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DEPT. OF MINES				
REF. No. 6385/85				

PROJECT NAME: COMSTAFF PROPRIETARY LIMITEDTITLE: EAST RENISON (EL 5/63), PART 6INTERIM REPORT

OPEN FILE

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: 1:250 000 sheet Burnie SK 55-03
 1:250 000 sheet Queenstown SK 55-05

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

TEXT PAGES NO: 7

PLAN NOS: See List of Plans

TABLE NOS: -

APPENDICES: 4

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DATE: APRIL 1985

AUSTRALIAN ANGLO AMERICAN LIMITED

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} *accompanying*

COMSTAFF PROPRIETARY LIMITEDEAST RENISON (EL 5/63, PART 6) INTERIM REPORTAPRIL 1985**1. INTRODUCTION**

This report describes the work carried out in the East Renison area of EL 5/63 (Part 6) in the period August '84 to March '85. More specifically it describes the drill testing of geophysical anomalies '180H' and '120AX' as a culmination of a long period of regional exploration, much of it based on the follow up of airborne EM and ground EM responses. The positions of grids 180H and 120AX are shown on location plan TAS/2/1802.

2. SUMMARY OF PREVIOUS WORK

The first use of airborne geophysics by Comstaff in this area was an INPUT EM survey flown in 1975. Ten anomalies were selected for field testing, all of these were later downgraded.

A DIGHEM EM survey was flown over the East Renison area in 1983 and a large number of conductors were located, including the re-location of the original ten selected INPUT anomalies.

For a detailed summary of the exploration of those DIGHEM anomalies to July '84, refer to:

"Ground Follow Up of Airborne Input and DIGHEM EM Anomalies, Progress and Conclusions Attained by July 1984", D.S. Thynne, Comstaff report, July 1984.

3. WORK ACHIEVED

Thynne's report recommended further work on DIGHEM anomalies 120AX (also a UTEM anomaly), 180H, 230H and 60D. Thynne's recommendations for work at 230H and 60D were rejected, largely on geological grounds; recommendations for a GENIE EM survey at 180H were accepted and for 120AX re-interpretation of the geophysical data led to the decision to test drill without further ground work.

3.1 Genie Survey (180H)

In September 1984, a GENIE EM survey was completed by Scintrex at DIGHEM anomaly 180H. Definite conductors were located on all five grid lines. The location of these responses and the varying interpretation of Scintrex and Comstaff's consulting geophysicist, Dr D B Trussell, are shown on plan TAS/2/4174. Following from this variance in interpretation, Scintrex were given the airborne EM data and asked to re-evaluate the 180H GENIE data. Their revised document forms Appendix 1 of this report. In brief, Scintrex's Zone H 1 was unaffected by this reappraisal but the previously confusing interpretation of Zone H₂ was refined and expanded and zones H₃ and H₄ added. Zone H₄ corresponds to an anomaly, picked by Trussell but not previously by Scintrex, and is described by Scintrex as probably being produced on line 5480N by a minor, horizontal to spherical, conductive source, possibly 50-100m deep at 5670E. Further north on line 5640N, Zone H₄ was revealed as a possible semi-vertical conductor at 5690E adjacent to a surface conductor west of about 5560E. For Zone H₃, the GENIE ground survey on line 5000N showed a negative anomaly at 5530E. This was possibly due to a near vertical conductor centred at 5530E and was seen on lines 5160N and 5320N at 5540E and 5510E respectively. This zone appeared to correspond with DIGHEM anomaly 180H.

3.2 Reinterpretation of UTEM Responses (120AX)

In order to get a better understanding of the UTEM anomaly at 120AX, Lamontagne Geophysics were asked to re-interpret the data and clarify their previous brief report. Lamontagne confirmed that the best response along feature B occurred on line 5425N (see TAS/2/4176) and advised that a broad, weak conductive zone lay between feature A and B and was 'formational' in character. This broad zone imitated the geology by following the same changes of strike from NW-SE in the north to NNW-SSE in the south. While feature A may reflect only the 'edge effect' of this broad zone, there were recognisable 'overprinted' extra conductivity responses associated with feature B. These were especially pronounced on the three southern lines of the grid and best developed on line 5325N. For various reasons, Lamontagne stated that it was not possible to predict the geometry of this overprinted conductive feature except that it appeared to be 'steep' and its exact line position was open to a lateral error of 25m.

3.3 Diamond Drilling Proposals

It was decided to test two of the DIGHEM anomalies which had both positive follow-up ground geophysical responses and were broadly representative of many of the local DIGHEM responses. Additionally the anomalies selected were blind to geological and geochemical evaluation through a thick glacial cover. Further, it was required to either quickly upgrade or to downgrade this area prior to the necessity to relinquish parts of EL 5/63 by June '85.

3.

Anomalies 180H and 120AX were selected for drill testing.

3.3.1 180H

The 180H grid covered INPUT anomaly GAO and DIGHEM anomalies 190K, 170F-180H and 160E-170E-180G (see TAS/2/4174).

By extrapolation from exposures to the south in the Pieman River, the grid appeared to be underlain by rocks of the Rosebery Group (Stitt Quartzite, Westcott Argillite, Salisbury Conglomerate, Natone Volcanics, Munro Creek Slates, etc) which have been prospected in other areas for base-metal deposits of a volcano-sedimentary style.

Locally, the 180H grid was covered by glacial deposits and thus geological, geochemical and magnetic data were of restricted use in helping to assess the economic potential of the area.

It was likely that the GENIE responses were 'formational' and represented conductive geological strata. However, in the absence of direct supporting geological and geochemical evidence, drilling was required in order to resolve the matter and consequently short drill holes were proposed to test both the western and eastern conductive GENIE zones.

The **western conductor** (H_1) was well defined (by both the Trussell and Scintrex interpretations) on all five grid lines. Scintrex commented that line 5000N was the probable southern extent of the anomaly while the northern limits were as yet undefined.

Also "the form of the data fits the shape generated by a moderate to resistive surface layer underlain by a body with a near vertical dip in the south at about 5160N, changing to a steep westerly dipping body fairly close to the surface at 5320N". Trussell's interpretation agreed closely but he noted the change of strike of the conductive body south of line 5320N and attributed this to the possibility of faulting.

To test this western conductor, the following hole was proposed to intersect a conductive body that dipped somewhere between 60° to the west and vertical:

4.

Hole No: 180H/1

Collar: 5170E 5480N (180H grid)

Declination: 45°

Azimuth: 090° mag (grid east)

Length: 100m

Target intersection: Between 65m and 95m down-hole is most likely since the exact dip of the conductive body is not known.

The eastern conductor (H₂) showed a far more confused pattern than the western and consequently may have been more difficult to test drill satisfactorily. Geophysical interpretation by Trussell and Scintrex were at variance for this zone (see plan TAS/2/4174).

Trussell recommended a hole to test responses (possibly horizontal) located at 5670E 5480N northwards through to 5630E 5640N (depth 50-60m). Scintrex did not pick these responses in their initial interpretation. On balance, it was decided to test the eastern conductor at 5750E (Trussell) 5770E (Scintrex) on line 5320N. Scintrex commented that this anomaly is 'steep, easterly and plate-like' while Trussell commented on the anomaly as '20m deep, horizontal or two adjacent vertical'. This anomaly (line 5230N) appeared to be related to a response at 5750E (Trussell and Scintrex) on line 5160N and 5700E on line 5000N (Scintrex only). On line 5000N, Scintrex described the anomaly as 'broad, near surface' appearing to have 'narrowed and plunged' on line 5160N.

The following hole was proposed to check the possibility of a horizontal to steep easterly dipping through to vertical conductive zone:

Hole No: 180H/2

Collar: 5820E 5320N (180H grid)

Declination: 50°

Azimuth: 270° mag (grid west)

Length: 120m

Target intersection: 70m to 110m down-hole is most likely.

3.3.2 120AX

There was no INPUT anomaly within this grid area; however, DIGHEM located conductors 120AX-130CX (see plan TAS/2/4176) which were interpreted by Trussell as being of 'substantial depth'.

Glacial cover prevented satisfactory geological and geochemical appraisal of the locality. However, the rocks underlying the grid area appeared mainly to be those belonging to the Huskisson (Dundas) Group. Sediments belonging to the Crimson Creek Formation become more apparent on the north-eastern corner of the grid. The regional strike was NW-SE swinging to NNW-SSE in the south. Geological mapping of the access track by D Thynne revealed vitric crystal tuffs and ignimbrites interbedded with NW-SE striking sandstones and conglomerates of the Huskisson Group.

Soil sampling did not reveal anomalous patterns that could be attributed to mineralisation or to an association with the DIGHEM responses.

In order to investigate the DIGHEM anomalies, and since these responses were believed to be deep and beyond the resolution of GENIE EM techniques, a UTEM survey was commissioned (April/May, 1984) with anomalous responses being duly obtained.

The interpretation of the UTEM results by the operators, Lamontagne, revealed a number of conductors (see TAS/2/4176), the most interesting of which was considered to be associated with feature B. Verbal communication with Jim McNae of Lamontagne Geophysics confirmed that the best response along feature B occurred on line 5425N.

McNae advised that there was a broad, weak conductive zone between feature A and B which was 'formational' in character. This broad zone imitated the geology by following the same change of strike from NW-SE in the north to NNW-SSE in the south. While feature A reflected only the edge effect of this broad zone, there were recognisable overprinted 'extra' conductivity responses associated with feature B. These were especially recognisable on the three southern lines of the grid and best developed on line 5425N. For various reasons, McNae stated that it was not possible to predict the geometry of this conductive feature except that it appeared to be 'steep', its exact line position was open to an error of up to 25m and that any drill-testing should be aimed to intersect the conductive body at close to 100m sub-surface.

Thus, the following drill hole was proposed (see TAS/2/4175).

Collar:	90m from grid position 4550E 5425N on a bearing of 835° mag.
Declination:	45°
Azimuth:	215° mag
Length:	170m (0-60m, open hole)

Essentially, the hole as proposed was a compromise between a reasonable hole length (and therefore cost) and intersecting the conductive body of feature B whilst allowing for possible errors in interpretation.

3.4 Diamond Drilling Results

Two holes were drilled at 180H and one at 120AX, all three in accordance with the proposals. Overland Drilling completed the work in the period December '84 to January '85.

Geochemical samples were either split sludge samples (open-hole) taken every 3m or chip samples (core) taken every 5 -10 cms over 5m intervals.

3.4.1 180H

Hole 180H/1 was drilled on an easterly azimuth at a collar declination of 45° to test a GENIE anomaly (zone H₁) on grid line 5480N. Non coring was to 17.10m with NQ coring to 101m (EOH).

It is considered that the carbonaceous/graphitic content of the pelites intersected from 12m onwards was sufficient to cause the geophysical responses. Geochemical encouragement, and the level of mineralisation from the core, was insufficient to warrant further testwork.

The hole is shown in sections TAS/2/4227 (Geology) and TAS/2/4228 (Geochem results). A summary drill log forms Appendix 2 of this report.

Hole 180H/2 was drilled on a westerly azimuth at a 50° collar declination to test a GENIE anomaly on line 5320N (zone H₂). Non coring was to 19.80m with NQ coring to the end of the hole at 117.50m.

Similarly to the first hole, 180H/2 intersected black laminated carbonaceous pelites thought to be the source of the geophysical anomalies. From 6m - 37.10m, however, the hole revealed a fuchsitic, tuffaceous breccia in association with an altered gabbro. Once again, mineralisation was limited to traces of pyrite and the geochemical results were insufficiently encouraging to warrant further work.

The hole is shown in sections TAS/2/4230 (Geology) and TAS/2/4231 (Geochem results). A summary drill log forms Appendix 3 of this report.

3.4.2 120AX

This hole was positioned 90m at a bearing of 035° (mag) from grid position 4550E 5425N; collar declination was 45° and the hole azimuth was 215° (mag). The hole was to test overprinted geophysical responses forming part of 'feature B' of the UTEM response.

Non coring was to 30.50m with NQ coring to 103.30m and BQ coring to the end of the hole at 167.0m.

Once again the cause of the geophysical anomaly has been ascribed to non-calcareous and calcareous carbonaceous slates and shales first intersected at 121.70m, possibly at a faulted contact.

Only low levels of pyrite mineralisation were observed and although levels of Ba, especially in the black slates and shales, are considerably higher in the 180H holes, the overall geochemical response was not considered sufficient to warrant further work.

The hole is shown in sections TAS/2/4224 (Geology) and TAS/2/4225 (Geochem results). A summary drill log forms Appendix 4 of this report.

4. CONCLUSIONS

The objectives of this short drilling programme were achieved in that they confirmed the geophysical responses at anomalies 180H and 120AX as being of formational origin and not related to mineralisation.

No further work can be justified on these two grids and this part of EL 5/63 may be considered for relinquishment.



for
M P EVERETT
APRIL 1985

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A P P E N D I X 1

SCINTREX

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180H GRID**DISCUSSION**

At this location, five lines each about 900 metres long and spaced at 160 metre intervals were read at a station interval of 20 metres, with a coil separation of 100 metres at the frequency pair of 112Hz-3037Hz.

