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PROJECT NAME: COMSTAFF PROPRIETARY LIMITED

TITLE: FINAL REPORT ON THE SOUTH BISCHOFF PROSPECT (CSB)

EL 5/63 Area 2

DEPT. M.	A.O.	NO.	E.O.	DATE
				REVISION
D. DIR.	30 MAY 1984			E&IL
	DEPT. OF MINES			
	5433/84			

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES: Burnie Sheet SK 55/3  
Metric Co-ordinates 539750mN/372500mE

COMMODITY/IES: Tin, Tungsten, Copper, Lead, Zinc

TEXT PAGES NO: 5

PLAN NOS: See List of Plans

TABLE NOS: 1 and 2 Figures

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AUTHOR/S: J A Levings

DATE: 9th November 1983

**OPEN FILE**

**AUSTRALIAN ANGLO AMERICAN LIMITED**

Incorporated in the State of Victoria

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FINAL REPORT ON THE SOUTH BISCHOFF PROSPECT (CSB)

EL 5/63 Area 2

1. INTRODUCTION

This report serves as a statement of the final phase of exploration at the South Bischoff Prospect which is located in the north western corner of EL 5/63, Area 2 (TAS/2/1799, TAS/2/1586). In the period reported here, between April 1983 and August 1983 the work involved geological mapping, soil and rock sampling and diamond drilling.

2. PREVIOUS WORK

Early work on the prospect is described in two reports by Green (1981 and 1983). Comstaff's exploration activity commenced in the Old South Bischoff Mine area in 1980. The work consisted of extensive gridding, geological mapping, geochemical sampling and geophysical surveying. This effort culminated in the drilling of two diamond drillholes. DDH CSB 1 and DDH CSB 2 in February 1983.

This report describes the work done and the results obtained after completion of this drilling.

3. WORK DONE

3.1 Geology

Exposures produced in creating access for the diamond drill (Taupo Rd, Access Tracks 1 and 2) were mapped.

Seven specimens of core from DDH CSB 3 were submitted for thin section and one for polished section analysis to Central Mineralogical Services. The petrographical report is appended.

3.2 Geochemistry

Sixty-five additional soil samples were collected from extensions in the northwest sector of the CSB grid.

Eighty-six metres of channel sample were collected from a section of Taupo Road and from Access Tracks 1 and 2.

### 3.3 Drilling

Three diamond drillholes were completed. The details of each hole are tabled below:-

DDH No	CSB 3	CSB 4	CSB 5
AMG East*	370937	370990	370937
AMG North*	5401703	5401620	5401703
RL	637 <sup>m</sup>	640 <sup>m</sup>	637 <sup>m</sup>
Azimuth	090 <sup>o</sup> TN	090 <sup>o</sup> T	090 <sup>o</sup> TN
Declination	45 <sup>o</sup>	45 <sup>o</sup>	65 <sup>o</sup>
Depth	100.8m	107.0	122.0
Start-Finish	15/4/83- 22/4/83	9/7/83 - 17/7/83	18/7/83 - 25/7/83
Contractor	Longyear	Longyear	Longyear

## 4. RESULTS

### 4.1 Geology

A comprehensive description of the general and detailed geological setting of South Bischoff is located in Green (1982). Those details will not be re-iterated here. Down hole geology will be described under Drilling in Section 4.3.

The contact between the porphyritic biotite microgranite and the coarser phases of the Meredith Granite is located on Taupo Road. Two other minor phases of granite, probably small dykes similar to those observed in DDH CSB 3, are also mapped. Narrow greisen veins and alteration zones are common within the porphyritic microgranite phase. The average trend of the greisen veins varies from approximately 345<sup>o</sup> mag in the southern to 325<sup>o</sup> mag in the northern sections of the road.

Greisen veins are seen to intersect each other and to bifurcate in exposures along Taupo Road between 1140m and 1180m. Exposures in Access Track 1 reveal two narrow (<1m) weathered greisen veins trending at 325<sup>o</sup> magnetic and one 20 centimetre quartz vein trending 335<sup>o</sup> magnetic. The host lithology is porphyritic biotite microgranite. Access Track 2 exposes coarse disequigranular biotite granite hosting a shallow westerly dipping quartz/tourmaline vein.

### 4.2 Geochemistry

#### a) Channel sampling

Channel samples collected from Taupo Road between 1140m and 1180m average 54 ppm tin with a peak of 430 ppm tin over 2 metres. copper, lead, zinc and molybdenum show a moderate to weak correlation with tin. Silver and arsenic do not respond significantly, while tungsten, although mildly anomalous (peaking at 50 ppm) shows no obvious relationship to anomalous tin values.

A moderate tungsten anomaly (peak 110 ppm, average 47 ppm) is evident from channel sampling of Access Track 1 from 10 to 18 metres. Weakly anomalous tin values (peak 60 ppm) are also recorded.

Access Track 2 channel sampling results indicate no anomalous tin or tungsten values. Base metals are anomalous with zinc peaking at 695 ppm and lead at 370 ppm.

#### b) Grid extensions

Results for 65 soil auger samples on extension of the South Bischoff grid indicate a number of anomalous values for most elements.

The tin histogram is presented in Figure 1 and clearly indicates the anomalous population.

The correlation coefficient matrix, indicates that tin correlates strongly with copper, zinc, silver and lead and not at all with nickel, arsenic and tungsten.

The geochemical pattern remains open to the north but has a discontinuous and en echelon character.

### 4.3 Drilling

DDH CSB 3 (Summary, Detailed and Analytical Logs in Appendix 2).

Narrow but intense, fracture controlled greisenisation is intersected over a drilled width of 14.9 metres from 46.1 to 61.0 metres. Approximately 12% of this zone comprises greisen; the remainder consists of altered porphyritic biotite microgranite (60%), relatively fresh porphyritic biotite microgranite (27%) and altered coarse grained equigranular granite (1%)>

The dominant rock type in the remainder of the hole is relatively unaltered porphyritic biotite microgranite. The hole terminates in coarsely porphyritic to equigranular biotite granite.

An ore grade intersection was made in DDH CSB 3 between 51.0 and 51.7 metres. Grades are:-

Tin	3.85%
Zinc	5.8%
Lead	1.2%
Silver	221 g/t

Values cut off very sharply on both sides of this intersection. From petrographical work it is seen that two distinct styles of mineralisation are evident. The main mineralised zone, grading 3.85 % Tin, is a pneumatolytic mica-cassiterite vein or segregation with a late, retrogressive talc-siderite (-quartz) assemblage accompanied by sporadic films and clots of sphalerite, galena and chalcopyrite. Cassiterite is a colour-zoned red variety characteristic of greisen-type cassiterite.

Alteration style is characteristic of greisen with development of secondary quartz-muscovite assemblages with varying proportions of chlorite and sideritic carbonate. Chlorite and siderite are temporally late and tend to impregnate feldspar - and biotite pseudomorphous white mica aggregates.

Three semi-distinct granitic phases are represented and on the basis of contact features, appear to reflect a differentiation trend from biotite adamellitic to progressively biotite-rich granitic.

The full petrographical report is located in Appendix 1.

DDH CSB 4 (Summary, Detailed and Analytical Logs in Appendix 3)

DDH CSB 4 did not find significant amounts of mineralisation although two greisen zones are evident. The upper zone is between 12 and 17m and the lower between 40 and 44m. The lower zone carries only weak Sn mineralisation while the upper zone suffers from weathering and extremely poor core recovery. The upper zone is of more interest as it appears to be the strike extension of the mineralised greisen intersected in CSB 3.

The peak tin value from CSB 4 is 0.485% from 12.0 to 14.0 metres. Unfortunately, core recovery from the start of coring at 12 metres until 23 metres is less than 10%. A sludge sample collected at 23 metres assays 220 ppm tin. 65 ppm tin is the highest assay from the lower greisen zone.

DDH CSB 5 (Summary, Detailed and Analytical Logs in Appendix 4).

CSB 5 tin assays are an order of magnitude less than those from the overlying hole, CSB 3. The main greisen vein between 62.0 and 64.0 metres grades at 0.11% tin with uninteresting base and precious metal values. The only other interesting greisen intersection occurs between 76.0 and 77.0 metres and carries values of 70 ppm Sn, 0.6% Zn, 875 ppm Pb and 4.5 ppm Ag.

