDSTONE curdled / speckled texture (b) minor gy siltstone (c) trace carb shale as thin interbeds. (d) slithers - narrow apophyses of green speckled / mottled GABBRO - coarser than sa. STOPED SEDIMENT / GABBRO CONTACT ZONE	clay / chlorite contact water? affect 2-5% calcite vns + fracture infillings.		273.5 D.C.A 35°		
					274						
	274.3	3.0	3.0	100%	275						tr Po + Py
					276						
					277						
	277.3	3.0	3.01	100%+	278				278.3 D.C.A 20° ; 10cm qz/clste vn. V.C.A 20° ; SHEAR C.A. 20°		
					279						
					280	279.2-280.9 : GABBRO DYKE ? mottled, granular texture - relict banding?			279.2 gb contact CA 45°		
	280.3	3.0	3.0	100%	281	280.9-283.0 : gr-gy f.g. TUFFACEOUS SANDSTONE & banded wavey intercalations of dark gy, black sa, SS + sh. contorted-deformed f.g. beds. While more massive tuf sa is undisturbed.	1-2% cal veining clay / chlorite.		280.9 gb contact CA 45° 281.25 Cal veining C.A 70° - amanstas from vns // to bd or vice versa.	patchy disseminated aggregates of Py.	1% Py
					282						
	283.3	3.0	3.0	100%	283				283.7 B.C.A. 40°		
					284	284.0-290.4 : GABBRO DYKE ? (see next page)			285.0 Cal Vn. V.C.A 45°		
					285						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y. FROM 270 TO 285m DATE /7/81 PAGE 20 OF 25

89700

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						GABBRO DYKE (con) green-grey mottled granular white flecked / speckled gabbro with XENOLITHS CLASTS of gr banded : SILTSTONE, TUFFACEOUS SANDSTONE, BLACK SHALE. (see 285.0 - 287.3m) gb has a tendency to intrude along bk carb sh contacts - less competent.	clay/chlorite. 2-3% calcite veining concentrated at contacts.	gabbro dyke	Intrudes parallel to bedding. 287.3 bedding C.A of 30° in banded sa clast. 290.1 2cm calc vn C.A. 40° 290.4 contact C.A. 35°-40°	barren.	
286.3	3.0	3.03	100%+	286 287 288 289							
289.3	3.0	3.0	100%	290 291 292		290.4 - 292.9 : massive fine to medium grained gy/gr TUF SANDSTONE & odd dark gy siltstone band + parting of bk carbonaceous shale.	weak clay chlorite		DISLOCATED - micro random fracturing 291.8 B.C.A 50°	sporadic aggregates + fine disseminations Py/Pb (prefers sa)	tr to 1%
292.3	3.0	3.03	100%+	293 294 295	292.9 - 299.1	Finely banded gy to dk gy f.g. calcareous sandstones (or LIMESTONE) and calc siltstones cyclically intermixed + graded & dk gy to charcoal gy. bk calc mudstones + NON-CALCAREOUS carb shales. BLACK SHALE DOMINANT.	10-20% cal veining // to bd. Knotted + sigmoidal.	60% sh 15% sa 10% gy 15% vn	some soft sediment deformation - esp sh. 294.3 5cm anastomosing qz/calcite vn & fr bl. Sp V.C.A 70° 295.3 B.C.A 40° - 55°	syngenetic Py → partial metasomatic conversion to Pb. 0.5 - 1.0%. Pb, Py overall as :- discrete aggregates, finely dis. fracture + vein/at fillings. locally more concentrated.	1%
295.3	3.0	3.01	100%+	296 297 298					298.0 BCA 50°+25°+45°		
298.3	3.0	3.01	100%+	299	299.1 - 299.6	gr-gy coarse grained TUF SANDSTONE & carb partings.		sa	299.1 B.C.A 50° 299.6 B.C.A 55°		
					299.6 - 316.5	see next page.			↑ sa ? upwards into ss then bk sh.		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RDE 25

LOGGED BY S.R.Y FROM 285 TO 300m DATE /1/81 PAGE 21 OF 25

0033701

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					301	Finely banded / laminate / or varve like battleship grey CALCAREOUS siltstones & fine grained sandstones & possibly PURE LIMESTONES (DOLOMITE ?) comprise 70% of unit. Individual bands do not exceed 1·0 cm thickness. Black carbonaceous shale approx 15% of unit as films & narrow bads intermixed & above. Occasionally dominates over 20 cm interval. INTERVAL REPRESENTS A GOOD REPLACEMENT HOST.	8-10% calcite veining, frequently parallel to bedding.		301·0 B.C.A 20° - wavey 301·5 irregular contorted/ convoluted bedding	see previous page.	
	301·3	3·0	3·02	100%+	302						
					303						
					304				304·4 B.C.A 55°		
	304·3	3·0	3·0	100%	305				305·0 B.C.A 50-55°		
					306						
					307						
	307·3	3·0	2·95	98·33%	308						
					309				309·0 B.C.A 55°		
					310						
	310·3	3·0	2·99	99·67%	311				311·3 B.C.A 55°		
					312						
					313						
	313·3	3·0	3·0	100%	314	At 313·8m: above sedimentary cycle is broken by influx of medium to coarse grained grade green-gy tuffaceous ss.			313·8 B.C.A 55°-60°		
					315				↑ grading		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 300 TO 315 m DATE /1/81 PAGE 22 OF 25

839702

DRILL ADVANCE / LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
									315.9 B.C.A 60°		
	316·3	3·0	3·0	100%	316·5 - 320·05	massive greenish gray fine to coarse grained, graded, bedded TUFFACEOUS SANDSTONE (85%) + minor dark gy siltstone + shale (15%). no calcareous horizons.	insipient hornfelsing + 3-5% white quartz calcite veins.		↓ grades down hole 316·7 B.C.A 55°	barren	
	319·3	3·0	3·02	100%+							
	322·3	3·0	3·04	100%+	320·05 - 323·1	banded gy silty LIMESTONE, dk gy calc siltstone + bk carbonaceous shale. gr. non-calc tuf sandstone at base.	10-15% wh Cal veining		322·3 B.C.A 55° (ls)	barren	
	325·3	3·0	3·05	100%+	323·1 - 326·55	Indurated gy TUFFACEOUS SANDSTONE dk gy SILTSTONE + bk carb SHALE. Pellets (○) of ss up to 1cm long in some tuf ss horizons.	5% wh Cal + cal/qz veining		fractured + dislocated 325·0 B.C.A 40°	barren	
	328·3	3·0	3·06	100%+	326·55 - 330·8	gr - mottled (spotted dog texture + 15mm eyes) GABBRO & inclusions of cooked gr tuf ss + bk sh. becomes granular + spotted down the hole rather than mottled.	insipient serp? talcose, clay/chlorite.		326·55 contact CA 55° 327·55 contact CA 35°	barren.	

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 25

LOGGED BY S.R.Y FROM 315 TO 330m DATE /7/81 PAGE 23 OF 25

8399703

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	331			
	331·3	3·0	3·0	100%
	332			
	333			
	334			
	334·3	2·9	2·9	100%
	335			
	336			
	337			
	337·2	3·1	3·12	100%
	338			
	339			
	340			
	340·3	3·0	3·01	100%
	341			
	342			
	343			
	343·3	3·0	3·0	100%
	344			
	345			

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				330·75 5cm qz/fqz cbte/fluorite vn v.c.A : top 40° bottom 50°		
330·8 - 335·6	cooked . fractured . dislocated brown (reddish) grey siltstone + greenish-gy tuffaceous sandstone.	hornfelsed			fracture ?y towards gb contact.	tr
				333·3 B.C.A 50°		
				335·6 B+ contact C.A. 55°		
335·6 - 337·25	GABBRO DYKE	clay . chlorite				
337·25 - 339·2	predominantly gr-gy tuf sandstone, minor siltstone + shale.	5% gash fill quartz vn hornfelsed.		338·2 B.C.A 35°		
339·2 - 342·0	spotted GABBRO dyke - black at base - contaminated & shale wall rock.	clay , chlorite calcite veining in lower contact.		341·5 cal vn C.A 0-5°	barren.	
342·0 - 345·28	predominantly indurated, fractured gr-gy tuf sandstone - lesser gy siltstone / shale exhibiting - flames + balls of sa- (pellat texture). Possible narrow gb dykes.	hornfelsed. 5-7% gash fill q.v.'s clasts of cal + qz .		342·3 B.C.A 50° soft sediment 343·0 B.C.A 55° deformation	barren.	

5cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 25

LOGGED BY S.R.Y FROM 330 TO 345m DATE /1/81 PAGE 24 OF 25

83704

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					345·28 – 351·0	Green/grey indurated dislocated (especially at upper contact) fine to coarse ground tuffaceous sandstone - sporadically banded with low angle core axis. Irregular carbonaceous partings towards base intermixed & deformed sa bands.	hornfelsed chlorite, actinolite/tremolite 1% irregular calcite veining		345·2 BC.A 53° 345·28 contact C.A 45°	barren	
	346·3	3·0	3·05	100%+							
									348·5 B?C.A 25°		
	349·3	3·0	3·0	100%		–349·2 Possible gabbro dyke - 30cm wide			350·0 B.C.A 50°		
									B. contact C.A 55°		
					351·0 – 353·6	Deformed black carbonaceous shale exhibiting pellet texture (irregular balls of gy siltstone & sandstone & white calcite) Becomes greenish at 352·2 - probably sa - highly dislocated - almost bracciated.	hornfelsed		convoluted bedding. bracciated.		
	352·3	1·1	1·1	100%							
	353·4	3·0	2·96	98·67%	353·6 – 356·0	Mix of deformed tuf sa (gr). Pellet txt bk carb sh + ss, more massive tuf sa towards base.	1/2 - 1% cal veining		353·6 B.C.A 55°		
									354·65 V.C.A 65°	1cm qz/cbte vn 1% Sp as aggregates	
	356·4					End of DDH: RBE 29 at 356·4m					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY S.R.Y FROM 345 TO 356 m DATE /7/81 PAGE 25 OF 25

23703

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
														Start of	Ground	Core ↓
21·0																
	8	130	BLD	725	1250	0·5	120	105								
27·6																
	20	80	15	220	410	BLD	100	125								
29·4																

5 cm

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 21 TO 30m DATE 17/7/81 PAGE 1 OF 23

90 6668

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	10	140	BLD	115	370	BLD	40	105								
31.4	15	85	BLD	270	320	BLD	40	130								
32.7	45	15	15	45	310	BLD	40	130								
34.3	15	65	20	80	300	BLD	56	95								
35.95	50	160	15	430	1150	0.5	85	135								
37.4	30	60	BLD	365	775	BLD	73	120								
38.9	8	90	20	175	680	BLD	72	120								
41.0	35	80	15	315	1200	BLD	50	110								
43.4	25	90	BLD	95	510	BLD	45	125								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 30 TO 45m DATE 17/7/81 PAGE 2 OF 23

0489

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
46·4	20	135	BLD	75	380	BLD	25	130								
49·4	15	55	BLD	35	205	BLD	10	105								
52·4	25	105	BLD	50	205	BLD	12	145								
55·4	10	55	BLD	60	280	BLD	23	120								
58·4	4	65	BLD	20	170	BLD	30	125								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 45 TO 60m DATE 17/7/81 PAGE 3 OF 23

83708

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
60									
61									
61·4									
62									
63	15	90	BLD	50	280	BLD	21	130	
64									
64·4									
65									
66	30	85	BLD	115	610	0·5	49	135	
67									
67·4									
68									
69	7	95	BLD	15	200	BLD	12	125	
70									
70·4									
71									
72	5	75	BLD	BLD	175	BLD	8	135	
73									
73·4									
74	BLD	40	BLD	10	145	BLD	5	115	
75									
75·9									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 60 TO 75m DATE 17/7/81 PAGE 4 OF 23

839709

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
75·0	4	55	10	BLD	130	0·5	3	120	
76·3	10	70	BLD	BLD	150	BLD	16	125	
79·3	4	65	BLD	10	140	BLD	8	135	
82·3	BLD	80	BLD	10	150	BLD	5	140	
85·3	7	85	BLD	10	135	BLD	8	140	
88·3	BLD	75	BLD	10	135	BLD	20	115	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 75 TO 90 m DATE 17/7/81 PAGE 5 OF 23

839740

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
91·3	4	135	BLD	75	165	BLD	23	95								
94·3	95	105	15	855	3650	1·5	280	110								
97·15	35	100	BLD	310	1600	0·5	300	105								
100·3	30	130	BLD	405	1050	0·5	60	100								
103·3	85	75	15	170	830	0·5	270	105								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 90 TO 105 m DATE 17/7/81 PAGE 6 OF 23

8397/T1

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
106·3	50	95	BLD	130	600	BLD	83	100								
109·3	10	90	BLD	125	950	0·5	41	105								
112·3	25	70	BLD	150	570	BLD	13	105								
115·3	40	55	20	160	525	0·5	520	105								
118·3	25	245	BLD	40	200	1·0	57	85								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RDE 22

ASSAYED BY Analabs FROM 105 TO 120 m DATE 17/7/81 PAGE 7 OF 23

8397/2

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
120																
121																
121·3																
122																
123	8	80	BLD	BLD	130	BLD	11	95								
124																
124·9																
126																
126	15	55	BLD	BLD	145	BLD	4	105								
127																
127·3																
128																
129	130	40	BLD	10	140	BLD	7	105								
130																
130·3																
131																
132	6	60	BLD	10	140	BLD	11	140								
133																
133·3																
134																
134	3	70"	BLD	BLD	135	BLD	10	125								
135																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 120 TO 135 m DATE 17/7/81 PAGE 8 OF 23

8397A3

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
136·25	8	30	BLD	10	120	BLD	7	110								
139·3	15	120	BLD	95	460	BLD	80	105								
142·3	4	100	BLD	15	155	BLD	54	125								
145·3	15	95	BLD	190	320	0·5	100	110								
148·3	8	105	BLD	70	180	BLD	40	105								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 136 TO 150m DATE 17/7/81 PAGE 9 OF 23

8397414

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
151·3	15	155	BLD	240	760	0·5	100	140	
154·3	10	90	BLD	135	360	BLD	80	145	
157·3	8	95	BLD	20	170	BLD	65	150	
160·3	35	65	BLD	270	230	BLD	190	160	
163·3	BLD	90	BLD	45	205	BLD	51	155	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 150 TO 175 m DATE 17/7/81 PAGE 10 OF 23

CRA 8397

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
165																
166																
166-3																
167																
168	3	95	BLD	40	230	BLD	26	150								
169																
169-3																
170																
171	6	80	BLD	10	155	BLD	15	145								
172																
172-25																
173																
174	6	70	BLD	15	175	BLD	39	165								
175																
175-3																
176																
177	BLD	80	BLD	15	175	BLD	10	165								
178																
178-3																
179																
BLD	80	10	10	150	BLD	16	160									
180																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 165 TO 180 m DATE 17/7/81 PAGE 11 OF 23

OPEN FILE

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
180																
181																
181-3																
182																
183	9	75	BLD	15	175	BLD	18	140								
184																
184-3																
185																
186	7	65	BLD	15	235	BLD	22	150								
187																
187-3																
188																
189	20	80	BLD	55	335	BLD	31	135								
190																
190-3																
191																
192	15	80	15	30	185	BLD	410	130								
193																
193-3																
194																
195	7	75	BLD	30	175	BLD	37	130								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 180 TO 195 m DATE 17/7/81 PAGE 12 OF 23

17/1088

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
196·3	7	75	BLD	40	125	BLD	12	130	
199·3	BLD	70	BLD	40	130	BLD	18	135	
202·3	10	85	15	100	505	BLD	32	135	
205·3	BLD	75	BLD	30	170	BLD	13	130	
208·3	4	80	BLD	BLD	140	BLD	13	135	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 195 TO 210 m DATE 17/7/81 PAGE 13 OF 23

83978

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	S.G.							SAMPLE NUMBER
211·3	BLD	80	BLD	10	160	BLD	15	175								
214·3	4	70	BLD	245	310	BLD	19	140								
217·15	15	85	10	110	1350	1·5	830	125								
220·3 (→223·3)	200	445 (450)	30	2·4% (2·42%)	2·7% (2·40%)	71·5 (75)	740	100						Base metals by A1/1 & confirmed by (A6/3)		
222·9	520	4400	BLD	14·8%	6·47%	640	1500	110	3·38					Ground Split	Core ↑ Core ↓	TD816
223·4	150	135	30	485	1·7%	6·0	6400	140								T5866
224·15	200	1700	BLD	865	2400	11·5	1·5%	150								T5867
224·85																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 24

ASSAYED BY Analabs FROM 210 TO 225m DATE 17 / /81 PAGE 14 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
220																
220·3																
221																
222	200	445 (450)	30	2·4% (2·42%)	2·7% (2·40%)	71·5 (75)	740	100						Base metals by A1/1 & confirmed by (A6/3)		
223																
223·3																
224	190	1200 (1175)	25	1·6% (1·59%)	1·25% (1·11%)	175 (221)	3000	100								
225																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 220·3 TO 225 m DATE 24/7/81 PAGE 14A OF 23

8302220

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	S.G.							SAMPLE NUMBER
	350	4300	BLD	1650	2900	24·0	1·3%	215								T5868
225·1	85	33.0	BLD	595	1200	4·0	180	150								T5869
226·1	90	150	BLD	650	970	3·5	620	155								T5870
227·1	120	75	BLD	90	550	1·5	190	140								T5871
228·1	150	415	BLD	250	1250	3·5	360	145								T5872
228·65	340	3660	40	1700	4·8%	49·0	4700	140								T5873
229·2	570	3350	BLD	330	1550	28·0	1·7%	160								T5874
229·88	120	780	BLD	608	1950	21·5	3900	195								T5875
229·8	180	165	BLD	1100	5600	4·0	1700	165						Split	Core ↑	T5876
230·05 (from 229·3)	35	280	15	95	360	3·0	1500	115						Ground	Core	
232·3 (from 233·3)	5	70	BLD	20	210	BLD	28	135						Ground	Core	
233·33	450	655	80	7·68%	1·82%	292	2100	120	3·10					Split	Core ↓	TD817
233·83	880	905	BLD	18·8%	9·83%	206	1700	95	3·60							TD818
234·42	210	210	80	3150	4·58%	16	94	105	3·13							TD819
234·68	290	950	BLD	2·06%	1·31%	54	2·0%	130	3·22							TD820
235·20	580	850	BLD	2·55%	3·03%	41	1·8%	160	3·19							TD821
235·45	180	545	BLD	9100	8200	30	2·3%	180	2·85							TD822
235·80	30	150	BLD	800	1100	4	570	135	2·96					Split	Core ↑	TD823
236·15 (from 235·3)	25	90	20	155	515	1·5	65	125						Ground	Core ↓	
238·3	30	185	20	85	180	2·5	340	110								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 225 TO 240 m DATE / /81 PAGE 15 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
225																
226																
226.3																
227																
228	140	730	25	875	5800	14.5	105	1200								
229																
229.3																
230																
231	35	280	15	95	360	3.0	1500	115								
232																
232.3																
233																
234	5	70	BLD	20	210	BLD	28	135								
235																
235.3																
236																
237	25	90	20	155	515	1.5	65	125								
238																
238.3																
239		-														
240																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 225 TO 238.3 m DATE 24/7/81 PAGE 15A OF 23

