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PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: INTERIM REPORT ON THE DIAMOND DRILLING
AT RAMSAY GRID CAL
EXPLORATION LICENCE 5/63 PART 2

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 Sheet Burnie K55-03
(Grid Centre:- 372286mE 539698mN)

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

TEXT PAGES NO: 8

PLAN NOS: See List of Plans

TABLE NOS:

APPENDICES: 2

AUTHOR/S: N P Green

DATE: 28 September 1982

OPEN FILE

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

LIST OF PLANS

Plan	Description	Scale
TAS-2-2925	Ramsay Grid - CAL, Plan & Section of DDH CAL, 1, Geological Details	1:500
TAS-2-3066	Ramsay Grid - CAL, Plan & Section of DDH CAL 1, Geological Interpretation	1:500
<i>Packet 1</i> TAS-2-1824	Ramsay Grid - CAL, Composite Section L 5120N, Topo, Mag, Crone, Geochem, Geol.	1:2 500
TAS-2-3067	Ramsay Grid - CAL, Plan & Section of DDH CAL 1, Core Magnetic Susceptibility	1:500
<i>Packet 2</i> TAS-2-2947	Ramsay Grid - CAL, Section DDH CAL 1 Geochemical results for Sn/Cu/W	1:500
TAS-2-2948	Ramsay Grid - CAL, Section DDH CAL 1, Geochemical results for Pb/Zn/Ag	1:500
TAS-2-2949	Ramsay Grid - CAL, Section DDH CAL 1, Geochemical results for Au/Bi/Mo	1:500
TAS-2-2950	Ramsay Grid - CAL, Section DDH CAL 1, Geochemical results for F/As	1:500
TAS-2-1822	Ramsay Grid - CAL, Composite Section L 4880N, Topo, Mag, Crone, Geochem, Geol. & Proposed DDH CAL 2	1:2 500

SUMMARY

The diamond drilling at Ramsay Grid CAL, comprising of one diamond drill hole, CAL 1 (227.4m), was carried out between 1-2-82 and 12-2-82.

The drill hole failed to intersect a concentration of Sn, W bearing pyrrhotite that would satisfactorily explain the AEM and ground Crone EM anomalies. Nor did it outline a source for the anomalous Zn and Cu soil sample results.

It was successful in explaining the ground magnetic and Pb soil anomalies.

As the primary objective (EM anomaly) of DDH CAL 1 remains untested a downhole EM survey is required to establish the presence and position of the interpreted conductor.

It is essential that this conductor be fully evaluated as it would be premature to write off the CAL AEM anomaly successfully located on the ground, on the basis of one negative drillhole in such a geologically favourable environment.

Thus a second diamond drill hole is proposed at CAL. If the downhole EM survey successfully locates the conductor the drillhole will be positioned accordingly. Otherwise this second drillhole would be drilled on L 4880N to further test the EM anomaly.

INTERIM REPORT ON THE DIAMOND DRILLING
AT RAMSAY GRID CAL

EXPLORATION LICENCE 5/63 PART 2

1.0 INTRODUCTION

This report outlines the results and conclusions of diamond drilling carried out at CAL grid between 1-2-82 and 12-2-82. One diamond drill hole CAL 1, was drilled as per the recommendation in the Interim Report on Grid CAL, EL 5/63 Part 2 (19-1-82) written by G F Pigott. This report should be read in conjunction with the grid report as location, access, grid geology, geochemistry and geophysics, other than that pertaining to the drill hole, are not repeated herein.

2.0 DIAMOND DRILL HOLE CAL 1

2.1 Summary

Collared at grid co-ordinates	5119N - 5018E
National Co-ordinates	372675mE - 5396810mN
Azimuth (av)	258 ^o MN
Declination (av)	-44 ^o
Length	227.4m

2.2 Objectives

- 1) To determine the source of the Crone EM response, and so determine the nature of the Input AEM anomaly.
- 2) To test the coincident ground magnetic anomaly.
- 3) Determine the source of the anomalous Zn, Pb and Cu values in the soils and rocks.

2.3 Geology

- a) Local - see Grid Report
- b) Drillhole

The geology downhole can be summarised as follows:-

<u>ROCK TYPE</u>		<u>MINERALIZATION</u>	
		<u>STYLE</u>	<u>GRADE</u>
0- 6.0m	Triconed		
6.0- 34.3	Metasomatized Biotite Hornfels	Common Py veins & scattered grains, minor Po-diss & f. veins tr Cpy assoc. with Po	5%
34.3- 94.2	Biotite-cordierite Hornfels with minor calc silicate metasomat- ism.	Irreg. patchy Po assoc with calc-silicate alt, minor f.diss. in coarse units, minor Py with Po	2%
94.2-100.3	Metasomatized Biotite Hornfels	Fine irreg. Po veinlets.	tr
100.3-129.4	Biotite-cordierite Hornfels with minor calc-silicate metasomatism	Intermittent patchy Po with tr Py assoc with calc. sil	1%
129.4-143.5	Biotite-anthophyllite ± cordierite Hornfels with ilmenite	Discontinuous patchy Po veinlets	1%
143.5-157.5	Fractured Biotite- anth. ± cordierite Hornfels with ilmenite	Discontinuous patchy Po veinlets	1%
157.5-200.6	Biotite-anthophyllite ± cordierite Hornfels with ilmenite	Discontinuous patchy Po veinlets with tr blebby Py	1%
200.6 205.0	Irreg. porphyritic rextalised Basalt? now uralitised	Fine diss. Po & Py	tr
205.0-227.4	Metasomatized Biotite Hornfels.	Irreg. patchy Po veinlets & rare blebby Py	tr

A detailed drill log at 1:100 scale is appended (Appendix 1). Detailed geology and an interpretation are included in section form, Plans TAS-2-2925 and TAS-2-3066 respectively.

Four samples of drill core were dispatched to CMS (Central Mineralogical Services) for thin section description. The CMS report is appended (Appendix 2).

2.4 Geophysics

a) Electromagnetics (EM)

The ground electromagnetic survey utilising the Crone shootback system is shown in profile form along L 5120N on the composite section, TAS-2-1824.

The anomaly centred at 5030E on L 5120N is described by D Trussell (AAA Ltd, Senior Geophysicist) as plunging north, east dipping at 60° with an interpreted depth of burial of 40 metres. The coincidence of the EM anomaly with a magnetic anomaly implies a pyrrhotite source. The drill hole passed through the centre of the postulated conductor at a depth of approximately 65 metres, downhole.

b) Ground Magnetics

The ground magnetic profile is also presented on the composite section of L 5120N, Plan TAS-2-1824. The magnetic anomaly tested by the drill hole extends from 5000E to approximately 5060E. This zone, extrapolated to the drillhole was tested between 30 and 120 metres.

c) Drill Core Magnetic Susceptibility

The results of the drill core magnetic susceptibility measurements are presented in section form as Plan-2-3067. The measurements on the core were taken approximately every metre using a Geoinstruments Susceptibility Meter JH-8. Four readings were taken at each point, averaged, corrected for core diameter and plotted in SI units.

2.5 Geochemistry

The C horizon soil sample results for Zn, Pb, Cu, W & Sn along grid line 5120N are presented on the composite section, Plan TAS-2-1824.

The composite section clearly delineates highly anomalous Zn and Pb responses between 4960E and 5060E which are coincident with a broader slightly less anomalous Cu response between 4960E and 5160E.

The drillhole was designed to test the main anomalous zone between 45 and 170 metres downhole. The drill core was sampled for geochemical assay by grinding a portion off the side of the core using a diamond studded, tungsten carbide wheel. The samples, each of three metres of core each, were dispatched to Analabs for analysis of the following elements:-

- Sn, Cu, W (Plan TAS-2-2947)
- Pb, Zn, Ag (Plan TAS-2-2948)
- Au, Bi, Mo (Plan TAS-2-2949)
- F, As (Plan TAS-2-2950)

All the results of the Analabs analyses are appended to the detailed geological log (Appendix 1). Five sample pulps Z 1345-49 (140.8 - 155.8 metres) were retrieved and dispatched to Amdel Laboratories for check analyses on Sn and W. Comparative results are listed below:-

<u>Sample No.</u>	<u>Sn</u>		<u>W</u>	
	<u>Analabs</u>	<u>Amdel</u>	<u>Analabs</u>	<u>Amdel</u>
Z 1345	6	8	200	250
1346	8	4	150	200
1347	3	<4	140	180
1348	3	12	140	180
1349	6	6	110	120

The high tungsten values are almost certainly due to contamination off the tungsten carbide wheel. Similar values were obtained from some of the CAF core produced in the same drilling programme. When this core was split and analysed the results ranged from <10 ppm (limit of detection 10 ppm) to 15 ppm.

Therefore the tungsten results must be treated with caution and cannot be used in a comparative sense.

The results from drillhole CAF 5 are listed below for comparison:-

<u>Sample No.</u>	<u>Ground Sample (ppm)</u>	<u>Split Core Sample (ppm)</u>
Z 1387	75	<10
1388	120	<10
1389	140	10
1390	150	<10
1391	140	<10

A general statistical analysis of the various assay results are provided below as well as a more detailed population analysis for Cu, Pb and Zn, the three elements anomalous in the soil samples:-

Element	Range of Values (ppm)	Mean (m) ppm	m + 2 σ * (ppm)	No. of Anomalous Samples	Populations (ppm)
<u>Sn</u> (Plan TAS-2-2947) BLD-15		4.4	11.8	2	-
<u>Cu</u> (Plan TAS-2-2947) 45-420		177	311.3	2	0-75 Low 75-120 Low 120-380 Norm
<u>W</u> (Plan TAS-2-2947) 10-200		69	160	2	-
<u>Pb</u> (Plan TAS-2-2948) BLD-215		18	78	2	0-23 Norm. 23-38 High > 38 "
<u>Zn</u> (Plan TAS-2-2948) 125-370		189	274	3	0-230 Norm 230-290 High > 290 "
<u>Au</u> (Plan TAS-2-2949) BLD-0.016		0.001	0.007	4	-
<u>Bi</u> (Plan TAS-2-2949) BLD-8		1.1	4.9	4	-
<u>Mo</u> (Plan TAS-2-2949) BLD-9		2.4	3.8	3	-
<u>F</u> (Plan TAS-2-2950) 400-2820		775	1374	1	-
<u>As</u> (Plan TAS-2-2950) 2-60		15	41	4	-

* mean plus twice the standard deviation.

2.6 Discussion

It is evident that CAL 1 failed to intersect economic or even highly anomalous concentrations of any of the elements assayed.

The geological target, the metadolomite unit, and the Crone EM implied conductor were not apparently intersected. However the magnetic anomaly coincident with EM anomaly appears to be caused by a relative concentration of pyrrhotite between 25 and 95 metres averaging 2.5% as opposed to 0.5% further down the hole. The two zones are very well defined by the magnetic susceptibility measurements, the top zone averaging approximately 400×10^{-5} SI units compared with 150×10^{-5} SI units. The magnetic susceptibility section, Plan TAS-2-3067 shows in graphic detail that the majority of the pyrrhotite occurs as veins and patches. The shift in the lower limit of the magnetic susceptibility values over the lower zone may also be due to the presence of ilmenite at the expense of magnetite in the more hornfelsed sediments at depth.