## 5. CONCLUSIONS

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Cassiterite mineralisation at South Bischoff occurs in small pods within narrow veins of greisenised porphyritic biotite microgranite. The greisen vein system has considerable strike length but sub-economic widths and the extremely lenticular nature of the mineralisation precludes the possibility of a viable mining operation.

High base metal and silver values obtained from CSB 3 are an interesting feature but in common with tin, lack economic size.

Repetitions of South Bischoff style mineralisation are indicated to the north northwest of the old workings. Tin and base metal auger geochemistry presents a picture of en echelon, discontinuous and narrow zones of mineralisation in this region. The anomalous geochemical pattern remains open to the north west. Proposed work designed to trace this anomaly was shelved after the poor drilling results.

Weak wolframite mineralisation appears to be associated with narrow, late stage quartz veining.

South Bischoff lacks intense fracturing and brecciation. The mineralisation is confined to joints, possibly cooling cracks within the porphyritic biotite microgranite and although the alteration is intense, it is rarely greater than 1 metre wide in any particular zone. The South Bischoff greisen veins are envisaged as conduits for mineralising fluids, there being no host amenable to significant metasomatic replacement nor a significant dilation or breccia zone. South Bischoff may represent the roots of possible mineralisation in the roof of the Meredith Pluton, which has long been eroded away.

A likely prerequisite for significant endogreisen mineralisation is strong penecontemporaneous brecciation of the host granite. Another favourable factor for intense greisenisation may be the existence of an impermeable caprock, be it the intruded country rock or another layer of granite. This would allow the convection of the mineralising magmatic fluid and the complete precipitation of its metallic component.

## 6. RECOMMENDATIONS

No further work is recommended for South Bischoff as the indicated style of mineralisation is not considered a viable economic target.

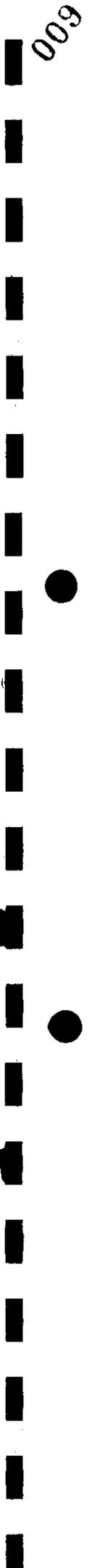
**J A LEVINGS**  
9th November 1983.

7. REFERENCES

Green, N P; 1983. Stage Report on the South Bischoff Mine Area (CSB) EL 5/63 Part 2; Comstaff Pty Ltd (Unpublished Report).

Green, N P; 1981. Preliminary Report on the South Bischoff Mine Area (CSB) in EL 5/63 Part 2; Comstaff Pty Ltd (Unpublished Report).

F I G U R E 1



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HISTOGRAM..FILENAME : B:CSBAUGER.DAT ELEMENT : Sn NO. OF SAMPLES : 64

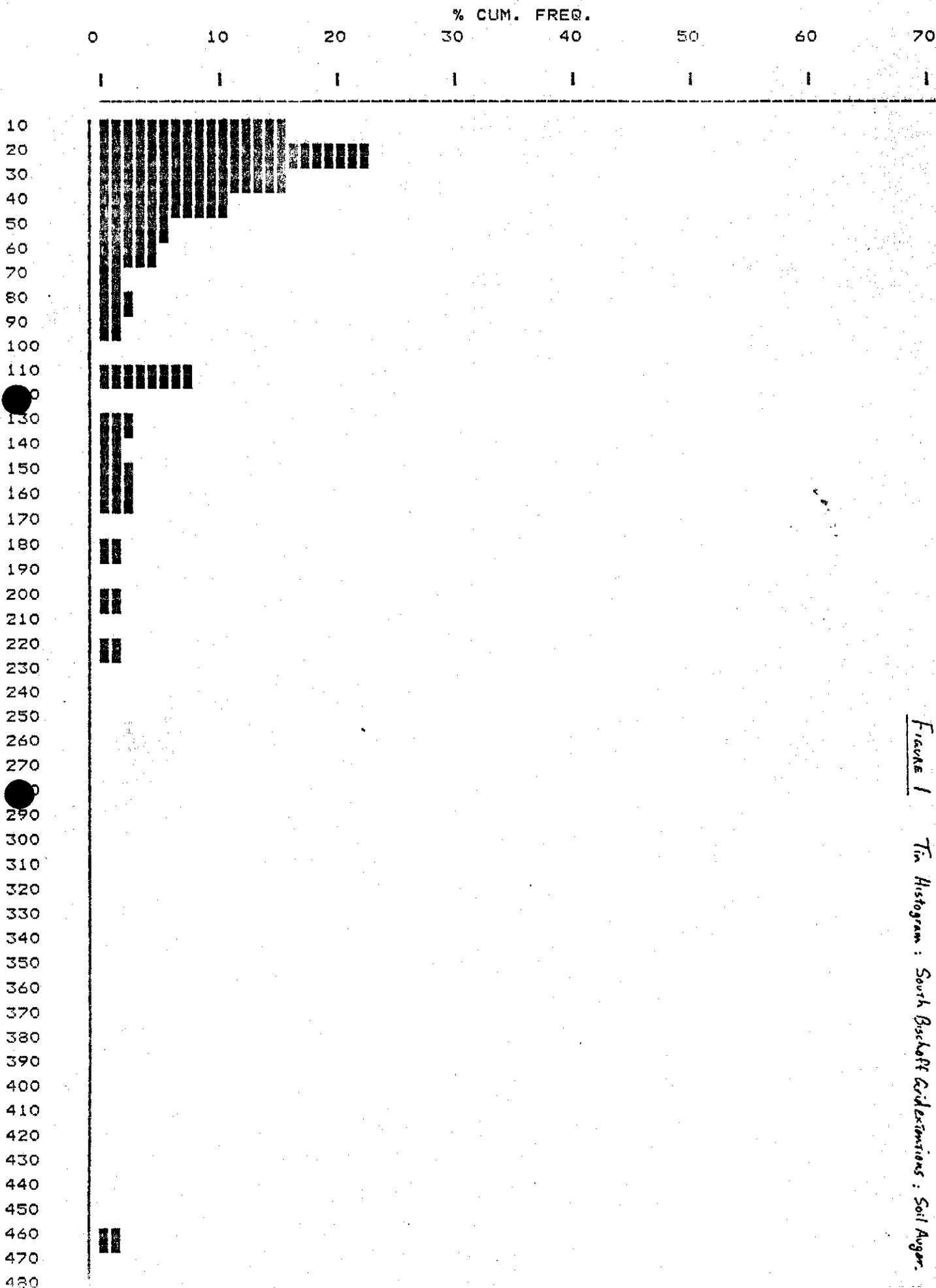


FIGURE 1 Tin Histogram : South District Grid Extensions : Soil Auger

F I G U R E 2

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CORRELATION COEFFICIENT MATRIX

THRESHOLD VALUE = 0

FILENAME : B:CSBAUGER.DAT

	Cu	Pb	Zn	Ag	Ni	As	Sn	W
Cu	1	.75	.94	.93	.05	.09	.85	.1
Pb	.75	1	.8	.8	.22	.03	.79	.14
Zn	.94	.8	1	.99	.02	-.03	.94	.05
Ag	.93	.8	.99	1	.02	-.03	.95	.07
Ni	.05	.22	.02	.02	1	.1	.06	-.01
As	.09	.03	-.03	-.03	.1	1	-.04	.12
Sn	.85	.79	.94	.95	.06	-.04	1	.08
W	.1	.14	.05	.07	-.01	.12	.08	1

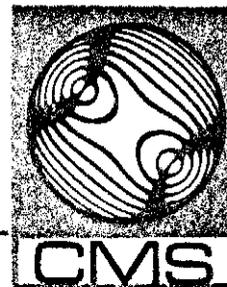
FIGURE 2 South Bischoff Grid Extensions : Soil Auger

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A P P E N D I X 1

# Central Mineralogical Services

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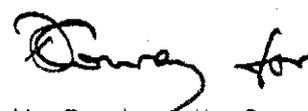
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19th May, 1983

## REPORT CMS 83/5/15

YOUR REFERENCE: Letter dated 9.5.1983  
DATE RECEIVED: 10th May, 1983  
SAMPLE NOS.: Z 2759 - Z 2765  
SUBMITTED BY: J.A. Levings  
WORK REQUESTED: Petrology

  
H.W. Fander, M. Sc.