This survey was a ground follow-up to an airborne Dighem survey which produced anomaly '180H'.

Zone H1 This zone is most clearly seen on lines 5640N, 5480N , 5320N and 5160N at 5230E, 5230E, 5210E and 5260E respectively.

It is also discernible on line 5000N at about 5290E which indicates the probable southerly extent of the anomaly. The northern limits are as yet undefined.

The form of the data fits the shape generated by a moderate to resistive surface layer underlain by a body with a near vertical dip in the south at about 5160N, changing to a steep westerly dipping body fairly close to the surface at 5320N. However, for proper interpretation the zone must be detailed using say 150 metre coil separation, and depending on the results, it should be read again at 70 metres or 200 metres. Once the optimum spacing has been determined, then using this spacing the process should be repeated at two different frequency pairs. It is not necessary to do this on all the lines, only on say line 5160N to establish the nature of the

SCINTREX

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source. Further reconnaissance lines to the north would adequately delineate the strike extent of the zone (which at present is some 600 metres), and subject to favourable geochemical or geological input, perhaps intermediate lines to locate an optimum drill target.

This zone is approximately 50 metres west of the plotted position of Dighem anomalies 170E and 160E, but 20 metres east of 180G. It can therefore be assumed that anomaly H1 from the ground survey is generated by the same source as the Dighem anomalies, but that the ground locations are more accurate.

Zone H2 The data from this zone represents a far more complex structure since the characteristics of the profile change from line to line. On line 5000N the appearance is that of a broad near surface conductor centred at about 5700E with some additional feature at about 5650E. Further north on line 5160N centred at 5750E, the 'broad' conductor appears to have narrowed and perhaps plunged. On line 5320N, however, the source could be more like a steep easterly dipping plate type conductor centred at 5770E.

At 5160N/5630E a feature, perhaps a minor semi-vertical conductor, occurs. This shows a continuation of the feature seen on line 5000N at 5650E.

The northernmost lines (5640N and 5480N) show little response along the projected source, and it appears to have pinched out completely or plunged below detection depth. While this interpretation is a solution, geological confirmation is required.

SCINTREX

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The Dighem anomaly 190K lies on the projection of the H2 anomaly at 5100N/5710E. It can also be seen faintly on Dighem line 180 at 528E (on the Dighem data) adjacent to 180H.

Zone H3 The Genie ground survey line 5000N shows a negative anomaly at 5530E. This could be due to a near vertical conductor centred at 5530E and can be seen on lines 5160N and 5320N at 5540E and 5510E respectively. The Dighem anomaly 180H has been plotted about 35 metres to the east of the H3 zone at about 5220N/5580E.

The GAO (Input) anomaly at 5480N/5580E and the Dighem anomaly 170F at 5470N/5620E are not readily apparent on line 5480N in the Genie data. However, if we assume a possible Dighem displacement of 50 metres to the east (as observed on line 5480N over anomaly H1), then the minor Genie anomaly at 5480N/5530E may be significant. This also implies that the anomaly between 5600E and 5740E on line 5480N is not a continuation of the H3 anomaly.

Zone H4 On line 5480N two near zero values occur in the data at 5630E and 5710E. These do not appear to be indications of two 'semi-vertical' type conductors since the depressed regions are only 20 metres across, where one would expect the similar distance as the instrument separation used (in this case 100 metres).

However, the two anomalies taken together are similar to that produced by a minor horizontal to spherical shaped conductive source, possibly 50 to 100 metres deep, at 5670E.

SCINTREX

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Further north on line 5640N a similar reduced amplitude anomaly occurs in the data centred at 5630E which could also be attributed to a semi-vertical conductor at 5690E adjacent to a surface conductor west of about 5560E.

South of H4 on line 5320N the anomaly H2 is so large that any adjacent minor anomaly in the region 5600E to 5700E could be completely obscured.

CONCLUSIONS AND RECOMMENDATIONS

The airborne Dighem data indicates a deep conductive source at 180H (about 10 ohm-metres and 60 metres depth).

The maximum penetration of the Genie is about 70% of the coil separation, and therefore a separation of at least 100 metres is necessary to energise the source. Any detailing with a coil separation of 50 metres or 70 metres is unlikely to pick up anomaly 180H, although it will respond to shallower conductors.

Zone H1 ... Further reconnaissance work to the north to delineate the strike extent of the source, followed by detailing work on the 'best' or most anomalous line, perhaps line 5320N, is recommended. Dighem anomalies 180G, 170E and 160E are approximately on the line of H1.

Zone H2 ... Further reconnaissance work in conjunction with zone H1, but to the south of line 5000N from about 5400E to 5900E is recommended. The Dighem anomaly 190K and the unspecified anomaly on line 180 at 528E (Dighem grid), approximate to this source.

SCINTREX

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Zone H3 ... This zone locates 180H and implies a moderate source on lines 5000N at 5530E and 5160N at 5540E. To the north the source diminishes or perhaps plunges to about the detection limit, but is observed weakly on 5320N at 5510E and can be interpreted on 5480N at 5580E. Should further work be done, a larger instrument spacing is recommended, say 140 metres.

Zone H4 ... This deep source, about 50 to 100 metres, is weakly observed on the data at 5480N/5670E and 5640N/5630E. Further work should be at an increased spacing to determine any extension of strike length, with detailing to determine depth.

Drill Targets:

- H1 5160N/5260E - near surface source, steep, perhaps west dipping.
- H2 5320N/5770E - near surface source, steep, probably east, dipping.
- H3 5160N/5530E - near surface source probably east dipping.
- H4 No drill target recommended until detailed Genie work has been done.

A P P E N D I X 2

APPENDIX 3

DRILLHOLE LOG

148020

Summary Sheet

PROJECT	COMSTAFF	AREA	EL 5/63	DRILLHOLE TYPE	DDH
CO-ORDS	180H Grid 5820E 5320N	DEC^{LN}	-50°	AZIMUTH	270° magRL
DATE COMMENCED	2/1/85	DATE COMPLETED	11/1/85	DRILLED BY	OVERLAND
				DRILL RIG	Warman Scout
Non Coring to: 19.80m		HQ Core to:	NQ Core to: EOH	BQ Core to:	EOH 117.50m

SURVEY DATA			Instrument:			
DEPTH	DECLINATION		AZIMUTH	DEPTH	DECLINATION	
	Uncorr	Corr			Uncorr	Corr
50m		44°	263° mag			
100m		45°	246° mag			

ROCK TYPE		MINERALIZATION		
		Style	Grade	Intersection width (Corr)
0 - 6m	Glacial overburden			
6 - 23m	Vitric-Crystal Tuff, possibly ignimbritic	Trace pyrite only (dissem. grains & crystals)		
23 - 27.50m	Lithic-Vitric Crystal Tuff, intensely fuchsitic	"		
27.50-29.70	Lithic-Vitric-Tuff, also fuchsitic	"		
29.70-32.90	Breccia of dk. grey carbonaceous shales, with fuchsitic & volcanic clasts	(Chromite crystals evident)		
32.90-35.70	Fuchsitic breccia with clasts of carbonaceous shales, Carbonate matrix	Trace pyrite only		
35.70-37.10	Pale buff, altered gabbro - fuchsitic and sheared	"		
37.10 to EOH	Black laminated pelites, carbonaceous, minor dolomite, qtz. veinlets. Minor sandier interbeds (Prob. Munro Slate of G.Green)	Minor syngenetic pyrite only		

