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20 JUN 1985			
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REF. No. 6323/85			

PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: FINAL REPORT TO THE DEPARTMENT OF MINES, TASMANIA
ON THE SURRENDERED PORTION OF EL 5/63 AREA 3

MT BLOCK

AREA NAME/S, STATE 1: 250,000 SHEET NO/S & COORDINATES: 1:250 000 sheets K55 03 (Burnie)
K55 05 (Queenstown)

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

TEXT PAGES NO: 3

PLAN NOS: See List of Plans

TABLE NOS: -

APPENDICES: 1

AUTHOR/S: R W L SHAW, M P EVERETT

DATE: MAY 1985

OPEN FILE

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

APPENDIX 1

Interim Report on Debussey Creek EL 5/63
Area 3; Mt Block CRM 1985.
(continued)

LIST OF PLANS

TAS/2/4241	Locality - Work Done	1:50 000
TAS/2/3077	Geology	1:50 000
TAS/2/2974	Fork Creek - Geology and Geochemistry.	1:5 000
TAS/2/4179	Debussey Creek - Geology and Geochemistry	1:5 000
TAS/2/4139		Mt Block - Mineral deposits and Geology

COMSTAFF PROPRIETARY LIMITEDFINAL REPORT TO THE DEPARTMENT OF MINES, TASMANIA,
ON THE SURRENDERED PORTION OF EL 5/63 AREA 3MT BLOCKINTRODUCTION

In accordance with the instructions of the Department of Mines, EL 5/63 has been reduced from 364 to 125 square kilometres. In order to achieve this objective two portions of Area 3 have been selected for surrender. The report which follows summarises the work done and results achieved to 1979; detailed reports are already on open file. Details of the work done since that date are reported as appendices to this document.

SUMMARY OF WORK DONE AND RESULTS TO 1979

1970-71 Two regional geochemical sampling exercises were conducted, the Mackintosh and the Bulgobac programmes. Both stream sediment samples and heavy mineral concentrates were collected and reconnaissance mapping established the geological context of the results. The stream sediment samples were sieved and the -80# fraction was analysed for Cu, Zn, Ag and Ni by AAS and Sn by colorimetry.

The heavy concentrates were separated in tetrabromide, microscopically examined and multielement spectrographically scanned. Anomalies for follow up were located at Debussey Creek, the Bulgobac/Mt Charter/Animal Creek triangle and Pink Creek (Southern Sock Creek grid area) in the north and Mullabadine and Tullabadine Creeks in the south east.

1972 Follow up took place at Debussey Creek where the target was a heavy mineral concentrate result of 500 ppm gold with anomalous lead and zinc. A closed loop and a small grid was A^o soil sampled. Analyses for Cu, Pb and Zn failed to provide a target for further work. Peak values recorded for these elements were 20, 360 and 130 ppm respectively. Tullabadine and Mullabadine Creek anomalies were gridded, soil sampled and geologically mapped. Old adits were discovered in the Mullabadine grid area. They were checked and up to 0.5% Cu in quartz, sericite schists on the mullock heaps was reported. One of the grid lines crossing the swampy flats of Tullabadine Creek was trial banka drilled.

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The objective in this project was to investigate an 8000 ppm Zn value in silt. The highest follow up result achieved was 1200 ppm Zn in siliceous 'quartzite' from rock adjacent to the swamp. It was concluded that the original anomaly was a result of hydromorphic dispersion and concentration.

The core from HEC holes at Tullabadine was inspected - no significant sulphide mineralisation was observed.

Initial soil sampling took place at Sock Creek. Gridding and routine follow up techniques led to a drilling programme. This area lies within the part of Mt Block being retained so details of the programmes conducted are omitted from this report.

1975/76

The Mt Block area was covered with the INPUT EM system. A sizeable anomaly was identified in the northern part of the licence - it was attributed to the presence of shale units. A segment of the anomaly was followed up with the DAB grid where coincident anomalism was recorded from the earlier stream sediment sampling programmes.

Three grid lines were cut, soil sampled, subjected to Crone EM and magnetic surveys and were geologically mapped. The geochemistry was not anomalous, peaking at 20 ppm Cu, 360 ppm Pb and 130 ppm Zn. However three costeans were excavated over the Crone EM anomaly which proved to be the results of carbonaceous and pyritic shales.

The Animal Creek grid was commenced to infill the sparse geochemical coverage down the centre of the Mt Block area commencing at the Murchison Highway. This falls within the area retained.

1977/78

Access track construction towards the DAC grid was commenced. A nine line grid was established which was soil sampled, mapped and in part was magnetically surveyed. No anomalous patterns were returned from the geochemical results and magnetic features represented lithological changes. Geologically the area straddles the contact zone between the Central and Eastern Sequence of the Mt Read Volcanics. No mineralisation or geological features were recognised which encouraged further exploration in the area.

A major review of all pre-existing stream geochemical sampling data was undertaken providing the anomalous zones Sl- 4 and Ml- 3 as illustrated on the accompanying map. They largely coincide with areas followed up and described in the foregoing. The most important finding was that the data base in the south of the Mt Block area was inadequate to assess the mineral potential conclusively.

REPORT ON WORK DONE AND RESULTS NOT CURRENTLY ON OPEN FILE

1981/82 The recommendation (1978) to infill the geochemical coverage in the southern portion of the area was taken up. The bulk of the results pertain to the area being retained and therefore they are not reported here. Fork Creek is the only sampled drainage being surrendered. Detailed results are presented on the attached map. Only weakly anomalous results occur on this creek which drains volcanics of the Central Sequence (195 ppm Cu, 93 ppm Zn and 108 ppm Ba - not coincident).