REPORT CMS 83/5/15

Seven samples of split diamond drill core were received for detailed petrological examination, and individual descriptions are attached.

All seven samples represent a suite of variably pneumatolytically altered, or greisened, granites. Three semi-distinct granitic phases are represented and, on the basis of contact features, appear to reflect a differentiation trend from biotite adamellite to progressively biotite-rich granitic. General features and some of the finer details (e.g. primary accessories) appear closely analogous to the similarly differentiated Devonian tin-mineralising granites of N.W. Tasmania, for example the Pine Hill Granite.

Alteration is of characteristic greisening style, with development of secondary quartz-muscovite assemblages with varying proportions of chlorite and sideritic carbonate. Chlorite and siderite are temporally late and tend to impregnate feldspar- and biotite-pseudomorphous white mica aggregates.

Two distinct styles of mineralisation are evident. Sample Z 2761 represents a pneumatolytic mica-cassiterite vein or segregation with a late retrogressive talc-siderite(-quartz) assemblage accompanied by sporadic films and clots of sphalerite, galena and chalcopyrite. Cassiterite is a colour-zoned red variety characteristic of greisen-type cassiterite.

Sample Z 2765 reflects wolframite-bearing quartz veins of late-magmatic character. Close inspection of relatively greisened granite revealed no detectable cassiterite, but mineragraphic examination may be warranted on the basis of assay data.

D. Cowan, B. Sc.

REPORT CMS 83/5/15Drill Core Samples Z 2759 - Z 2765Z 2759

(T.S. 45871)

The sectioned area includes the contact between a relatively fine-grained, weakly feldspar-porphyrific, biotite-rich granite and a coarser-grained, biotite-poor granite.

The coarser-grained phase (pale mesoscopically) can be classified as a biotite granite and verges on alkali granitic. Major constituents are quartz and orthoclase-microperthite with subordinate saussurite-sericite-stained, essentially unzoned oligoclase and disseminated yellow-brown to dark brown pleochroic biotite. Accessories include thinly disseminated zircons, rare dark schorl and rare xenotime in addition to traces of magnetite. This phase is granitic-textured with a mean grain size about 1.5 mm and is incipiently porphyritic in orthoclase.

The biotite-rich phase is compositionally similar, but with distinctly higher contents of biotite and plagioclase. Biotite is optically similar to that in the adjacent rock, but slightly paler in comparison. In contrast, the plagioclase is zoned with oligoclase cores and albitic margins. This rock is medium- and uneven-grained, weakly (but coarsely) porphyritic in orthoclase and to a minor degree in oligoclase. Accessories include traces of apatite and rare metamict/degraded grains of ?allanite. Plagioclase is weakly sericitised, the alteration being semi-zonally distributed and concentrated in the relatively calcic core zones.

The contact is sharp, but irregular on a microscale, where it is defined more by the distribution of biotite and plagioclase rather than a distinct textural break, a feature consistent with partly contemporaneous crystallization of the two granite phases.

Both granites are very incipiently stressed, the coarser phase slightly relatively more so. In addition, this phase is the slightly relatively more altered and exhibits partial recrystallization of quartz in a narrow zone marginal to the contact. These features are subtle contrasts, but consistent with the finer, relatively differentiated (in terms of mica content and the albite component) granite as the temporally younger phase.

Z 2760

(T.S. 45872A, B)

Two thin-sections were prepared representing the transition from essentially fresh to completely altered granite over a 10 cm length of core.

Where fresh, this granite is closely analogous to the biotite-rich phase in Z 2759, but is slightly coarser and more even-grained. It consists of weakly argillically clouded orthoclase, quartz, subordinate weakly sericitised zoned oligoclase-albite and disseminated dark brown biotite with accessory apatite. The fabric is typically granitic with isolated orthoclase phenocrysts and rare phenocrystal clusters of biotite flakes.

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Marginal to the relatively altered zones biotite becomes bleached with an associated "exsolution" of cloudy ultrafine leucoxenitic semi-opaques. These phenomena grade into incipient to complete Fe-Mg-chlorite pseudomorphism of biotite, the chlorite being accompanied by fine to semi-sericitic muscovite in spatially intermediate zones within a few centimetres of the (relatively) fresh granite. Paralleling this trend is a progressive replacement of plagioclase by sericite aggregates, grading laterally into semi-sericitic and fine-grained muscovite.

Orthoclase is similarly progressively muscovitised. Initially, perthite lamellae and sparse plagioclase inclusions are selectively altered. The orthoclase host is progressively argillically clouded, but persists (with essentially completely altered plagioclase) to approximately 4 cm from the fresh granite. Beyond this zone orthoclase is progressively muscovitised, and in distal areas is crudely pseudomorphed by relatively siliceous muscovite-quartz aggregates, as is similarly the plagioclase component.

Where intensely altered, the rock thus consists of quartz and fine-grained muscovite with varying proportions of chlorite. Veinlets of chlorite occur sporadically and, in the vicinity of these features, white mica aggregates are variably impregnated with chlorite. The chlorite is thus temporally late, postdating and impregnating feldspar-(and biotite-)pseudomorphous white mica.

Close inspection of the two thin-sections revealed no positively optically detectable cassiterite. Conceivably, traces of ultrafine-grained cassiterite are masked by the leucoxenitic opaques in altered biotite. Extremely rare dark schorl is present in the thoroughly greisenized zones where it locally pseudomorphs biotite.

Z 2761

(T.S., P.S. 45873)

This core sample represents a talc-carbonate rock with conspicuous disseminated cassiterite and traces of sulphide.

The rock is crudely banded and consists essentially of fine- to locally medium-grained random talc interspersed with disseminated to near-massive anhedral, variably poikilitic sideritic carbonate which grades into crudely crustiform zones and locally into coarse-grained sparry vugs with thinly disseminated quartz crystals and minor clots and discontinuous films of sulphide (mainly dark red, but colour-variable sphalerite).

Cassiterite exhibits a semi-banded distribution, a wide variation in sizing (< 100-750  $\mu$ , mean about 350  $\mu$ ), and is red-brown to dark red, a characteristic of greisen-type (or pneumatolytic) cassiterite. Individual grains are discrete to clustered, and the coarser grains exhibit complex sector-twinning and growth-zoning enhanced by zonal colour variations. Many individual grains and clusters exhibit thin overgrowth selvages of extremely fine-grained subacicular cassiterite ("needle tin").

The rock exhibits sparse to locally conspicuous talc pseudomorphs of mica (phlogopite or biotite), partly defined by secondary leucoxene staining. These features are consistent with the talc-carbonate (-sulphide) assemblage representing a "retrograde" alteration of a primary pneumatolytic mica-cassiterite vein or segregation.

Polished section examination confirms the sulphide assemblage as sphalerite with subordinate galena and chalcopyrite. These three phases are usually intergrown, typically in discontinuous films (to 300 µ wide), which grade into subequant aggregates (to 1.2 x 2 mm). Sphalerite is anhedral to euhedral with intergranular galena and included, often zonally distributed, exsolution blebs of chalcopyrite. Galena rarely forms the matrix to small clusters of quartz in the sideritic vugs.

Z 2762

(T.S. 45874)

This rock can be classified as a sideritic quartz-muscovite rock and represents a thoroughly greisenized biotitic granite.

Major components comprise relict granitic-textured quartz, fine-grained to semi-sericitic muscovite- and subordinate muscovite-quartz semi-pseudomorphs after feldspar and disseminated leucoxene-stained muscovite pseudomorphs after biotite. Small clots of sideritic carbonate are pervasive throughout the muscovite aggregates.

Accessories include traces of apatite, thinly disseminated zircon and xenotime of relict primary character and thinly disseminated microscopic particles of pyrite, sphalerite and galena which tend to be associated with siderite. There is no optically detectable cassiterite in the area sectioned.