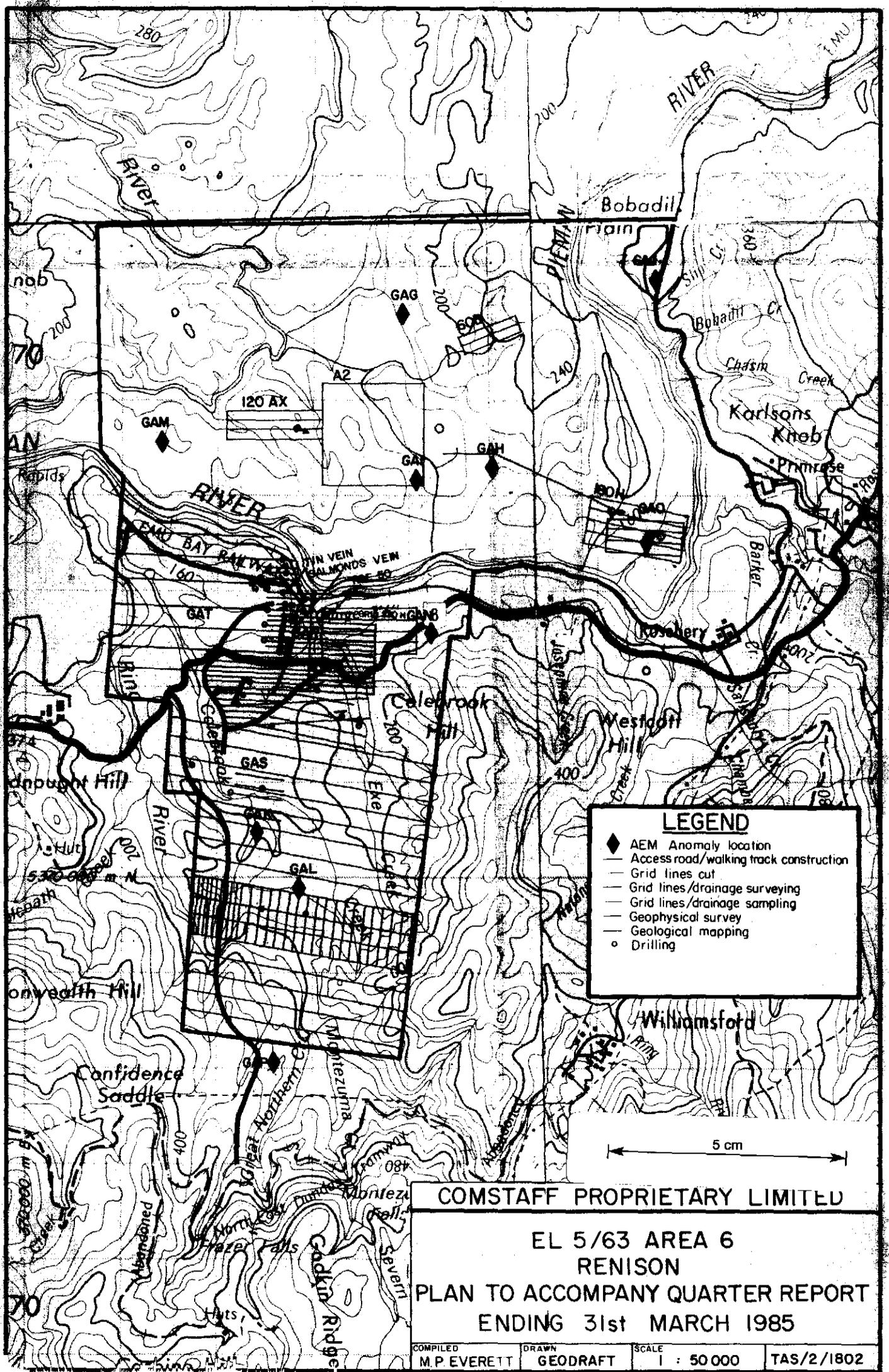
Signature

Date

12/2/85

APPENDIX 4

022
148023





5 373 000 m N

376 000 m E

377 000 m E

LEGEND

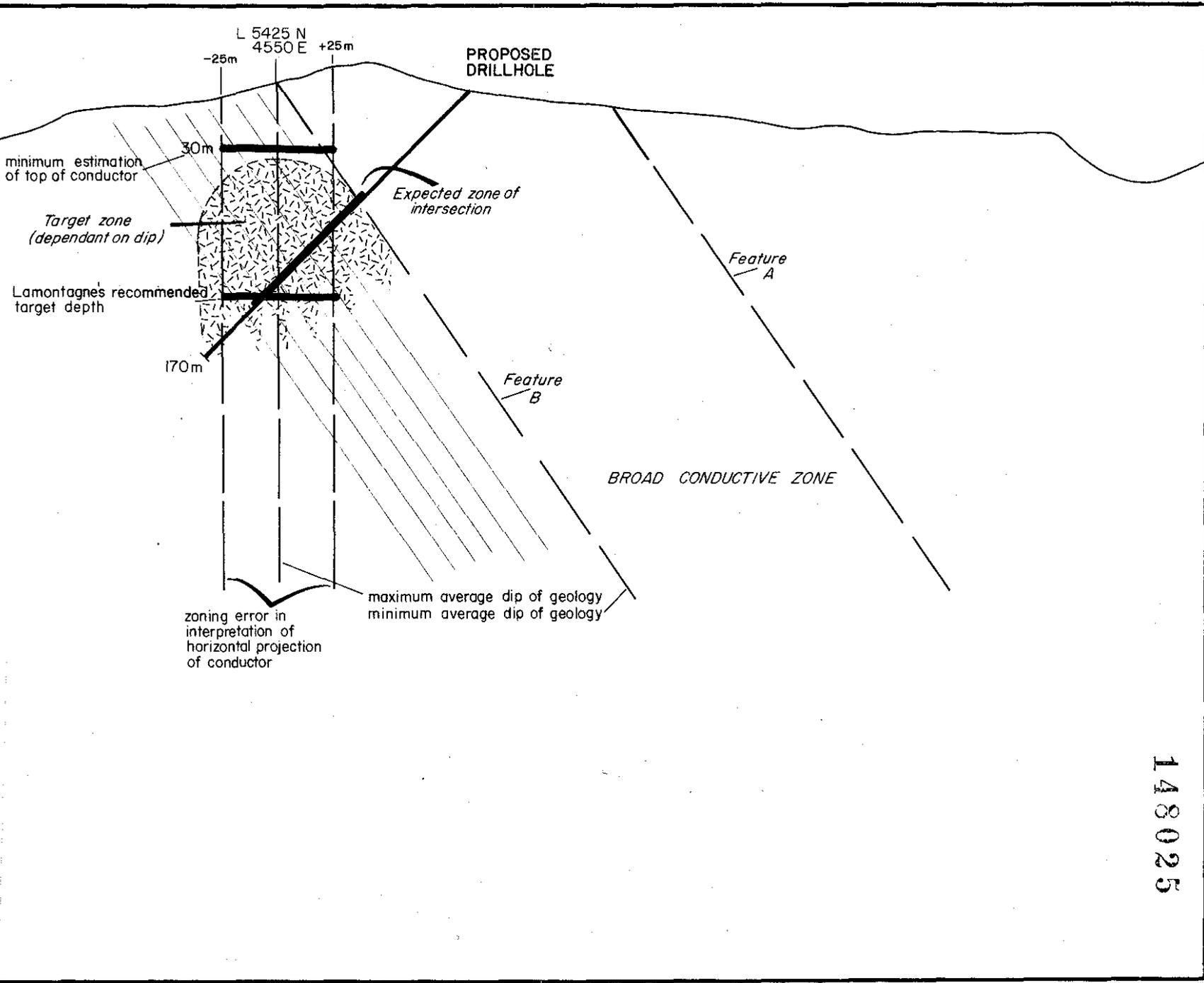
- ◆ GAO Approximate INPUT anomaly location
- ▲ 180 H Approximate DIGHEM anomaly location
- 62 250 nT Magnetic contours
- GENIE interpretation by TRUSSELL
- GENIE interpretation by SCINTREX
- Revised DIGHEM interpretation (Dec '84)
- Drill target - suggested by SCINTREX

148024

5 cm

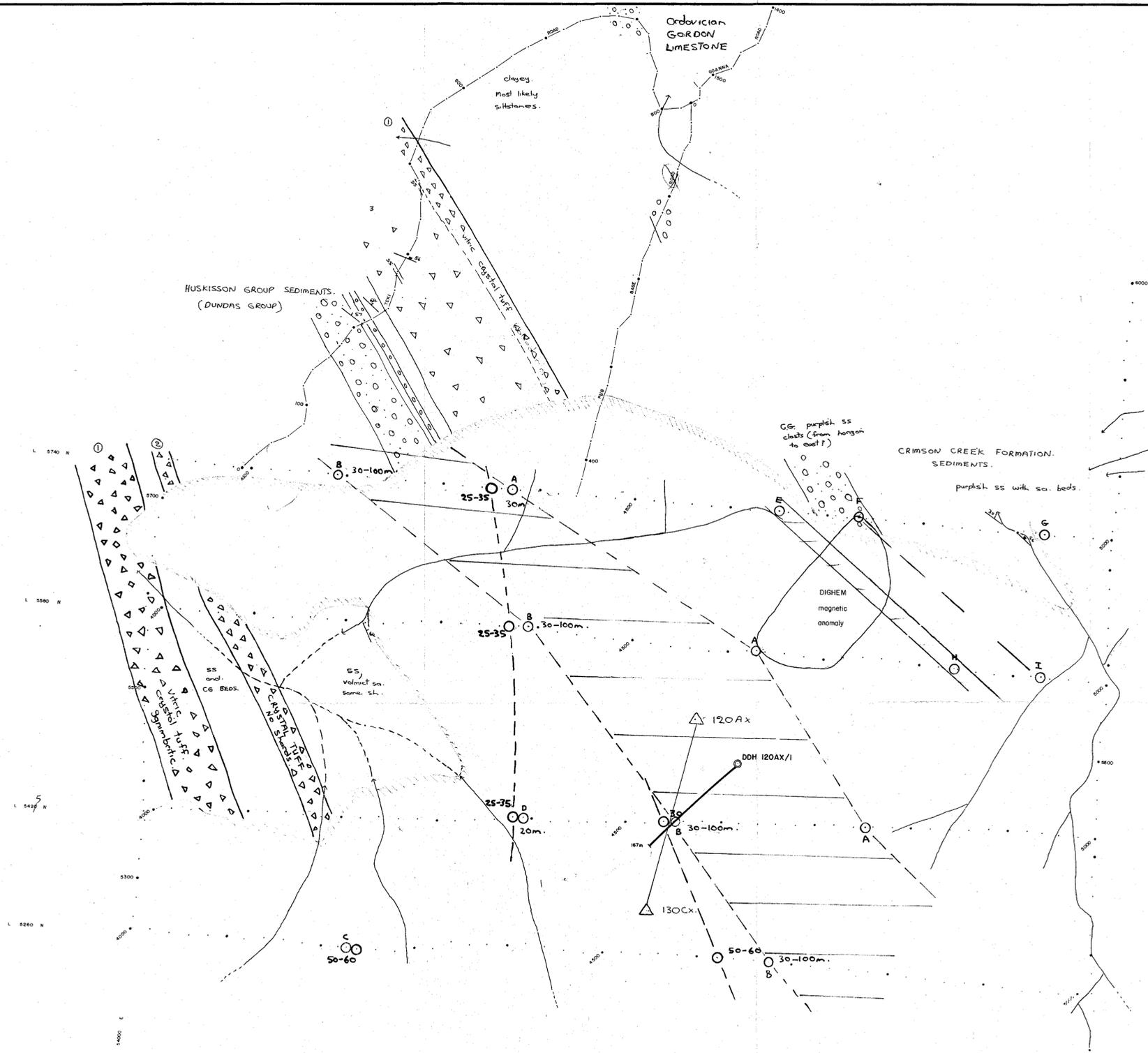
COMSTAFF PROPRIETARY LIMITED		COMPILED M. P. EVERETT
TASK No EL 5/63	PIEMAN NORTH GRID - 180H	DRAWN J. HAROISTY
AREA 6		DATE 27/11/84
GEOPHYSICAL INTERPRETATION PLAN		SCALE 1 : 2500
061		REF No TAS/2/4174

85-2419



COMSTAFF PROPRIETARY LIMITED			
NORTH PIEMAN GRID - 120AX			
SECTION OF PROPOSED DRILLHOLE			
TO TEST FEATURE B ANOMALY-L5425 N			
COMPILED	DRAWN	DATE	AMENDED
M.P. EVERETT	J. HARDISTY	27/11/84	
LEASE No	AREA	SCALE	PLAN No
EL 5/63	6	1 : 2500	TAS/2/4175

85-2419



- ▲▲▲ Crystal tuffs.
- Vlnic crystal tuff, symmetrical
- ⊙ as above but no shards.
- ⊖ Feldspars obliterated in post.
- ⊙ Crystal tuff.
- Conglomerate.
- H In Huskisson Group.
- C In Crimson Creek Formation.
- ss Siltstones.
- CG Conglomerates.
- Volmet Volcanomet.
- sa sandstones.
- sh shales.

- Margin of glacial till cover.
- DIGHEM 120AX Conductor.
- 130CX
- UTEM Conductors.
- indicated depth.
- Angle.
- UTEM 2nd interpretation.
- (Lamentagne Geophysics)
- Dighem magnetic anomaly
- indicated broad, weak conductive feature.