Although the interpreted conductor is situated in the higher pyrrhotite zone, approximately between 55 and 75 metres, there appears to be no significant build up of pyrrhotite between those depths. The EM anomaly on grid line 5120N has a very low amplitude and although D B Trussell (AAA Ltd, Senior Geophysicist) interprets this as a northerly plunge of the conductor, well delineated further south, it is possible that it is pinching out on L 5120 rather than plunging deeper. To test the situation a downhole EM survey should be carried out. Plastic piping was inserted down the drill hole on completion of drilling for this eventuality.

The interpreted position of the EM conductor downhole coincides with the main zone of anomalously high Pb values. Placed thus, this zone would outcrop on surface in a position to give rise to the Pb soil anomaly with downslope movement into the creek at 4980E.

There appears to be no satisfactory explanation of the anomalous Cu and Zn soil values except that they are concentrated in swampy ground (as Pb is) adjacent to the creek.

2.7 Recommendations

- a) Carry out a downhole EM survey as soon as access and crew availability allows.
- b) A further diamond drillhole is proposed for CAL, its position to be determined by the downhole EM survey.

This is essential as it would be premature to write off the CAL AEM anomaly, successfully located on the ground, on the basis of one negative drillhole in such a geologically favourable environment.

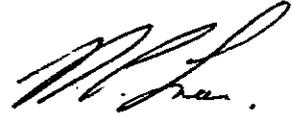
In the first case it would be drilled on L 5120 N to intersect the EM conductor delineated by the downhole EM survey, positioned accordingly.

In the second case, following the failure of the downhole survey to locate a conductor for whatever reason, a drillhole on L 4880 N is recommended as follows:-

Collar position	4880N/5091E
Azimuth	270° T.N.
Declination	- 45°
Estimated Length	100 m.

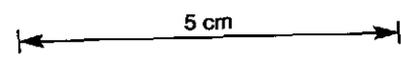
Target: The target for the proposed drill hole would be to intersect the GEM conductor in the region of the geologically mapped calc-silicate altered pelite unit at a depth of 40 metres. Plan TAS/2 '1822 shows the proposed hole. This composite section plan shows that the ground EM response is well developed and is coincident with an erratic magnetic anomaly. There are also well developed EM responses to the north and south.

There is no apparent soil geochemical anomaly associated with this EM anomaly. Therefore this drillhole is proposed on the basis of geological and geophysical data.



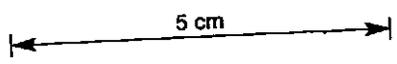
N P GREEN

A P P E N D I X 1



DRILL ADVANCE				637014 LITHOLOGY						
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	PERCENT MINERALISATION
6.0	1.0	0.25	25%	6-7	<p><u>Weathered Sediments.</u> V. broken, ox. br. - pale br. weathered sediments :- f. tuffaceous sa, ss, ar.</p>				<p>No fresh mineralisation seen.</p>	
7.0	1.0	0.25	25%	7-8						
8.0	1.7	0.20	11.76%	8-9						
9.7	1.1	0.25	22.72%	9-10						
10.8	1.0	0.95	95%	10.8-11	<p><u>Fractured ho -</u> Froc. & br. ox products along fractures. ho sediments v. hd. & heavy, dk gy, predominantly f. tuffaceous sa. & minor ss. & ar.</p>	<p>Few wh-pale gr. diffuse veins of amphibole & minor assoc. bleaching</p>		<p>11-20 Structure obscured by pervasive calc-silicate alteration & hornfelsing. 'Glimpses' of structure reveal disturbed sed's & little bedding minor b. recitation, probably intraformational.</p>	<p>V. scattered relatively coarse dis. Py. av. 1mm</p>	
11.8	1.6	1.40	87.5%	11-12						
13.4	2.6	2.63	~100%	13-3-14	<p><u>Hornfelsed Sediments</u> - V. hd. heavy gy.-dk gy hornfelsed & sl. alt. metasomatised into. f. tuf. sa, ss & minor ar.</p>	<p>Common v.f. veining of gypsum & v. common pale gr. & wh. calc-silicate veins, few zones up to 4cm. Few intr. coarse beds showing replacement by br. mica & Po?</p>		<p>Few fractures with slickensided surfaces.</p>	<p>13-8 Common Py. as v.f. irregular veins, dis. f. patches after assoc. & am. veining. Minor Po. also & more alt. zones</p>	
15				14-15						

SCALE 1:100 (1cm = 1m)



DRILL ADVANCE

637015

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
0	2.4	2.42	~100%	16		Possibly bk. to. as selvage alt ⁿ to calc-silicate replacement.		Erosional contact & graded ss. grading or. @ 70° graded uphole.		
				17				Bd. @ 30°		
4	3.1	3.1	100%	18				18.6 Bd @ 40°		
				19		19.1				
				20		More intense pale gr-wh calc-silicate veining & br. mica replacement.		Pseudo brecc. appearance from veinwork & true intra-formational healed brecc'n	Pu-vein & minor small patchy + much Po in same form & f. dis.	10%
				21	21.2					
5	0.8	0.8	100%	22	Fractured Hornfelsed Sediments Frag. broken hornfelsed ss. - dk. gy. v. hd. heavy Common irregular wh. gypsum veining assoc. & fracturing. Also minor intr. often brecc. pale br. pl. → ch.	Common wh. gypsum vns. related to fracturing		Slight increase in fracturing often sub // to L.C.A.	As before & mn. v. f. dis. Po. in v. alt. zones	3%
3	1.3	1.2	92.8%	23						
				24	23.6	Hornfelsed Sediments gy-dk. gy. v. hd. heavy hornfelsed irregularly intr. ss & f. tuf so. Common irregular vein & alt ⁿ effects. Mn. brecc. & disturbed pale br. pl. → ch. in more disturbed areas. General decrease in f. br. mica replacement downhole.	Common f. irregular pale gr-wh calc-silicate -gz-sul vns & selvage -bl-wh-pale gy bleaching. Few rounded zones up to 5cm often patchy of calc-silicate-sul replacement. Rare cbte assoc. & 'patchy' replacement. Less cloudy diffuse replacement.	23.8 Bd. @ 40° Generally v. hd. competent core 24.5 Bd. @ 50° Structure more clear. Generally disturbed pelitic units usually f. & brecc. Unit contacts always erosional	24.6 Common Py as vns & mn. scattered grains av. < 1mm & common dis. in c. units & Po. as f. dis. in confined zones & discontinuous f. vns. Possible replacement scheme:- sed. by calc-silicate by Po by Py. Tr. Cp. assoc. & Po.	7%
2	2.8	2.84	~100%	25						
				26						
				27						
0	1.9	1.85	97.37%	28				27.9 Common 'ribbons' Bd. @ 30° of pelitic rocks through ss.		
				29						
9	1.1	1.0	90.90%	30						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG

FOR DDH CAL I

LOGGED BY N. P. GREEN

FROM 15M TO 30M

DATE 7/2/82

PAGE OF

015

5 cm

DRILL ADVANCE

637016

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
								30.3 Bd @ 30°	7%
2.0	0.6	0.6	100%	31				31.5 Bd @ 35° - younging downhole	
6	1.8	1.8	100%	32				32.1 Bd @ 45°	
				33				33.0 Bd @ 25°	
3.4	2.6	2.35	90.38%	34				33.5 - Extremely disturbed	
				35				35.0 Bd @ 45°	
6.0	0.6	0.4	67%	36					
6.6	1.9	1.82	95.79%	37		Appearance of v. f. bk. vns. + bk. unknown mineral. Salvage alt ⁿ to few f. calc-silicate vns, more often unassoc., nearly always regular + continuous.		37.5 Bd @ 40°	
				38					
8.5	3.0	3.0	100%	39					
				40					
				41					
11.5	1.0	1.03	~100%	42		V. rare br-bk. f < 1mm diffusely bounded spots		42.1 Bd @ 30°	
				43				42.6 Bd @ 45°	
2.5	3.1	2.95	95.16%	44					
				45	No Alt Sed's Irregularly inter. br. f. tuf. ss's ± gy ss + minor often broken + disturbed br-gy ho pl.	Minor pale gr f calc-silicate veining, Rounded patchy calc-silicate alt ⁿ - replacement less common. Ho affects not as strong, sl softer + structure clearer.		44.1 Bd @ 40°	
								41.0	2%
								Po dis irregularly through calc-silicate replated patches appears to replace am. also f dis in c. units rarely Py - also assoc. ± alt patch -es. Few f Po - qz ± Py vns Po > Py	

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG

FOR DDH CAL I

LOGGED BY N.P. GREEN FROM 30M TO 45M

DATE 7/2/82

PAGE OF

5 cm

DRILL ADVANCE

637017

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
46	1.8	1.75	97.22%	46		Ubiquitous v. f. br. mica dis through ss units - rarely as short v. f. vns.				2%
47				47		Rare chte assoc. & calc-silicate alt° v. rarely as f discrete vns.			47.4	
48	0.8	0.7	87.5%	48		More intense alt° as described				10%
49	3.1	3.1	100%	49					49.2 - Ssm - Py - Po vns @ 10° calc-silicate	
50				50					49.4	2%
51				51					51.0 - Ssm Po actinolite vns @ 0°	
52	1.2	1.2	100%	52		Structure				
53	0.7	0.65	78.57%	53		Relatively common irregular fracturing			52.0 Bd @ 30°	
54	0.6	0.53	~100%	54					54.5 Bd @ 20°	
55	0.9	0.9	100%	55					51.8	
56	3.1	2.97	95.81%	56				55.2 Bd @ 15°		
57				57				56.8 Bd @ 45°		
58	2.5	2.32	92.8%	58				57.8 Bd @ 35°		
59				59				58.1 " @ 25°		
60				60						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG

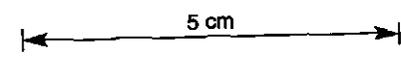
FOR DDH CAL I

LOGGED BY N. P. GREEN FROM 454 TO 604

DATE 7/12/82

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DRILL ADVANCE

637018 LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CONE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
2	0.8	0.8	100%							2%
10	2.6	2.62	~100%	61		60.8 - 3mm chtz vn @ 25°				
				62						
				63						
36	1.0	0.85	85%	64				63.5 Bd @ 40°		
				65						
				66						
				67				67.1 graded Bd @ 60° downhole		
77	3.1	3.07	99.03%	68						
				69						
				70						
08	2.2	1.95	88.64%	71				71.3 Bd @ 25°		
				72					71.2 - 4cm patch pale-gr calc-silicate alt ⁿ (diopside)? ± 10% Po + 1% Py as dis spots.	
				73		72.5 - 1mm chtz vn @ 20° + minor chlorite?		72.4 Bd @ 30°		
				74						
50	3.0	3.05	~100%	75		73.8 - 10mm pale gr-wh. f calc-silicate vn ± bl-gy alt. halo-bleaching @ 40°			73.4 - 10cm gr-gy replaced bed? ± vt dis Po 20%	

SCALE 1:100 (1cm = 1m)

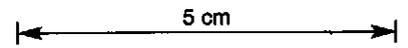
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DRILLHOLE LOG FOR DDH CAL I

LOGGED BY N. P. GREEN FROM 60M TO 75M

DATE 11/2/82

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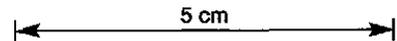
DRILL ADVANCE