The relict fabric is even-grained granitic with sparse (altered) feldspar phenocrysts. General features are consistent with a medium-scale intrusive with analogies to Z 2759 and 2760.

Z 2763

(T.S. 45875)

This is a moderately greisenized biotite granite, consisting essentially of quartz, fresh to incipiently sericite-stained orthoclase, completely semi- to sericitic muscovite pseudomorphed/indeterminate plagioclase, and disseminated variably chloritised and locally muscovite-chlorite pseudomorphed dark brown biotite. Accessories comprise traces of apatite, zircon, metamict/degraded ?allanite and rare ultrafine schorl in addition to secondary cloudy anatase and leucoxenic semi-opaques which stain the chlorite aggregates.

Compositionally, this rock appears analogous to the biotite-deficient phase in Z 2759, although close comparison is hindered by the complete alteration of plagioclase.

The fabric is coarsely (plagioclase-orthoclase-) porphyritic, uneven-grained granitic with minor zones of micrographic quartz-orthoclase intergrowths. The rock is mildly stressed and weakly microfractured, with rare discontinuous semi-planar zones of granulation.

Z 2764

(T.S. 45876)

The sectioned area includes the contact between a coarsely and strongly feldspar porphyritic biotite adamellite and a finer but uneven-grained biotite-rich granite.

The biotite-rich phase is closely analogous, compositionally and texturally, to that in Z 2759 and is similarly altered. Analogies are marked to the extent that no further comment is warranted.

The adjacent adamellite comprises coarse phenocrysts of orthoclase-microperthite accompanied by subordinate phenocrystal, weakly zoned oligoclase in a medium-grained, granitic-textured groundmass of quartz, variably sericitised oligoclase and disseminated to clustered biotite flakes. Accessories include apatite, rare zircons and relatively conspicuous magnetite.

The contact is similar to that in Z 2759, that is sharp, but irregular. Both phases are incipiently stressed, the coarser porphyritic adamellite phase slightly relatively so. This phase is also slightly relatively altered. The contact is locally straddled by phenocrystal orthoclase accompanied by adjacent phenocrysts of xenocrystal habit within the biotite-rich granite. These features tend to confirm the biotite-rich granite as the temporally younger phase.

Z 2765

(T.S. 45877)

The sectioned area includes a quartz vein and a representative area of the granitic host.

The host rock is a weakly orthoclase-porphyritic biotite granite or, strictly, a microgranite. Main components (orthoclase, quartz, zoned oligoclase-albite, dark biotite) are closely analogous to the uneven-grained biotite granites in Z 2759 and Z 2764. The rock is similarly altered with weak but pervasive zonally distributed sericitisation of plagioclase. The only contrasts lie in a slightly modally lower biotite content and the minor, relatively coarse orthoclase phenocrysts.

Quartz veins are coarse-grained and granular, with weakly sutured grain-boundaries. Margins are essentially planar, but irregular on a microscale. Discontinuous selvages of poikilitic, weakly argillically clouded orthoclase are developed. These features, and to a certain degree the vein-quartz, are in semi-optical continuity with the host rock components, a feature typical of late-magmatic veins. Sparsely disseminated orthoclase, plagioclase and biotite represent mechanical inclusions. The veins are unmineralised in the area sectioned but, in the offcuts, include rare subhedral grains of wolframite (to 500  $\mu$ , the identification is semi-tentative and warrants assay confirmation).

D. Cowan, B. Sc.

A P P E N D I X      2

# AUSTRALIAN ANGLO AMERICAN LIMITED DRILLHOLE LOG

419022

Page 1  
of 1

## Summary Sheet

PROJECT SOUTH BISCHOFF	AREA EL 5/63 Part 2	DRILLHOLE TYPE DDH W/L
CO-ORDS N: 5401703 E: 370937	DECLIN 45°	AZIMUTH 090° TRUE RL 637
DATE COMMENCED 15/4/1983	DATE COMPLETED 22/4/1983	DRILLED BY LONGYEAR
DRILL RIG L 38	Non Coring to:	HQ Core to: 9.2m    NQ Core to: 100.80    BQ Core to: EOH 100.80

### SURVEY DATA

Instrument: Eastman Camera

DEPTH	DECLINATION		AZIMUTH	DEPTH	DECLINATION		AZIMUTH
	Uncorr	Corr			Uncorr	Corr	
0		45°	078° Mag				
40.3		44.5°	074° "				
70.3		43°	075° "				
100.3		42°	075.5° "				

### LOG SUMMARY

ROCK TYPE	MINERALIZATION		
	Style	Grade	Intersection width (Corr)
0.0 - 4.4 Rubble: Porphyritic Biotite Micro-granite (py bi mcg) and sand			
4.4 - 5.8 Py Bi Mcg - Weathered			
5.8 - 18.5 Py Bi Mcg - Selvedge weathered near fractures			
18.5 - 30.8 Py Bi Mcg - Fresh except weak patchy selvedge alteration			
30.8 - 43.8 Py Bi Mcg - Altered = 40% - Fresh = 60%			
43.8 - 44.5 Non porphyritic microgranite dyke			
44.5 - 46.1 Py Bi Mcg - Altered = 40% - Fresh = 60%			
46.1 - 61.0 Greisen Zone comprises			
7% Hydromuscovite, Sulphide Greisen 51.0-51.7 Pale yellow muscovite		Sn 3.85%	} 0.5m CIA- 45°
5% Dark Green Chlorite Greisen greisen with abundant sphalerite and galena		Zn 5.8%	
60% Altered Py Bi Mcg		Pb 1.2%	
27% Fresh Py Bi Mcg		Ag 221g/t	
1% Altered coarse equigranular granite			
61.0 - 71.8 Py Bi Mcg - Mostly fresh < 10% selvedge alteration			
71.8 - 100.0 Py Bi Mcg - Fresh. Rare alteration selvedges schorl vns			
100.0 - 100.3 Coarse Equigranular Granite			
100.3 - 100.5 Py Bi Mcg			
100.5 - 100.8 Coarse Equigranular Granite			

*[Handwritten signature]*

022

# LITHOLOGY

## DRILL ADVANCE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
					CSB 3				

SCALE 1:100 (1cm = 1m)

419023

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR

DDH \_\_\_\_\_

LOGGED BY \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_

DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

PAGE \_\_\_\_ OF \_\_\_\_



# LITHOLOGY

## DRILL ADVANCE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
15.40	3.1	2.90	93.5		Porphyritic Biotite Microgranite				
				16					
				17					
				18					
18.50	3.1	3.1	100%						
				19					
				20					
				21					
21.60	3.1	3.1	100%						
				22					
				23					
				24					
24.70	2.50	2.50	100%						
				25					
				26					
				27					
27.20	3.10	3.10	100%						
				28					
				29					
				30					

SCALE 1:100 (1cm = 1m)

17.4 — remnant of chloritic  
dots on fracture over  
printed by weathering

20.2 — Joints are no longer  
oxidised

Joint planes are  
coated by dark green  
chlorite ± pyrite

Weak 1-2 cm wide  
zones of selvage alter-  
ation (ie chloritisation  
and partial kaolinisation  
of feldspar) -

28.7 — 10 cm altered zone

27.4 J CIA 51°

28.7 J CIA 50°

Joint frequency ~ 1/metre

trace pyrite in joint  
cavities

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DRILLHOLE LOG FOR DDH CSB 3

LOGGED BY JA LEVINGS FROM 15 TO 30

DATE 27/4/83

PAGE 2 OF 7

DRILL ADVANCE

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
30.30	3.00	2.90	96.6	31	30.8 Porphyritic Biotite Microgranite Altered and unaltered	31.0 2mm fissure fill veinlet ± sphalerite, chlorite and quartz. 30 cm alteration halo 31.3-31.6 porphyritic alteration not obviously related to a fracture. Feldspars altered to yellow clay. Original texture visible. Chloritic cores 22cm on joints	31.0 J CIA 20°	31.0 tr. sp in veinlet	41
33.30	3.1	3.01	97.0	32			32.8 J @ 65° altered		
				33					
				34			34.3 J @ 5-10° altered		
				35			35.2 J @ 10° altered		
				36					
36.40	3.1	3.1	100%	37					
				38					
				39		Several narrow chlorite veinlets ~ 1mm + selvage alteration	38.9 J @ 37° altered		
				40			39.5 J @ 410° chl alt. irregular		
39.50	3.1	3.0	96.7	41			40.2 V @ 33° altered	Trace sphalerite	41
				42			40.7 V @ 35° altered		
				43					
2.60	3.1	3.1	100%	44	43.84 Medium grain dequigranular granite	Fresh	Contact sharp @ 61°		
				45	44.5 dyke 2mm grain size quartz biotite feldspar Porphyritic Biotite Microgranite altered and unaltered		Contact sharp @ 50°		