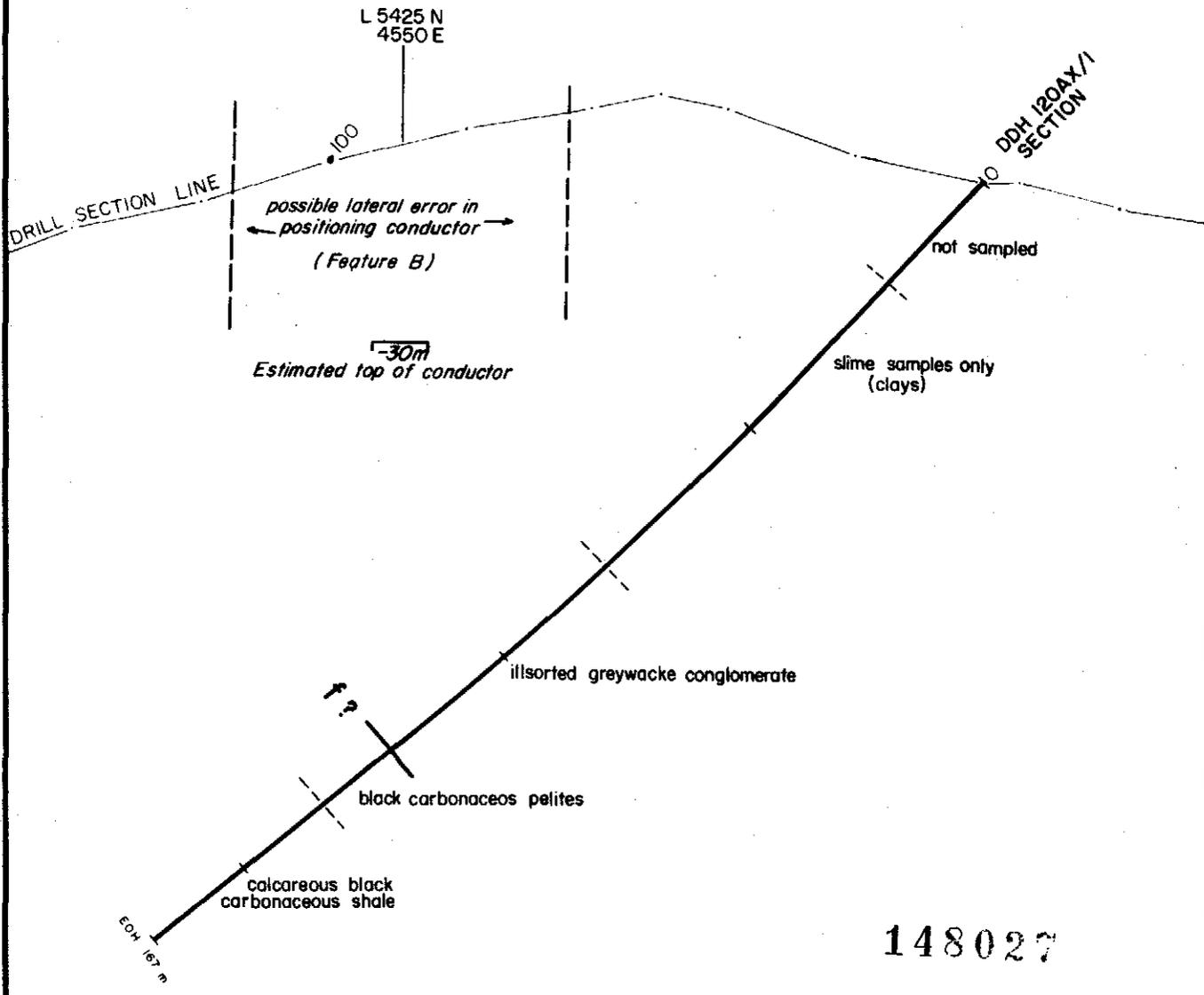
148026
5 cm

COMSTAFF PROPRIETARY LIMITED	
NORTH PIEMAN GRID - 120 AX	
GEOLOGY & GEOPHYSICAL INTERPRETATION	
6	EL 5 / 63
6	TAS/2/4176

COMPILED BY	D. S. THYNNE
DRAWN BY	D. S. THYNNE
DATE	13 / 4 / 84
SCALE	1 : 2500
PT. NO.	TAS/2/4176

064

DRILL SECTION LINE 100 DDH 120AX/1 PLAN



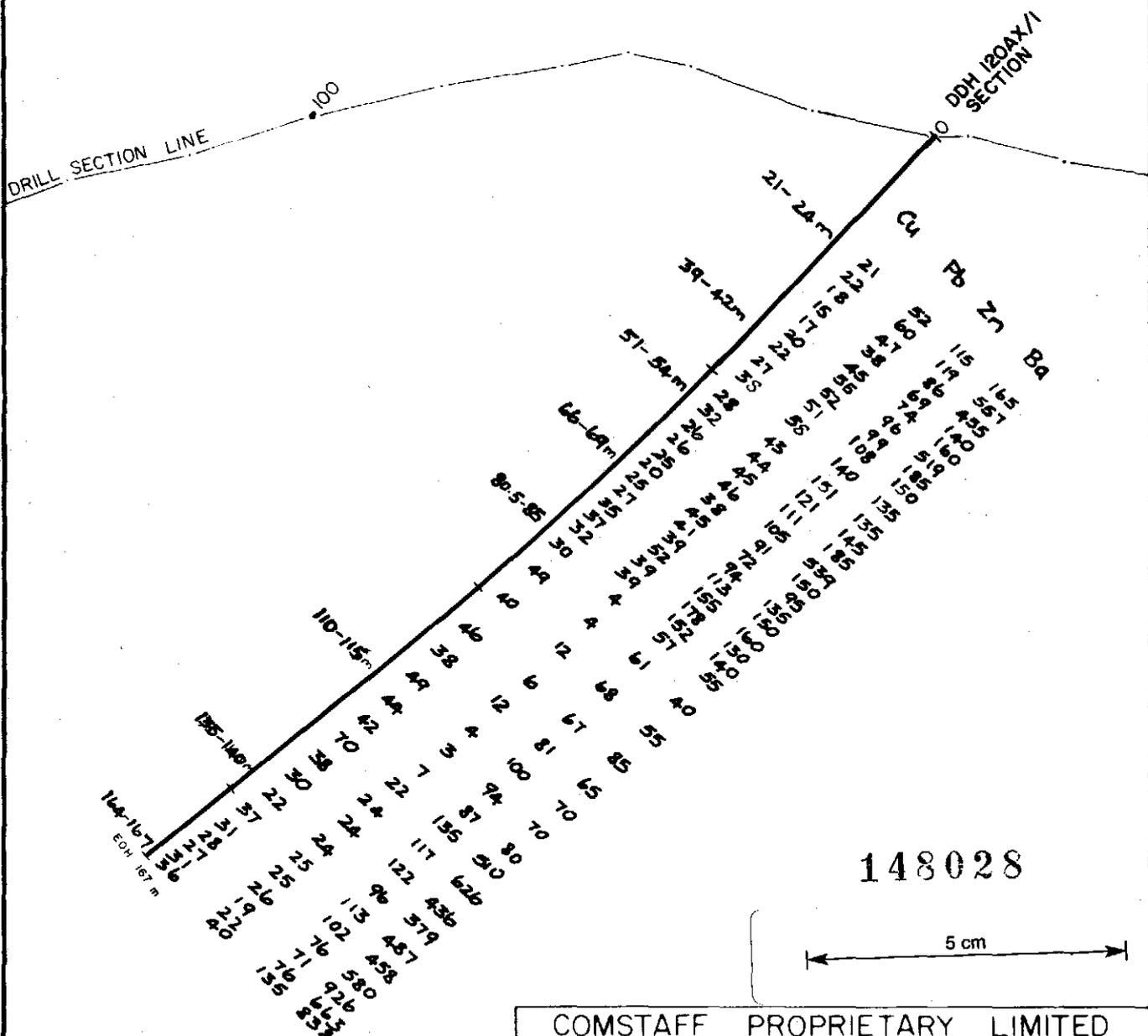
148027

5 cm

COMSTAFF PROPRIETARY LIMITED			
NORTH PIEMAN GRID - 120 AX			
SECTION OF DRILLHOLE DDH 120AX/1			
GEOLOGICAL INTERPRETATION			
COMPILED M.P. EVERETT	DRAWN J. HARDISTY	DATE 29/4/85	AMENDED
LEASE NO EL 5/63	AREA 6	SCALE 1 : 1000	PLAN NO TAS/2/4224

062

DRILL SECTION LINE 100 DDH 120AX/1 PLAN

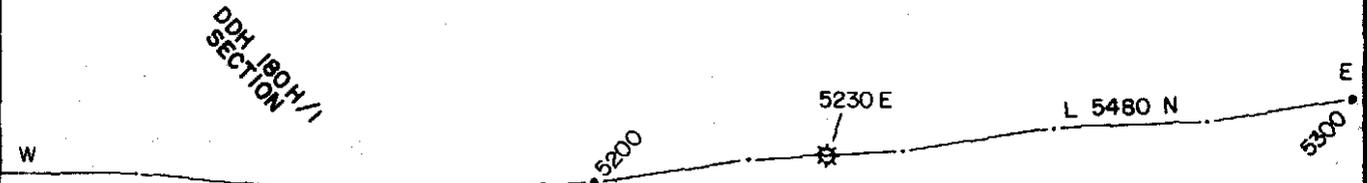


Au - no values above 0.006 ppm
 Sn - " " " 8 ppm

COMSTAFF PROPRIETARY LIMITED			
NORTH PIEMAN GRID - 120 AX			
SECTION OF DRILLHOLE DDH 120AX/1			
GEOCHEMICAL RESULTS FOR Cu,Pb,Zn,Ba			
COMPILED M. P. EVERETT	DRAWN H. PAPAS	DATE 29/4/85	AMENDED
LEASE No EL 5/63	AREA 6	SCALE 1 1000	PLAN No TAS/2/4225

85-2419

066



glacial debris

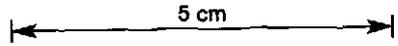
increasingly graphitic
core fracture surfaces

finely laminated light grey to dark
grey variably carbonaceous pelites
with subordinate sandier sediments.
minor irregular quartz and carbonate
veinlets. very minor pyrite

~ 30m, estimated depth to top of conductor
estimated position of conductive zone
between 60° and vertical

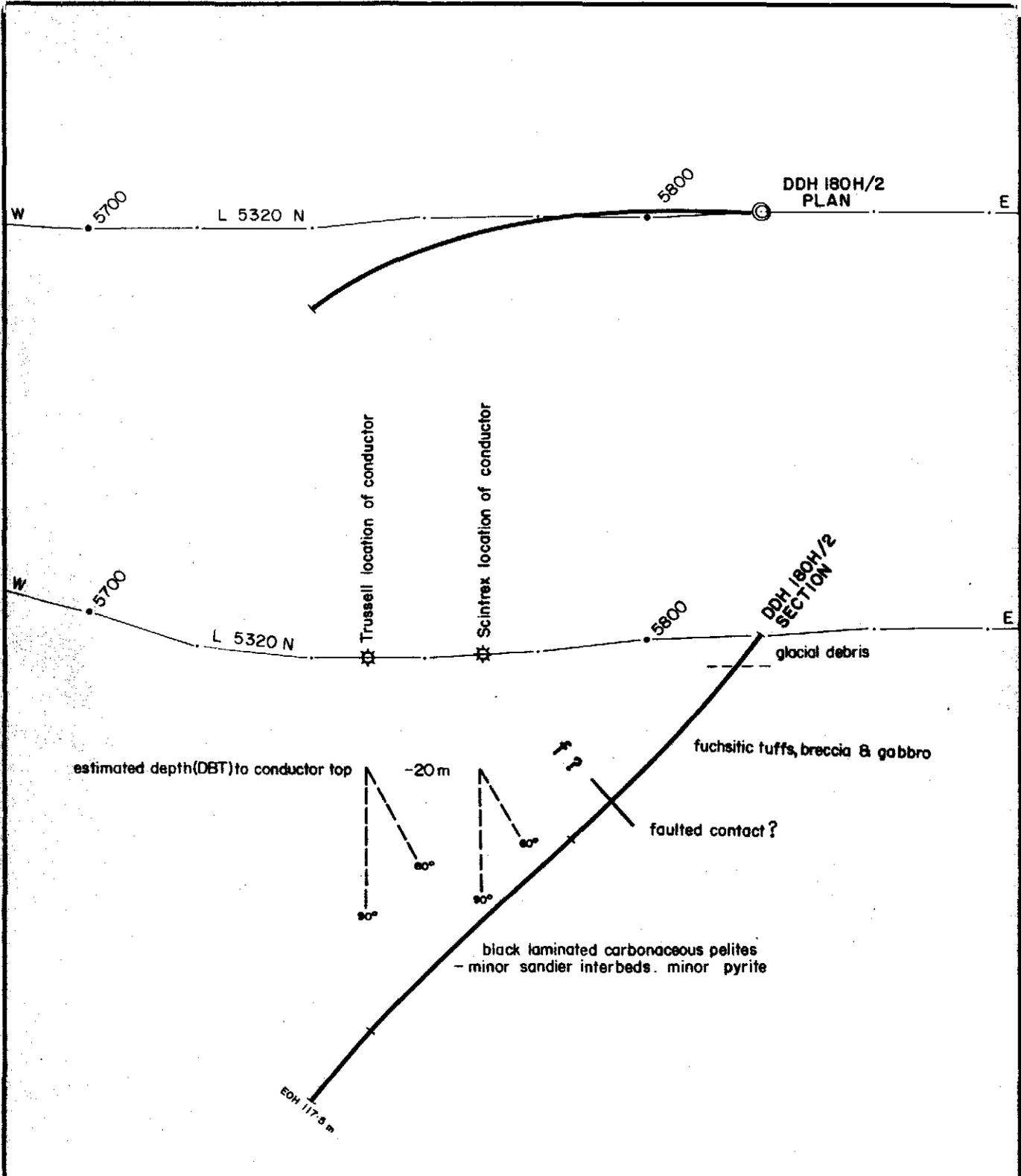
50m 101m

148029



COMSTAFF PROPRIETARY LIMITED			
NORTH PIEMAN GRID - 180H SECTION OF DRILLHOLE DDH 180H/1 GEOLOGICAL INTERPRETATION			
COMPILED M.P. EVERETT	DRAWN J. HARDISTY	DATE 29/4/85	AMENDED
LEASE NO. EL 5/63	AREA 6	SCALE 1 : 1000	PLAN NO. TAS/2/4227

068



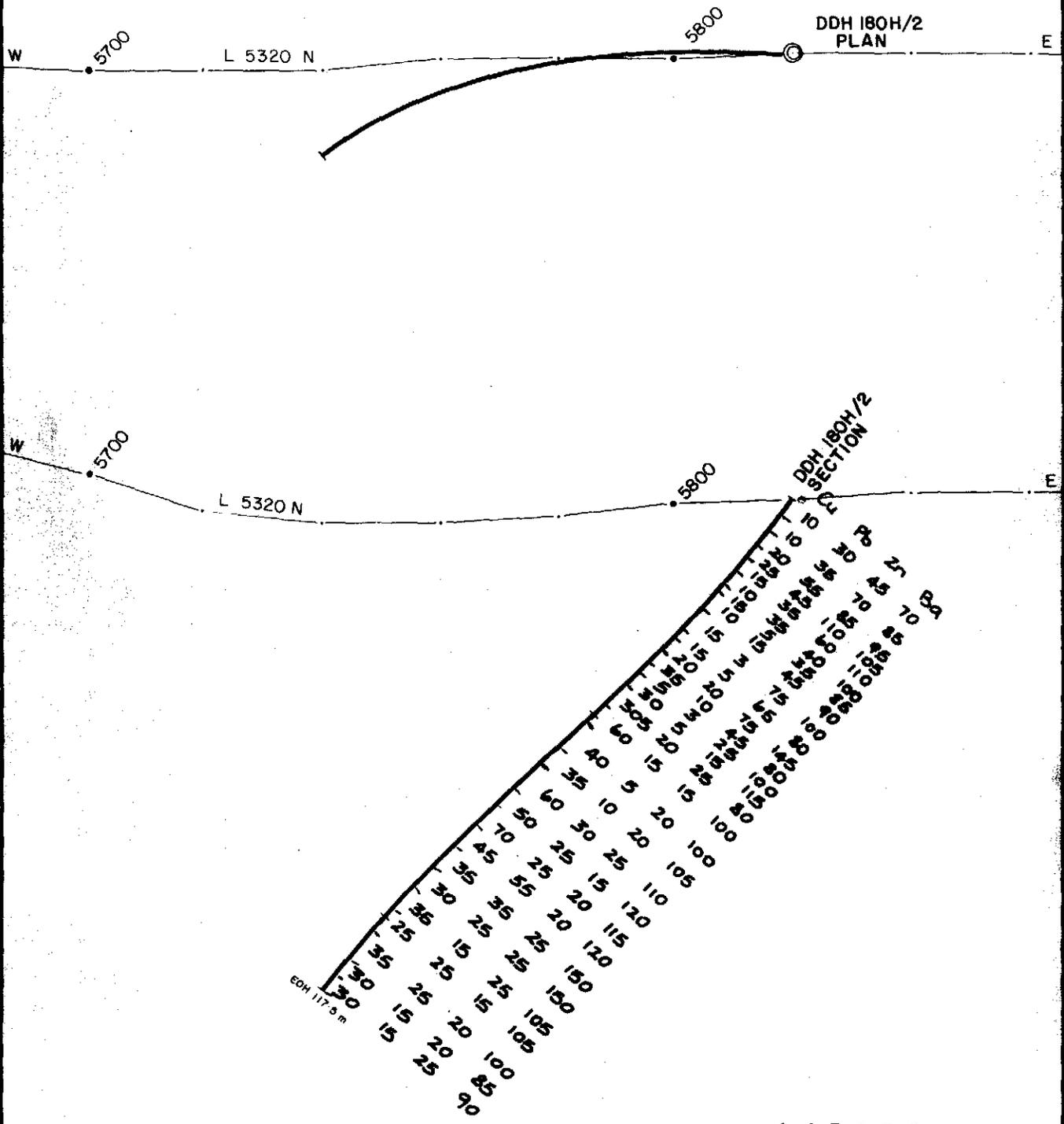
148031

5 cm

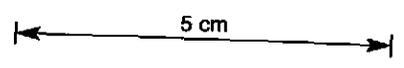
COMSTAFF PROPRIETARY LIMITED			
NORTH PIEMAN GRID - 180H			
SECTION OF DRILLHOLE DDH 180H/2			
GEOLOGICAL INTERPRETATION			
COMPILED M. P. EVERETT	DRAWN J. HARDISTY	DATE 29/4/85	AMENDED
LEASE No EL 5/63	AREA 6	SCALE 1 : 1000	PLAN No TAS/2/4230