8321 22

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni							SAMPLE NUMBER
241·3	35	215	15	145	355	0·5	49	115							
244·3 (→246·3)	3100	290	35	660	1300	3·0	3200	80					Ground	Core↑	
246·4	152	275	BLD	1350	875	6·0	150	150					Split	Core↓	T5877
245·95	5480	7000	BLD	3450	4500	21·0	7900	175							T5878
246·75	458	675	BLD	1050	1350	6·0	260	160							T5879
247·3	648	1100	BLD	195	205	7·0	7·5%	170							T5880
247·85	1080	345	30	395	775	5·5	540	105							T5881
247·85	470	4·1%	BLD	1400	2400	130	7·5%	175							T5882
248·6	1310	585	BLD	225	280	4·0	710	145							T5883
249·0	300	320	BLD	515	105	5·5	86	135					Split	Core↑	T5884
249·5 (from 248·2)	420	2·8% (2·59%)	20	1100 (1200)	2050 (2200)	71·0 (340)	2·6%	70					Ground	Core↓	
250·25	45	185	15	780	3050	2·0	970	80							
253·3	20	175	BLD	65	170	0·5	250	90							

Base metals by A1/1 + confirmed by (A6/3)

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH KBE 25

ASSAYED BY Analabs FROM 240 TO 265 DATE 24/27/9/81 PAGE 16 OF 23

27838

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
244·3	3100	290	35	660	1300	3·0	3200	80								
246·2	700	3000	30	860	1450	13·5	8600	45								
248·2	420	2·8% (2·59%)	20	1100 (1200)	2050 (2200)	71·0 (74)	2·6%	70						Base metals by A1/1 & confirmed by (A6/3)		
250·25																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 246·2 TO 250·25 m DATE 24/7/81 PAGE 16A OF 23

8027941

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
255																
256																
256·3																
257																
	20	145	BLD	105	325	BLD	78	110								
258																
259																
259·15																
260																
	280	305	15	45	180	1·0	71	85								
261																
262																
262·25																
263																
	2000	345	35	640	1450	1·5	1200	105								
264																
265																
265·3																
266																
	690	95	25	65	240	BLD	450	110								
267																
268																
268·3	1·10%	945	40	170	935	3·5	1·5%	110						Ground	Core ↑	(→271·3m)
268·55	590	2900	BLD	1300	4600	12·0	1·7%	185						Split	Core ↓	T5885
268·8	1250	2500	BLD	150	665	8·0	5·7%	200								T5886
269·2	2250	3700	BLD	60	145	8·5	2000	165								T5887
269·6	3·35%	135	BLD	110	485	1·5	330	170			NB: Sn	by gz dilution	not	XRF.		T5888
270																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 255 TO 270 m DATE 24/7/81 PAGE 17 OF 23

52/68

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
268.3	1·10%	945	40	170	935	3·5	1·5%	110								

268
269
270

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 268·3 TO 271·3 DATE 24/7/81 PAGE 11A OF 23

83976

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
270·15	3·1%	335	BLD	285	380	6·0	110	250	T5889
270·5	9600	145	BLD	130	495	1·5	1300	160	T5890
271·0	75	15	BLD	20	240	BLD	54	220	T5997
271·27	500	10	20	40	150	BLD	19	190	T5998
271·8	4950	550	BLD	455	880	5·5	800	135	T5891
272·05	100	85	10	480	1800	0·5	72	105	T5999
272·49	10	75	BLD	35	210	BLD	34	145	T6000
273·25 (from 271·3)	810	75	30	105	555	BLD	570	105	
274·3	11	75	BLD	35	120	0·5	28	145	
277·3	27	115	9	90	255	0·5	29	125	
280·3	BLD	95	BLD	90	115	0·5	8	105	
283·3	BLD	125	BLD	30	130	BLD	13	90	

NB: Sn by qz dilution technique, not XRF.

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Arialabs FROM 270 TO 285 m DATE 24/20/7/10/81 PAGE 18 OF 23

RBE 25 8398

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
270																
271																
271·3																
272																
273	1·10%	945	40	170	935	3·5	1·5%	110								
274																
274·3																
275																
276																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Anslabs FROM 270 TO 274·3 m DATE 24/7/81 PAGE 18A OF 23

8839

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
286-3	BLD	175	BLD	35	110	BLD	15	70	
289-3	BLD	110	4	30	125	BLD	11	100	
292-3	BLD	60	BLD	235	640	BLD	64	80	
295-3	106	105	BLD	180	765	0·5	140	85	
298-3	BLD	55	5	30	100	BLD	19	90	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 285 TO 300 m DATE 13/8/81 PAGE 19 OF 23

8309-49

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
301.3	BLD	60	BLD	35	115	BLD	34	80								
304.3	BLD	65	BLD	30	85	BLD	8	85								
307.3	BLD	60	BLD	35	90	BLD	6	75								
310.3	BLD	60	BLD	25	115	BLD	7	80								
313.3	BLD	65	BLD	35	115	BLD	9	80								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 300 TO 315m DATE 13/8/81 PAGE 20 OF 23

83973

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
315									
316									
316.3									
317									
318	BLD	70	5	35	165	BLD	5	130	
319									
319.3									
320									
321	BLD	75	4	30	150	BLD	4	105	
322									
322.3									
323									
324	BLD	80	8	10	110	BLD	5	105	
325									
325.3									
326									
327	BLD	60	5	25	85	BLD	5	125	
328									
328.3									
329		-							
330	BLD	50	7	90	150	BLD	12	95	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 315 TO 330m DATE 13/8/81 PAGE 21 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
330																
331																
331·3																
332																
333	BLD	120	5	15	175	BLD	3	90								
334																
334·3																
335																
336	BLD	85	BLD	10	105	3·5	4	105								
337																
337·3																
338																
339	BLD	130	BLD	40	190	BLD	5	110								
340																
340·3																
341																
342	BLD	95	BLD	40	145	BLD	14	115								
343																
343·3																
344																
345	BLD	100	4	65	290	BLD	5	245								

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 25

ASSAYED BY Analabs FROM 330 TO 345 m DATE 13/8/81 PAGE 22 OF 23

8228

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
345																
346																
346·3																
347																
348	BLD	80	BLD	40	100	BLD	7	475								
349																
349·3																
350																
351	64	65	5	20	105	BLD	8	380								
352																
352·3																
353	58	85	BLD	35	205	BLD	98	120								
353·4																
354																
355	BLD	100	BLD	115	620	BLD	94	145								
356																
356·4																
357	End	of DDH:	RBE	25 at	356·4m											

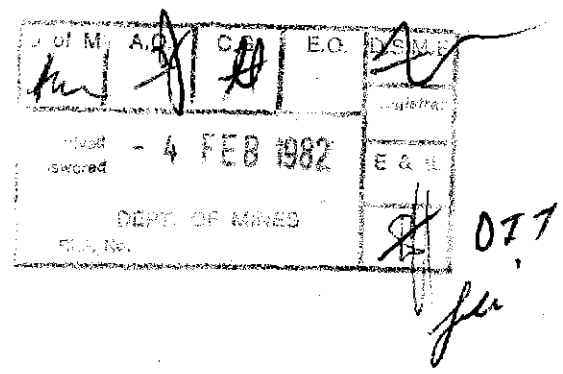
COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 25

ASSAYED BY Analabs FROM 345 TO 356·4m DATE 13/8/81 PAGE 23 OF 23

03678

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- 4 FEB 1982



Mines Department photocopy :-

DDH : RBE 26

OPEN FILE

82-1690 (Vol 9) part 6 of 6
(RBE 26)

839e/15.

839735

AUSTRALIAN ANGLO AMERICAN LIMITED
DRILLHOLE LOG
Summary Sheet

PROJECT Renison	**AREA** GAR south		**DRILLHOLE TYPE** Diamond
CO-ORDS 372614·5E 5372000·4N	**DEC**^{LN} −45°	**AZIMUTH** 77·5° MN **RL** 154·0 m	**DH No.** RBE 26
DATE COMMENCED	**DATE COMPLETED**	**DRILLED BY** Longyear	**DRILL RIG** Longyear 38
Non Coring to: 18 m	**HQ Core to:**	**NQ Core to:**	**BQ Core to:** **EOH** 340·3 m

SURVEY DATA
Instrument: downhole camera

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH
30 m		−45·5°	081° MN	180		−42·25°	073° MN
60 m		−43·625°	077° MN	210		−42·5°	070·5° MN
90 m		−41·75°	077° MN	240		−42·75°	073° MN
120 m		−42·5°	074° MN	270		−42·5°	072° MN
150 m		−42·5°	074° MN	300		−43°	075·5° MN
				330		−43·75°	074° MN