SCALE 1:100 (1cm = 1m)

# LITHOLOGY

## DRILL ADVANCE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
45.70	3.1	3.12	100.6
48.80	3.1	3.14	101.2
51.90	3.1	3.0	96.7
55.00	3.0	3.01	100.3
58.00	3.0	2.95	98.3

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
45.70 - 48.80	Porphyritic Biotite Microgranite 60% altered.			45.3 - 8cm greisen zone @ 35° 45.8 - @ 42° vein 46.2 - @ 57° " 46.6 - @ 50° V	
48.80 - 51.90	50.5 Greisen Zone Granitic porphyritic texture nearly obliterated by alteration. Core soft. Pale yellow in centre of zone becoming more chloritic towards margins.	50.5 pale hydro muscovite greisen zone with some dark or chloritic veinlets 51.3-51.8. Intense, pale, sphalerite bearing hydro muscovite quartz, kaolin greisen	50.5 @ 45° V 50.9 @ 55° V 51.4 @ 52° foliating Broken core - soft	50.9 1mm sphalerite vein	10% sphalerite, minor galena and chalcopyrite
51.90 - 55.00	52.5 - brecciated in places 10cm Altered coarse grained granite ? local phenocryst accumulation	3mm gv	52.3 @ 43° V 53.6 @ 65° V		3mm sphalerite vein
55.00 - 58.00		54.9 10cm chlorite greisen 55.7 10cm chlorite greisen 57.3 2cm sphalerite/chlorite vein 58.5 10cm dense chlorite greisen several small greisen veins	55.7 @ 50° V 57.3 @ 35° V 58.5 @ 57° vein @ 57-65° greisen veins		minor sphalerite vein + trace pyrite

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 3

LOGGED BY J.A. LEVINGS FROM 45 TO 60m

DATE 27/4/83

PAGE 4 OF 7

DRILL ADVANCE

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					Porphyritic Biotite Microgranite 60% altered, 40.	60.3 greisen vein - 10 cm moderate		60.3 V @ 60°		
61.00	3.00	3.00	100%	61		61.0 10cm dense chlorite greisen		61.0		
				61.5	Alteration and greisenisation has died out. Fresh Porphyritic Biotite Microgranite					
64.00	3.00	2.99	99.6%	64		65.0 8cm fracture controlled alteration 3mm chloritic core		65.0 V @ 55°		
				65		occasional mod-weak alt. zones		66.3 V @ 57°		
67.00	3.0	3.05	101.6	67		minor veining chlorite or quartz		lower dyke contact @ 30°		
				69	69.2-69.5 Small dyke? of coarse grained granite (? local phenocryst accumulations)					
70.00	3.0	2.93	97.6	70						
				72	occasional very narrow c. grained dykes. Contacts not clear - due to reaction					
73.00	3.0	3.05	101.6	73						
				74		74.2 quartz vein 2cm wide		QV @ 47°		

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 3

LOGGED BY J.A. LEVINGS FROM 60m TO 75m

DATE 27/4/83

PAGE 5 OF 7

DRILL ADVANCE

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				75	Porphyritic Biotite Microgranite				
76.00	3.00	2.99	99.6	76		76.6 chlorite-kaolinisation very narrow veins of gndisen		chloritic vein @ 63°	
				77					
				78		1cm Quartz vein grey		77.2 QV @ 63°	
				79				78.7 QV @ 62°	
79.00	3.00	3.00	100%	79				79.2 QV @ 60°	
				80					
				81					
82.00	3.00	3.01	100.3	82					
				83		2 cm QV 2x1 cm QV		83.3 QV @ 53°	
				84				83.7 intersecting quartz veins	
				85					
85.00	3.00	3.00	100%	85		85.2 5cm weak altn			
				86					
				87					
				88					
88.00	3.00	3.04	101.3	88					
				89					
				90					

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 3

LOGGED BY J.A. LEVINGS FROM 75 TO 90m

DATE 27/4/83

PAGE 6 OF 7

U.C. 2

DRILL ADVANCE

LITHOLOGY

LOST CORE	DRILL ADVANCE				INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY						
					90	Porphyritic Biotite Microgranite				
	91.0	3.0	3.02	100.6	91					
					92					
					93					
	94.0	3.0	2.93	97.6	94		94.2 1cm chlorite vein + associated selvage alteration		94.2 v @ 76°	
					95					
					96					
	97.0	3.0	2.99	99.6	97					
					98					
					99					
	100.00	0.80	0.78	97.5	100	100.17 C gr Epigranular biotite granite dyke 100.3) " " " " " " 100.5) " " " " " " 100.8)	Contacts sharp & conc of biotite at contact			
	100.80					END OF DDH CSB 3 100.80m				

SCALE 1:100 (1cm = 1m)

419030

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DRILLHOLE LOG FOR DDH CSB 3

LOGGED BY J.A. LEVINGS FROM 90 TO 100.80

DATE 27/4/83

PAGE 7 OF 7

METRES	Cu	Pb	Zn	Ag	Sn	W	Mo	As								SAMPLE NUMBER
0																
1	85	10	135	1.0	110	65										
3.0																
4	40	20	125	0.5	70	40										
6.0																
7	30	5	125	0.5	9	30										
9.0																
10	35	5	85	BLD	6	70										
12.0																
13	55	5	100	0.5	4	70										
15.0																

GROUND CORE ↓

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB 3

ASSAYED BY ANALABS FROM 0 TO 15

DATE 7/6/83

PAGE 1 OF 8

U31

METRES	Cu	Pb	Zn	Ag	Sn	W	Mo	As								SAMPLE NUMBER
15.0																
16.0	45	5	90	0.5	10	100										
18.0																
19.0	35	5	100	0.5	7	85										
21.0																
22.0	50	5	95	BLD	9	75										
24.0																
25.0	40	5	95	0.5	7	80										
27.0																
28.0	30	15	85	0.5	15	55										
30.0																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB 3

ASSAYED BY ANALABS

FROM 15.0 TO 30.0

DATE 7/6/83

PAGE 1 OF 8

419032

METRES	Cu	Pb	Zn	Ag	Sn	W	Mo	As								SAMPLE NUMBER
30.0																
31	35	80	150	BLD	20	65										
33.0																
35	35	340	390	BLD	35	95										
36.0																
38	25	20	80	BLD	5	45										
39.0																
40	25	30	130	0.5	40	40										
42.0																
44	50	5	120	0.5	15	80										
45.0																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB3

ASSAYED BY ANALABS FROM 30.0 TO 45.0

DATE 1/6/83

PAGE 3 OF 8

033

METRES	Cu	Pb	Zn	Ag	Sn	W	Mo	As	Au						SPLIT CORE	↓	SAMPLE NUMBER
45	10	30	105	BLD	35	BLD											Z 2740
46	15	50	250	0.5	35	BLD											Z 2741
47	10	5	50	BLD	20	BLD											Z 2742
48	15	65	465	0.5	35	BLD											Z 2743
49	5	25	95	BLD	10	BLD											Z 2744
50	60	170	1850	2.0	240	10											Z 2745
51	495	510	1.66%	7.0	2.78%	68.5	14	41	0.017								Z 2746
51.45	5950	2.52%	13.2%	605	5.46%	91.0	19	22	0.032								Z 2747
51.7	15	135	455	BLD	210	BLD											Z 2748
52	85	180	5250	3.0	490	195.0											Z 2749
53	5	40	230	BLD	70	BLD											Z 2750
54	15	125	360	1.5	150	BLD											Z 2751
55	10	45	180	BLD	30	70.5											Z 2752
56	10	10	45	BLD	10	BLD											Z 2753
57	100	110	3150	BLD	35	10											Z 2754
58	70	205	1300	0.5	810	15											Z 2755
59	10	5	50	BLD	10	10											Z 2756
60																	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH CSB3  
 ASSAYED BY ANALABS FROM 45 TO 60 DATE 7/6/83 PAGE 4 OF 8