55-2419

063



148032



Au - no values above 0.006 ppm
 Sn - " " " 15 ppm

COMSTAFF PROPRIETARY LIMITED			
NORTH PIEMAN GRID - 180H SECTION OF DRILLHOLE DDH 180H/2 GEOCHEMICAL RESULTS FOR Cu,Pb,Zn,Ba			
COMPILED M. PEVERETT	DRAWN H. PAPAS	DATE 29/4/85	AMENDED
LEASE No EL 5/63	AREA 6	SCALE 1 : 1000	PLAN No TAS/2/4231

85-2419

U23

AUSTRALIAN ANGLO AMERICAN LIMITED DRILLHOLE LOG

Page 1
of 1

148033

Summary Sheet

PROJECT Comstaff	AREA EL5/63	DRILLHOLE TYPE DDH
CO-ORDS 180H GM10 5820E 5520N	DECLIN -50°	AZIMUTH 270° true RL
DATE COMMENCED 2-1-85	DATE COMPLETED 11-1-85	DRILLED BY OVENLIND
DRILL RIG WARREN SCOUT	DH No. 180H/2	
Non Coring to: 19.80m	HQ Core to:	NQ Core to: EOH
		BQ Core to: EOH 117.50m

SURVEY DATA			Instrument: EASTMAN CANTON			
DEPTH	DECLINATION		AZIMUTH	DEPTH	DECLINATION	
	Uncorr	Corr			Uncorr	Corr
50m		-48°	263° mag			
100m		-45°	246° mag			

LOG SUMMARY			
ROCK TYPE	MINERALIZATION		
	Style	Grade	Intersection width (Corr)
0-6m. Glacial overburden			
6-23m. Vitric-Crystal Tuff, possibly ignimbrite	Trace pyrite only (dissemin grains + crystals)		
23-27.50m Lithic-Vitric-Crystal Tuff, intensely fructified	"		
27.50-29.70. Lithic-Vitric-Tuff, also fructified.	"		
29.70 - 32.90. Breccia of dk grey carbonaceous shales, with fructite and volcanic clasts	" (Chromite crystals evident)		
32.90 - 35.70 Fructite breccia with clasts of carbonaceous shales. Calcite matrix.	Trace pyrite only.		
35.70 - 37.10 Pale buff, altered gabbro. - fructified and shaled.	"		
37.10 to E.O.H. Black laminated pellets, carbonaceous; minor dolomite, 95 veinlets. Thin sandstone interbeds. (Prob. Munro Slate of G. Green)	Thin syncretic pyrite only		

Signature **ATB** Date **12-2-85**

02A

148034

Hole No:

180H/2

CORE RECOVERY

Interval from - To	ADVANCED	RETRIAL	%	CORE LOSS	CORE GAIN
17.5 - 21.5	1.70	1.64	96.4		
21.5 - 22.10	.6	.36	60.		
22.10 - 22.10	1.3	.34	26.1		
22.10 - 22.70	1.3	.40	30.7		
22.70 - 26.00	2.3	.30	13.0		
26.00 - 27.10	1.4	.73	55.7		
27.10 - 28.20	.8	.60	75.		
28.20 - 29.30	1.1	1.12	101.8		
29.30 - 30.30	1.00	1.11	111		
30.30 - 31.50	1.2	1.10	91.6		
31.50 - 31.60	3.1	2.65	85.4		
31.60 - 35.8	1.2	1.0	83.3		
35.8 - 37.0	1.2	1.10	91.6		
37.0 - 38.0	1.00	0.80	80.		
38.0 - 41.0	3.00	2.40	80.		
41.0 - 42.9	1.9	1.70	91.7		
42.9 - 45.9	3.00	2.40	80		
45.9 - 47.0	1.10	1.10	100		
47.0 - 48.3	1.3	1.20	92.3		
48.3 - 49.0	.70	0.50	71.4		
49.0 - 49.3	.30	0.40	13.3	133.3	
49.3 - 50.0	.7	0.60	85.7	85.7	
50.0 - 50.8	.80	0.40	50.		
50.8 - 52.2	1.5	0.90	60.		
52.2 - 52.0	.70	0.20	28.5		
52.0 - 52.7	.70	0.50	71.4		
52.7 - 54.1	.40	0.40	100.		
54.1 - 54.5	.40	0.40	100		
54.5 - 55.6	1.1	0.85	77.2		
55.6 - 56.2	.60	0.55	91.6		
56.2 - 56.7	1.5	0.40	26.6		
56.7 - 57.1	.70	0.70	100.		

025

148035

Hole No:

CORE RECOVERY

Interval from - To	ADVANCE	ACTUAL	%	CORE LOSS	CORE GAIN
57.4 - 58.6	1.2	1.2	100		
58.6 - 59.0	0.4	0.3	75		
59.0 - 60.0	1.00	1.0	100		
60.0 - 61.1	1.1	0.95	86.3		
61.1 - 62.2	1.1	1.0	90.9		
62.2 - 61.2	2.00	2.0	100		
61.2 - 65.0	0.8	0.75	187.5		
65.0 - 65.6	.6	0.55	91.6		
65.6 - 66.5	.9	0.90	100		
66.5 - 67.8	1.3	1.20	92.2		
67.8 - 69.0	.2	1.10	55		
69.0 - 69.3	.3	0.30	100		
69.3 - 70.2	.9	.96	106.7		
70.2 - 71.6	1.4	1.40	111.2		
71.6 - 72.0	.4	.50	125		
72.0 - 72.90	.9	.84	93		
72.9 - 73.50	.6	.86	143		
73.5 - 73.8	.3	.22	73.3		
73.8 - 74.2	.4	.55	137.5		
74.2 - 75.1	.9	.87	96.6		
75.1 - 76.2	1.1	1.00	90.9		
76.2 - 76.8	1.6	.30	187		
76.8 - 77.3	.5	.28	56		
77.3 - 77.8	1.5	.42	28		
77.8 - 78.2	.4	.60	150		
78.2 - 80.0	.8	1.24	155.0		
80.0 - 83.8	3.8	3.10	81.5		
83.8 - 86.0	2.2	2.51	114.1		
86.0 - 86.5	.5	.62	124		
86.5 - 87.2	.7	.76	108.5	108.5	
87.2 - 88.0	.8	.73	91.2		
88.0 - 88.9	.9	.87	96.6		

026

CORE RECOVERY

148036

Hole No:

Interval from - To	ADVANCE	RETRIAL	%	CORE LOSS	CORE GRAM
89-50 - 89-50	.6	.6	82.3		
89-50 - 91-10	1.6	1.6	110		
91-10 - 91-30	.3	.3	110		
91-30 - 92-50	.6	.65	110		
92-50 - 92-50	.80	.68	85		
92-50 - 93-20	.5	.64	128		
93-20 - 94-20	1.00	.90	90.0		
94-20 - 95-50	1.2	1.10	91.6		
95-50 - 96-00	.5	.80	160		
96-00 - 98-00	2.00	1.23	61.5		
98-00 - 98-30	.9	.50	55.6		
98-30 - 99-30	1.2	1.15	95.8		
99-30 - 100-60	.5	.80	160		
100-60 - 101-0	.6	.80	133.3		
101-0 - 101-50	1.6	.71	44.4		
101-50 - 102-30	1.3	1.37	105.4		
102-30 - 103-30	.4	.98	245		
103-30 - 105-30	2.00	1.60	80		
105-30 - 105-50	.9	.80	88.9		
105-50 - 107-50	1.5	1.35	90.0		
107-50 - 108-30	1.2	1.20	100		
108-30 - 109-10	.9	.65	72.2		
109-10 - 110-00	.4	.44	110		
110-00 - 110-30	.8	.90	112.5		
110-30 - 112-50	.9	.55	61.1		
112-50 - 112-50	1.00	1.00	100		
112-50 - 113-20	1.00	.50	50.0		
113-20 - 113-50	.5	.30	60		
113-50 - 114-30	1.1	1.10	100		
114-30 - 116-00	1.1	1.20	109		
116-00 - 117-30	1.5	1.82	121.3		

DRILL ADVANCE				N. PIEMAN EL 5/63 GRID 180H.		LITHOLOGY		HOLE 180H/2		VISUAL PERCENTAGE MINERALISATION
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL / TRY NO.	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	
				0-3	mud, humus and coarse gravel			B = bedding to core.		
				3-6	coarse gravel and sand					
				6-9	khaki to light green					
				9-12	95-sensate sil. fragments (possibly volcanic?) v. similar to first section of core.					
				12-15						
				15-18						
				18-19.80						
				19.80	Commencement of coring.					
19.8	1.70	1.64	96.4%	20.0	VITRIC XTAL TUFF (ignimbritic) - sub-aerial Field des. light grey silic. 95-sensate rock with orange-yellow wisps of siderite. Appears to be flow textured and of weak fragmental appearance (minor clasts of black shale)			CHS. 20m. Tentative angle to core (mostly strand) is imp. but from 10-45°	Rare, small imp. dist. grains of pyrite	
21.5	.6	.36	60%	21.50						
22.10	1.3	.34	26.1%	22.10						
22.40	1.3	.40	30.7%	22.40						
23.70	2.3	.30	13.0%	23.70	23.0m. (sub-aerial to shallow sub-aqueous) LITHIC-VITRIC-CONCRETE TUFF. Field des. Intensely fucititic sensate, siliceous fragmental volcanic			CHS 26.0m	148037	
27.40	.8	.60	75%	27.40						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH 180H/2

LOGGED BY TIPZ

FROM 0 TO FOR

DATE 12/1/85

PAGE 1 OF 9

DRILL ADVANCE

LITHOLOGY

148038

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
28.20	1.1	1.12	101.8%	28.20	27.50m Field des. Light grey to buff silic. sericite and siderite v. frag. Fuchsite in parts.				Trace pyr grains only.
29.30	1.00	1.11	111.0%	29.30	LITHIC VITRIL TUFF (sub-aerial to shallow sub-aquous) 29.70m				
30.30	1.2	1.10	91.6%	30.30	Field des. Breccia of dk. grey carbonaceous shales, pass dolomite in part. Fuchsite clasts and paler clasts of volcanics as base. Chromite cognates disseminated.				No pyrite observed in hand specimen. Traces of vitafite pyr under microscope.
31.50	3.1	2.65	85.4%	31.50	BRECCIA. 29.70m				
34.60	1.2	1.0	83.3%	34.60	Field des. Fuchsite breccia clasts of carbonaceous shale matrix of calcite (?)				Ditto.
35.80	1.2	1.0	91.6%	35.80	Field des. Pale buff siliceous, siliceous sericite fine-grained, pass. carbonated				
37.00	1.00	.80	80%	37.00	ALIEN(?) SHEARED GABBRO. gabbro? rock				
38.00	3.00	2.70	90%	38.00	Sharp change to thinly laminated black carbonaceous pelites with minor 1-2cm light grey sandier interbeds (V. sim. to 180H/1 succession) X-cutting dolomite veinlets. Evidence of intraformational slumping and dissection. 38.40-38.55 light grey sandier bed - fine grained and with carb. wisps and streaks.				
41.00	1.9	1.80	94.7%	41.0	Continuation of black carb. pelites with minor 1-2cm sfs beds.				
42.90	3.00	2.40	80%	42.90	41.53-41.80 sandier band - gty veined 43.38-43.55 " " " "	Fracture surfaces from 43.20m onwards are increasingly graphitic			
				43.90					



SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG

FOR DDH 180H/2

LOGGED BY HPS

FROM 0 TO E.04

DATE 14/1/85

PAGE 2 OF 9

DRILL ADVANCE				LITHOLOGY				148039	
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				44.50	5 Continuation of qtz and dolomite veined brecciated (tectonic??) black carbonaceous pelites with minor thin sandier beds.	Graphitic fracture surfaces common			Minor fine sym pyrite // to bedding. Also traces of pyrite remain into very fine streaking iron dolomite veinlets. Pyr < 1/2% in any 1/2m section.
45.9	1.10	1.10	100%	45.90				46.0m	
47.00	1.3	1.20	92.3%	47.00					35° B
49.00	1.30	0.40	133.3%	49.0	6 Ditto to above.				
49.3	1.7	0.60	25.7%	49.30	48.30 - 50.0 sandier unit with pyr (poss cpy?) on fracture surface.	Vi graphitic around 53.70m.			
50.00	1.80	0.40	50%	50.0	51.10 - 52.30 intensely qtz-veined sandier unit. Qtz veins cut by minor dolomite veinlets.				Traces pyr only
50.8	1.5	0.90	60%	50.80				53.20 (Var) - 55° B (little certain bedding)	
52.3	1.70	0.20	28.5%	52.30					
53.0	1.70	0.50	71.4%	53.0					
53.7	1.40	0.40	100%	53.70					
54.10	1.40	0.40	100%	54.10	7 Cont. of black carb/graphitic pelites s/s bed at 57.40 - 57.47. Minor dolomite veinlets (irreg) - some w. traces of pyrite.			54.20m	45° B
54.5	1.1	0.85	77.2%	54.50				57.40m	30° B
55.60	1.60	0.55	91.6%	55.60				58.0 m	20° B

SCALE 1:100 (1cm = 1m)



COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH 180K/2

LOGGED BY N.P.S. FROM 0 TO F.O.M.