LOG SUMMARY

ROCK TYPE	MINERALIZATION Style	Grade	Intersection width (Corr)
0-18·0m: tricored through wthd tuf ss/ss			
18·0-35·4 m: intc/intb gy fg-mg tuf ss ć gy/dk gy ss	q.v.'s ć Py	tr	
35·4-91·8 m: intc/intb calc gy fg-mg tuf ss ć calc gy/dk gy ss + minor carb bk sh	dis + vn Py	1%	
91·8-117·8 m: intc/intb calc gy and dk gy ss.	Cal vns + dis Py	2%	
117·8-127·8 m: intc/intb calc gy ss ć dm ss + minor calc f-g tuf ss.	Cal vns, dis + vn Py	2%	
127·8-142·6m: intc/intb gy ss + dk gy carb ss/sh ć gy f-g-m-g tuf ss.	Cal vns, dis + vn Po/Py	2%	
142·6-176·6m: intc/intb calc/dm gy ss + f-g gy tuf ss ć minor dk gy carb sh/ss.	dis + vn Py >> Po	2%	
176·6-193·0m: intc gy f-c-g tuf ss ć minor gy ss	dis Py	1%	
193·0-199·1m: ho intc/intb gr-gr/gy + br ss + mg tuf ss	mixed vns Py/Po	1%	
199·1-208·9m: ho intb seds ć several gb? dykes/sills	dis Py + mixed vns Py/Po	1%	
208·9-230·0m: ho intc/intb dk gy/br ss + f-g-m-g. tuf ss	Cal; mixed vns, vns + dis Py/Po	2%	
230·0-236·4m: intc/intb calc carb bk sh + ss	qz/cbtic vns Gl, Sp, Cp, Py, Po, AsPy	9%	
236·4-271·6m: intb/intc gr, gr/gy ss ć f-g-m-g gr, gr/gy tuf ss.	mixed vns Po/Py	2%	
→ 264·7-276·0: mas qz/cbtic vn ć stk	vns ć Po, Py, Gl, Sp, Cp, AsPy	20%	
271·6-324·5m: talc cbtic zone	dis Py, Mt, Cr?	1%	
324·5-325·6 m: talc seds	dis Py	tr	
325·6-340·3m: intc/intb ho fg, gy, gr/gy tuf ss ć gr + br ss.	dis Py, qz/cbtic vns ć AsPy, Sp Gl	1%	

Signature J.D.Crimeen **Date** 6·9·81

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					0–15 m	No core recovered:- tricored through weathered siltstone and tuffaceous sandstone.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.Crimeen FROM 0 TO 15 m DATE 23/7/81 PAGE 2 OF 24

8307339

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					16						
					17						
	18·0	1·4	1·4	100%	18						
					19						
	19·4	1·25	1·08	86·40%	20						
	20·65	1·55	1·46	94·19%	21						
					22						
	22·2	1·65	1·65	100%	23						
	23·85	1·55	1·66	100%+	24						
					25						
	25·4	1·6	1·63	~100%	26						
	27·0	1·6	1·6	100%	27						
					28						
					29						
	29·6	1·85	1·58	100%	30						

INTERVAL: 15·0

DESCRIPTION: tuffaceous sandstone + siltstone. interbedded + intercalated. gray. fine to medium grained tuf sa ; minor gy. brown coarse grained tuf sa with gy + minor dark gy ss.

ALTERATION: common limonite staining on fractures at top of hole. tension gash quartz veins.

STRUCTURE: core highly broken; common tension gashes moderate disruption + contortion.
20·0 B at 80° (ss)
22·7 B at 65° (ss/tuf sa)
24·5 B at 65° (ss)
27·2 B at 60° (tuf sa)

MINERALISATION: trace Pyrite & q.v.'s

VISUAL PERCENTAGE MINERALISATION: tr

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C. FROM 15 TO 30 m DATE 23/7/81 PAGE 3 OF 24

C.C.G.S. 033078

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				31		intercalated & interbedded grey fine to medium grained tuffaceous sandstone & minor gy-brown coarse grained tuf ss & gy & dark gy siltstone & minor carbonaceous black shale.	common tension gash quartz veins.		core moderately broken. mod. disruption & contortion.	trace Py & q.v.'s.	tr
	31·15	1·45	1·45	100%							
				32					33·0 B at 52° (ss/tuf ss)		
	32·6	1·35	1·35	100%							
				33							
				34							
	34·15	1·35	1·10	81·48%							
				35			35·4 smooth, bedded calcareous siltstones.				
	35·4	1·8	1·66	90·56%		35·9 0·65 m of disrupted, crit to brecciated carb bk sh, gy & dk gy ss. followed by unit of mostly intb, f.g. gy & minor m.g to c.g. br tuf ss & gy ss.	contains common calcite vaining (disrupt) unit slightly ± discontinuously calc.+ very minor q.v.'s.		35·7 B at 73° (ss) Heavily disrupted to brec. minor crit & disruption mostly massive ss.	tr Py tr patches (blabs) of Pyrrhotite & cal? in middle of unit.	tr tr
				36							
				37							
	37·2	3·15	3·15	100%							
				38					38·4 B at 54° (ss/tuf ss)		
				39					39·2 B at 68° (ss/tuf ss)		
				40							
	40·35	3·05	3·04	99·67%					40·5 B at 59° (tuf ss)		
				41							
				42					41·7 B at 59° (ss/tuf ss)		
				43		42·6 unit of f.g. to m.g. dk gy tuf ss & f. disseminated carb matter, unit discontinuously calc.	very common smooth & disrupted Cal vns. tr fluorite.		disrupted at top, then is mas.	tr dis Py	tr
	42·4	3·0	3·0	100%							
				44							
				45							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY JDC FROM 30 TO 45 m DATE 23/7/81 PAGE 4 OF 24.

83768

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					46	48.4 intercalated + interbedded grey fine to medium grained + gy-brown m.g. tuffaceous sandstone & gy + dark gy siltstone. units are discontinuously and slightly calcareous	very common large. 46.0 Cal vn, 160 mm at 50° + small, smooth + disrupted, calcite vns (<160 mm) down to 48.5m		highly disrupted + contorted.	trace Pyrite	
	46.4	2.1	1.84	87.62%	47						
					48						
	48.5	0.9	0.9	100%	49						
	49.4	3.0	3.05	~100%	50				50.8 B at 22° (ss) bedding cnt. but usually shallow to core axis.		
					51						
					52				52.5 B at 40° (tuf sa/ss)		
	52.4	1.5	1.52	~100%	53						
	53.9	1.4	1.4	100%	54	54.3 massive, gy with minor carbonaceous matter, slightly calc, fine to m.g tuf sa	v. minor, small disrupted Cal veining		mas. little disturbance	tr Py	
					55						
	55.3	3.0	3.0	100%	56						
					57						
					58	58.0 intc + intb predominantly gy + dk gy siltstone & gy + gy-brown fg to mg tuf sandstone + minor carb black shale.	moderate, small, disrupted calcite vns.		moderate to heavy disruption + contortion	tr Py	
	58.3	3.0	2.96	99.33%	59						
					60				59.8 B at 55° (ss)		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 45 TO 60 m DATE 29/1/81 PAGE 5 OF 24

CC16088

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					61	intercalated & interbedded predominantly grey & dark gy siltstone & gy medium grained tuffaceous sandstone & black carbonaceous shale (mix)	moderate, small, disrupted calcite veining		mod. to heavy disruption & contortion.	minor pyrite in patches & vns & the cal.	1%
	61·3	3·0	3·0	100%	62				62·0 B at 62° (SS/bk sh)		
					63				62·6 B at 53° (ss/bk sh)		
	64·3	3·0	3·08	~100%	64				65·4 B ~ at 57° (bk sh)		
					65						
					66				66·9 B at 35°	66·6 minor development of banded pyrrhotite? (minor mineralisation along laminated bedding)	
	67·3	3·0	3·03	~100%	67	67·5 0·3 m of intc gy SS & gy tuf ss					
					68	68·3 massive, gy, fine to mg tuf ss; discontinously & slightly calcareous.	68·3 quartz/siderite/Cal vn, 90 mm at 63° minor Cal veining.		little to moderate disruption & carb matter along fractures	tr Py	
					69						
	70·3	3·0	3·0	100%	70						
					71						
					72						
					73						
	73·3	3·0	2·95	98·33%	74		74·2 Cal vn 150 mm at ~35°				
					75	74·6 end of massive ss.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C. FROM 60 TO 75 m DATE 23/7/81 PAGE 6 OF 24

83978

DRILL ADVANCE / LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					76	mixed sediments intercalated + interbedded predominantly dark grey siltstone + carbonaceous black shale & gy ss + + gy/gy-brown fine to medium grained tuffaceous sandstone.	moderate. small. smooth calcite vaining		heavy disruption and contortion core moderately broken.	mod. pyrite in patches + vns.	2%
	76·3	3·0	2·93	97·67%	77						
					78						
					79						
	79·3	3·0	3·0	100%	80						
					81				81·1 B? at 63° (bk sh)		
					82						
	82·3	2·5	2·3	92·0%	83				82·9 B at 57° (bk sh)		
					84						
	84·8	0·7	0·7	100%	85						
	85·5	2·8	2·87	~100%	86	-86·3 interbedded + intercalated gy ss + m.g. tuf ss & v. minor dk gy ss.	very minor. small. disrupted Cal vaining		mod disruption + cnt.	barren	0
					87						
					88						
	88·3	3·0	3·0	100%	89	-89·3 predominantly massive gy m.g. tuf ss (slightly calcareous)	v. minor Cal vns.		mostly mas.	barren	0

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 75 TO 90 m DATE 23/7/81 PAGE 7 OF 24