1984/85 Prior to decision making on areas for surrender the results of work done in the Mt Block area were again re-assessed. This work stimulated a further phase of activity at Debussey Creek where it was felt that the previous follow up had not adequately explained the original gold anomaly - that element was not in the suite of metals for which soil samples were analysed. Details of the new work are appended:-

"Interim Report on Debussey Creek EL 5/63 Area 3 Mt Block", CRM Jan '85

CONCLUSIONS

It is considered that with the combination of geochemical, geological and geophysical surveys and the follow up they received the areas of EL 5/63 Area 3 being surrendered have been exhaustively tested. The Debussey Creek anomaly was probably largely a result of the original sample being contaminated by Que River alluvium. No other targets prompted detailed follow up in the northern part of the area where the underlying rocks are mostly Western Sequence sediments and porphyritic intrusives. The SE part of the area includes northward stratigraphical equivalents of the Farrell Slates.

DAC, Tullabadine and Mullabadine grids cover this target adequately. The grid results along with the enclosing stream sediment sample values, failed to find mineralisation other than that previously known and reported by Henderson 1943 at Mullabadine.

for { R W L SHAW
M P EVERETT
MAY 1985.

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A P P E N D I X 1

Interim Report on Debussey Creek
EL 5/63, Area 3
Mt Block

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PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: INTERIM REPORT ON DEBUSSEY CREEK

EL 5/63, AREA 3

MT BLOCK

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES:

COMMODITY/IES: Au

TEXT PAGES NO: 3

PLAN NOS: TAS/2/4139, 4179

TABLE NOS: -

APPENDICES: -

AUTHOR/S: C R MROCZEK

DATE: January 1985

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

CONTENTS

- 1.1 INTRODUCTION
- 1.2 LOCATION
- 1.3 PREVIOUS WORK
- 1.4 WORK COMPLETED
- 1.5 GEOLOGY
- 1.6 HEAVY CONCENTRATE RESULTS
 - 1.6.1 Method of Collection
 - 1.6.2 Results
- 1.7 CONCLUSIONS/RECOMMENDATIONS

REFERENCES

LIST OF PLANS

- ✓ TAS/2/4139 General Location
- ✓ TAS/2/4179 Mt Block area. Debussey Creek Geology and Geochemistry.

INTERIM REPORT ON DEBUSSEY CREEK EL 5/63 AREA 3MOUNT BLOCK1.1 INTRODUCTION

This report outlines the follow-up exploration carried out on Debussey Creek.

Debussey Creek occurs in the northern part of the Mt Block tenement, EL 5/63, Area 3 (Plan TAS/2/4139) within the Western Sequence of the Mount Read Volcanics.

The objective was to try and determine the source of previously reported detectable gold occurring in stream sediments and heavy concentrates (Thynne, 1984) and to see if a geological setting was present that could host volcanogenic base metal gold mineralisation.

1.2 LOCATION

The Debussey Creek area is situated approximately 20 km south along the Murchison Highway from the Fingerpost junction.

Debussey Creek is a minor tributary of the Que River flowing in from the true left, 1180m downstream from where the Murchison Highway crosses the Que River.

1.3 PREVIOUS WORK

D Thynne in his assessment report on Mt Block (Thynne, 1984) provides a detailed account of previous work carried out in this area. The following is a brief summary from this report.

The Debussey Creek area was covered during a regional stream sediment and heavy concentrate sampling programme carried out in 1969/71 over the Mount Block tenement.

A heavy concentrate sample collected in Debussey Creek indicated the presence of gold. Spectrographic scan analysis returned a 500 ppm Au value, 10000 ppm Pb and 1000 ppm Zn values. In 1972 follow-up heavy concentrates were collected in the creek at 30m intervals. Minor gold colours were recorded, spectrographic analysis showed that the gold values were below the level of detection (3 ppm). In late 1972 a small grid-closed traverse was established over Debussey Creek.

Soil samples were collected and analysed only for Cu, Pb and Zn. Results were not encouraging. Apart from the spectrographic scan analysis of heavy mineral concentrates no further gold assays were reported, and no further work was done on the area.

1.4 WORK COMPLETED

Geological mapping was restricted to stream and track traverses using tape and compass survey points for control. In total 1.94 km of stream and 700m of track survey was completed. Mapping was carried out on a 1:5000 scale (Plan TAS/2/4179).

Five heavy concentrates were collected for Au analysis (Plan TAS/2/4179). Three in Debussey Creek at 40m, 240m and 360m respectively and two in minor creeks to the west and east of Debussey Creek.

1.5 GEOLOGY

The Debussey Creek area occurs towards the eastern edge of the Western Sequence of the Mt Read Volcanics, about 2 km from the inferred contact of Western Sequence and Central Sequence (Plan TAS/2/4139).

The area is underlain by dark grey argillites /shales/ greywackes and pale grey siltstones of the late middle Cambrian Que River beds. These beds are interpreted to be the basal unit of the Western Sequence (Collins et. al. 1981). Rocks of the Que River beds were observed in places outcropping from the Que River Bridge down the Que River to the junction with Debussey Creek, then up Debussey Creek for a distance of 300m. Cleavage of the Que River beds strikes NE with dips to the SE and E of 18° to 70°. Bedding observed in only one outcrop of greywacke in Debussey Creek had an ENE strike and 20° dip to the south.

Minor pyrite was observed occurring in the shales as small (1-2mm) nodules and cubes.

Between 180m and 220m in Debussey Creek a fine grained pale brecciated rock was observed. A specimen submitted for a petrological description in 1972, was classified as a rhyolitic flow breccia. The setting of this unit in the field is that of a dyke.