DATE 14/1/88

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DRILL ADVANCE					LITHOLOGY				
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
56.2	1.5	0.40	26.6%	56.20					
56.7	0.70	0.70	100%	56.70					
57.40	1.2	1.2	100%	57.40					
58.60	0.4	0.3	75%	58.60	Troy of intensely graphitic carb. black pellets. No sandier beds.	v. graphitic.			
59.00	1.00	1.00	100%	59.00	Thinner dolom. veinlets. No qtz-veining				
60.00	1.1	0.95	86.3%	60.00					
61.10	1.1	1.0	90.9%	61.10					
62.2	2.00	2.00	100%	62.20	Ditto. V. graphitic but almost no pyrite. V. minor dolom. veining.	v. graphitic			
64.2	0.8	0.75	137.5%	64.20					
65.0	0.6	0.55	91.6%	65.00					
65.6	0.9	0.90	100%	65.60	Continuation of finely laminated graphitic black pellets. Weak x-cutting dolom. veinlets.				
				66.60					

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH 180H/2

LOGGED BY M.P.E FROM 0 TO E.O.H

DATE 19/1/85

PAGE 4 OF 9

±30%
Pyr occurs as blebs and streaks usually aligned // to bedding. Rare cross-cutting veinlets.
Pyr ~ 1/2% in any one meter

Trace pyrite only

10-15%

5 cm

DRILL ADVANCE					LITHOLOGY					148041
DEPTN	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
67.8	.2	1.10	5.5%	10 67.80				67m.	60°B	
69.00	.3	0.30	100%	18 69.00						
69.3	.9	.96	106.7%	10 69.30				69.5m	30°B	
70.2	1.4	1.60	114.2%	" 70.2	Essentially the same as Ref. 10. graphitic black pelites with minor irreg. x-cutty diam. veinlets.	graphitic				
71.6	.4	.50	125%	" 71.60				70m	30°B	
72.0	.9	.84	.93%	" 72.0						
72.9	.6	.86	1.43%	" 72.9						
73.5	.3	.22	73.3%	" 73.5				73.8m	50°B	
73.8	.4	.55	137.5%	" 73.80						
74.2	.9	.87	96.6%	12 74.20	Ditto. (graphitic black pelites)	graphitic		74.9m	60°B	
75.1	1.1	1.00	90.9%	12 75.10						
76.2	1.6	.30	18.7%	12 76.20				76.0m	45°B	
76.8	.5	.38	76%	12 76.80						

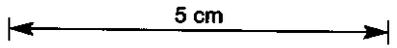
SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH 180H/2

LOGGED BY MPZ FROM O TO EOK DATE 14/1/85 PAGE 5 OF 9

DRILL ADVANCE					LITHOLOGY					148042
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
77.3	1.5	.42	28%	77.30						
77.8	1.4	.60	150	77.80						
78.2	.8	1.27	158.7%	78.20						
80.00	3.8	3.10	81.5%	80.0	Contin. of black carb (graphite) pellets - no sandier beds					
83.8	2.2	2.84	45.4%	83.80	Core slightly disrupted also veining most intense (80-83m) thin. detem. & 95 veinlets - some of detem. veinlets weakly pyritised!	slightly less graphite from 81.0m onwards				V. min. pyr only - same style as previous.
86.00	.5	.62	124	86.0	Ditto, some thin silty laminations.	less graphite than previously				
86.5	.7	.76	108.5	86.5						Trace pyr. only.
87.2	.8	.73	91.2%	87.20						
88.00	.9	.87	96.6%	88.0						
88.9	.6	.50	83.3%	88.90	Ditto. No sandier units or 95 veining.					Trace pyrite only
89.50	1.6	1.76	110%	89.50						
91.10	.3	.33	110%	91.10						



SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH 1804/2

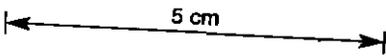
LOGGED BY M.P.Z.

FROM 0 TO E.04

DATE 14/1/88

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DRILL ADVANCE				LITHOLOGY					148043	
LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
	91.40	.6	.60	110%	91.40		Still less graphitic (than logs 89, 10 etc)		91.70m	40°B
	92.00	.80	.68	85%	92.0					
	92.80	.5	.64	128%	92.80	Ditto. (black carb. pelites)				
	93.30	1.00	.90	90%	93.30				94.5	45°B
	94.30	1.2	1.10	91.6%	94.30					Trace pyrite only
	95.50	.5	.20	40%	95.50				97.0	40°B
	96.00	2.00	1.23	61.5%	96.0					
					97.0					
	98.00	.7	.50	71.4%	98.0	Ditto (black carb. pelites) v. little veining	Slightly more graphitic (esp. 98-98.7m)		98.2m	40°B
	98.70	1.2	1.15	95.8%	98.7					Trace pyr. only
	99.90	.5	.30	60%	99.0					
	100.4	.6	.80	133.3%	100.40					
	101.0	.6	.74	123.3%	101.0				101.0m	35°B



SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH 180.H/2

LOGGED BY T.P.B. FROM 0 TO E.O.H.

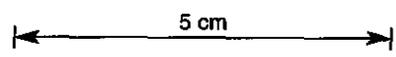
DATE 14/1/88 PAGE 7 OF 9

DRILL ADVANCE				LITHOLOGY				148044	
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
01.60	1.3	1.37	101.2%	101.60					
02.90	.4	.98	245	102.90	Continuation of black carb. shales - not so graphitic looking.	less graphite			
03.30	2.00	1.60	50%	103.30	V. weak veining		103.5m	70° B	Almost nil pyrite - rare bands and irreg. blobs // to bedding.
05.30	.9	.80	88.8%	105.30					
06.20	1.5	1.36	90.6%	106.20			106.0m	65° B	
07.70	1.2	1.20	100%	107.70	Ditto Thinner film. veinlets only	less graphite			
08.90	.7	.65	92.8%	108.90	Ocas 1-2cm thin sandstone bands.		108.0m	70° B	V. minor dissem. pyrite and occas. thin bands // to bedding eg. 108m
09.60	.4	.44	110%	109.60			109m	60° B	
10.00	.8	.90	112.5%	110.0					
10.80	.7	.55	78.5%	110.80			110.40m	30° B	
11.50	1.00	1.00	100%	111.50			111.70m	45° B	

SCALE 1:100 (1cm = 1m)



DRILL ADVANCE				LITHOLOGY				148045	
DEPT	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				112.80 ²⁰	Cont. of black carb lam. pellets with 1-2cm grey sandier units becoming more obvious				
113.20	1.5	1.30	60%	113.20 ²⁰	114.80 - 115.0 silty slt band (fine grained)			115.20m	50°C
113.50	1.4	1.10	78.5%	113.50 ²⁰	115.45 - 115.65 " "				
114.90	1.1	1.20	109%	114.90 ²⁰					
116.00	1.5	1.82	121.3%	116.00 ²⁰					
				117.50 ²⁰				117.0m	50°C
					117.50 E.O.H.				



SCALE 1:100 (1cm = 1m)

U36

148046

Central Mineralogical Services



39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. M.P. Everett
Senior Geologist
Comstaff Pty. Ltd.
Mt. Bischoff Road
WARATAH / TAS. 7321

25th January, 1985

REPORT CMS 85/1/8

YOUR REFERENCE:	Letter dated 15.1.1985
DATE RECEIVED:	16th January, 1985
SAMPLE NOS.:	6 Samples
SUBMITTED BY:	M.P. Everett
WORK REQUESTED:	Petrology

1804/2.

H.W. Fander
H.W. Fander, M. Sc.

037

REPORT CMS 85/1/8

Six drill core samples from DDH 180H/2 between Rosebery and Renison were received for brief petrological description. Representative thin-sections were prepared and examined in transmitted and oblique incident light together with the respective offcuts. Attached tabulated descriptions summarise the microscopic data and include interpretative comments.

Summary

Sample 180H/2-20.0 m, 26.0 m and 29.2 m represent a sequence of altered (silicified-sericitised, variably sideritic) and sheared acid volcanics, fragmental and with relict features consistent with a subaerial mode of deposition, at least in part. The 20.0 m sample exhibits ignimbritic features. In contrast, 26.0 m and 29.2 m are less diagnostic and conceivably represent shallow subaqueously deposited types, with the critical finer detail obscured by secondary effects.

The 31.5 m and 34.30 m samples are best classified as altered breccias. These are composite lithologies with sediment and ultramafic igneous-derived components (the latter in the form of conspicuous chromite), and may include accessory "rhyolitic" components. Carbonate is pervasive and although finer details are obscured the major primary lithology could be interpreted as carbonate-facies sedimentary. Similar chromite-rich sedimentary breccias occur, for example, locally, at the base of the Gordon Limestone, and within the Dundas Group.

The 36.7 m sample represents a thoroughly altered medium, even-grained basic igneous rock (gabbroic, or strictly a microgabbro).

Green sericite, reasonably interpreted as fuchsite, is semi-ubiquitous in accessory to major proportions throughout this suite, with the dark red-black chromite disseminations in the breccias the inferred source of Cr.

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Comments
30H/2 20.0 T.S. (2502)	<u>Vitric-Crystal Tuff</u> . Sericite and crypto- to microcrystalline quartz in variable but overall near-equant proportions, with disseminated quartz and sericite-pseudomorphed feldspar crystals/crystal fragments.	Flow-brecciated, eutaxitic, with minor ill-defined fiamme. Weakly sheared.	Minor stressed quartz veinlets, sericite films. Minor late crosscutting films of sideritic carbonate.	Thoroughly sericitised/silicified, eutaxitic (ignimbritic) rhyolitic vitric-crystal tuff. Microtextural detail well preserved despite mild shearing.
5.0	<u>Lithic-Vitric-Crystal Tuff</u> . Green (?fuchsitic) to colourless sericite with varying proportions of microcrystalline quartz. Disseminated quartz crystal fragments, boudinaged quartz veinlets. Minor late clots, films of siderite.	Poorly sorted psammitic to lapilli grade lithic fragmental with a sparse shardy matrix; siderite. mildly sheared.	Disseminated fine to ultrafine opaques, leucoxenic semi-opaques. Sporadic contorted, sheared sericite veinlets.	Coarse lithic fragmental with subordinate to minor vitric-crystal components. Reflects shearing-induced secondary brecciation. Alteration analogous to 20.0 m.
9.2	<u>Lithic-Vitric Tuff</u> . Sericite-microcrystalline quartz aggregates, semi-pervasively stained with microcrystalline sideritic carbonate. Thinly disseminated quartz crystal fragments.	Mildly sheared-rebrecciated angular psammitic fragmental with a patchy relict shardy-textured matrix.	Traces of chlorite and patchy green (?fuchsitic) sericite. Thinly disseminated ultrafine pyrite.	Affinities with 26.0 m. Primarily finer-grained and relatively silicified/siderite-stained in comparison. "Dacitic" characteristics (similarly 26.0 m).
1.5	<u>Breccia</u> . Aggregates of medium-grained to microcrystalline quartz and sideritic carbonate with conspicuous disseminated chromite. Frequent crosscutting quartz and chalcedony veinlets.	Random, angular, sub-millimetric to centimetric clasts. Multistage vein-type matrix.	Intraclasts of silicified/carbonated carbonaceous (?dolomitic) pelite. Traces of ultrafine Fe-sulphide.	Breccia composite of carbonaceous pelitic and silicified-carbonaceous ultramafic components. Detail obscured by multistage brecciation, veining.
4.30	<u>Breccia</u> . Microcrystalline quartz, sericite and composite aggregates with conspicuously disseminated chromite, sporadic quartz grains, composites in a matrix of fine-grained ankeritic carbonate.	Random angular sub-to millimetric siliceous contorted sericitic clasts. Mildly sheared matrix.	Sporadic clasts of variably silicified/carbonated carbonaceous pelite. Relatively conspicuous ultrafine	Soft-pebble conglomerate-like breccia composite of sediment- and ultramafic-derived components. Detail obscured by alteration, shearing effects.
6.7 T.S. (2508)	<u>Altered Sheared Gabbro</u> . Various feldspar-pseudomorphous to featureless sericite- and pyroxene-pseudomorphous to featureless carbonate-microcrystalline quartz aggregates. Interspersed foliae of sideritic carbonate, chalcedony.	Variable. Relict even, medium-grained, gabbroic to sheared/banded, phyllitic.	Patchy late films, replacements of siderite (after ankeritic carbonate). Rare ultrafine pyrite.	Thoroughly sericite-carbonate-quartz-altered, medium, even-grained basic. Chalcedonic quartz-veined, sheared; siderite-altered.