RB 8274

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					91	predominantly massive sandstone.	minor calcite veining		mostly mas & disrupted siltstone sections.		
■	91·3	2·9	2·65	91·38%	92	92 intercalated & minor interbedded gray-brown siltstone & gy-br fine to medium grained tuffaceous sandstone.	minor small disrupted Cal veining		core moderately to highly broken. heavy disruption 92·6 B at 37° (ss) & contortion.	minor pyrite & Cal vns. (also rare Po, cp)	tr
					93						
	94·2	0·18	0·15	100%	94						
	94·35	2·95	3·0	~100%	95						
					96				96·8 B at 34° (ss/tuf ss)		
					97						
	97·3	3·0	3·0	100%	98						
					99						
					100						
	100·3	3·0	3·0	100%	101				100·5 B at 34° (ss)		
					102	102·0 intb & minor intc gy & dk gy discontinuously calcareous ss & minor thin beds to isolated laminae of black carbonaceous shale.	mod. small, smooth & disrupted Cal vns.		minor disruption & cnt well beddad - thin bd to laminar. steep to core axis	mod Py & Po in Cal vns & disseminated.	2%
					103				103·3 B at 66° (ss)		
	103·3	3·0	3·04	101·3%	104						
					105				104·9 B at 61° (ss/bk sh)		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 90 TO 105m DATE 25/7/81 PAGE 8 OF 24

CRA 6888

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					106	interbedded and intercalated grey & dark gy siltstone with minor beds & laminae of carbonaceous black shale, & several calcd units of light gy-brown medium to coarse grained tuffs. units discontinuously calcareous	moderate, small (<1cm) smooth & disrupted, calcite veining		light to mod disruption & contorted. generally well bedded - thin to laminar bedding	moderate pyrrhotite & & pyrite & cal vns, & in vns & in patches	2%
	106·3	3·0	3·0	100%	107				107·0 B at 70° (ss/bk sh)		
					108						
					109				108·8 B at 72° (ss)		
	109·3	3·0	3·01	~100%	110						
					111				110·4 B at 68° (ss)		
					112						
	112·3	3·0	3·04	~100%	113				112·3 B at 73° (ss)		
					114				113·9 B at 60° (ss)		
					115				115·2 B at 71° (ss)		
	115·3	3·0	3·01	~100%	116					115·9 minor sp & cal	
					117						
					118	117·8 intb & minor intc light gy. soft, calc siltstone, & ?? (unreactive light gy, undisturbed dolomite) & s. fine to m.g light gy tu.	minor cal veining. small. disrupted vns.		117·6 B at 54° (ss) minor disruption & crit.	disseminated Py	2%
	118·3	3·0	3·0	100%	119				119·2 B at 40° (tu)		
					120						

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY JDC FROM 105 TO 120m DATE 25/7/81 PAGE 9 OF 24

CONFIDENTIAL

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					121	interbedded + minor intercalated light grey + gy siltstone + very fine tuffaceous sandstone. sporadically calcareous.	minor small, disrupted calcite veining		minor to moderate disruption + contortion thin to laminar bedding	minor pyrite in vns. & cal + disseminated	2%
	121·3	3·0	3·0	100%	122				121·9 B at 28° (ss/tuf sa)		
					123				123·6 B at 32° (ss/tuf sa)		
	124·3	3·0	3·0	100%	124						
					125				125·4 B at 32° (ss/tuf sa)		
					126						
					127				127·5 B at 40° (ss)		
	127·3	3·0	3·0	100%	128	127·8 intb + into gy + dark gy ss with carbonaceous black shale + minor gy f. to medium grained tuf sa.	minor, small disrupted Cal veining		mod to heavy disruption + cnt. common microfaulting. mineralised veinlets mostly steep to core axis ~ 60°	mod Py + pyrrhotite in in vns. patches + & Cal	3%
					129						
					130						
	130·3	3·0	3·0	100%	131				130·7 B at 15° (ss/bk sh)		
					132						
					133				133·0 B at 28° (ss/bk sh)		
	133·3	3·0	3·0	100%	134						
					135						

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 120 TO 135 m DATE 25/7/81 PAGE 10 OF 24

8307444

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					136	Interbedded + minor intercalated dark grey + minor gy siltstone & black shale + minor brown-gy fine to medium grained tuffaceous sandstone	minor, small, veinsd disrupted calcite		moderate to heavy disruption + contortion	mod Pyrite, minor pyrrhotite in veins + patches, & Cal.	2%
	136·3	3·0	3·4	~100%	137				137·0 B at 41° (ss)		
					138						
					139				139·3 B at 41° (ss)		
	139·3	2·4	2·43	~100%	140						
					141						
	141·7	0·75	0·75	100%	142				142·0 B at 31° (ss)		
	142·45	2·85	2·85	100%		142·6 intb + intc gy ss + f.g. gy tuf ss, & minor dk gy ss + bk sh.	142·2 {cal/quartz/fluorite vns over 50mm @ 67° minor, small, smooth + disrupted Cal vns.		minor to mod. disruption + contortion.	mod Py in vns + disseminated	2%
					143						
					144				144·4 B at 31° (ss)		
					145						
	145·3	3·0	3·09	~100%	146				145·9 B at 36° (ss/tufss)		
					147				147·5 B at 32° (ss)		
					148						
	148·3	3·0	3·0	100%	149				149·0 B at 48° (ss/tufss)		
					150						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C. FROM 135 TO 150m DATE 25/7/81 PAGE 11 OF 24

CF 33568

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					151	interbedded + intercalated grey fine grained tuffaceous sandstone with gy siltstone + occasional units of dark gy ss & minor black shale. sporadically calcareous	rare small, smooth + disrupted calcite veining.		heavy disruption + contortion.	common pyrite, some vns, mostly finely disseminated minor pyrrhotite.	3%
	151·3	3·0	3·0	100%	152				152·0 B at 16° (cs)		
					153						
					154				bedding generally shallow to parallel to core axis from 154·0 m down.		
	154·3	3·0	3·03	~100%	155						
					156						
					157						
	157·3	3·0	3·0	100%	158						
					159						
					160	160·2 1·2 m of intb + intc dk gy ss + carbonaceous bk sh.			160·0 B at 29° (ss/tuf ss)		
	160·3	2·95	3·0	~100%	161						
					162		162·3 Cal vns over 410 mm at 52°		162·2 B at 34° (ss/tuf ss)		
					163						
	163·25	2·45	2·46	~100%	164						
					165						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY JDC FROM 150 TO 165m DATE 25/7/81 PAGE 12 OF 24

91/638

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						interbedded and intercalated grey + dark gy siltstone, with fine to medium grained (sometimes é carbonaceous matter) gy + minor dk gy tuffaceous sandstone. finer units calcareous.	moderate, mostly small, smooth + disrupted calcite veining.		heavy disruption + contortion common microfaulting 167.0 B at 29° (tuf sa)	moderate pyrite, patches + disseminated more Py in coarser units.	2%
	165.7	1.45	1.51	~100%							
	167.15	0.85	0.85	100%							
	166.0	3.1	3.19	~100%		~166.2 intb + intc dk gy ss é minor gy ss + carb bk shale, occasional fg to m.g. tuf sa (all units calc)	minor small, disrupted cal vns.		heavily disrupted + cnt. bedding variable but generally shallow to core axis. 169.4 B @ ~15° (ss/sh) microfaulting common.	common Py, minor pyrrhotite é cal, in vns + patches.	3%
	171.1	3.0	3.0	100%							
	174.1	3.0	3.01	~100%		~176.6 intc gy f.g. to coarse grained tuf sa é minor gy ss.	minor, small, smooth cal veining.		minor disruption, mostly massive.	minor patches + dis Py	1%
	177.1	3.0	3.0	100%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY JDC FROM 165 TO 180 m DATE 26/7/81 PAGE 13 OF 24

A7938

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	180·1	3·0	3·01	~100%
	183·1	3·0	3·0	100%
	186·1	1·2	1·22	~100%
	187·3	3·0	3·0	100%
	190·3	3·0	3·03	~100%
	193·3	2·9	2·9	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
180·1 – 193·0	intercalated green-grey medium to coarse grained tuffaceous sandstone, with minor gr-gy + dark gy siltstone.	minor small, smooth + disrupted calcite + quartz veining.		mostly massive, in parts bedded + usually disrupt -ed + contorted.	minor disseminated pyrite.	
		184·3 qz/cal vn: 150 mm at 36°				
		186·2 qz/cal vn: 140 mm at 44°				
				185·8 cyclic bd; B at 40° (ss/tuf ss)		
	190·0 increase in ss (also some dk gy sections.)			190·0 cyclic bd; B at 40° (ss/tuf ss)		
	192·0	193·0 beginning of hornfelsing, slight, minor actinolite / tremolite vns.				