637019

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
0	3.0	2.96	98.67%	76				75.3 Bd @ 40° 75.6 Bd @ 25°		2%
				77						
				78						
7.0	3.0	2.80	93.33%	79		77.8 More common f vns of dis bk replacement mineral; rarely randomly dis through. More alt bed.			More intense patchy Po veining in pale gr. calc-sili- cate veining & small massive patches up to 1cm. Mac. dis Py.	7%
				80						
				81						
0	3.0	3.05	~100%	82						
				83					83.1 - Semi-regular Po veining up to 5mm & qz @ 55°	
				84						
5.0	3.0	3.05	~100%	85						
				86		86.6				
				87						
0	3.0	3.02	~100%	88	88.0			87.7 Bd @ 50°	87.3 - 30cm zone of more intense Po veining - irregular 87.6 discontinuous, assoc. & calc-silicate alt ⁿ & veining	5%
				89	No Sed's Irregularly into br-gy s.s & f-v.f tuf. s.e. (rare) & gy-br ho pelite. Common cloudy br replacement of pelite beds	Subtle increase in v.f biotite? - br mica giving brownier colour to sed's. Calc-silicate alt ⁿ as before & bi-gy alt halos				
				90						

SCALE 1:100 (1cm = 1m)



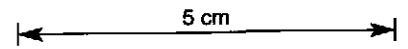
DRILL ADVANCE

637020

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
10	3.0	3.06	~ 100%	91-93						2%
40	2.4	2.34	97.5%	94-96	94-2 Ho sa's - hd gy ho f. sl. tuf. sa, well sorted & f intb gy & mnc. br-gy palite.	Generally less alt ⁿ . Mnc. v. f. biotite replacement in few beds. Calc-silicate alt ⁿ confined to few irregular vns & v. rare patches. V. rare cbte f. vns. Rare f. subtle regular vns of unknown bk. mineral - possibly to?		Structure generally clearer owing to less intense alt ⁿ effects. Less disturbed than before, relatively well bd.	Moderate increase in irregular pale gr diop? veining & assoc. Pa. & tr Cp & Py. Cp always assoc. & Pa.	5%
4	4.1	4.37	~ 100%	97-100				97.5 Bd @ 35° 98.0 Bd @ 30° 99.2 Bd @ 45°	Rare small irregular veinlets of Pa. 96.0 Dz - Pa vn (7mm) @ 40°	tr
5	2.5	2.35	94%	101-103	Ho Alt Sed's - Irregularly intc. def. br. & gy alt. f tuf. sa, s.s. & mnc. ar. - palite units	Common pale gr & pale gy calc-silicate alt ⁿ mostly vn & characteristic bl-gy halos. Few concentrations of br. mica into vns. especially & f replacement of same. Rare irregular vns of c. dk-gr-gr amphibole.		Structure as before, def. - v. mostly sharp v. irregular erosional cont-acts often obscured by alt ⁿ .	101.4 More intense calc-silicate alt ⁿ & assoc. Pa. as patches in calc-silicate vns. & discrete veinlets.	5%
30	2.5	2.51	~ 100%	103-105				103.9 Zone of more intense alt ⁿ as before Pa also as vns up to 10mm & tr Cp. Mnc assoc. Py	102.3 As before	tr
								104.9 Bd @ 50°		5%

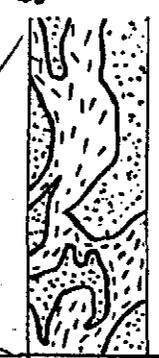
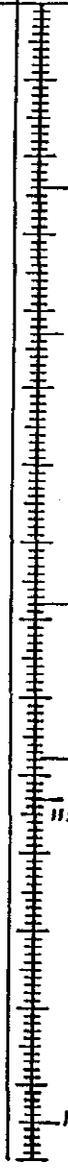
SCALE 1:100 (1cm = 1m)



DRILL ADVANCE

637021 LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
5.5	3.1	3.09	~100%	106						5%
				107					As before	tr
				108				107.4 Bd @ 40°		
05.6	3.1	3.12	~100%	109					Zone as before	5%
				110					108.4 - 10mm Pa vn @ 60°	
				111						
				112	Zone pre-faced by 50cm of extremely hd gy ho (probably s.s)	110.8 - 10cm zone of f. wh. pale gy spotting assoc. E veining of same		109.3 Bd @ 50°		
11.7	3.1	3.07	99.03%	113	High Grade Ho gy hd ho f tuf. sa & pale ov spotting	Completely different alt ⁿ regime - no br. mica - no pale gr. calc. silicate alt ⁿ . Pale gr spotting well developed in places to circles showing zoning Dis. unknown bk. alt ⁿ mineral.		sharp contact @ 70°	Original structure completely obscured. Irregular compositional banding	Visibly barren
				114				gradational irregular contact		0%
14.8	1.1	1.07	97.27%	115	Ho Sed's - Irregularly inter f br-gy tuf. sa, poorly sorted & gr-br s.s., rare gy pelitic v. def units.	Alt ⁿ as before & v.f. br. mica replacements only v. rare calc-silicate veining & limited bl-gy haloes		Structure obscured	Few f veinlets usually irregular & discontinuous of Pa.	tr
15.9	3.1	3.05	98.39%	116				115.3 - aligned elongate mud flakes - clefts @ ~ 45°		
				117						
				118						
19.0	3.1	3.05	98.39%	119						
				120				119.3 - 2mm cbte vn @ 10°		

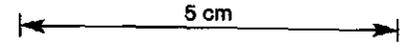


SCALE 1:100 (1cm = 1m)

DRILL ADVANCE

.637022

LITHOLOGY



DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				121				120.5 Bd @ 30°		fr
122.1	2.9	2.7	93.1%	122						
				123		Common of short wh. colorless needles (andalusite)?				
				124	123.6					
				125	Calc-silicate Alt. Ho V. hd gr-gy intensely alt sed's. Cloudy v. f gr-dk gr calc-silicate (amphibole) replacement ubiquitous & v. common	Distinct alt ⁿ schama with-out the br mica alt ⁿ which also appears to 'soften' the lora.	124.3 v. sharply angular brack. clasts of milky wh-au sil. petite marble			
125.0	0.6	0.4	66.67%	126	gr-pale gr irregular vns of same often & diffuse boundaries	Rare f wh. qz & cbte vns completely dominated by f gy calc-silicate replacement & v. common pale gr-gr-dk gr veining of same. Vns & actinolite xal's up to 4 mm			V. common v irregular small patches of Po & rare Py mostly as vns v. rare cp as v. small patches in Po 9% Po 1% Py & Cp	10%
125.6	0.9	0.75	~ 100%	127						
126.5	1.5	1.6	~ 100%	128						
128.0	3.1	2.95	95.16%	129		129.1 - cbte-actinolite C needles up to 5mm & calc-silicate?? @ 20°			As before	fr
				130	Alt Ho Sed's Similar to before gr calc-silicate alt. except, br mica replacement not quite as extensive	f br mica replacement v. common in c. units Still common pale gr highly irregular diap? veining		130.1 20mm pale gr calc-silicate vn @ 50° & brack. sed. clasts.	Veinlets of Po & patches of Po usually enclosed in Calc-silicate vns.	1%
131.1	1.3	1.1	84.62%	131						
				132						
132.4	2.6	2.5	96.15%	133		132.3 Onset of common diffuse vns of f bk mineral also as dis's.		132.8 Bd @ 45°		
				134				10cm zone apparently 134.0 - brack. & Po & Py in mfr		
				135	Ho Sed's. V. hd gy ho sed's. Pred. s.s.-sa. Also alt.	Possible development of v.f pale gy spotting, rare br mica. Extremely common br dis. mineral.		Finally bd often f'd & sl. def	Po as discrete discontinuous irregular patchy veinlets	1%
135.0	0.9	0.88	94.44%					135.0 Bd @ 35°		

SCALE 1:100 (1cm = 1m)

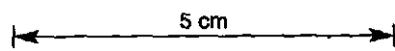
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DRILLHOLE LOG FOR DDH CAL I

LOGGED BY N.P. GREEN FROM 120M TO 135M DATE 15/2/82

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022



DRILL ADVANCE

637023

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
135.9	3.1	2.93	95.16%	136				136.0 Bd @ 40°	
				137				136.8 X Bd Younging downward @ 50°	
				138				Structure again obscure or mas. sa.	
139.0	1.6	1.7	~100%	139					
				140					
140.6	1.6	1.18	76.67%	141	Alt Ho Sed's - Irregularly intc gy + gy-br f sa ± gy s.s + dk gy	140.8 - 20mm pale ye-gr calc-silicate - sed - qz - Po v @ 40°		Structure returns to v. common highly irregular disturbed intc.	Mostly small patchy Po assoc ± calc-silicate veining
				142	gy ar. Mostly v. hd. Common calc-silicate veining ± possibly higher grade alt ⁿ assoc. ± gy matting ± bk mineral as mtx similar to unit above.	Calc-silicate - qz - Po highly irregular veining increasing			v. common f-v.f short Po vns.
142.1	2.6	2.65	~100%	143					As before
				144					
144.7	0.4	0.4	100%	145	Free Alt Ho Sed's	V. Common Onset of v.f often eroded but v. irregular cbte vns probably causing fracturing. Possibly minor gypsum. Mn. f br mica replacement. Unknown bk mineral common in places as dis + subtle replacement vns		Fracturing markedly more common rarely intense. Mostly highly irregular although v. rarely at < 10° L.C.A.	Rare Po as irregular small patches + veinlets in or assoc. ± calc-silicate veining.
145.1	0.7	0.6	86.71%	146	Commonly frac. rarely intensely possibly due to v. common irregular veining of alt ⁿ minerals. Rock types as before.	Common dk gr mineral along frac's ± 'greasy' feel.		147.2 Probably assoc. ± Bd @ 60° eroded alt ⁿ vns - especially cbte ??	V. rare blebs (av. 1mm) of Py
146.8	1.1	0.8	72.73%	147					
146.9	1.4	1.43	89.38%	148					
				149				Mistach - Brass Contamination	
148.5	0.7	0.55	78.57%	150					

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CALZ

LOGGED BY N.P. GREE FROM 135M TO 150M DATE 18/2/82 PAGE OF

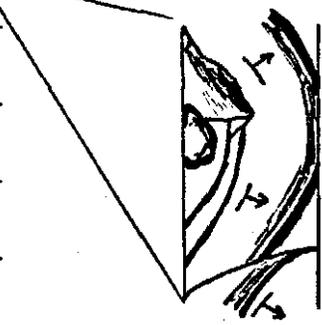
5 cm

DRILL ADVANCE

637024

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
150.2	1.8	1.5	100%	151				151.5 Bd @ 55°		1%
151.7	1.0	0.97	97%	152				Highly irregular f 'dispy' Po veining	152.3 100% 152.6 Fr	
152.7	1.4	1.15	82.14%	153						
154.1	0.7	0.6	85.71%	154						
154.8	2.5	2.3	92%	155		154.8 - C. patchy dk gr amphibole		154.9 - 20cm breccia zone partially healed & cbte; mostly dk gr amphibole.	154.9 - 3mm Pu vein @ 70°	
				156						
				157		156.6 - 5mm discontinuous cbte vn @ 55°			156.8 - 10cm zone of irregular Po ₂ Py veining	
157.3	2.7	2.7	100%	158	<u>Ho Sed's</u> V. hd competent generally mas. f sa intb? & mnrgy - dk gy s.s.	Few f-vf stringy irregular pale gr calc-silicate vns rarely & qz. & bl-gy holes. V. rare f. cbte vns. - all generally sl. increasing to base.		Core competent & unfrac. Structure appears mas. owing to f replacement & predominance of mas sa.	Rare Po as v f small discontinuous veinlets & contained in pale gr calc-silicate vns.	fr
				159						
160.0	2.7	2.6	96.30%	160		Sa appears finely replaced by cloudy br. mineral. Few irregular subtle vns of bk mineral.				
				161		Mnr. br mica in few sa beds.				
				162		All effects especially replacement decrease downhole.				
162.7	1.50	1.45	96.67%	163		V. common f wh-colour less needles < 0.5 cm up to 10% in sa.				
				164						
164.2	0.50	0.44	97.78%	165						
164.7	3.0	2.97	99%							