039

ANALABS

ANALYTICAL DATA

180412

6.1 08 2077

29.1.85

85/4

1 OF 3

TIME	TEMP	WIND	WAVE	SEA	SWELL	WIND DIR	WAVE DIR	SEA DIR	SWELL DIR	WIND SPC	WAVE SPC	SEA SPC	SWELL SPC
1	0-3	10	30	45	70	X	-	X					
2	3-6	20	35	70	85	X	-	X					
3	6-9	20	55	85	95	X	-	X					
4	9-12	25	45	110	105	X	-	X					
5	12-15	15	35	60	110	X	-	X					
6	15-18	10	35	40	100	X	-	6					
7	18-19.6	15	5	35	85	X	-	X					
8	19.8-23	10	15	45	90	X	-	X					
9	23-27.5	15	X	75	100	X	-	X					
10	27.5-29.7	15	5	65	80	X	X	3					
11	29.7-32.9	20	20	75	145	X	-	X					
12	32.9-35.7	35	10	45	80	X	-	X					
13	35.7-37.1	5	X	25	100	X	-	X					
14	37.1-41.0	30	5	15	115	X	-	3					
15	41-46	205	20	25	80	X	-	15					
16	46-51	60	15	15	100	X	-	4					
17	51-57	40	5	20	100	X	-	4					
18	57-61	35	10	20	105	X	-	5					
19	61-67	60	30	25	110	X	-	4					
20	67-71	50	25	15	120	X	X	4					
21	71-76	70	25	20	115	X	-	15					
22	76-81	45	55	20	120	X	-	5					
23	81-86	35	35	25	150	X	-	7					
24	86-91	30	25	25	150	X	-	4					
25	91-96	35	15	25	105	X	-	3					

These data are for information only and are not to be used for legal purposes. All measurements are subject to the accuracy of the instruments used.

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[Signature]

148049

U40

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

180H/Z

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

6.1 98 2877

23.1.85

25.4

2 OF

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ba	Flu	Flu Fmt	Sn
1	98-101	25	25	15	105	X	-	6
2	101-107	35	25	20	100	X	-	X
3	107-111	30	15	20	85	X	-	X
4	111-117.5	30	15	25	90	X	-	7
5								
6								
7								
8								
9								
10								
11								
12								
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14								
15								
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19								
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25								

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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148050

DRILL ADVANCE

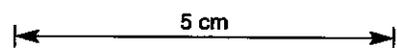
LITHOLOGY

120AX.

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				0	NOT sampled.					
				21						
				80.50	Slime samples only. Not possible to core or percuss. (Puls. remnants of fine (?) clays as seen at surface.)					
				80.50	Commencement of Casing.					
80.50	.50	20	40%	80.50	graywacke conglomerate, ill-sorted and with 10% of 20-30cm wide fine bands of sandstone and grit sized material					
81.00	.90	34.6	1.70%	81.00	Color lighter gray; finer bands are darker gray					
83.60	1.90	1.70	89.5%	83.60	Clasts up to 16cm - long axis; majority around 1-2cm or smaller. Clasts usually supported by the matrix (s/s to grit). Clasts composed of quartz, shale, chert, s/s, acid volcs(?) - no basic frags. and are rounded to sub rounded although shales clasts tend to be irregular shaped and angular.					
85.50	3.50	2.40	97.1%	85.50						
				88.50						
				89.00						

No obvious bedding can be measured. Vague suggestion of graded bedding eg. 83.50m suggesting younging down-hole

Minor widely dissem. specks / ovoids of pyrite.



89.00 1.50 1.00 66.6%

SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG FOR DDH 120 AX

LOGGED BY W. V. H. FROM 0 TO EOL

DATE 26/1/84

PAGE 1 OF 6

DRILL ADVANCE				LITHOLOGY						
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	
				90.50 ²	Ditto to tray one. Only slight change in 15-20cm g shaly cong. at 92.85m					
90.50	.50	.20	40%	91.00 ²				92.30	Poorly def. graded bedding indicating younging up hole	Trace pyrite only
91.00	1.20	.70	58.3%	92.20 ²						
92.20	.80	1.20	150%							
				93.00 ³	Ditto. Clasts up to 9cm (mostly 1-2cm in worst sections) Shaly cong from 95.50-95.40- Compositing clasts as above					
93.00	1.00	.80	80%	94.00 ³				95.60m	60° B	Trace dissemin pyrite only
94.00	3.00	2.20	73.3%	97.00 ³				100.00	65° B	
97.00	2.90	.90	31.0%	99.90 ³				No def. graded bedding seen		
99.90	.70	.50	42.8%	100.60						
100.60	.40	.40	100%							
				101 ⁴	Ditto cong. w. occas v. large clasts as before. Also elongate and aligned 'rip-up' clasts of shale at 100.90, 101.50m. and 106m. [103.50 Change to <u>BQ core</u>] Towards end of tray has become generally finer grained - more gobby but with occas. larger clasts as before (i.e. sim. to matrix of worn sections)					
101.00	1.10	1.00	90.9%	102.10 ⁴				106m	Coarse graded bedding (?) - younging up-hole	
102.10	1.20	.56	46.6%	103.30 ⁴						
103.30	.70	.54	77.1%	104 ⁴						
104.00	1.40	1.20	85.7%	105.40 ⁴						

SCALE 1:100 (1cm = 1m)



DRILL ADVANCE				LITHOLOGY					
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				106.40					
106.40	1.10	.94	85.4%						
				107.50					
107.50	1.10	1.12	101.8%						
				108.60					
108.60	1.50	1.10	84.6%						
				109.90					
109.90	1.20	1.10	91.6%						
				111.10					
111.10	.70	.14	20%						
				111.80					
111.80	1.00	.80	80%						
				112.80					
112.80	.60	.46	76.6%						
				113.40					
113.40	2.60	2.48	95.3%						
				116					
116.00	2.70	2.43	90%						
				118.70					
118.70	1.90	1.60	84.2%						

Cont. of conglomerate, grit and coarse
 lithic sandstone. Clasts of sps, chert
 and vls, minor shale (no carbonate
 or basic). Clasts vary from round
 to square - mainly rounded to sub-
 rounded and roughly elongated
 at high angle to core axis
 Clasts gen. less than 1cm -
 occas. up to 4.5cm - where
 coarser clasts are gen. more
 apart - i.e. supported by the matrix

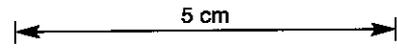
Vague indication of
 graded bedding (best
 younging up and down the
 core - hole seems most
 convincing)

No pyrite observed.

clasts gen elongating
 at high angle to core
 axis (not easily
 measurable)

Trace pyrite only

Ditto
 116.50 - 120.60 (finer section)



SCALE 1:100 (1cm = 1m)

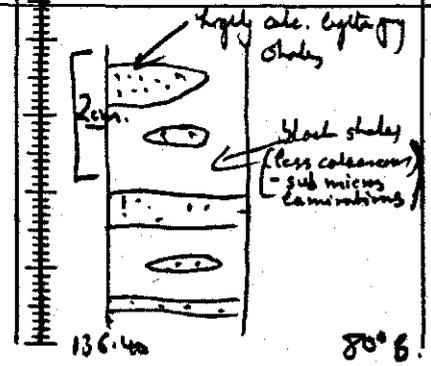
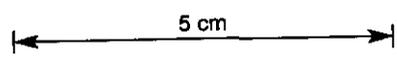
DRILL ADVANCE

LITHOLOGY

148055

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				7 120.60	Conglquit larvae 6/5 as before.					
120.60	1.10	47	42.7%	7 121.70						
121.70	1.30	30	23.0%	7 123.0	Faulted Contact (?)					
123.0	1.60	30	50%	7 123.60	Black calcareous (graphite on fracture surfaces) shales. V. broken and high conc. lvs. (non-calcareous)				1-2% dissem syn pyrite grains and aggregates (most pyrite section of the hole)	
123.60	2.00	60	30%	7 125						
125	60	15	25%	7 125.60						
125.60	1.10	10	100%	7 126.50						
126.50	1.40	10	7.14%	8 127.0	Continuation of black carb. shale as before					(Pyrite as above)
127.0	1.00	20	20%	8 128.0						
128.0	1.90	20	10.5%	8 129.90						
129.90	1.80	10	12.5%	8 130.70	134.10 Commencement of improved core and introduction of more calcareous (lenses/bands) into the shale which has become calcareous in itself. The calcareous bands are light grey (undisturbed) and 1-2cm wide					
130.70	1.90	40	31.5%	8 132.60						
132.60	1.50	20	13.3%	8 134.10						
134.10	2.30	110	47.8%	8 136.40						
136.40	3.10	255	80.2%							

SCALE 1:100 (1cm = 1m)



Thin pyrite (± 1/2%) as 1/2 to 1cm clots and large flecks (often associated with the calcite veins)

Thin calcite veins

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DRILLHOLE LOG FOR DDH 1204x

LOGGED BY TMB FROM 0 TO 1204

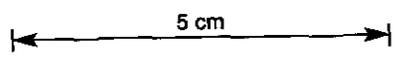
DATE 24/1/85

PAGE 4 OF 6

148056

LITHOLOGY

DRILL ADVANCE				LITHOLOGY					
DEPTH	DRILL ADVANCE (INTERVAL)	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				139.50	Ditto calcareous shales	Thin long calcite veins on base.	Beds v. indistinct	80° B	Up to 1/2-1% locally of pyrite. Occurs mostly as plates and blebs elongated parallel to bedding 142.10m - massive pyrite (calcite band parallel to bedding (1-2cm thick))
139.50	3.10	2.80	90.3%	142.60					
142.60	3.10	2.90	93.5%						
				145.70	Ditto	Prominent calcite vein at 147.70.	Up to: 148.70 - bedding at high angle to core After: 148.70 - bedding 'flattens' to ± 45° to core.	Ditto pyrite (1-2% locally at best)	
145.70	2.00	1.50	75%	147.70					
147.70	1.00	.90	90%	148.70					
148.70	1.30	1.00	76.9%						
				150.10	Ditto	Thin calcareous bands becoming better defined and easier to see		50° B	Ditto plus: Blas bands of 1-2cm of pyrite parallel to bedding
150.00	2.00	1.80	90%	152.00					
152.00	1.90	1.70	89.4%	153.90					
153.90	3.1	2.70	87.1%						
				157.00	Ditto calcareous shales		Some interf. clumping evident.	60° B	
157.00	2.3	2.00	86.9%	159.30					
159.30	2.3	2.00	86.9%						



SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG FOR DDH 120 AX

LOGGED BY JFB FROM 0 TO 50m

DATE 24/1/85

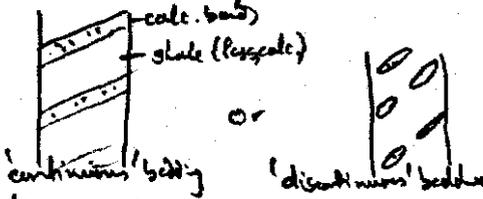
PAGE 5 OF 6

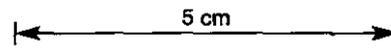
047

DRILL ADVANCE

LITHOLOGY

148057

LAST CORE	DRILL ADVANCE				INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VOLUME PERCENTAGE MINERALISATION
	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY							
					160.60	<p>Ditto. More calcareous bands (1-2cm) are v. distinct from 162 & onwards.</p>  <p>or</p> <p>167m END OF HOLE.</p>	<p>Thin x-cutting calcite veins</p>		<p>50°G</p>	<p>1-2% pyrite as bands or blebs as before.</p>	
				164.1							
				167							



SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG FOR

DDH 12047

LOGGED BY SMZ

FROM 0 TO 167m

DATE 28/1/88

PAGE 6 OF 6

048

Hole No: 120 AX

148058

Interval From - To	ADVANCE	ACTUAL	%	CORE LOSS	CORE GAIN
80.50 - 81.00	.50	.20	40	.30	
81.00 - 83.60	2.60	.90	34.6	1.70	
83.60 - 85.50	1.90	1.70	89.5	.20	
85.50 - 89.00	3.50	3.40	97.1	.10	
89.00 - 90.50	1.50	1.00	66.6	.50	
90.50 - 91.00	.50	.20	40	.30	
91.00 - 92.20	1.20	.70	58.3	.50	
92.20 - 93.00	.80	1.20	150	.40	.40
93.00 - 94.00	1.00	.80	80	.20	
94.00 - 97.00	3.00	2.20	73.3	.80	
97.00 - 99.90	2.90	.90	31.0	2.00	
99.90 - 100.60	.70	.30	42.8	.40	
100.60 - 101.00	.40	.40	100		
101.00 - 102.10	1.10	1.00	90.9	.10	
102.10 - 103.30	1.20	.56	46.6	.3	
103.30 - 104.00	.70	.54	77.1	.16	
104.00 - 105.40	1.40	1.20	85.7	.20	
105.40 - 106.40	1.00	.90	90	.10	
106.40 - 107.50	1.10	.94	85.4	.16	
107.50 - 108.60	1.10	1.12	101.8	.2	
108.60 - 109.90	1.30	1.10	84.6	.20	
109.90 - 111.10	1.20	1.10	91.6	.10	
111.10 - 111.80	.70	.14	20	.56	
111.80 - 112.80	1.00	.80	80	.20	
112.80 - 113.40	.60	.46	76.6	.14	
113.40 - 116.0	2.60	2.48	95.3	.12	
116.0 - 118.70	2.70	2.43	90	.27	
118.70 - 120.60	1.90	1.60	84.2	.30	.30
120.60 - 121.70	1.10	.47	42.7	.5	
121.70 - 123.0	1.30	.30	23.0	1.00	
123.0 - 123.60	.60	.30	50	.30	
123.60 - 125.60	2.00	.60	30	1.40	