5 cm

SCALE 1:100 (1cm = 1 m)

CS 1633

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 180 TO 195m DATE 26/7/81 PAGE 14 OF 24

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					196	interbedded and intercalated green, grey-gr + minor gy + brown siltstone + fine to coarse (mostly medium) grained tuffaceous sandstone. unit slightly altered.	minor small, disrupted calcite veining. more common are small actinolite/ tremolite vns.		moderate disruption + contortion.	minor pyrite + pyrrhotite in act/tt vns	1%
	196.2	3.1	3.1	100%	197				196.6 B at 45° (ss/tuf sa)		
					198				198.4 B at 50° (ss/tuf sa)		
					199	199.1 dark gr + dk br alt ash?? has spotted texture (ē spots + wisps of white matter)	common tt/act vns + at top, pervasive quartz veining? (ophitic → gabbroic)?		massive unit with gradual contacts (conformable? ē bedding)	mod Py in patches + disseminated.	2%
	199.3	3.0	3.0	100%	200						
					201						
					202	202.1 slightly altered gr, gy-gr + gy-br intc + intb ss + f.g to m.g tuf sa ē minor wh very f ash + dk gr/br "spotted" ash? lighter coloured units commonly calc.	mod, small, disrupted Cal vns to 206.7 then minor. mod act/tt veining throughout.		202.1 contact at 50° heavy disruption + cnt. 202.9 B? at 32° (ss/ash)	minor Po, Py ē act/tt vns.	1%
	202.3	3.0	3.01	~100%	203						
					204						
					205						
	205.3	3.0	3.0	100%	206						
					207	206.7 units predominantly dk gy-br from here down.					
					208	207.9 0.8 m of "spotted ash"? gabbro?					
	208.3	3.0	3.0	100%	209						
					210						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 195 TO 210m DATE 26/7/81 PAGE 15 OF 24

83978

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					211	altered intercalated dark grey-brown siltstone + fine to medium grained tuffaceous sandstone (+ shale?)	minor small smooth calcite veining, moderate actinolite/ tremolite veining.		mod to heavy disruption	mod Po in vns, patches	2%
	211·3	3·0	3·0	100%	212				211·4 B at 20° (tuf sa/ss)		
					213						
					214	214·3 unit changes colour to light gy-br, light br + gr-gy.			increase in disruption - soft sediment deformation + brecciation	minor Po, pyrite.	
	214·3	3·0	3·08	~100%	215						
					216						
					217						
	217·3	3·0	3·01	~100%	218						
					219						
					220				220·1 B at 55° (ss/tuf sa)		
	220·3	2·8	2·58	~100%	221				221·4 B at 42° (ss/tuf sa)		
					222						
	222·8	3·15	3·18	100%	223						
					224						
					225						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 26

LOGGED BY J.D.C FROM 210 TO 225m DATE 26/7/81 PAGE 16 OF 24

09466

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					226	intercalated + minor interbedded green-grey + brown siltstone to fine to medium grained tuffaceous sandstone + very minor white ash. unit is hornfelsed.	minor small calcite, quartz, siderite + actinolite/tremolite veining. 226.6 qv's over 150 mm at 52°	5°	core very highly broken to 228.5 m. moderately to heavily disrupted + contorted. 227.0 B at 72° (ss)	moderate pyrite & act/tt vns.	2%
	225.4	1.0	1.0	100%							
	226.4	0.85	0.96	100% (+13%)	227						
	227.5	0.7	0.7	100%	228						
	228.5	0.8	0.8	100%	229						
	229.3	3.0	2.99	99.67%	230	230.0 intb + minor intc calcareous, carbonaceous black shale & dark gy siltstone.	common small smooth Cal vns.		mod to heavily crt. mod disruption. 230.8 B at 43° (bk sh)	common Py in Cal vns + in patches.	3%
					231						
					232						
	232.3	3.0	3.0	100%	233				232.9 B at 48° (bk sh)		
					233.3	Base Metal Zone	233.3 q.v's 150mm @38°			233.3 } vns & Gl 40%, Sp 25%, Py 2% 233.7 }	6%
					234		233.7 qz/St vn & stringer vns below 180mm @38°		core inclinations 43° vn core axis average 37°.		
					235		234.6 qz/St vn cxcomb texture 100mm at 35° minor ankerite & sed.		234.5 vns at ~38° (52° vn omitted)	234.6 vn & Py 3%, Gl, Sp, AsPy 1% + Cp Tr	6%
	235.3	3.0	3.0	100%	235.6		235.3 qz/cal vn 250mm @ 52°			236.3 vn & AsPy 4%, Gl, Py 1%	5%
					236	236.4 intc + minor intb gy-gr + br ss + f.g to m.g tuf sa. unit ho.	minor Cal vns. common pervasive + disturbed qz + act/tt vns.		236.2 B at 45° (bk sh) heavily disrupted + crt. 237.3 B at 75° (ss)	minor Py, Po & act/tt vns	1%
					237						
					238						
	238.3	0.68	0.68	100%							
	238.9	2.36	2.37	~100%	239				239.3 B? at 52° (ss/ash)		
					240						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 225 TO 240 m DATE 26/1/81 PAGE 17 OF 24

CRA 1638

LITHOLOGY

LOST CORE	DRILL ADVANCE DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				241		interbedded + intercalated green + gr-grey + dark gr-gy siltstone with minor fine grained tuffaceous sandstone + ash. unit hornfelsed.	common small to pervasive "mixed" veining. mixed = quartz/ calcite/actinolite/ tremolite ± epidote.		moderate to heavy disruption + contortion. often well bedded - thin to laminer bd.	minor pyrrhotite + pyrite & mixed vns occasional larger mixed vn & >50% Po, Py (<10mm)	2%
241·3	3·0	3·0	100%	242					242·5 B? at 44° (ss)		
				243							
				244							
244·3	3·0	3·03	~100%	245					244·6 B at 75° (ss)		
				246							
				247					246·1 B at 70° (ss)		
247·3	3·0	3·0	100%	248							
				249					248·8 B at 25° (ss)		
				250							
250·3	3·0	2·99	99·67%	251					251·3 B at 70° (ss/ash)		
				252							
				253					253·0 B at 65° (ss/ash)		
253·3	3·0	2·96	98·67%	254							
				255							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY JDC FROM 240 TO 255m DATE 27/7/81 PAGE 18 OF .....

83077

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				256		interbedded + intercalated green, gr-grey + brown-gy siltstone (hornfelsed) + fine grained tuffaceous sandstone, rare ash. thin beds.	minor veinlets of calcite + mixed veining · small, mostly smooth; in parts pervasive quartz veining.		heavy disruption + contortion. soft sediment brecciation + deformation beds commonly thin to laminar, mostly cnt, generally shallow to core axis (<30°)	256·4 mixed vn & Po/Py 0·02 100 mm at 30°	qz%
	256·3	3·0	2·99	99·67%						general mixed vns & Po/Py, most < 10 mm.	3%
				257							
				258							
				259							
	259·3	3·0	3·0	100%							
				260							
				261							
				262					262·8 lam B at 27° (ss/f. tuf ss)		
	262·3	3·0	3·0	100%							
				263							
							263·4 several qz/siderite vns < 10 mm at ~ 45°				
				264							
				265	264·7	massive quartz/carbonate with interconnecting stockwork zone. mas qz/cbte/pyrrhotite vn-i-om, followed by zone & siderite veinlets, larger qz/cbte vns + intermediate zones of sediment; intimately mixed in with qz + small bands of gr, altered chloritic ss.	mas vns sometimes have coxscomb texture; sometimes a sweated out txt. cbte mostly yellow-white st. sed/qz mix has clouded contacts, mottled txt.		vn contact at 31° margin & sediment breccia. inner contact at 40°		
	265·3	3·0	2·97	99·0%					qz/St/Po vns 265·7 bottom contact at 35° sed band & minor St vnlets (// vns) 266·2 contact at 50°	qz/St vn - Po 15% Sp 3% seds & dis Py	18% tr
				266					//qz/St vns: seds between vns at 85° 267·1 contact at 55°	qz/St vns - Gl, Cp, AsPy, Py, Po + Sp - all 1%	6%
				267					mottled mix zone (minor St) mottle coarsens mid-zone 268·0 contact at 55°	mix & dis Py. Gl 1%, patchy Po 3%	4%
				268					vn + mix zone: vns at 80°, 65°, 5° opposing vn at 23° (⊥ to others) 268·7 contact at 65°	qz/St vns & vn Sp 3%, AsPy, Py 2%, patchy Po 2%	9%
	268·3	3·0	2·96	98·67%					mottled mix zone (seds > qz) 269·35 contact at 68°	mix & patchy Sp, Py 1%, Po 2%	3%
				269					qz/St/Sp vn at 25° & mix.	vn qz/St & vn Sp/Gl 8%, Po 5%, dis Py AsPy 1%	14%
				270							

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY JDC FROM 255 TO 270m DATE 2/9/81 PAGE 19 OF 24

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						massive quartz vns + stockwork (con) very little, if any, sediment - blotchy green colour due to? chlorite/talc/sed? smeared on qz crystal faces	mix has mottled texture, also clouded minor siderite present.	AsPy Py	mottled mix / qz predominant veins at 60°	Patchy Sp 2%, Po, Py 3%, Gn tr dis AsPy (tr)	5%
	271·3	2·4	2·4	100%	271·4				271·1 contact at 20°		
									massive qv. & AsPy. Py	Sweated out AsPy 8%, Py 7%	15%
						massive qz vns + minor stockwork vns cut host rock of gr/yellow-white/wh + grey carbonate/minor talc? q.v's usually & sulphide + minor st.	cbtes usually foliated + highly veined by cbte, sometimes mottled.		271·6 contact 15° talc cbte - foliated / sometimes highly veined, (vnlets - cbte) minor small q.v.'s fol at 65° 273·7 contact at 48°	dis/ blebs of Py/Po 2%, Sp 2%, Gn? Mt? tr	4%
	273·7	3·1	3·13	~100%				AsPy AsPy AsPy	qz / Po vn & st. AsPy / Py minor sed inclusion? in bed	Sweated out AsPy 8%, Py 8% Po 10%, minor Cp/Py on edges Po.	26%
								Po/Py Po/Py Py	275·1 contact at 36° vn (AsPy/qz) at 63°		
					276·0	talc carbonate zone. minor talc blebs, mostly gy/wh/gr cbtes. ranges from ye-wh cbte & dark specks + wh mottle; strongly fol + cut by dk stylolites; to streaky (moderately fol) gy & wh (& mod. amber mottling) cbte. minor cbte veining. minor magnetite blebs.	minor wh cbte vns. also minor q.v's at top.	Po/Py vn (6°)	talc cbte cut by qz/sulphide (vns contact = vn at 61°	Zone & total AsPy 50mm Py 5% Py 50mm Po/Cp 2%	12%
	276·8	0·85	0·75	100% (~115%)					mod to strong foliation steeper fol (~55°) & coarser units. 277·8 fol at 36°	minor disseminated Py? Mt? Cr?	1%
	277·65	2·65	2·65	100%					278·2 qz/6l vn 18 mm at 46°		80%
	280·3	3·0	2·0	100%					279·5 fol at 55°		
									281·0 fol at 36°		
									282·7 fol at 56°		
	283·3	3·0	3·02	~100%					284·9 fol at 39°		