SCALE 1:100 (1cm = 1 m)

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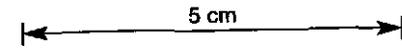
DRILLHOLE LOG FOR DDH CAL I

LOGGED BY N.P. GREEN

FROM 150M TO 165M

DATE 18/2/82

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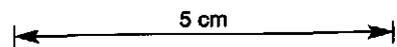
DRILL ADVANCE

637025

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISJA PERCENTA MINERALISATIK
				166				165.6 Bl @ 40°		tr
				167					166.8	
167.7	1.6	1.45	90.63%	168		167.6 - 3mm discontinuous qz + Po vns @ 40°			Slight increase in Po as v.f veinlets discrete in calc-silicate vns always discontinuous. Mnr dis in v. rare sa beds. Extremely rare tr Cp in Po.	1%
				169						
169.3	2.0	1.9	95%	170						
				171						
171.3	0.8	0.65	81.25	172					172.0	
172.1	1.4	1.4	100%	173		172.1 Cloudy br alt ⁿ more intense especially pelite units.			Appearance of blebs of Py av. 1mm. Also sl. increase in Po veining	2%
				174		173.9 - 1mm cbtz vns @ 15°			173.3	
173.5	2.2	2.1	95.45%	175		174.9 - 10mm qz @ 40°			173.4 - 20mm zone of Po veinlets @ ≈ 25°	1%
				176						
175.7	2.8	2.8	100%	177						
				178		177.0			Decrease in calc-silicate veining	
				179		178.6			Back to tr Po as v.f veinlets assoc. ± calc-silicate vns.	tr
178.5	3.1	3.05	98.39%	180		178.6 Irregular vns of wh-colourless needle mineral, rarely ± qz / Po.				

SCALE 1:100 (1cm = 1m)



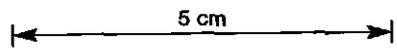
DRILL ADVANCE

637026 LITHOLOGY

LOST CORE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VIS. PERCENT MINERAL ISZ
				181						
181.6	0.9	0.87	96.67%	182		182.5 End of f needle vns				
182.5	3.0	2.78	92.67%	183					183.1 - 15cm calc-silicate - Po Vn zone	
				184						
				185		184.9				
185.5	3.1	3.1	100%	186		As before 172.1. No cloudy br alt ^a of petite units. Pale gr - Pale br f calc-silicate vns relatively common especially in petite units		Structure sl. clearer & out intensive replacement alt ^a Common meso-faulting.		
				187				186.6		
				188				187.1 Elongate mt (pl. ho) flakes - clasts up to 10mm long apparently randomly orientated.		
188.6	2.4	2.5	~100%	189						
				190						
191.0	1.2	1.15	95.83%	191		191.1 - 15cm zone of intense br-colourless alt ^a & common bk patchy mineral			190.0 Relatively common Po assoc. 2 ⁺ & calc-silicate veining as veinlets & small patches enclosed in calc-silicate. Few patches up to 13mm of mas. Po. Rare assoc. Cp.	191.7 5mm Po Vn 235
				192						
192.2	3.0	2.82	94%	193						
				194						
				195					194.0 - 5cm of intense Po patchy replacement & fr of Cp enclosed in Po assoc. Amorphous bk. mineral as 'spots'	

SCALE 1:100 (1cm = 1m)



DRILL ADVANCE

637027 LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	PERCENT MINERALISATION
195.2	1.8	1.82	~ 100%	196					195.2 Rare f veinlets of Po discrete & assoc. E calc-silicate veining	
197.0	0.5	0.52	~ 100%	197						
197.5	3.1	3.1	100%	198						
				199						
				200						
200.6	0.3	0.2	67%	201						
200.9	3.1	3.1	100%	202						
				203						
				204						
204.0	3.1	3.0	96.77%	205						
				206						
				207						
207.1	1.8	1.75	97.22%	208						
				209						
208.9	3.1	3.05	98.39%	210						

SCALE 1:100 (1cm = 1m)

197.9
Zone of intense calc-silicate veining & br cloudy replacement of common sparry bk mineral.

198.5
198.8 - 10mm pale gr v irregular vns @ 10° E spots of patchy To? bk mineral??

Porphyritic Basalt? V. hd competent irregularly py (up to 10% phc) & re-crystallised sil. fels. phc. in f.g. gm. now metasomatised - gy-gr & f. calc-silicate altⁿ.

Few f gr - dk gr calc-silicate vns. & out altⁿ haloes.
Rare f-vf cbtz vns. Relatively common v. diff-use gr - dk gr highly irregular vns & v indistinct boundaries.
Rare f patchy wh-milky qz.

Visibly Mas.

Rare tr Po & Pu as f. dis. tr

Ho Sed's V. hd competent gy-dk gy into ho sed's as before, & relatively common calc-silicate veining

Relatively common usually as zones slightly decreasing downhole irregular pale gr - pale br calc-silicate veining.
Rare br bi? highly irregular f veining.
V. rare vf cbtz veining

Structure generally obscured by hornfelsing & metaxomatic altⁿ

Few small - v. small potides f Po assoc. E calc-silicate & qz veining & discrete f. veinlets.

207.6 Bd @ 30°

209.4 Bd @ 35° - f.g. bd uphole.

Onset of scattered v.f replacement by f br mica Calc-silicate vns now & common gy-bl altⁿ haloes

5 cm

DRILL ADVANCE

637028

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				211				210.7 Bd @ 45°	
12.0	3.7	2.7	100%	212					
				213					
				214					
14.7	3.1	3.1	100%	215		214.8 - 13 cm v sharply contact (unalt) qz - to v. @ 30°		214.4 Bd @ 40°	
				216				216.0 Bd @ 40°	
				217	<i>Alt Ho Sed's V. hd competent gy - dk gy gy-br inte f sa + ss.</i>	<i>Common pale gy irregular often discontinuous calc-silicate veining</i>			
17.8	1.2	1.1	91.67%	218		<i>Few zones of cloudy br. altⁿ - replacement</i>		218.0 - 10 cm well healed (qz) breccia band	
				219		<i>Few v.f. qv. Rare dk br v.f. vns of br mica</i>			
19.0	3.1	3.05	98.39%	220					
				221					
				222					
21.1	1.1	1.0	90.91%	223					
				224					
23.2	1.4	1.4	100%	225					
				226					
24.6	1.2	1.2	100%	225		Onset of small zones < 10 cm of banded wh - pale gy mineral @ or near 90°			Rare scattered v.f. blebs of tr Py & rare Pa veinlets

SCALE 1:100 (1cm = 1m)

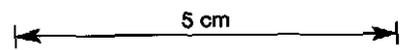
COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CALI

LOGGED BY N.P. GREEN FROM 210 M TO 225 M

DATE 20/2/82

PAGE OF



DRILL ADVANCE

637029

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VIS. PERCENT MINERALISATION
225.8	0.4	0.4	100%	226						
226.2	1.2	1.14	95%	227	227.4			226.8 Bd @ 65° - graded younging uphole.		
				228	END OF HOLE					

SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG FOR DDH CAL I

LOGGED BY N. P. GREEN

FROM 225 M TO 227.4 M

DATE 20/2/82

PAGE OF

637030

Matrix	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
6-0	BLD	145	10	30	155	BLD	BLD	2	1.5	665	24					Ground Core ↓ Z1301
11-9	5	105	45	25	160	BLD	BLD	4	BLD	639	3					Z1302

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CAL 1

ASSAYED BY Analabs

FROM 6 TO 15m

DATE 15/3/82

PAGE 1 OF 16

030

637031

Metres	Sn	Cu	N	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
16	BLD	155	45	5	150	BLD	BLD	2	2.0	520	5					Z1303
17.8	5	160	25	45	130	BLD	BLD	BLD	BLD	520	43					Z1304
20.9	BLD	130	45	25	125	BLD	BLD	BLD	1.5	570	10					Z1305
23.8	5	145	20	20	135	BLD	BLD	BLD	2.0	540	32					Z1306
26.8	7	170	45	30	145	BLD	BLD	BLD	BLD	670	19					Z1307
29.8																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR DDH CAL 1

ASSAYED BY Analabs

FROM 15

TO 30m.....

DATE 15/3/82

PAGE 2 OF 16

031

637032

Metres	Sn	Cu	W	Pb'	Zn	Ag	Au	Bi	Mo	P	As					SAMPLE NUMBER
30																
31	6	270	45	15	260	BLD	BLD	2	BLD	405	20					Z1308
32																
33	32.8															
34	4	155	120	15	215	BLD	BLD	BLD	BLD	730	18					Z1309
35																
36	35.2															
37	BLD	225	100	20	170	BLD	BLD	BLD	0.5	640	7					Z1310
38																
39	38.8															
40	9	170	65	20	180	BLD	BLD	BLD	BLD	885	9					Z1311
41																
42	41.8															
43	BLD	125	60	20	185	BLD	BLD	BLD	BLD	500	12					Z1312
44																
45	44.8															

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CAL 1

ASSAYED BY Analabs

FROM 30 TO 45 m

DATE 15/3/82

PAGE 3 OF 16

032

637033

Metres	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
46	BLD	205	95	25	175	BLD	BLD	BLD	BLD	755	9					Z1313
48	41-6															
49	7	160	75	30	180	BLD	BLD	2	BLD	750	37					Z1314
51	30-6															
52	4	185	110	15	200	BLD	BLD	BLD	BLD	860	8					Z1315
54	43-6															
55	3	150	70	75	185	BLD	BLD	BLD	BLD	445	16					Z1316
57	44-6															
58	BLD	195	75	50	170	BLD	BLD	4	BLD	575	36					Z1317
60	54-6															

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CAL 1

ASSAYED BY Analabs

FROM 45 TO 60 m

DATE 15/4/82

PAGE 4 OF 16

637034

0233

Matrix	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
	5	180	100	50	220	BLD	BLD	BLD	BLD	505	17					Z1318
62-B	3	165	110	215	215	BLD	BLD	BLD	BLD	675	15					Z1319
65-B	10	160	50	95	195	BLD	BLD	BLD	2.0	795	7					Z1320
68-B	BLD	125	45	75	205	BLD	BLD	BLD	BLD	830	36					Z1321
71-B	BLD	140	35	15	160	BLD	BLD	BLD	BLD	645	25					Z1322
74-B																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CAL 1

ASSAYED BY Analabs

FROM 60 TO 75 m

DATE 10/2/82

PAGE 5 OF 16

637035

Metres	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
74	BLD	100	40	BLD	190	BLD	BLD	4	BLD	665	34					Z1323
76	77.8															
77	7	190	50	BLD	140	0.5	BLD	BLD	2.0	445	13					Z1324
78																
79	80.2															
80	3	150	35	BLD	130	BLD	BLD	BLD	1.0	595	6					Z1325
81																
82	83.2															
83	4	150	30	BLD	125	BLD	BLD	BLD	1.0	715	5					Z1326
84																
85	86.2															
86	BLD	80	45	BLD	150	BLD	BLD	4	1.5	560	5					Z1327
87																
88	89.2															
89																
90	91.2															