419034

034

METRES	Cu	Pb	Zn	Ag	Sn	W	Mo	As								SAMPLE NUMBER
60.0																
61.0	5	45	190	BLD	40	BLD										Z 2757
62.0	5	25	120	BLD	35	BLD										Z 2758
63.0	30	15	115	0.5	20	35										
64.0																
65.0																
66.0	35	225	1050	0.5	35	45										
67.0																
68.0																
69.0	95	10	140	1.0	50	140										
70.0																
71.0																
72.0	100	10	130	0.5	20	170										
73.0																
74.0																
75.0																

SPLIT CORE ↑  
 REBOUND CORE ↓

410000

METRES	Cu	Pb	Zn	Ag	Sn	W	Mo	As								SAMPLE NUMBER
75																
76	50	60	115	0.5	25	70										
77	77.0															
78	50	5	125	BLD	25	95										
79																
80	80.0															
81	60	5	95	BLD	10	90										
82																
83	83.0															
84	65	BLD	105	0.5	15	95										
85																
86	86.0															
87																
88	65	5	100	0.5	15	100										
89	89.0															
90																

METRES	Cu	Pb	Zn	Ag	Sn	W	Mo	As								SAMPLE NUMBER
90																
91	80	BLD	115	BLD	25	110										
92	42.0															
93	35	10	170	0.5	30	110										
94																
95	45.0															
96	80	5	130	0.5	40	110										
97																
98	48.0															
99																
100																
101																
102																
103																
104																
105																

Vertical scale markings on the right side of the table grid.

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB 3

ASSAYED BY ANALABS FROM 90.0 TO

DATE 7/6/83

PAGE 7 OF 8

METRES	Cu	Pb	Zn	Ag	Sn	W	Mo	As							SAMPLE NUMBER
105															
106															
107	85	BLD	110	BLD	25	120									
108															
108.8				EOH	108.8 m										

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB 3

ASSAYED BY ANALABS

FROM

TO 108.8 EOH DATE 7/6/83

PAGE 8 OF 8

A P P E N D I X 3

AUSTRALIAN ANGLO AMERICAN LIMITED  
**DRILLHOLE LOG**

Page 1  
of 1

Summary Sheet

<b>PROJECT</b> South BISCHOFF	<b>AREA</b> EL 5/63 Area 2	<b>DRILLHOLE TYPE</b> DDH W/L
<b>CO-ORDS</b> N19 401620 * E 370990	<b>DECLIN</b> 45°	<b>AZIMUTH</b> 090° true RL 640 #
<b>DATE COMMENCED</b> 9/7/83	<b>DATE COMPLETED</b> 17/7/83	<b>DRILLED BY</b> LONGYEAR
		<b>DRILL RIG</b> L 38
<b>Non Coring to:</b> 12m	<b>HQ Core to:</b>	<b>NQ Core to:</b>
		<b>BQ Core to:</b> EOH/07.0

**SURVEY DATA**

Instrument:

DEPTH	DECLINATION		AZIMUTH mag	DEPTH	DECLINATION		AZIMUTH
	Uncorr	Corr			Uncorr	Corr	
0		46.5	078°				
35		47.5	079°				
65		48.0	080°				
95		48.0					

**LOG SUMMARY**

ROCK TYPE	MINERALIZATION		
	Style	Grade	Intersection width (Corr)
0.0 - 12.0 Triconed			
12.0 - 17.0 Weathered Greisen (Very poor core recovery)			
17.0 - 23.0 Sand - sludge sample at 23m (Very poor core recovery)			
23.0 - 25.7 Weathered Py. Bi. Mcg *			
25.7 - 39.9 Fresh Py. Bi. Mcg			
39.9 - 40.8 Greisen Zone chloritic + narrow quartz veins			
40.8 - 43.3 Py. Bi. Mcg localised greisen veins + alteration			
43.3 - 45.0 Greisen Zone chloritic + narrow quartz veins			
45.0 - 85.3 Py. Bi. Mcg			
85.3 - 85.4 Quartz Porphyry Dyke			
85.4 - 88.5 Py. Bi. Mcg			
88.5 - 89.2 Quartz Porphyry Dyke			
89.2 - 90.5 Py. Bi. Mcg			
90.5 - 96.9 Coarse Grained Porphyritic Biotite Granite ± alteration			
96.9 - 104.9 Fault Zone Breccia (poor core recovery)			
104.9 - 107.0 Py. Bi. Mcg ± alteration			
EOH			
* NB Py. Bi. Mcg = Porphyritic Biotite Microgranite			

DRILL ADVANCE

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					CSB 4					

SCALE 1:100 (1cm = 1m)

419041

041

# DRILL ADVANCE

# LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				1	Triconed to 12.0 metres				
				2					
				3					
				4					
				5					
				6					
				7					
				8					
				9					
				10					
				11					
				12					
				13	Weathered Gneiss Brown, Fe stained, altered/gneissified granite	Alteration strongly overprinted by weathering		NB Serious core loss	
				14					
				15					

SCALE 1:100 (1cm = 1m)

419042

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 4

LOGGED BY JA LEVINGS FROM 0 TO 15m

DATE 14/7/83

PAGE 1 OF 8

DRILL ADVANCE

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				16	Weathered Greisen Brown, Remnant patches of greisen colouration. Typical granular greisen texture.	Chlorite, mica, qtz Greisen: Strongly overprinted by weathering		Broken	Narrow limonite/qtz veinlets (after sulphides)	
				17	Sand					
				18						
				19						
				20	Major Core Loss					
				21						
				22	Sludge Sample taken @ 23 m					
				23	Weathered Porphyritic Biotite Microgranite	Intense weathering NO apparent epithermal alteration				
				24	Duplicated core from 26.0 - 32.0 m					
				25						
26.00	3.00	1.95	65%	26	Porphyritic Biotite Microgranite Fine grained ground mass and rare 1-2 cm feldspar phenocrysts	Relatively fresh cores flanked by fracture controlled weathering. Minor Tourmalinisation				
				27						
				28						
29.00	3.00	2.35	78.3%	29		Weathering rarer after 29 m				
				30						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 4

LOGGED BY J.A. LEVINGS FROM 15 TO 30

DATE 14/7/83

PAGE 2 OF 8

DRILL ADVANCE

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				31	Duplicated Porphyritic Biotite Microgranite				
32.00	3.00	3.00	100%	32					
				33					
				34					
35.00	3.00	2.85	95%	35					
				36					
				37					
38.00	3.00	3.02	100.6%	38					
				39					
				39.4					
				40	Greisen Zone 65% dk chl. grs. py. texture nearly obliterated. Some narrow qtz veins	39.9-40.4 narrow Qtz - tourmaline veins & mineral selvage greisen (chloritic) 40.4-40.75 Int. chl. greisen	1cm grs vein @ 63 5mm QV @ 78° 5mm Q-TV @ 80° greisen zone @ 45-53° 5mm QV @ 78°		40.4 - some limonite on fractures? after sulphides?
				40.8					
41.00	1.60	1.60	100%	41	Porphyritic Biotite microgranite local accumulation of phenocrysts @ 41.5m	weak-mod pervasive OH? mainly of feldspars chl/musk/Qtz greisen vein			
				42	Some narrow chl/musk/Qtz greisen veins				
				43		15cm gr. vein			
				44					
44.00	1.60	1.60	100%	44					
				45					

SCALE 1:100 (1cm = 1m)

419044

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 4

LOGGED BY J.A. LEVINGS

FROM 30 TO 45 m

DATE 14/6/83

PAGE 3 OF 8

# LITHOLOGY

## DRILL ADVANCE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				45	Porphyritic Biotite Microgranite	Weak pervasive kaolinisation, minor hairline greisen veins				
45.60	1.40	1.36	97.1%	46						
				47	Local accumulations of phenos	↓ reducing downwards				
47.00	3.00	3.00	100%	48						
				49						
				50						
50.00	3.00	2.95	98.3%	51	rare green clay altn of phenos					
				52						
				53						
53.00	3.00	2.90	96.6%	54						
				55						
				56						
56.00	3.00	2.90	96.6%	57						
				58						
				59						
59.00	3.00	3.03	101%	60						