In the headwaters of Debussey Creek, observed outcrops were of a pale green lapilli sized volcanic tuff. The contact between the Que River beds and the tuff unit is said to be conformable (Collins et.al. 1981).

The contact was not observed in the field. The tuff is composed essentially of quartz and feldspar crystals and shaley fragments. The fragments and crystals are randomly orientated and no lamination was observed (Collins et.al. 1981) suggest that this unit was formed by airfall and deposition was in an aqueous environment rather than a subaerial environment.

Minor insitu quartz veins were observed in this unit, infilling fractures. Predominant strike directions were E-W and NE-SW, dips were generally vertical. Abundant large boulders of milky white quartz float were observed in the headwaters, and the ridge leading to the main highway, no large veins were observed in outcrop. The quartz veins looked barren.

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Apart from minor secondary pyrite associated with the Que River beds, no evidence of base metals was observed.

1.6 HEAVY CONCENTRATE RESULTS

1.6.1 Method of Collection

A 10 l bucket of gravel was collected at each site and sieved through an 0.5 cm sieve. The resulting concentrate was concentrated further using a prospecting dish at the Waratah office.

Each sample was carefully panned down till enough material remained to fill a 100 ml bottle. The samples were sent off to Amdel for gold analysis by fire assay.

1.6.2 Results

Gold results for the five heavy concentrates are as follows:-

<u>Sample No</u>	<u>Location</u>	<u>Au(g/t)</u>
Z 4636	Debussey Creek 40m	< 0.01
Z 4637	" " 240m	< 0.01
Z 4638	" " 360m	1.2
Z 3601	Ck west side of Debussey Ck	< 0.01
Z 3602	Ck east side of " "	< 0.01

The results are low. The 1.2 g/t value in the headwaters of Debussey Creek indicates that the gold is most likely being shed from the tuff unit, probably from the quartz veins associated with it. It is unlikely these quartz veins would contain economic quantities of Au.