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAL 1

ASSAYED BY Analabs FROM 75 TO 90 m DATE 10/4/82 PAGE 6 OF 16

035

637036

Matrix	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
	5	135	35	BLD	175	BLD	BLD	BLD	1.5	670	49					Z1328
92.5	5	100	35	BLD	150	BLD	BLD	BLD	1.5	710	24					Z1329
95.5	4	130	45	BLD	130	BLD	BLD	2	2.0	620	5					Z1330
98.5	3	155	30	10	160	10	BLD	2	1.5	750	8					Z1331
101.5	BLD	90	15	BLD	175	0.5	BLD	BLD	4.0	1015	36					Z1332
104.5																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CALI

ASSAYED BY Anelabs

FROM 90 TO 105m

DATE 15/3/82

PAGE 7 OF 16

036

637037

Matras	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
	BLD	140	15	15	195	BLD	BLD	6	9.0	645	18					Z1333
107-B	4	120	15	BLD	170	0.5	BLD	BLD	1.0	750	11					Z1334
110-B	10	60	25	20	175	BLD	BLD	BLD	2.5	495	4					Z1335
113-B	10	45	25	5	185	BLD	0.005	8	3.0	400	19					Z1336
116-B	BLD	50	25	BLD	215	0.5	BLD	BLD	1.5	780	11					Z1337
119-B																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CAL 1

ASSAYED BY Analabs FROM 105 TO 120 m DATE 10/4/82 PAGE 8 OF 14

037

637038

Metres	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	P	As					SAMPLE NUMBER
120	4	70	20	5	225	1.0	BLD	6	1.5	695	9					21336
123-5	7	60	25	BLD	180	0.5	BLD	BLD	0.5	995	33					21339
125-5	15	230	30	10	260	0.5	0.007	2	3.0	2820	16					21340
128-5	5	125	50	20	165	0.5	0.005	2	4.5	1165	18					21341
131-5	BLD	170	55	BLD	200	BLD	BLD	BLD	1.5	955	24					21342
134-5																

038

637039

	Mt/res	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	F	As				SAMPLE NUMBER
138		BLD	70	BLD	10	150	BLD	BLD	6	1.5	1115	29				Z1343
139	137-B	BLD	120	BLD	15	130	BLD	BLD	BLD	BLD	975	8				Z1344
141	140-B	6	420	200	10	370	BLD	BLD	2	2.5	975	11				Z1345
143	143-B	8	225	150	5	200	BLD	BLD	BLD	1.0	955	10				Z1346
145	146-B	3	250	140	5	300	0.5	BLD	BLD	0.5	965	21				Z1347
149	149-B															

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CAL 1

ASSAYED BY Analabs

FROM 135 TO 150 m

DATE 15/3/82

PAGE 10 OF 16

637040

Matres	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
152-B	3	280	140	5	235	0.5	BLD	BLD	0.5	945	36					Z1348
153-B	6	170	110	BLD	200	0.5	BLD	BLD	1.5	895	60					Z1349
155-B	4	160	65	5	180	BLD	BLD	2	0.5	845	28					Z1350
158-B	8	190	160	BLD	230	0.5	BLD	BLD	BLD	825	7					Z1351
161-B	10	135	120	10	230	0.5	BLD	BLD	0.5	695	5					Z1352
164-B																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CALI

ASSAYED BY Analabs

FROM 150 TO 65m

DATE 15/3/82

PAGE 11 OF 16

040

637041

	Matrix	Sn	Cu	N	Pb	Zn	Ag	Au	Bi	Mo	P	As				SAMPLE NUMBER
165		4	260	120	BLD	185	0.5	BLD	BLD	1.0	845	2				Z1353
166	167-B	BLD	300	150	BLD	280	0.5	BLD	BLD	1.5	855	3				Z1354
167																
168	170-B	6	305	150	15	240	BLD	BLD	BLD	0.5	935	6				Z1355
169																
170	173-B	8	205	110	5	220	BLD	0.006	4	0.5	1108	4				Z1356
171																
172	176-B	BLD	200	120	15	235	BLD	BLD	BLD	1.5	925	7				Z1357
173																
174	179-B															
175																
176																
177																
178																
179																
180																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR DDH CAL

ASSAYED BY Analabs

FROM 165 TO 180 m

DATE 1.10.12/62

PAGE 12 OF 16

637042

	Mzlrzs	Sn	Cu	W	Pb	Zn	Ag	Ni	Bi	Mo	F	As					SAMPLE NUMBER
180		7	155	110	BLD	200	BLD	BLD	BLD	BLD	510	2					Z1358
181	181-B	10	225	90	BLD	195	BLD	BLD	2	10	655	5					Z1359
182																	
183	185-B	3	250	150	5	220	BLD	BLD	2	BLD	765	5					Z1360
184																	
185	188-B	BLD	240	110	10	195	BLD	BLD	BLD	BLD	845	4					Z1361
186																	
187	191-B	7	350	50	10	180	BLD	0.007	2	3.5	680	6					Z1362
188																	
189	194-B																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CAL 1

ASSAYED BY Analabs

FROM 180 TO 195m

DATE 15/3/82

PAGE 13 OF 16

637043

Matras	Sn	Cu	N	Pb	Zn	Ag	Au	Bi	Mo	F	As					SAMPLE NUMBER
197-8	3	270	65	BLD	160	BLD	BLD	BLD	2.5	790	5					Z1363
198-8	10	220	25	50	205	0.5	BLD	BLD	1.5	515	6					Z1364
200-8	4	205	50	20	200	BLD	0.007	BLD	0.5	430	12					Z1365
203-8	15	160	50	10	210	BLD	BLD	2	1.0	565	16					Z1366
206-8	BLD	185	40	25	145	BLD	BLD	BLD	1.5	655	9					Z1367
209-8																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CALI

ASSAYED BY Analabs FROM 195 TO 210.m DATE 10/2/82 PAGE 14 OF 16

043

637044

Metres	Sn	Cu	W	Pb	Zn	Ag	Au	Pi	Mo	F	As					SAMPLE NUMBER
210																
211	8	250	60	30	180	BLD	BLD	BLD	1.5	760	2					Z1368
212																
212.8																
214	4	145	130	5	175	BLD	BLD	BLD	1.5	1005	3					Z1369
215																
216																
216.8																
217	4	155	90	15	160	BLD	BLD	4	0.5	765	3					Z1370
218																
219																
219.8																
220	4	150	70	BLD	155	BLD	BLD	BLD	1.0	995	10					Z1371
221																
221.8																
222	BLD	255	110	10	230	BLD	BLD	BLD	1.5	770	15					Z1372
223																
224																
224.8																
225																

637045

044

Matres	Sn	Cu	W	Pb	Zn	Ag	Au	Bi	Mo	P	As					SAMPLE NUMBER
	7	185	70	20	210	BLD	0.016	6	1.0	655	17					Z1373
2274	End of	DDH:	<u>CAL 1</u> at	227.4												

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CAL 1

ASSAYED BY Anabela

FROM 229 TO 227.4m.

DATE 15/3/82

PAGE 16 OF 16

A P P E N D I X 11

CENTRAL MINERALOGICAL SERVICES

<u>Sample No.</u>	<u>Rock Type - Composition</u>	<u>Fabric</u>	<u>Minor Minerals</u>	<u>Comments</u>
Z 1492 CAL 1 134.0 m	<u>Cordierite-Anthophyllite-Biotite Hornfels.</u> Mostly ultrafine cordierite with embedded anthophyllite needles, fine biotite and ilmenite, pyrrhotite.	Mostly very fine-grained, finely laminated in places. Shear zones.	Shear zones carry pyrrhotite. A few relict clastic quartz grains. Tremolite patches.	Tremolite has formed at a late stage, as well as anthophyllite and is younger, in vein-like masses.
T 9999 CAL 1 134.9 m	<u>Anthophyllite-Biotite-Cordierite Hornfels.</u> Radiating anthophyllite needles, small biotite flakes, conspicuous ?ilmenite grains, matrix of granular cordierite.	Fine-grained, uniform fabric, no relict features.	Anthophyllite veinlets with pyrrhotite patches up to 1 mm.	Very unlikely to have been quartzose rock, but rather an Mg-rich type. Anthophyllite may be partly metasomatic.
T 10000 CAL 1 141.0 m	<u>Anthophyllite-Biotite-Cordierite Hornfels.</u> Small radiating anthophyllite needles, fine biotite flakes, set in mass of cordierite. abundant fine ilmenite.	Relict clastic textures preserved. Fine-grained, hornfelsic.	Clastic quartz, altered lithic grains recognisable. Biotite veins.	Similar to T 9999, but original rock contained sand-sized clast quartz and lithic grains. Black mineral is ilmenite.
Z 1491 CAL 1 181.95m	<u>Biotite-Cordierite-Anthophyllite Hornfels.</u> Mostly fine biotite and small cordierite crystals with biotite inclusions: radiating anthophyllite needles replacing these minerals	Fine-grained with faint relict bedding. Zones of coarser crystallinity.	Quartz veins. Pyrrhotite grains associated with quartz veins.	Low-grade contact-metamorphism of pelitic sediment, followed by prograde hornblende-hornfels metamorphism to form anthophyllite.

Ramsay Pond
 2x 2.5 m x 1.5 m
 2x 2.5 m x 1.5 m
 2x 2.5 m x 1.5 m



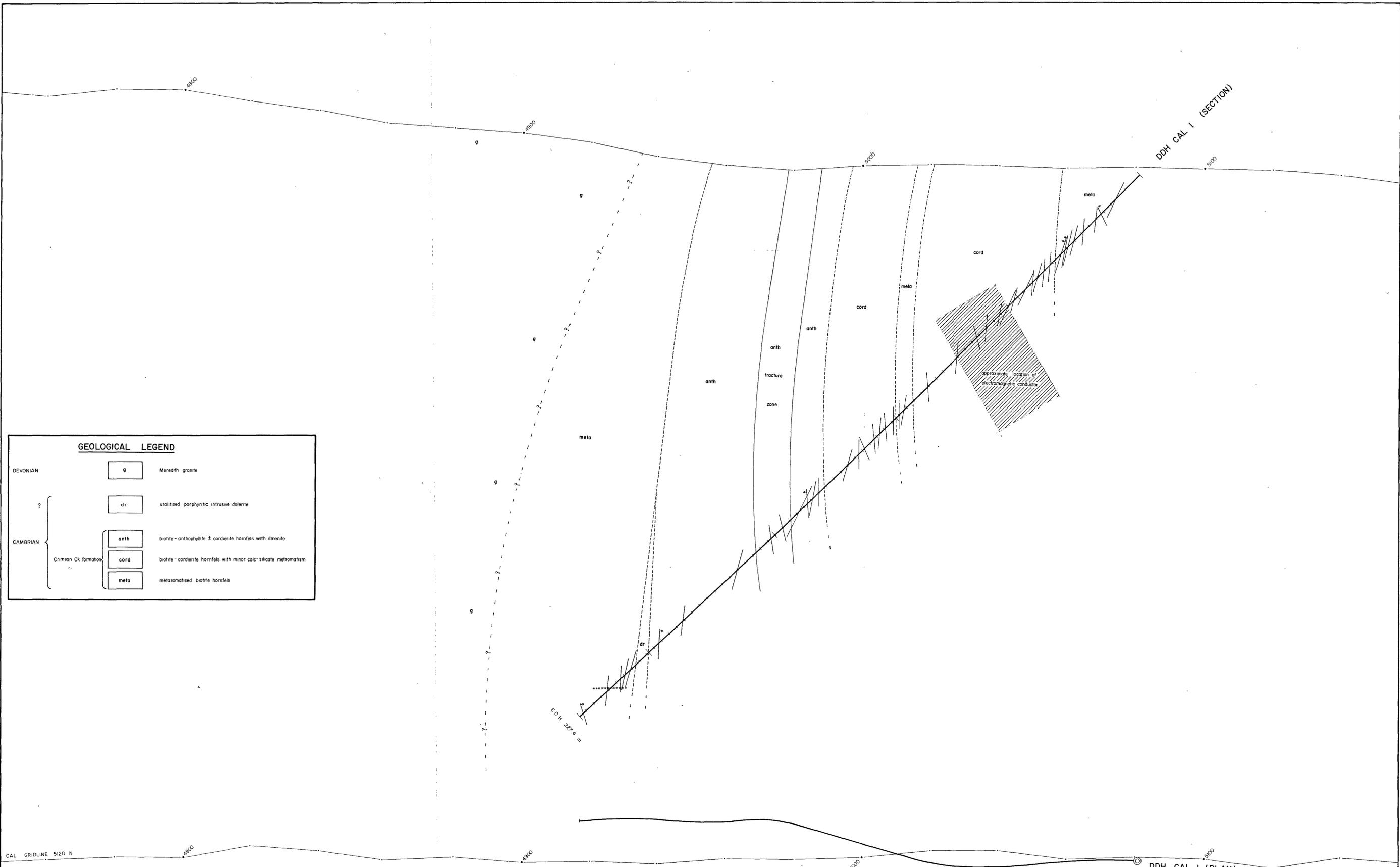
CAL GRIDLINE 5120 N

DDH CAL 1 (PLAN)