Weathered joint @ 50°

SCALE 1:100 (1cm = 1m)

DRILL ADVANCE

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
					Fresh Porphyritic Biotite Microgranite	Rare schorl replacement of feld. phenos		Rare fracturing	
62.00	3.00	3.10	103.3%						
65.00	3.00	3.05	101.7%			64.7 2mm grs. vein		64.7 Weathered joint (minor)	
68.00	3.00	3.00	100.0%			66.8 mod. clay altn (green) of phenos + grd mass (20cm)			
71.00	1.00	1.14	114.0%			68.1 Qtz chl grs vein, vuggy, some clay altn of feldspar.		68.1 1cm grs vein @ 70°	
72.00	2.00	1.90	95.0%			70.7 3 in dk. gr. chl. grs + selvedge clay zone		70.7 3cm grs vein @ 73°	
74.00	3.00	3.08	102.6%			72.7 5cm dk gr grs + selvedge clay altn 73.3 < 1cm "		72.7 5cm grs vein @ 55° 73.3 < 1cm grs vein @ 56°	

SCALE 1:100 (1cm = 1m)

419046

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DRILLHOLE LOG FOR DDH CSB 4

LOGGED BY JA LEVINGS FROM 60 TO 75

DATE 19/7/83

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# DRILL ADVANCE

# LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					Porphyritic Biotite Microgranite					
77.00	3.00	3.26	108.6%							
80.00	3.00	2.70	90%							
83.00	3.00	3.10	103%							
								oxidised joint @ 60°		
						84.5 } clay altered zone 85.2 } feldspars white or green		85.3 dyke at 75°		
86.00	3.00	2.98	99.3%		85.3 10 cm Qtz porphyry Dyke Abundant Qtz phenos. Occasional xenolithic feld. phenos. ground mass Qtz feld. biotite.			86.0 hairline chloritic fractures.		
89.00	3.00	3.10	103%		88.5 } Qtz py. Dyke as above 89.2 }	hairline schorl/chl vein in gp rock		dyke contact @ 60° dyke contact @ 60°		

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 4

LOGGED BY J.A. LEVINGS FROM 75 TO 90

DATE 19/7/83

PAGE 6 OF 8

419047

# LITHOLOGY

## DRILL ADVANCE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				90.5				Gradational contact		
				91	Course Grained Porphyritic Biotite Granite (coarse gr. disequigranular granite) Abundant large pink + white feld. phenos - euhedral + sub. med. c gr qtz. feld. bi. grd mass.	felds cloudy and sometimes replaced by schorl				
92.00	3.00	2.93	47.6%	92						
				93						
				94						
95.00	3.00	2.60	86.6%	95		clay altered zone → green clays				
				96						
				97	96.9 <u>Fault Zone</u> Brecciated + oxidised granite Most primary minerals are decompressed (except Qtz)	Limonite + manganese staining. Weathered (supergene alteration)		Contact @ 12° Typical fault brecciation + foliation close to core axis		
98.00	3.00	0.60	20%	98						
				99						
				100						
101.00	3.00	0.50	16.6%	101	Poor Core Recovery Sludge Sample taken					
				102						
				103						
104.00	3.00	2.71	90.3%	104						
				105						

SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG FOR DDH CSB 4

LOGGED BY J.A. LEVINGS FROM 90 TO 105

DATE 19/7/83

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# LITHOLOGY

## DRILL ADVANCE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				106	Porphyritic Biotite Microgranite	intense clay alteration to 106.3 106.3-107 fresh		sheared + altered to 106.3 10-20° CIA	105.6 5m fracture containing pyrite crystals
				107	EOH 107.0 m.				

SCALE 1:100 (1cm = 1m)

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DRILLHOLE LOG FOR DDH CSB 4

LOGGED BY JA LEVING-S

FROM 105 TO 107 EOH

DATE 19/7/83

PAGE 8 OF 8

419050

Metres	Cu	Pb	Zn	Ag	As	Mo	Sn	N								SAMPLE NUMBER
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12	12m															
13		30	585	110	0.5	120	5.0	4850	40					SPLIT CORE ↓		22766
14	14m															
15																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB-4

ASSAYED BY ANALABS

FROM 12 TO 14m

DATE 2/8/83

PAGE 1 OF 8

419051

Metres	Cu	Pb	Zn	Ag	As	Mo	Sn	W								SAMPLE NUMBER
	40	145	165	BLD	38	5.0	85	25								Z 2767
17m																
	45	20	185	BLD	8	BLD	190	30								Z 2768
23m																
	35	10	180	0.5	6	BLD	220	25					← SPLIT CORE →			Z 2776
	10	5	55	BLD	3	3.0	20	BLD								Z 2769
26m																
	95	20	170	BLD			7	99					GROUND CORE ↓			

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB-4

ASSAYED BY ANALABS

FROM 15 TO 30

DATE 2/8/83

PAGE 2 OF 3

419052

Metres	Cu	Pb	Zn	Ag	As	Mo	Sn	W								SAMPLE NUMBER
	45	BLD	115	BLD			10	36								GROUND CORE ↓
32 m	55	10	105	BLD			5	46								
35 m	70	BLD	100	BLD			5	109								
38 m	80	5	150	BLD			3	125								
40 m	20	100	340	BLD	6	2.5	55	15					SPLIT CORE ↓			Z 2770
41 m	15	30	180	BLD	7	5.0	30	35								Z 2771
42 m	10	70	500	BLD	6	2.0	20	BLD								Z 2772
43 m	10	140	545	0.5	2	3.0	50	15								Z 2773
44 m	15	180	880	0.5	36	3.0	65	20								Z 2774

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ASSAY RESULT SHEET FOR

DDH CSB-4

ASSAYED BY ANALABS

FROM 30 TO 45 m

DATE 2/8/83

PAGE 3 OF 8

419053

052

Metres	Cu	Pb	Zn	Ag	As	Mo	Sn	W									SAMPLE NUMBER
45m	10	10	130	BLD	13	3.0	8	10									Z 2775
46m	40	5	155	BLD			8	71									
47m																	
48m	60	BLD	120	BLD			4	61									
49m																	
50m																	
51m	60	BLD	105	0.5			4	55									
52m																	
53m																	
54m	55	10	105	BLD			BLD	67									
55m																	
56m																	
57m	50	10	90	BLD			BLD	30									
58m																	
59-62																	

419054

Meters	Cu	Pb	Zn	Ag	Sn	W										SAMPLE NUMBER
	35	BLD	75	BLD	BLD	39										
62 m	40	BLD	75	0.5	BLD	54										
65 m	35	5	75	BLD	3	53										
68 m	35	BLD	100	BLD	7	48										
71 m	35	260	290	BLD	11	42										
74-77																

524

419055

Metres	Cu	Pb	Zn	Ag	Sn	W											SAMPLE NUMBER
75	30	5	65	BLD	6	27											
77	77m																
79	35	15	115	BLD	6	36											
80	80m																
81	45	10	80	BLD	BLD	37											
83	83m																
84	40	10	65	BLD	BLD	62											
85	85m																
86	35	BLD	75	BLD	7	49											
89	89-92m																
90																	

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ASSAY RESULT SHEET FOR

DDH CSB-4

ASSAYED BY ANALABS

FROM 75 TO 90m

DATE 2/8/83

PAGE 6 OF 8

419056

Metres	Cu	Pb	Zn	Ag	As	Mo	Sn	W								SAMPLE NUMBER
90																
91	35	BLD	60	0.5			BLD	47								
92	92 m															
93	35	BLD	75	BLD			4	35								
94																
95	95 m															
96	15	5	60	BLD			BLD	11								
97																
98	98 m															
99	10	5	80	0.5			BLD	19								
100																
101	101 m															
102	65	5	80	BLD	7	2.0	25	95								
103	10	15	60	0.5			BLD	10								
104																
105	104-107 m															

SPLIT CORE 101-104m  
GROUND CORE ↓  
Z 2777

419057

Metres	Cu	Pb	Zn	Ag	Sn	W									SAMPLE NUMBER
	35	60	115	0.5	BLD	31									
107 m	EOH														