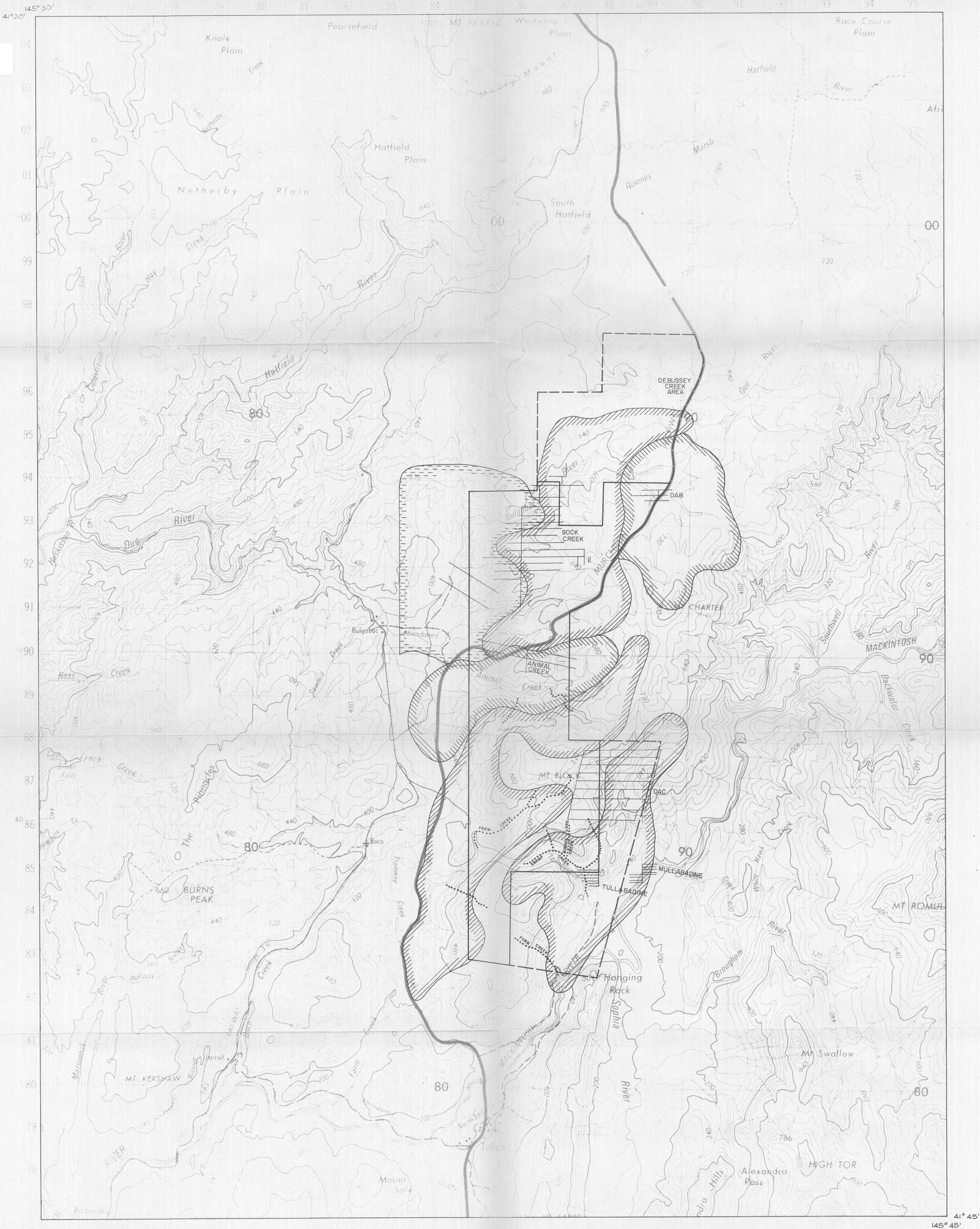
1.7 CONCLUSIONS/RECOMMENDATIONS

From geological mapping at Debussey Creek no basemetal or Au mineralisation was observed; but Que River beds are associated with mineralisation in other areas. At Sock Creek to the south of Debussey Creek base metal mineralisation is associated with quartz porphyry/Que River bed contacts. At Hellyer, to the east of Debussey Creek, Que River beds occur. However they overlie a sequence of andesites of the Central Volcanic Sequence which are the host to massive sulphides. From surface geological evidence no porphyries or andesites are present in the Debussey Creek area, and with the poor geochemical results (past and present) it is unlikely that volcanogenic base metal or Au mineralisation is present at Debussey Creek and no further work is recommended.

REFERENCES

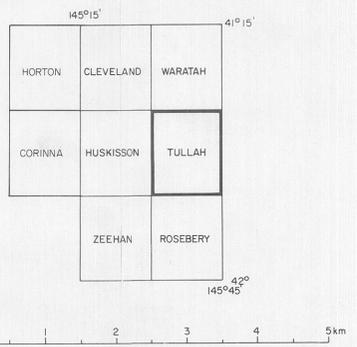
Collins P L F, Gulline A B, Williams E, 1981. Sheet 44
Mackintosh Geological Survey Explanatory Report. Tasmania
Department of Mines.

Thynne D, 1984. EL 5/63 Mt Block. An Assessment. "In House"
company report for Comstaff Pty Ltd.



LEGEND

-  Existing lease boundary
-  Proposed lease boundary
-  1970 Winter stream sediment sampling program (part only shown - remainder outside of area)
-  1970/71 Summer stream sediment sampling program - Bulgobac (part only shown - remainder outside area)
-  1971 Winter stream sediment sampling program - Mackintosh
-  1982 stream sediment sampling program

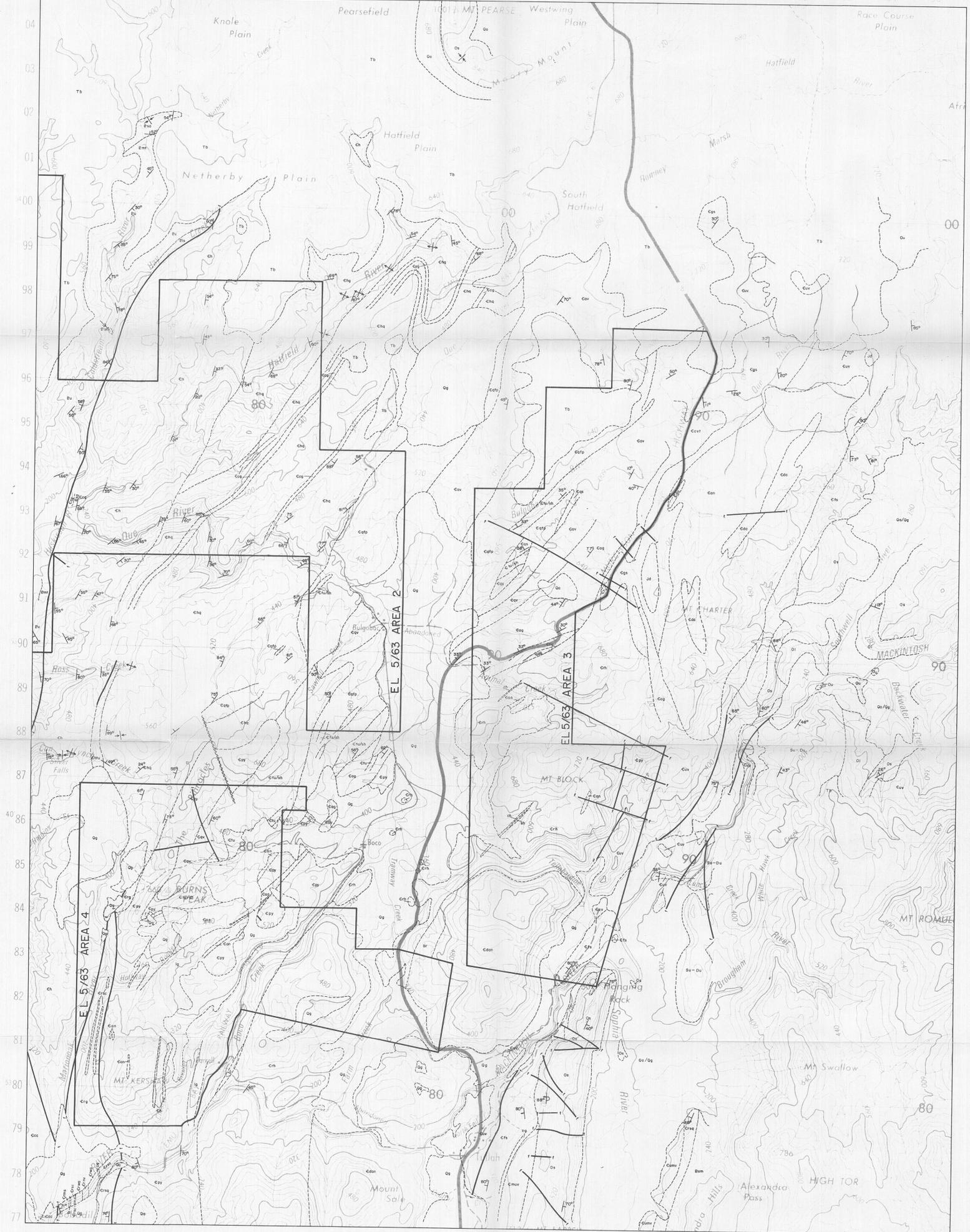


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EL 5/63 AREA 3 - MT. BLOCK 016