637048

5 cm

COMSTAFF PROPRIETARY LIMITED	
RAMSAY GRID - CAL	
PLAN & SECTION OF DRILLHOLE DDH CAL 1	
GEOLOGICAL DETAILS	
001	
COMPILED	N P G
DRAWN	N P G
AMENDED	
SCALE	1 500
PLAN NO.	TAS/2/2925



DDH CAL 1 (SECTION)

DDH CAL 1 (PLAN)

GEOLOGICAL LEGEND		
DEVONIAN	g	Meredith granite
?	dr	uratitised porphyritic intrusive dolerite
CAMBRIAN	anth	biotite - anthophyllite ± cordierite hornfels with ilmenite
	cord	biotite - cordierite hornfels with minor calc-silicate metatomafem
	meta	metatomafised biotite hornfels

CAL GRIDLINE 5120 N

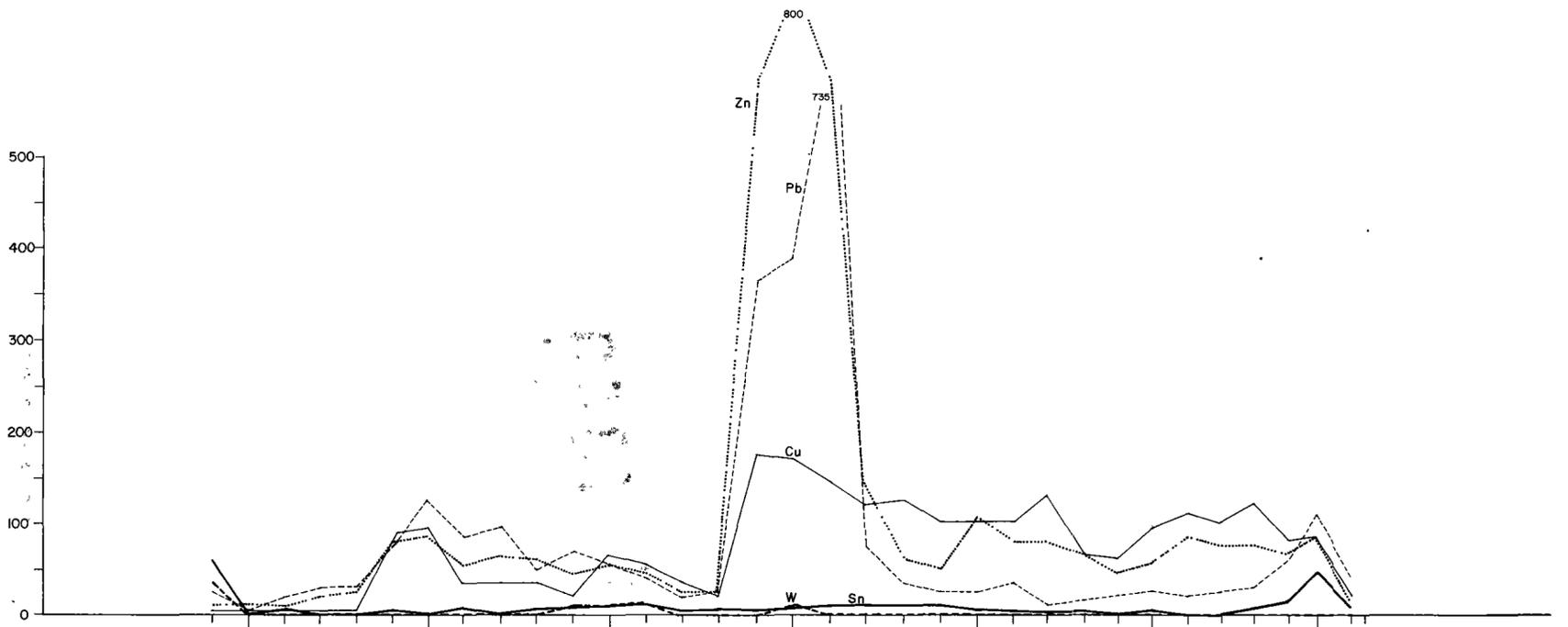
637049

5 cm

COMSTAFF PROPRIETARY LIMITED	
RAMSAY GRID - CAL	
PLAN & SECTION OF DRILLHOLE DDH CAL 1	
GEOLOGICAL INTERPRETATION SECTION	
002	
COMPILED	N P G
DRAWN	DATE
GEO DRAFT	27/8/82
AMENDED	
SCALE	1 500
PLAN No	TAS / 2 / 3066

Geochemistry

ppm



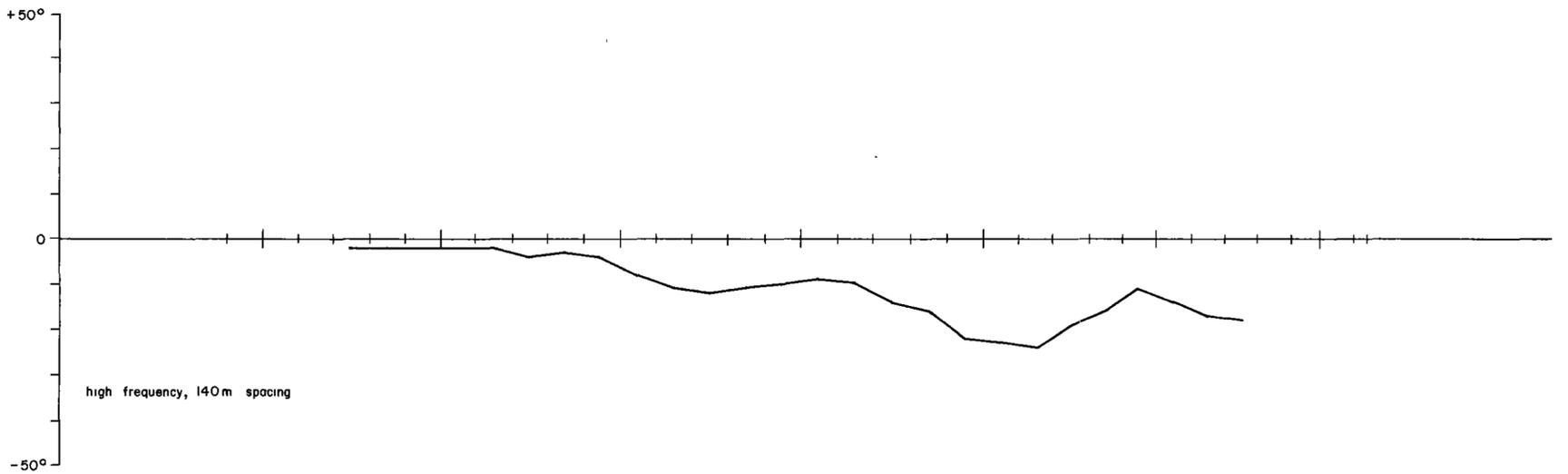
Crone

+50°

0

-50°

high frequency, 140m spacing



Magnetics

n T

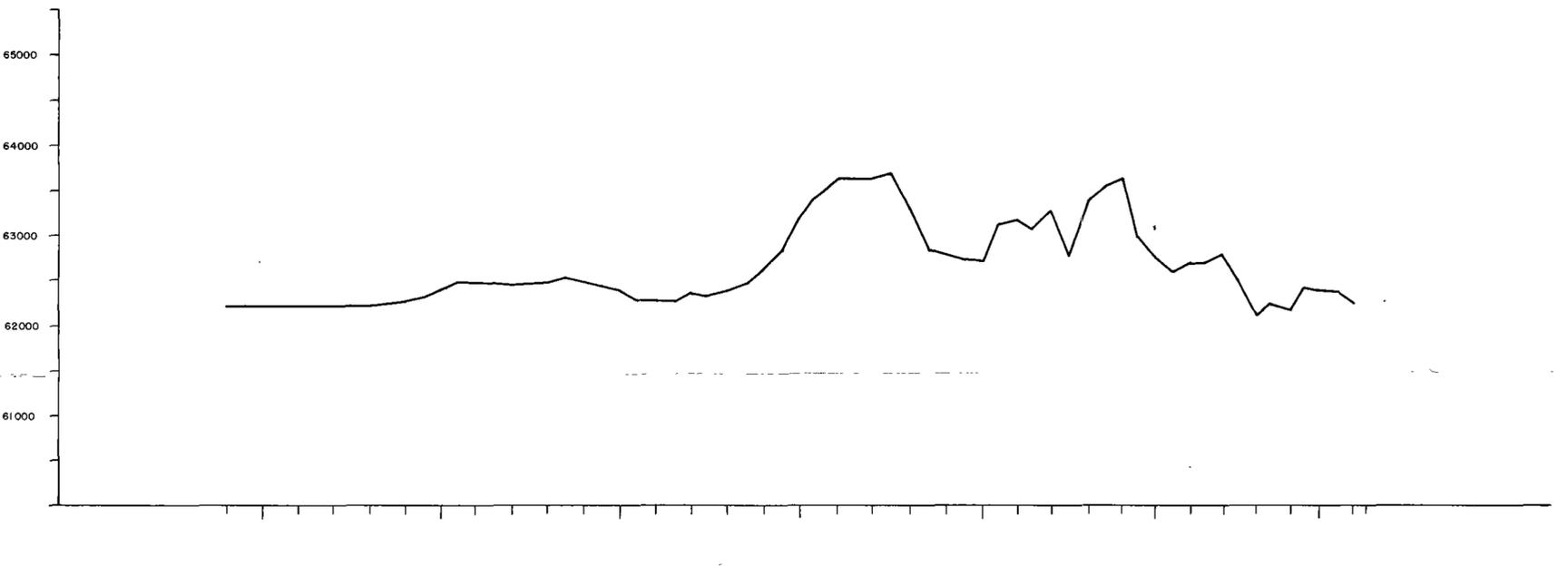
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64000