SCALE 1:100 (1cm = 1 m)

5 cm

8307

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 26

LOGGED BY JDC FROM 270 TO 285 m DATE 5/9/81 PAGE 20 OF 24

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	286·3	3·0	3·02	~100%
	289·3	2·1	2·1	100%
	291·4	3·0	3·03	~100%
	294·4	3·0	3·0	100%
	297·4	3·0	3·0	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	Talc carbonate (con) green-white & yellow-wh cbte with common Talc.	highly veined by wh. network of cbte vnlets		veinlets in all directions. 285·8 fol at 40° ? mostly 90° to core axis	disseminated rare pyrite, minor Magnetite? 2%	2%
	grey & wh cbte & common Talc	moderate wh cbte veining, coarse mottling - strong foliation.		286·5 fol at 60°	dis rare Py = Mt. minor Mt in cbte vns 2%	2%
				290·1 fol at 50°		
				291·4 fol at 40°		
	gr-wh. wh & gr-gy cbte with common talc, common streaks & blebs of Mt	"massive" to mod. fol. fine to medium mottling.		common Mt vns at 56° 293·3 fol at 50° common Mt/cbte at 57°	dis blebs of Mt, Py. (minor) common vns & Mt, Py.	4%
				296·5 fol at 60°		
				299·6 fol at 80°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 285 TO 300m DATE 6/9/81 PAGE 21 OF 24

83/758

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	300·4	3·0	3·03	~100%	301	talc carbonate (con) green-grey, white + gy cbtes, with minor talc. fine mottling ("dog rock") to coarse blotchy texture.	minor foliation, wh cbte veining common		minor to moderate fol.	Mt, minor pyrite in blebs + cbte vns.	4%
									301·5 fol at 60°		
					302				Mt/cbte vns at 60°		
	303·4	2·35	2·35	100%	303				303·8 fol at 64°		
					304						
					305				305·4 fol at 50°		
	305·75	3·1	3·1	100%	306				306·4 fol at 54°		
					307						
					308				308·1 fol at 57°		
	308·85	1·45	1·43	98·6%	309						
					310				310·8 fol at 54°		
	310·3	3·0	2·99	99·67%	311						
					312				312·9 fol at 60°		
					313						
	313·3	2·95	2·95	100%	314				314·6 fol at 60°		
					315						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY JDC FROM 300 TO 315m DATE 6/9/81 PAGE 22 OF 27

8839756

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
				316
	316·25	3·05	3·06	~100%
				317
				318
				319
	319·3	3·0	3·0	100%
				320
				321
				322
	322·3	3·0	2·98	99·3%
				323
				324
				325
	325·3	3·0	3·0	100%
				326
				327
				328
	328·3	3·0	3·0	100%
				329
				330

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	talc carbonate zone (con) White ; green-wh + minor grey cbtes with common talc. moderate to strong mottled texture.	common wh cbte veining		315·5 fol at 60° light to strong foliation 316·8 fol at 45° cbte vns at 57° + 40° 318·7 fol at 66° 320·3 fol at 64°	minor disseminated Magnetite, Pyrite + minor cbte vns & Mt, Py	2%
	~321·2 several sediment inclusions ~100 mm each.					
				322·7 fol at 60°		
324·5	talcose sediments dark gr homogeneous talcose sed cut by talc vns.	talc decreasing down hole		contact at 20°? vns in all directions	trace dis f.g. Py	tr
325·6	hornfelsed sediments. intercalated + minor interbedded ho fine grained gy + gy-gr tuffaceous sandstone & gy + brown siltstone, very	minor veining usually small + smooth quartz mixed + minor calcite veins. chlorite filled fractures in sa.		mostly massive units- 326·6 qz / st vn 60mm at 41° bedding hard to find. 329·3 B? at 20° (tuf sa/se)	bedrock barren -326·6 vn contains AsPy, cp 2% each.	0 -4%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY J.D.C FROM 315 TO 330m DATE 6/9/81 PAGE 23 OF 24

8309753

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	331			
	331·3	3·0	3·0	100%
	332			
	333			
	334			
	334·3	3·0	3·01	~100%
	335			
	336			
	337			
	337·3	3·0	3·0	100%
	338			
	339			
	340			
	340·3			
	341			
	342			
	343			
	344			
	345			

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intercalated + minor interbedded hornfelsed grey, green-gy + brown-gy fine-grained tuffaceous sandstone with gy + gy-br siltstone. discontinuously calcareous. minor silicified zones.	common quartz + mixed veining, small + disrupted. 331·9 zone ± tourmaline? (200mm) 332·1 qtz/siderite vns clear (240 mm at 30°		330·6 B at 47° (ss) units often disrupted, but bedding where present is undisturbed + consistent. 333·3 B at 50° (tuf ss) 337·8 B at 46° (ss/tuf ss) 339·8 B at 47° (ss/tuf ss)	minor disseminated pyrite	1%
		332·1 vn contains sp, Gl 2% + AsPy + Py 1%				6%
340·3	End of DDH: RBE 26					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 26

LOGGED BY JDC FROM 330 TO 340·3m DATE 6/9/81 PAGE 24 OF 24

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
									Start of Ground Core ↓
18·0	18	80	4	20	165	BLD	7	125	
19·4	5	85	5	15	110	BLD	3	150	
20·65	BLD	65	9	20	165	BLD	7	140	
22·2	BLD	120	11	20	150	0·5	31	130	
23·85	BLD	125	6	25	160	1·0	9	130	
25·4	BLD	105	5	10	160	BLD	11	135	
27·0	BLD	95	BLD	5	155	BLD	2	140	
29·6									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 15 TO 30m DATE 13/5/81 PAGE 1 OF 22

83075

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
	BLD	70	6	30	155	BLD	BLD	135	
31·5	4	70	6	15	155	BLD	31	120	
32·4	BLD	75	7	15	150	BLD	8	135	
34·5	BLD	80	5	25	170	0·5	3	130	
35·4	BLD	80	4	15	140	BLD	5	125	
37·2	BLD	90	5	25	135	BLD	3	140	
40·35	BLD	85	5	15	140	BLD	45	140	
43·4	BLD	50	BLD	10	105	BLD	12	100	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 30 TO 45m DATE 13/5/81 PAGE 2 OF 22

839760

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
46·4	BLD	80	8	25	125	BLD	21	110	
48·5	BLD	85	6	30	130	BLD	8	105	
49·4	BLD	70	BLD	25	115	BLD	7	95	
52·4	BLD	60	BLD	10	135	BLD	6	110	
55·9	BLD	60	4	25	110	0·5	3	120	
55·3	BLD	50	5	45	115	BLD	4	130	
58·3	BLD	60	BLD	50	125	BLD	11	110	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 45 TO 60m DATE 13/8/81 PAGE 3 OF 22

839761

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
61·3	BLD	85	BLD	40	105	BLD	11	95								
64·3	BLD	100	BLD	35	95	BLD	10	85								
67·3	10	45	7	250	570	1·0	250	110								
70·3	BLD	55	4	30	130	BLD	11	130								
73·3	BLD	70	6	20	140	BLD	14	105								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 60 TO 75 m DATE 13/8/81 PAGE 4 OF 22

8397G

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
76·3	BLD	65	BLD	45	150	BLD	14	110								
79·3	BLD	90	BLD	35	155	BLD	7	105								
82·3	BLD	105	BLD	55	135	BLD	14	100								
84·8	BLD	75	7	90	220	BLD	210	105								
85·5	BLD	65	4	35	120	BLD	17	110								
88·3	BLD	65	6	15	125	BLD	6	120								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 75 TO 90 m DATE 13/8/81 PAGE 5 OF 22

C0/6838

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
91·3	BLD	70	5	10	120	0·5	3	110								
94·35	BLD	60	BLD	25	150	BLD	7	115								
97·3	BLD	130	4	30	160	BLD	13	110								
100·3	11	75	5	70	375	BLD	47	105								
103·3	BLD	110	BLD	35	130	BLD	3	105								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 90 TO 105 m DATE 13/8/81 PAGE 6 OF 22

839764

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
105																
106																
106·5	BLD	75	BLD	30	100	0·5	6	80								
107																
108																
109																
109·3	BLD	70	BLD	30	115	BLD	5	90								
110																
111																
112																
112·3	BLD	100	BLD	20	120	BLD	8	100								
113																
114																
115																
115·3	103	98	4	95	735	BLD	43	165								
116																
117																
118																
118·3	BLD	115	BLD	25	130	BLD	1	235								
119																
120																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 105 TO 120 m DATE 13/8/81 PAGE 7 OF 22

83963

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
120																
121																
121·3																
122																
123	BLD	100	BLD	25	125	BLD	2	250								
124																
124·3																
125																
126	BLD	115	4	15	120	BLD	7	270								
127																
127·3																
128																
129	BLD	115	BLD	35	130	BLD	2	165								
130																
130·3																
131																
132	BLD	135	5	30	150	0·5	130	115								
133																
133·3																
134																
134	BLD	95	BLD	30	130	BLD	45	130								
135																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 120 TO 135 m DATE 13/8/81 PAGE 8 OF 22