PLAN TO ACCOMPANY SURRENDER REPORT

DATE	27/5/85
DRAWN BY	RWLS, MPE
CHECKED BY	EW/5/85
DATE	27/5/85
SCALE	TAS/2/4241



CONTOUR INTERVAL 40 METERS

41° 45' 145° 45'

HORTON TAS/2/3072	CLEVELAND TAS/2/3073	WARATAH TAS/2/3074
CORINNA TAS/2/3075	HUSKISSON TAS/2/3076	TULLAH TAS/2/3077
ZEEHAN TAS/2/3078	ROSEBERY TAS/2/3079	

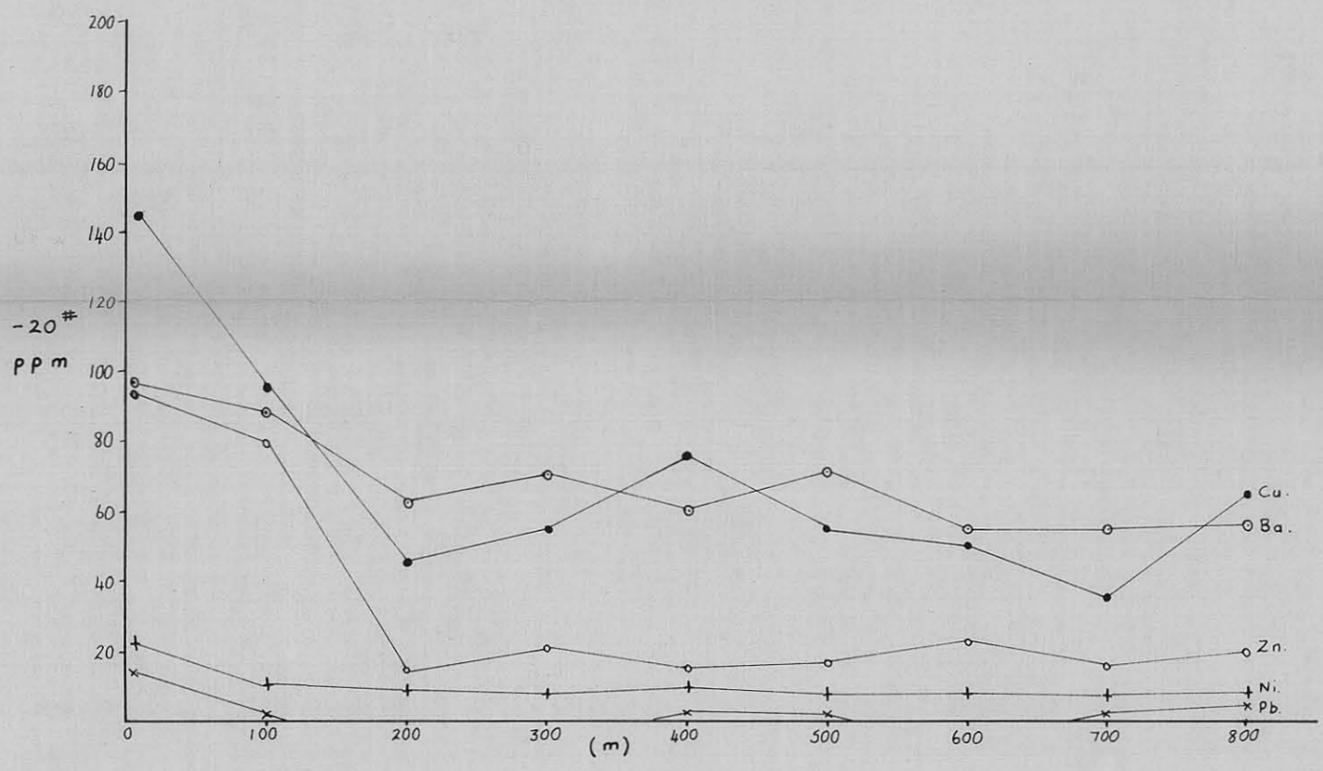
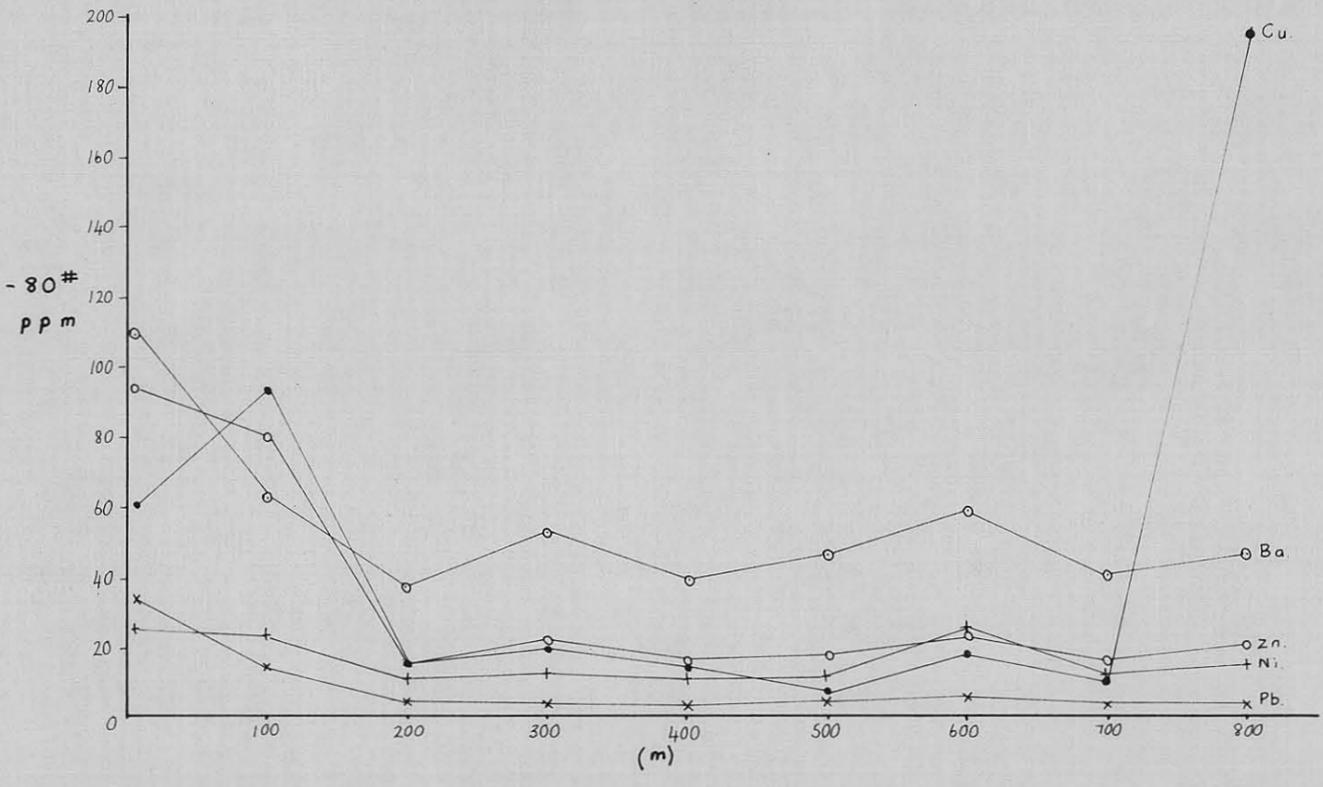