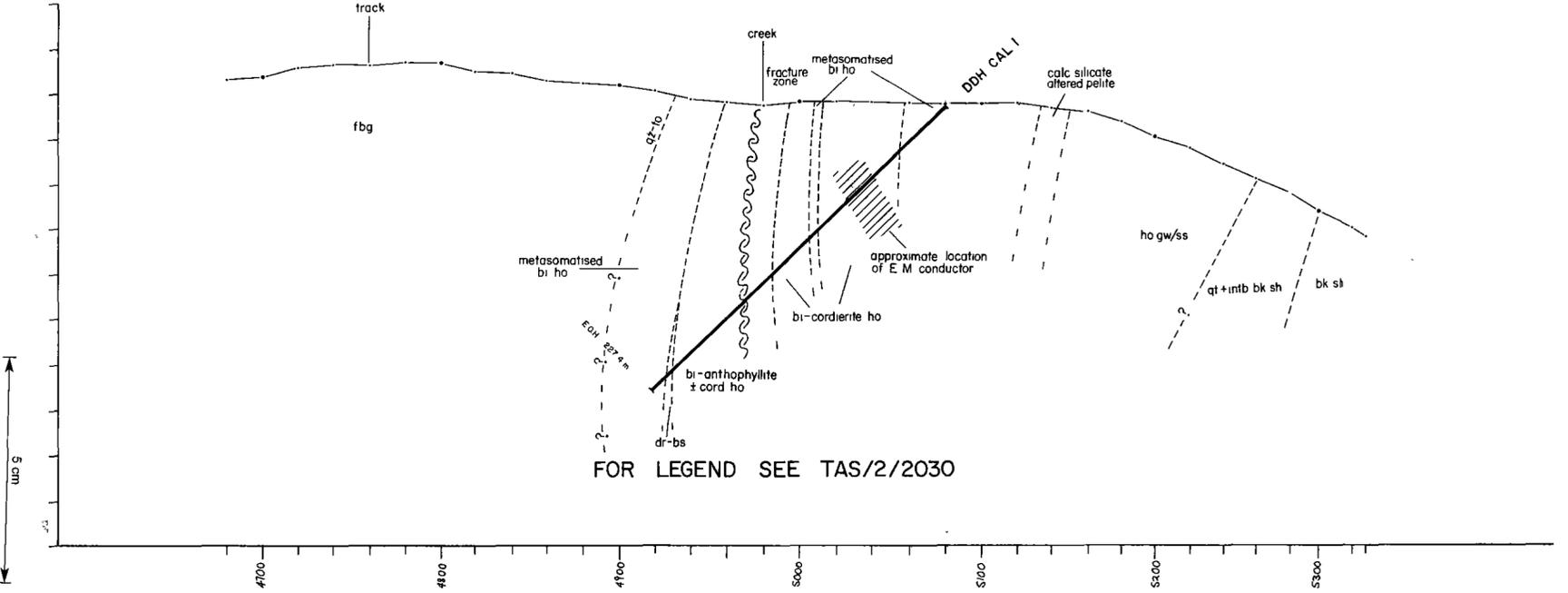
63000

62000

61000



Topography



FOR LEGEND SEE TAS/2/2030

637050

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL

L 5120 N PROFILES 003

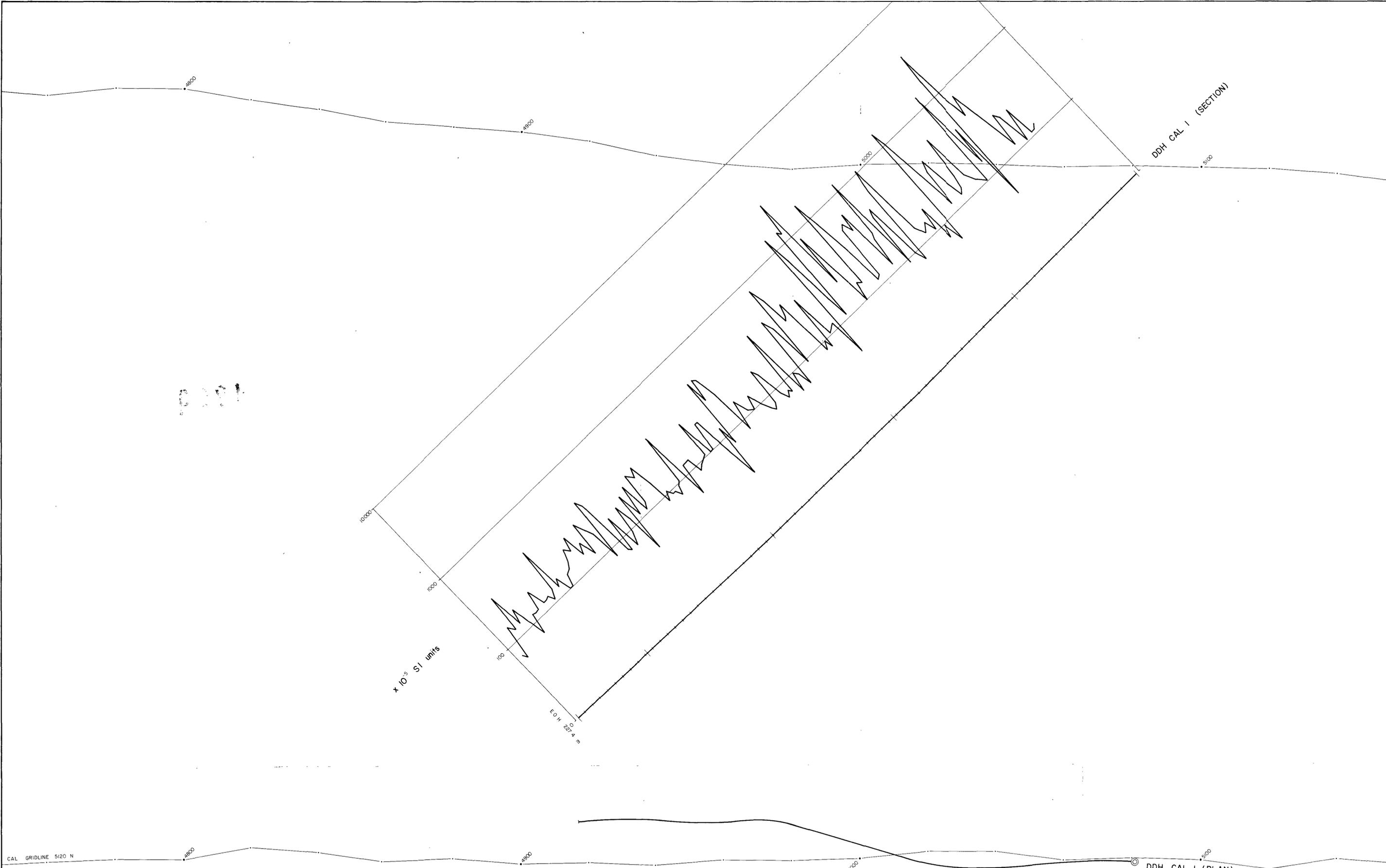
TOPQ, MAG, CRONE, GEOCHEM

DATE: 4/79

SCALE: 2500

TAS/2/1824

0 101



DDH CAL 1 (SECTION)

DDH CAL 1 (PLAN)

ED H 227 A B

CAL GRIDLINE 5120 N

637051

5 cm

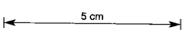
COMSTAFF PROPRIETARY LIMITED	
RAMSAY GRID - CAL	
PLAN & SECTION OF DRILLHOLE DDH CAL 1	
MAGNETIC SUSCEPTIBILITY PROFILE 004	
COMPILED	A H
DRAWN	DATE
GEO DRAFT	20/9/82
AMENDED	
SCALE	1 500
PLAN No	TAS / 2 / 3067



CAL GRIDLINE 5120 N

DDH CAL 1 (PLAN)

637052



COMSTAFF PROPRIETARY LIMITED	
RAMSAY GRID - CAL	
PLAN & SECTION OF DRILLHOLE DDH CAL 1	
GEOCHEMICAL RESULTS FOR Sn. Cu. W.	
005	
COMPILED	GEOGRAFT
DRAWN	DATE
GEOGRAFT	30/7/82
AMENDED	
SCALE	1 500
PLAN NO.	TAS/2/2947



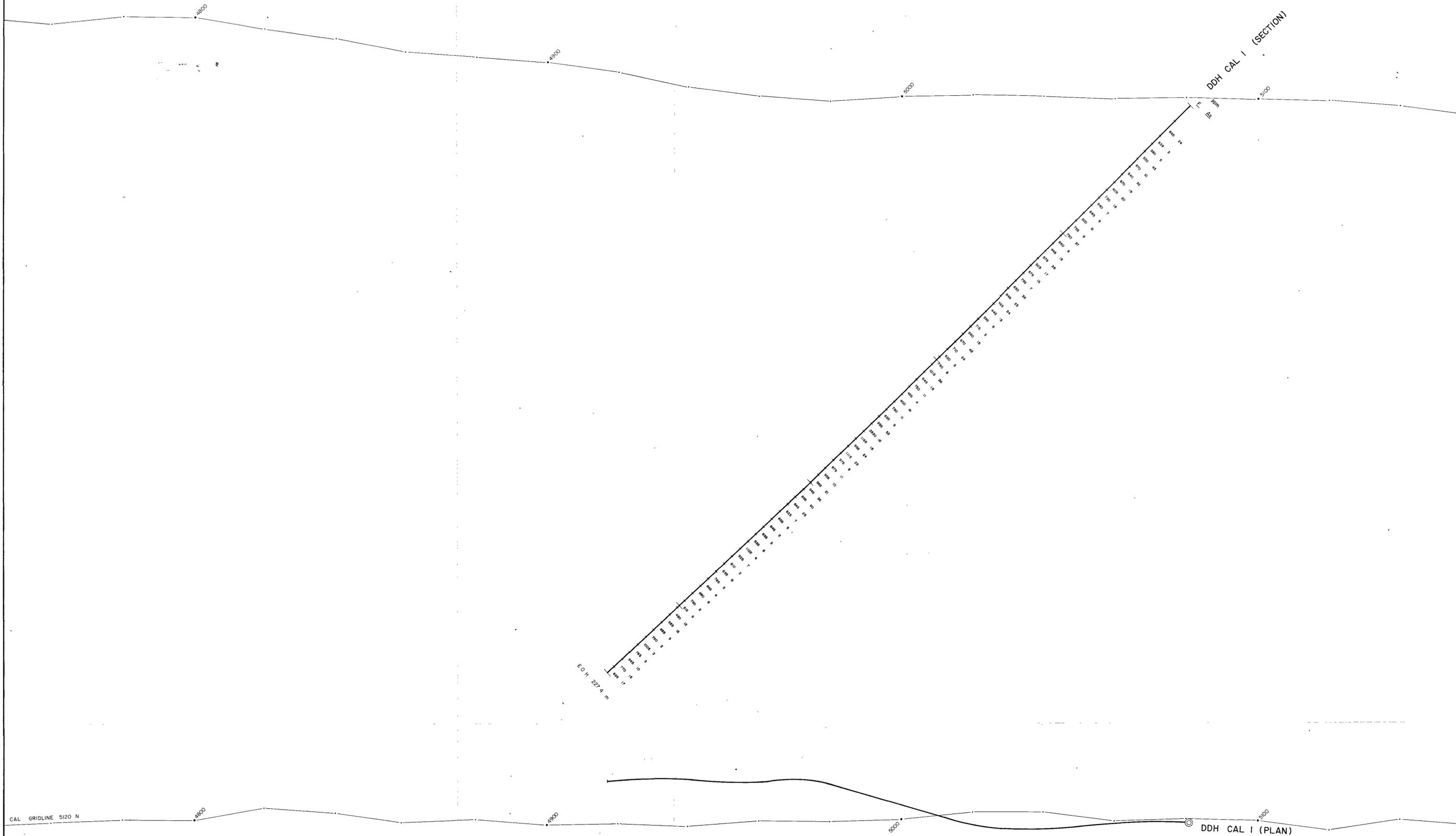
637054

COMSTAFF PROPRIETARY LIMITED

RAMSEY GRID - CAL
 PLAN & SECTION OF DRILLHOLE DDH CAL 1
 GEOCHEMICAL RESULTS FOR Au, Bi, Mo.