839766

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
136·3	BLD	130	BLD	30	150	0·5	4	125	
139·3	BLD	125	4	15	145	1·0	160	230	
141·7	BLD	100	5	30	145	0·5	320	255	
142·35	BLD	105	BLD	25	145	1·5	23	260	
145·3	BLD	110	BLD	35	985	0·5	280	185	
148·3	BLD	90	BLD	20	140	BLD	6	155	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 135 TO 150 m DATE 13/5/81 PAGE 9 OF 22

29438

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
151·3	BLD	105	BLD	15	160	0·5	10	230	
154·3	BLD	110	BLD	20	145	0·5	3	190	
157·3	BLD	100	BLD	30	140	BLD	10	195	
160·3	BLD	95	BLD	25	95	0·5	5	100	
163·25	BLD	80	BLD	25	150	0·5	10	110	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 150 TO 165m DATE 13/8/81 PAGE 19 OF 22

83768

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
166·7	BLD	95	BLD	25	100	BLD	10	90								
167·15	BLD	70	BLD	15	115	BLD	16	105								
168·10	BLD	135	BLD	30	135	0·5	2	110								
171·1	BLD	110	BLD	40	175	BLD	11	120								
174·1	BLD	115	BLD	30	150	0·5	6	125								
177·1	BLD	55	BLD	20	160	BLD	66	145								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 165 TO 180m DATE 13/6/81 PAGE 11 OF 22

83976

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
180-1	BLD	70	BLD	20	130	BLD	9	150								
183-1	BLD	100	BLD	40	110	0·5	12	125								
186-1	BLD	105	13	20	160	0·5	90	130								
189-3	BLD	65	BLD	15	140	0·5	10	115								
190-3	27	30	4	15	100	0·5	77	120								
193-3	73	110	BLD	10	80	1·5	90	140								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RDE 26

ASSAYED BY Analabs FROM 180 TO 195m DATE 13/8/81 PAGE 12 OF 22

83720

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
195 – 196									
196-3 – 197 – 198 – 199	86	135	4	15	65	BLD	71	105	
199-3 – 200 – 201 – 202	115	145	8	40	120	BLD	45	125	
202-3 – 203 – 204 – 205	70	130	5	35	95	BLD	130	155	
205-3 – 206 – 207 – 208	24	115	BLD	25	65	BLD	24	90	
208-3 – 209 – 210	4	415	BLD	20	95	BLD	28	105	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 195 TO 210m DATE 13/8/81 PAGE 13 OF 22

83978

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
210																
211																
211·3																
212																
213	BLD	95	9	25	90	BLD	45	90								
214																
214·3																
216																
216	14	65	BLD	25	115	BLD	45	110								
217																
217·3																
218																
219	BLD	50	BLD	20	90	BLD	45	125								
220																
220·3																
221																
222	BLD	65	BLD	15	85	0·5	17	125								
223																
223·8																
224	15	20	BLD	55	85	BLD	55	120								
225																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 210 TO 225m DATE 13/8/81 PAGE 14 OF 22

7/1988

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
225																
226	225·95	18	80	13	195	305	BLD	82	170							
227	226·95	11	120	4	415	295	1·5	95	250							
228	227·8	17	70	8	135	155	BLD	76	125							
229	228·5	5	105	6	170	205	0·5	89	195							
230	229·3	35	120	BLD	40	115	1·0	65	85							
231																
232																
233	232·3	434	575	BLD	7·0%	4·6%	135	4300	65							
234																
235																
236	235·3	80	210	BLD	1900	1400	4·5	2800	120							
237																
238																
	238·3	29	30	11	165	215	1·0	1000	120							
239	238·95	15	65	5	130	290	1·0	65	85							
240																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RDE 26

ASSAYED BY Analabs FROM 225 TO 240m DATE 13/8/81 PAGE 15 OF 22

83977

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
241·3	41	20	5	80	90	1·0	21	50	
244·3	60	85	5	90	135	0·5	65	55	
247·3	43	110	BLD	60	80	1·0	350	70	
250·3	39	30	BLD	40	115	1·0	22	55	
253·3	23	230	6	75	95	1·5	89	70	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 240 TO 255m DATE 13/8/81 PAGE 16 OF 22

8397

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
256																
256																
256·3																
257																
258	26	260	5	420	560	1·0	85	70								
259																
259·3																
260																
261	58	205	4	115	255	1·0	58	105								
262																
262·3 (+265·3)																
263	625	160	BLD	550	1400	6·5	220	1050								
264																
264·65	1200	130	7	815	1750	1·0	540	400						Ground Split	Core ↑ Core ↓	T5953
265·0	3830	1450	BLD	2000/1850	7450/6700	29·0/28	1400	3500								T5954
265·3	404	295	BLD	2500/2600	2·75%/2·5%	16·0/18	2400	330								T5955
265·7	80	100	BLD	2·2%/2·11%	2950/2775	24·0/26	8200	575								T5956
266·2	1120	820	BLD	2950/3075	3150/3025	48·5/53	4300	1250					NB: base metals	by AV1 + A6/3		T5957
267·1	3830	355	BLD	4450/4325	6250/6700	69·0/75	4200	1700								T5958
268·0	825	240	BLD	2700/2700	1·4%/1·37%	35·0/27	5800	1150								T5959
268·7	1·14%	100	·13	1750	2150	19·0	6500	2300								T5960
269·35	2800	265	BLD	2650/2825	2·55%/2·7%	15·0/18	3800	1900								T5961
269·8																
270																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 255 TO 270 m DATE 13/8/81 PAGE 17 OF 22

839275

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
262																
262.3	625	160	BLD	550	1400	6.5	220	1050								
263																
264																
265																
265.3	1150	395	BLD	3000	9500	45.5	230	1100								
266																
267																
268																
268.3	3200	1150	BLD	6000	2.05%	68.5	1.1%	1700								
269																
270																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 262.3 TO 270m DATE 13/8/81 PAGE 17A OF 22

83071A

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	3310	765	BLD	6750/7000	1·5%/	80·0	4600	2100				NB: base metals by A1/1 & A6/3				T5962
270·65	1020	640	BLD	8200/8500	2·55%/2·46%	64·0/69	2·2%	2100								T5963
271·05	408	360	14	1350	770	15·0	5·0%	475								T5964
271·7	28	30	BLD	380	730	3·5	6400	1150								T5965
273·65	258	9650	BLD	345/450	680/700	22·5/23	3·3%	655								T5966
274·45	505	6500	BLD	2100/2150	6350/7000	42·0/35	10·0%	790								T5967
275·1	76	1250	BLD	2100/2125	4050/4000	22·0/22	6·4%	840								T5968
275·55	577	6000	BLD	270	435	14·5	4600	1700								T5969
278·95	23	125	BLD	155	3400	3·0	4100	2200								T5970
277·05	98	110	BLD	3650	6950	8·0	6300	2000								T5971
278·2	455	3350	BLD	6·0%/5·46%	1·6%/1·46%	130/112	5500	1950								T5972
278·6	4	35	BLD	160	200	1·0	1900	1850					Split	Core ↑		T5973
279·25 (from 277·65)	102	1500	BLD	3·6%	5000	65	3000	1700					Ground	Core ↓		
280·3	4	BLD	BLD	110	195	1·5	1200	1350								
283·3	12	BLD	BLD	75	50	BLD	1100	1250								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 270 TO 285 m DATE 13/8/81 PAGE 15 OF 22

A/1938

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
271·3	242	90	8	435	750	4·5	1·3%	975	
273·4	2140	3000	BLD	1750	6000	26·0	6·5%	1000	
276·85	40	45	BLD	2000	5250	3·5	6000	2000	
277·65	102	1500	BLD	3·6%	5000	65·0	3000	1700	
280·3									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 270 TO 280·3m DATE 13/8/81 PAGE 18A OF 22

83977

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
285 – 286																
286·3 – 289	4	BLD	BLD	60	60	0·5	1700	1750								
289·3 – 291	BLD	5	BLD	55	70	BLD	1100	2000								
291·4 – 294	BLD	BLD	BLD	45	50	BLD	490	1850								
294·4 – 297	BLD	30	BLD	185	220	0·5	520	1850								
297·4 – 300	BLD	40	BLD	40	155	0·5	290	2500								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 285 TO 300m DATE 13/8/81 PAGE 19 OF 22

83679

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
300																
300·4	BLD	125	BLD	290	395	BLD	80	2300								
303·4	BLD	100	BLD	240	560	0·5	50	2200								
306·75	BLD	15	BLD	85	175	0·5	36	2200								
308·85	BLD	5	BLD	30	50	0·5	54	2350								
310·3	BLD	30	BLD	55	110	0·5	140	2450								
313·3	BLD	10	BLD	BLD	40	BLD	260	2100								
315																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 300 TO 315m DATE 19/8/81 PAGE 20 OF 22

83-7-30

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
315																
316																
316·28																
317																
318	BLD	15	BLD	5	40	0·5	150	1850								
319																
319·3																
320																
321	BLD	30	BLD	60	155	0·5	350	1700								
322																
322·3																
323																
324	BLD	25	BLD	BLD	60	BLD	30	1500								
325																
325·3																
326																
327	10	5	BLD	100	365	1·0	350	140								
328																
328·3																
329																
329	33	15	4	BLD	180	0·5	60	125								
330																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 315 TO 330m DATE 19/8/81 PAGE 21 OF 22

89078

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
330																
331																
331·3																
332																
333	159	30	BLD	1800	5650	2·5	1800	135								
334																
334·3																
335																
336	139	135	BLD	1150	2050	4·5	1600	285								
337																
337·3																
338																
339	156	165	BLD	780	1350	5·0	69	360								
340																
340·3		End of DDH : RBE 26 at 340·3m.														

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 26

ASSAYED BY Analabs FROM 330 TO 340·3 m DATE 19/8/81 PAGE 22 OF 22

839782