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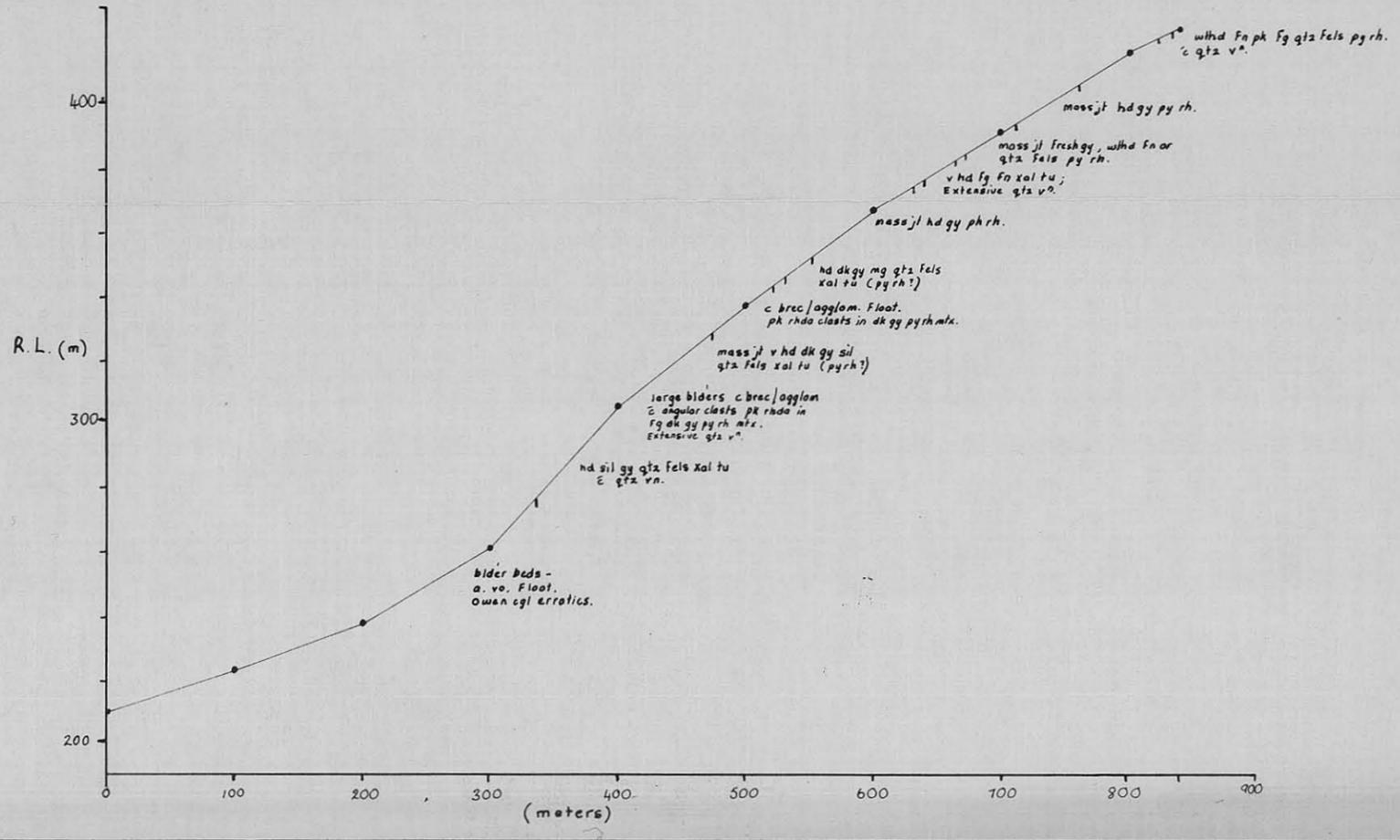
COMSTAFF PROPRIETARY LIMITED
 REGIONAL GEOLOGICAL INTERPRETATION
 TULLAH PLAN
 015
 1:50000
 DRAWN BY G.F.P.
 DATE 27/9/92
 REVISION 1
 SCALE 1:50000
 SHEET No. TAS/2/3077