COMPILED	GEODRAFT
DRAWN	DATE
GEODRAFT	30/8/82
AMENDED	
SCALE	1 500
PLAN NO.	TAS / 2 / 2949

007



DDH 2274 m

DDH CAL 1 (SECTION)

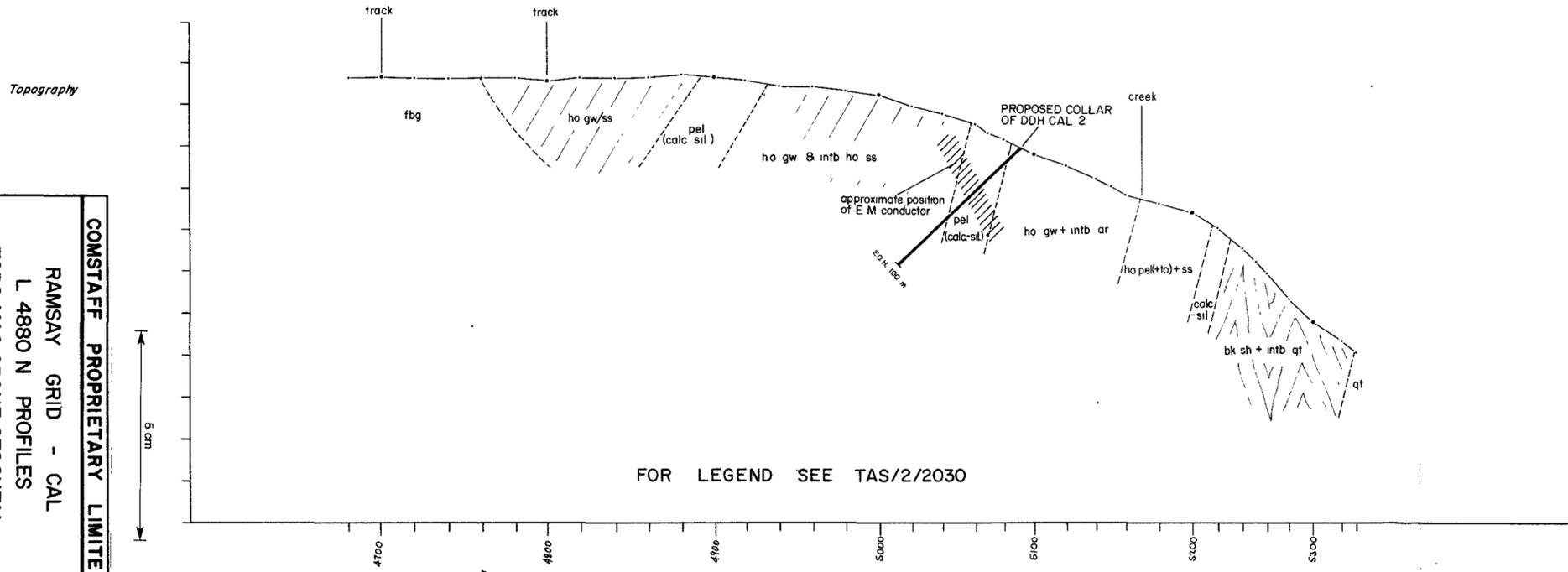
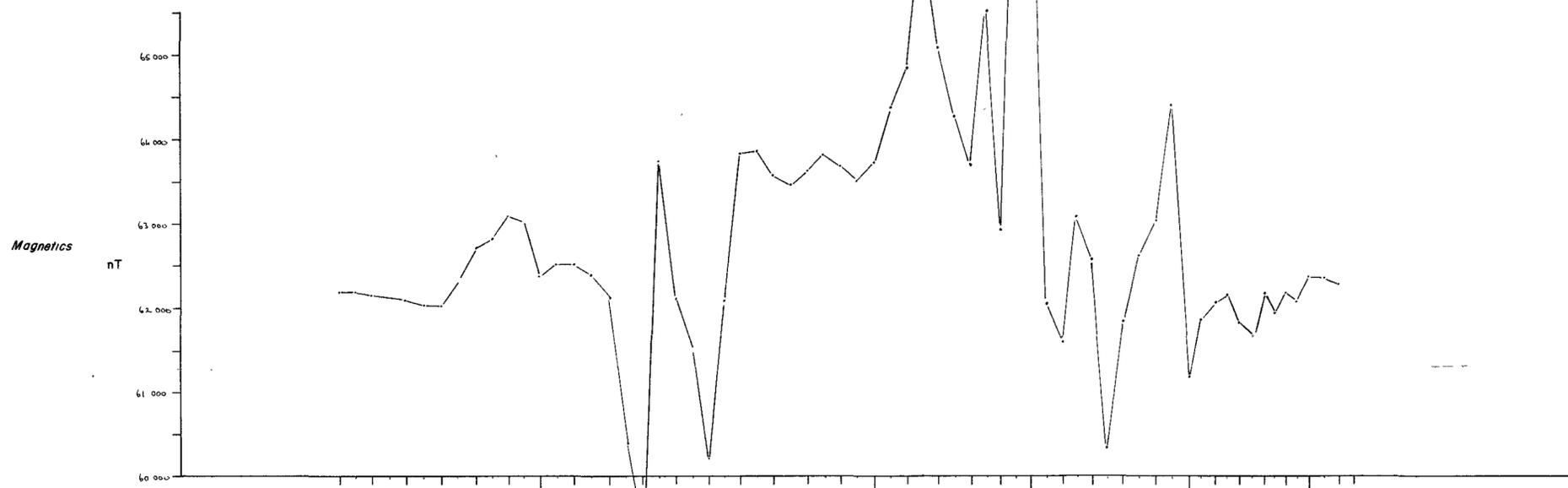
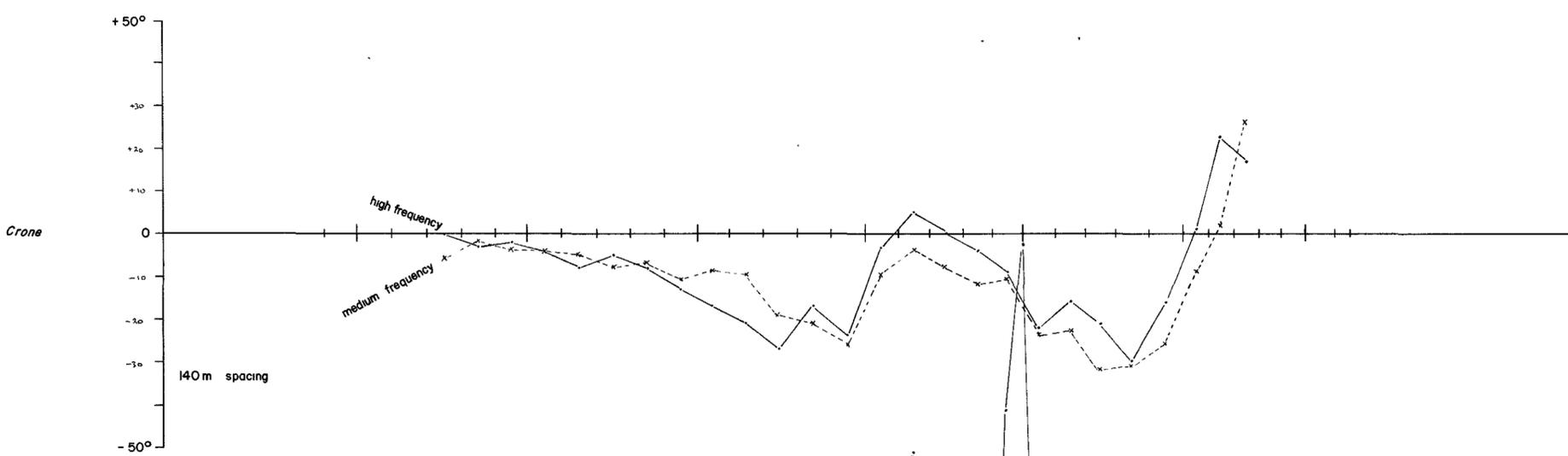
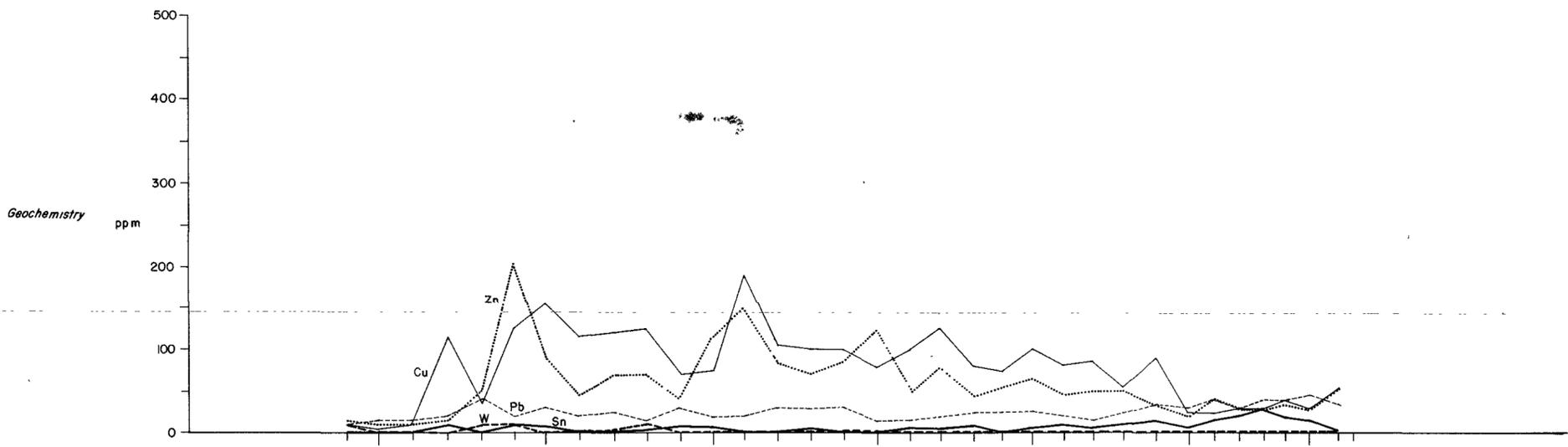
DDH CAL 1 (PLAN)

CAL GRIDLINE 5120 N

637055

5 cm

COMSTAFF PROPRIETARY LIMITED	
RAMSAY GRID - CAL	
PLAN & SECTION OF DRILLHOLE DDH CAL 1	
GEOCHEMICAL RESULTS FOR F. As.	
008	
COMPILED GEO DRAFT	DATE 30/8/82
DRAWN GEO DRAFT	AMENDED
SCALE 1 : 500	PLAN No. TAS / 2 / 2950



FOR LEGEND SEE TAS/2/2030

637056

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL
L 4880 N PROFILES
TOPO, MAG, CRONE, GEOCHEM 009

DRAWN G.F.P. 4/79
COMPILED G.F.P.
SCALE 1:2500
TAS/2/1922