ANALABS

ANALYTICAL DATA

6.1 88 2894

4.2.85

85/9

1 of 3

TEST No.	SAMPLE No.		PL	SL	FL	PL	PL	PL	PL
1	80-85	38	4	57	59	X	-	X	
2	85-90	49	4	61	48	X	-	X	
3	90-95	48	12	68	65	X	-	X	
4	95-100	46	6	67	63	X	-	X	
5	100-105	38	12	81	69	X	-	?	
6	105-110	49	4	100	78	X	-	X	
7	110-115	44	3	94	78	X	-	X	
8	115-120	42	7	87	88	X	-	X	
9	120-125	78	22	135	518*	X	-	X	
10	125-130	38	24	117	626*	X	X	X	
11	130-135	38	24	122	436*	X	-	3-	
12	135-140	22	24	86	379*	X	-	X	
13	140-144	37	23	118	487*	X	-	X	
14	144-149	31	23	102	458*	X	-	X	
15	149-154	28	26	76	588*	X	-	X	
16	154-159	27	19	71	926*	X	-	X	
17	159-164	31	22	76	663*	X	-	X	
18	164-167	36	48	135	838*	X	-	X	
19	21-24	21	52	115	165	X	-	4	
20	24-27	22	68	119	557*	X	X	X	
21	27-30	18	47	86	455*	X	-	X	
22	30-33	15	38	69	148	X	-	?	
23	33-36	17	45	74	160	X	-	?	
24	36-39	28	55	96	519*	X	-	X	
25	39-42	22	52	99	165	X	-	?	

Results given are those specified

For further details see the instructions to the analyst

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148060

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

1101X

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ba	Pu	Pu Rpt	Sn	
1 ^T	42-45	27	51	108	150	X		3	
2	45-48	38	58	140	135	X		X	
3	48-51	28	43	151	135	X		X	
4	51-54	32	44	121	145	X		X	
5	54-57	30	45	111	150	X		X	
6	57-60	36	46	150	135	X		X	
7	60-63	39	36	71	135	X		X	
8	63-66	28	35	72	135	X		X	
9	66-69	25	41	94	135	X		X	
10	69-72	27	39	110	150	X		X	
11	72-75	33	52	155	130	X		X	
12	75-78	37	39	170	130	X		X	
13	78-80.5	22	79	132	140	X		X	
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

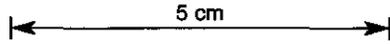
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148061

DRILL ADVANCE				N. PIETAN EL 5/63 PT 6. GRID 180H.		LITHOLOGY		HOLE 180H/1		VISUAL PERCENTAGE MINERALISATION
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	
				0-3.				B = bedding to core		
				3-6	light grey glacial debris.					
				6-9	Ditto					
				9-12	Ditto. Increasing					
				12-15	light to dark grey shale fragments. Thin qz and mica (dism?) fragments Subordinate s/s.				v. minor pyr. - cubic.	
				15-17.10	As above.					
17.10	2.70	1.82	67.4%	17.10	Commencement of <u>finely laminated (bedded) light grey to dark grey shales with</u>			17.55m 60° B	Thin (<1%) symmetrical pyrite - tends to occur dissem. and in thin bands parallel to bedding. Some pyrite in qz veins.	
19.80	1.90	1.50	76.9%	19.80	<u>subordinate medium grey fine sandstone or silty shale bands up to 70cm thick.</u>	Some muscovite on fracture surfaces of more psammite units	20.0m 60° B			
21.70	1.80	1.76	42.2%	21.7						
23.50	2.10	1.32	62.8%	23.5						
25.60	2.10	1.45	69%	25.6	Thin of veining and minor carbonate (dolomite) veining. Some fs. veins massive, others vuggy showing secondary qz growth. <u>W. qz veins up to 20cm in width; dolomite vein 1cm or less.</u>	qz veins - chert(?) inclusions	25m 80° B			
27.70	1.80	1.62	77.5%	27.7						
28.50	2.00	1.50	75%	28.5				28m 50° B		
30.50	1.30	1.06	81.5%	30.5				30m 45° B		

SCALE 1:100 (1cm = 1m)



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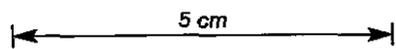
DRILLHOLE LOG FOR DDH 180H/1

LOGGED BY HPE FROM TO

DATE 19/12/84

PAGE 1 OF 4

DRILL ADVANCE				LITHOLOGY					
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
31.80	2.70	2.19	81.1%	31.8			32m	45°B	
34.50	1.50	1.13	75.3%	34.5					
36.00	2.20	1.00	45.4%	36.0					
				38.1			37m	40-45°	
38.20	1.30	.66	52.3%	38.2					
39.50	2.00	1.40	70%	39.5	Ditto but increasing qtz veining and brecciation of sediments, much of which may be intraformational. Laminations (beddy) less obvious.	Increasing carbonaceous (graphitic) conc fracture surfaces.			
41.50	3.00	2.63	87.6%	41.5			41m	80°	
44.50	1.80	1.54	85.5%	44.5			42m	// to core	
46.30	1.10	.58	52.7%	46.3				beddy becoming very disrupted by brecciation/slumping.	
47.40	2.20	1.26	57.3%	47.4					
49.60	.80	.18	22.5%	49.6					
51.70	.70	.56	82.8%	51.7					
52.40	1.10	1.10	100%	52.4					
53.50	2.30	1.91	83%	53.5					
55.80	1.20	.70	58.3%	55.8					



SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG FOR DDH 1804/1

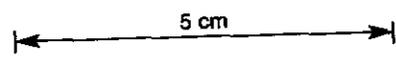
LOGGED BY MRE

FROM 19/12 TO

DATE / /

PAGE 2 OF 4

DRILL ADVANCE				LITHOLOGY					VERNAL PERCENTAGE MINERALISATION
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
57.00	2.30	2.10	91.3%	57.0	-58m - endy disrupted section.		58m	70° B	
59.30	1.60	1.28	80%	59.3	Continuation of well laminated bedded light grey to dark grey shales, locally pyritic. More prominent (N1m) and frequent sections of fine s/s and sandy siltstone (eg. Tray 10 in 5% fine s/s units).		60m	60° B	Slight increase in pyrite (1-2%) between 62.14 and 65.0m. Some pyrite 'remobilized' into core fracture surfaces.
60.90	1.00	.70	70%	60.9			71m		
61.90	.50	.40	80%	61.9			Thin displacement of veins on bedding surfaces (1-2cm thick) - little disruption to bedding.		
62.40	1.10	.80	72.7%	62.4			63m	45° B	
63.50	2.00	1.73	86.5%	63.5	Mod. veining of qtz and carbonate (dolomite?) - some together in same veins. Carbonate appears to be late phase than quartz.		64m	65° B	
65.50	3.00	2.76	92%	65.5			68	65° B	
68.50	2.20	1.83	83.2%	68.5			Vague local structures indicate younging up-hole.		
70.70	1.00	.80	80%	70.7			73m	60° B	
71.7	2.80	2.40	85.7%	71.7			74.5m	65° B	
74.50	2.30	2.11	91.7%	74.5					
76.80	2.60	2.45	94.2%	76.8					
79.40	2.50	1.97	78.8%	79.4					
81.90	3.00	2.88	96%	81.9			81m	60° B	
84.90	1.10	.88	80%	84.9			83m	55° B	



SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG

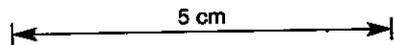
FOR DDH 1804/1

LOGGED BY H.P.E. FROM TO

DATE 21/12/84

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DRILL ADVANCE				LITHOLOGY					
DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
86.00	2.70	2.41	89.2%	86.0	Ditto.				Ditto.
88.70	1.70	1.29	75.8%	88.7			87m	70°B.	
90.40	1.20	1.13	94.1%	90.4			88.5m	80°B.	
94.70	1.80	1.46	81.1%	94.7			90.0m	50°B.	
96.50	3.10	2.86	92.2%	96.5			94.0m	65°B.	
99.60	1.40	1.39	99.2%	99.6			98.0m	70°B.	
101.00				101	END OF HOLE		100m	60°B.	



SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG

FOR DDH 180 H/1

LOGGED BY MPB FROM _____ TO _____

DATE 21/12/84

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057

CORE RECOVERY

PAGE 1

Hole No: 180 H/1

148067

Interval from - To	ADVANCE	RETRAK	%	CORE LOSS	CORE GAIN
17.10 - 19.80	2.70	1.82	67.4	.88	
19.80 - 21.70	1.90	1.50	78.9	.40	
21.70 - 23.50	1.80	.76	42.2	1.04	
23.50 - 25.60	2.10	1.32	62.8	.78	
25.60 - 27.70	2.10	1.45	69	.65	
27.70 - 28.50	.80	.62	77.5	.18	
28.50 - 30.50	2.00	1.50	75	.50	
30.50 - 31.80	1.30	1.06	81.5	.24	
31.80 - 34.50	2.70	2.14	81.1	.51	
34.50 - 36.00	1.50	1.13	75.3	.37	
36.00 - 38.20	2.20	1.00	45.4	1.20	
38.20 - 39.50	1.30	.68	52.3	.62	
39.50 - 41.50	2.00	1.40	70	.60	
41.50 - 44.50	3.00	2.63	87.6	.37	
44.50 - 46.30	1.80	1.54	85.5	.26	
46.30 - 47.40	1.10	.58	52.7	.52	
47.40 - 49.60	2.20	1.26	57.3	.94	
49.60 - 50.60	.80	.18	22.5	.62	
50.40 - 51.70	1.30	.97	74.6	.33	
51.70 - 52.40	.70	.58	82.8	.12	
52.40 - 53.50	1.10	1.10	100		
53.50 - 55.80	2.30	1.91	83	.39	
55.80 - 57.00	1.20	.70	58.3	.50	
57.00 - 59.30	2.30	2.10	91.3	.20	
59.30 - 60.90	1.60	1.28	80	.32	
60.90 - 61.90	1.00	.70	70	.30	
61.90 - 62.40	.50	.40	80	.10	
62.40 - 63.50	1.10	.80	72.7	.30	
63.50 - 65.50	2.00	1.73	86.5	.27	
65.50 - 68.50	3.00	2.76	92	.24	
68.50 - 70.70	2.20	1.83	83.2	.37	
70.70 - 71.70	1.00	.80	80	.20	
71.70 - 74.50	2.80	2.40	85.7	.40	

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1504/1

ANALYTICAL DATA

SAMPLE REFERENCE

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		6.1 08 2863				8.1.85		94470		10F	
TUBE No.	SAMPLE No.	Pb	Pb	Zn	Cd	Pb	Sn				
cc (1)	17-18-22	30	30	25	120	X	7				
2	22-27	30	20	30	180	X	5				
3	22-22	30	35	35	100	X	9				
4	32-37	25	50	45	100	X	X				
5	37-4	40		40	90	X	9				
6	42-47	30	60	25	85	X	5				
7	47-52	30	40	40	80	X	5				
8	52-57	20	50	30	75	X	X				
9	57-62	35	50	40	30	0.01	X				
10	62-67	35	65	30	90	X	5				
11	67-72	25	55	35	95	X	9				
12	72-77	45	20	80	90	X	6				
13	77-82	30	70	70	100	X	7				
14	82-87	30	25	40	90	X	5				
15	87-92	25	25	40	65	0.01	8				
16	92-97	30	40	35	80	X	6				
17	97-101	40	60	45	90	X	3				
18	28502	25	55	235	90	X	3				
19	28503	25	45	130	100	X	5				
20	28504	20	45	100	80	0.01	4				
21	28505	30	20	70	70	X	7				
22	28506	30	30	30	75	X	6				
23											
24											
25											

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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060

130H/1

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ANALYTICAL DATA

SAMPLE PREFIX

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PAGE

		E. I. 96 2803				8, 1, 55		24-773		OF	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ba	Hg	Sn				
1	1-55	-	-	-	325	-	-				
2	17-10-22	-	-	-	125	-	-				
3	28503	-	-	-	95	-	-				
4	37-42	-	-	-	-	X	-				
5	67-92	-	-	-	-	-	-				
6											
7											
8											
9											
10											
11											
12											
13											
14					0.101						
15					1						
16											
17											
18											
19											
20											
21											
22											
23	DETECTION	5	5	5	5	0.012	2				
24	DIGESTION										
25	METHOD	103	103	103	120	229	442				

Results in ppm unless otherwise specified
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