85-2412



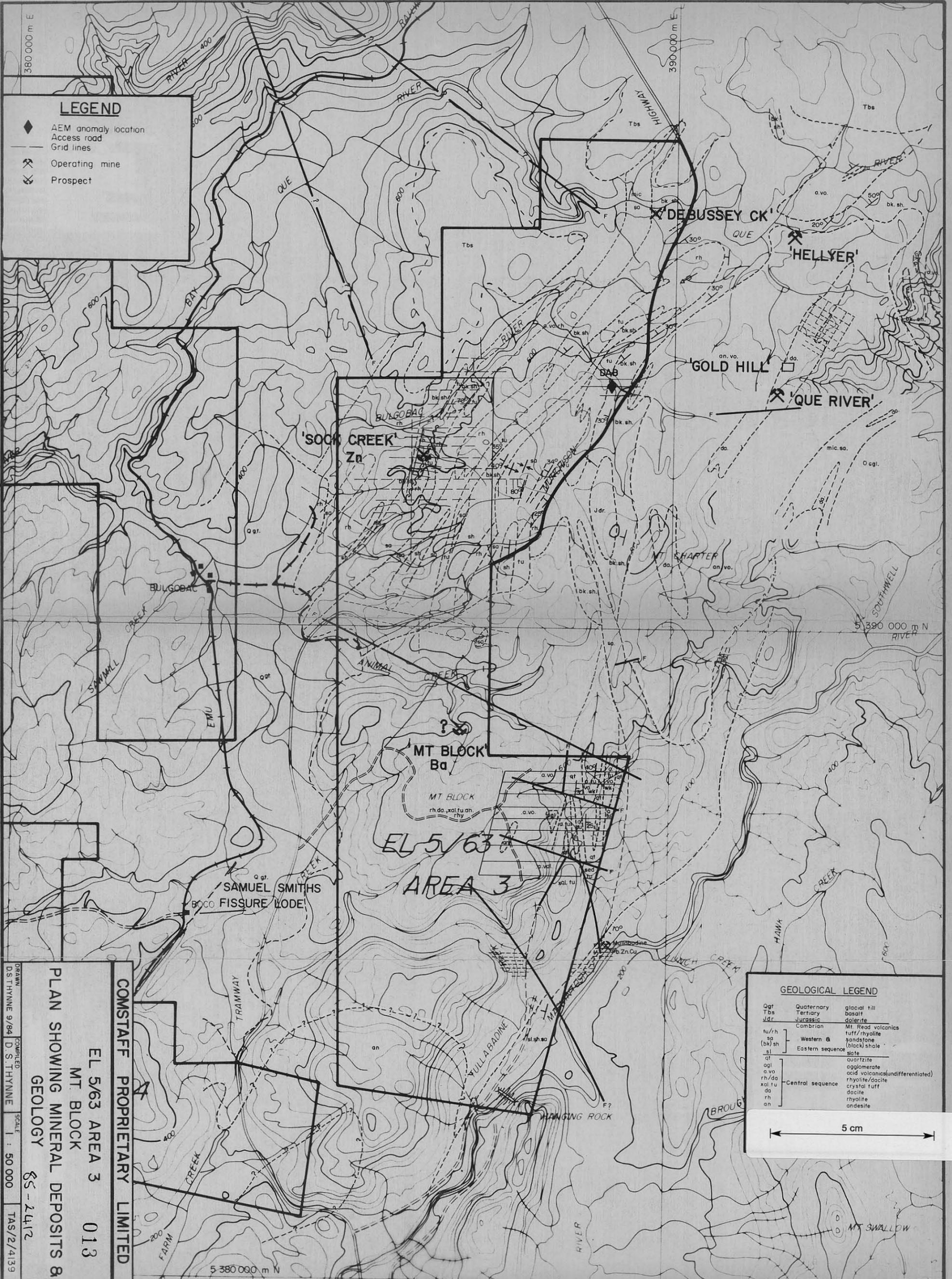
5 cm



COMSTAFF PROPRIETARY LIMITED
E.L. 5/63 AREA 3 - MT. BLOCK 014
FORK CREEK DRAINAGE PROFILE
WITH GEOLOGY AND GEOCHEMISTRY

DRAWN B.E.A. 7/82
 COMPILED B.E.A.
 SCALE 1:5000
 T/S/2/2974

155015



LEGEND

- ◆ AEM anomaly location
- Access road
- Grid lines
- ⊗ Operating mine
- ⊗ Prospect

GEOLOGICAL LEGEND

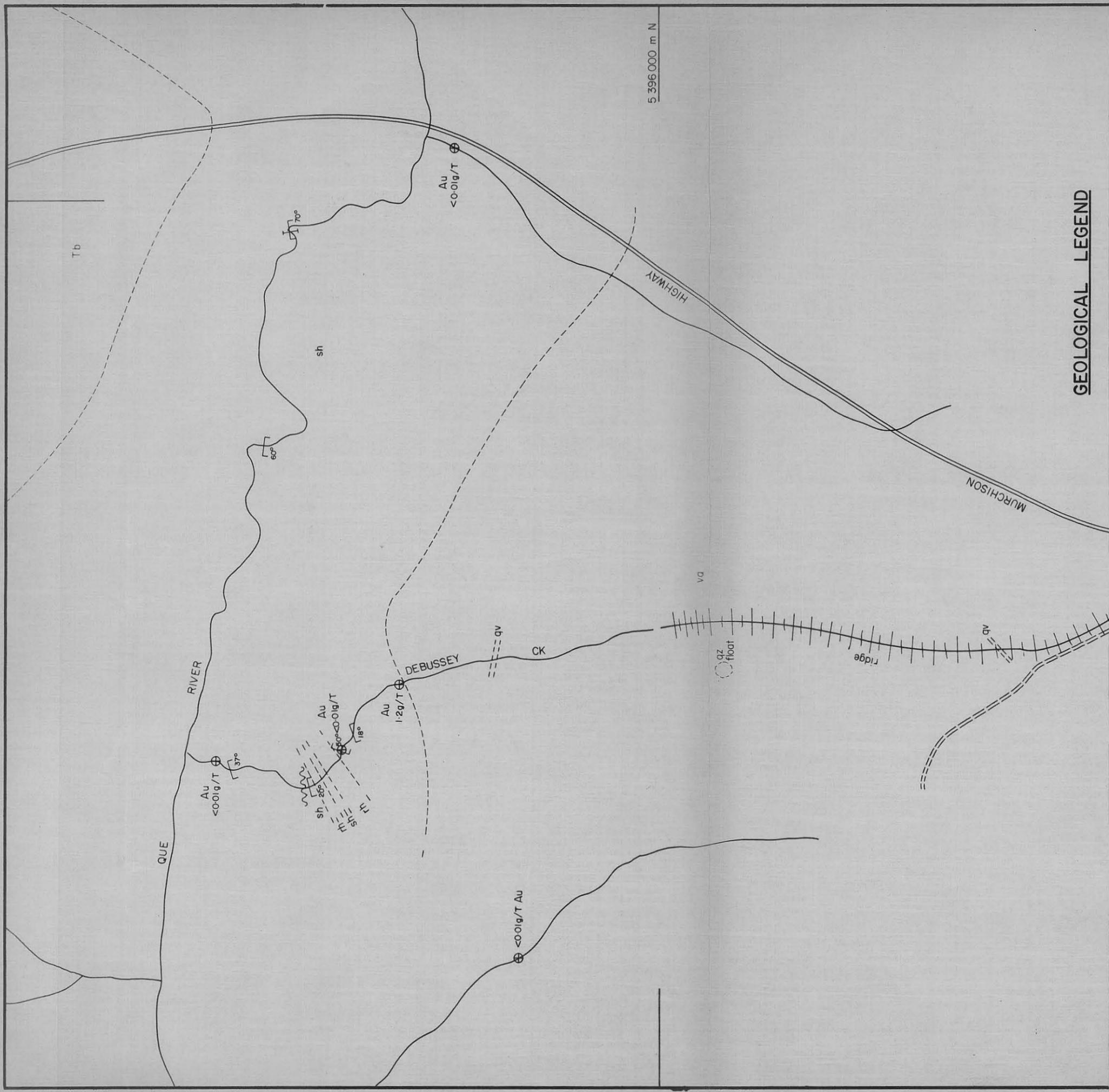
- | | | |
|---------|------------------|-----------------------------------|
| Qgt | Quaternary | glacial till |
| Tbs | Tertiary | basalt |
| Jdr | Jurassic | dolerite |
| tu/rh | Cambrian | Mt. Read volcanics |
| sa | | tuff/rhyolite |
| (bk) sh | Western & | sandstone |
| sl | Eastern sequence | (black) shale |
| qt | | quartzite |
| agl | | agglomerate |
| a.vo | | acid volcanics (undifferentiated) |
| rh/da | Central sequence | rhyolite/dacite |
| xal tu | | crystal tuff |
| da | | dacite |
| rh | | rhyolite |
| an | | andesite |

5 cm

DRAWN
 D.S. THYNE 9/84
 COMPILED
 D.S. THYNE
 SCALE
 1 : 50 000
 TAS/2/4/39

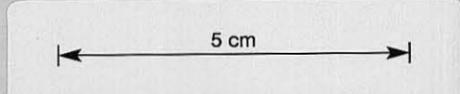
COMSTAFF PROPRIETARY LIMITED
 EL 5/63 AREA 3
 MT. BLOCK
 PLAN SHOWING MINERAL DEPOSITS &
 GEOLOGY
 85-2412
 013

5 396 000 m N



GEOLOGICAL LEGEND

- TERTIARY
 - Tb basalt
- CAMBRIAN
 - va pale green volcanic agglomerate with quartz veins
 - rh pale volcanoclastic breccia (rhyolite flow breccia)
 - sh shale, siltstone, greywacke (Que river beds)
- ⊕ heavy mineral concentrate location



COMSTAFF PROPRIETARY LIMITED			
MOUNT BLOCK AREA 012 DEBUSSEY CREEK GEOLOGY AND GEOCHEMISTRY PLAN			
COMPILED C. MROCZEK	DRAWN J. HARDISTY	DATE 20/12/84	AMENDED
LEASE No EL 5/63	AREA 3	SCALE 1:5000	PLAN No TAS/2/4179

85-2412

390 000 m E