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ASSAY RESULT SHEET FOR

DDH CSB-4

ASSAYED BY ANALABS

FROM 105 TO 107 m EOH

DATE 2/8/83

PAGE 8 OF 8

A P P E N D I X

AUSTRALIAN ANGLO AMERICAN LIMITED  
**DRILLHOLE LOG**

Page 1  
of 1

Summary Sheet

PROJECT South Bischoff

AREA EL 5/63 . AREA 2

DRILLHOLE TYPE  
DOH W/L

CO-ORDS N: 5 40' 703"  
E: 370 937"

DECLIN 65°

AZIMUTH 090° T. RL 637m\*

DH No. CSB 5

DATE COMMENCED 18/7/83

DATE COMPLETED 25/7/83

DRILLED BY LONGYEAR

DRILL RIG L38

Non Coring to: 2.0m

HQ Core to:

NQ Core to: 122m

BQ Core to:

EOH 122m

SURVEY DATA

Instrument:

DEPTH	DECLINATION		AZIMUTH	DEPTH	DECLINATION		AZIMUTH
	Uncorr	Corr			Uncorr	Corr	
0m		65°	077° M				
41m		63°	077° M				
80m		63°	077° M				
116m		62°	078° M				

LOG SUMMARY

ROCK TYPE	MINERALIZATION		
	Style	Grade	Intersection width (Corr)
0.0 - 2.0m Open Hole			
2.0 - 60.3m Py. Bi Mcg: rare, narrow greisen veins: Mostly Fresh	Minor MoS <sub>2</sub> at 31.6m		
60.3 - 60.6m Coarse Porphyritic Granite			
60.6 - 61.1m Quartz Porphyry Dyke: no feldspar phenocrysts.			
61.1 - 62.0m Coarse Porphyritic Granite			
62.0 - 63.9m Greisen Zone: Chloritic: associated quartz veins	Minor py. in Qtz Veins	0.11% Sn	1.1 metres
63.9 - 71.1m Py. Bi. Mcg: moderate clay alteration and fracturing.	Trace py. cp. asp? sp. cs? associated with small xenolith.		
71.1 - 71.8m Medium Grained Porphyritic Granite			
71.8 - 76.2m Py. Bi. Mcg: Fresh			
76.2 - 77.2m Greisen Zone: Green, qty/ chlorite with sulphide vein cores	Narrow Veins: Sp, py, gn, cp, cs? + Quartz	70 ppm Sn	0.5 metres
77.2 - 80.0m Py. Bi. Mcg: Quite fresh			
80.0 - 82.0m Greisen and Altered Py Bi Mcg Sulphide vein cores. chloritic	Narrow Veins: Sp, py, cp, cs?	57 ppm Sn	1.1 metres
82.0 - 122.0m Py Bi. Mcg: - mostly fresh. minor Aplite veining			

\* Tape & Compass Survey

\* Py Bi Mcg = Porphyritic Biotite Microgranite

Signature



Date 28/7/83

DRILL ADVANCE

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					CSB 5					

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH \_\_\_\_\_

LOGGED BY \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_

DRILL ADVANCE

LITHOLOGY

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOGS	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				0	Open Hole - no core					
				1						
				2						
3.00	2.00	1.12	36%	3	Porphyritic Biotite Microgranite Large, widely spaced anhedral feldspar phenocrysts. (phenocryst probably abraded) some smaller quartz and biotite phenocrysts in qtz/feldspar/biotite groundmass.	Weathered. Intense on fractures.				
				4						
5.00	3.00	2.48	82.6%	5		from 5m: fairly fresh except for weathering on fractures.				
				6						
				7		rare tourmalinisation of feldspars.				
				8						
8.00	3.00	3.00	100%	9						
				10						
11.00	3.00	2.67	89%	11						
				12						
				13						
14.00	3.00	3.15	105%	14						
				15		No more weathering ↓				

SCALE 1:100 (1cm = 1m)



062  
419063

**DRILL ADVANCE**

**LITHOLOGY**

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				30	Porphyritic Biotite Microgranite				
				31					
32.00	3.00	3.03	101 %	32					31.6 - MoS flakes in fracture
				33					
				34					
35.00	3.00	3.00	100 %	35					
				36		5mm Quartz vein		36.0 av @ 52°	
				37					
38.00	3.00	2.98	99.3 %	38		38.2 2cm chl Grs vein + Qtz		38.2 Greisen V @ ~42°	
				39		10cm selvedge clay altn.			
				40					
41.00	3.00	2.96	98.6 %	41					
				42					
				43		42.6 5mm chl. grs 3cm selvedge altn		42.6 Grs. veinlet @ 45°	
				44					
44.00	3.00	3.05	101.6 %	44				44.5 Fracture @ 210°	
				45					

SCALE 1:100 (1cm = 1m)

**COMSTAFF PROPRIETARY LIMITED**

**DRILLHOLE LOG FOR DDH CSB 5**

LOGGED BY JA LEVINGS FROM 30 TO 45

DATE 26/7/83

PAGE 3 OF 9

# DRILL ADVANCE

# LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
					Porphyritic Biotite Microgranite				
47.00	3.00	3.06	102.6%						
50.00	3.00	2.91	99%						
53.00	3.00	3.05	101.6%						
						53.2 1cm Qtz vein		53.2 QV @ 38°	
56.00	3.00	3.15	105%						
						55.9 5mm Grs vein Granite becoming altered.		55.9 GRS. V @ 15°	
						57.1 3cm (TW) Greisen vein 10cm altn		57.1 GRS. V @ 25°	
						1cm dk green chl. greisen + selvage altn		58.0-58.6 1cm grs vein    to core	
59.00	3.00	3.15	105%						

SCALE 1:100 (1cm = 1m)

419064

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DRILLHOLE LOG FOR DDH CSB 5

LOGGED BY JA LEVINGS FROM 45 TO 60

DATE 26/7/83

PAGE 4 OF 9

DRILL ADVANCE

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				60.3				Contact indistinct over 5cm		
				60.6	Coarse Porphyritic Granite			Contact @ 35°		
				61.1	Quartz Porphyry Dyke coarse porphyritic granite	Mod. porv. clay becoming stronger ↓				
62.00	3.00	3.07	102.3%	62.0	Gneiss Zone - dk. green chloritic, fgr. some pale clay + talc @ 62.3. core is quite broken. Original granitic texture.	int chlorite gneissification. int {clay} altn @ 62.1m {talc}		62.1 JV @ ~ 35° Some alkalinising	minor py & Qtz veins	41%
				65.9	Porphyritic Biotite Microgranite Somewhat altered + fractured	mod pervasive altn (mostly kaolinisation) Some clay on joint surfaces.		63.5 joints @ 43° Lower contact @ ~ 43°		
65.00	3.00	3.10	103.3%	65				65.1 Jt @ 23°		
				66				66.0 Jt @ 28°		
				67				66.8 5m Qtz/Calcite Gash Vein		
68.00	3.00	3.01	100.3%	68				66.8 Vn @ 23°		
				69	3x5 cm Xenolith? Sulphides associated with chlorite clots. Distinctive foliation in granite					
				70					trace py, cp, asp? sp or cas & chlorite + Qtz	
71.00	3.00	2.90	96.6%	71.1	Medium Grained Porphyritic Granite			Contact @ ~ 65 (sharp)		
				71.8	Subhedral feld. phenos. Qtz, bi feld grd. mass			Contact indistinct		
				72		Quite Fresh				
				73						
74.00	3.00	3.06	102%	74				73.6 Joint @ 25°		
				75						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB.5

LOGGED BY JA LEVINGS FROM 60 TO 75

DATE 26/7/83

PAGE 5 OF 9

# LITHOLOGY

## DRILL ADVANCE

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				76	76.2 Greisen Zone dk. green and chloritic with 3 sulphide bearing cores.	Int. greisenisation	76.4 Gms/sulphide vein @ 38° 76.7 Gms/sulphide vein @ 35°		Most sulphides in 2x5 mm veins. Sp (honey) Py, gr, cp, cas + qtz
77.00	3.00	2.93	97.6%	77-78	77.3 Porphyritic Biotite Microgranite Distinctly foliated fabric in places alignment of phenos	Fresh to weakly altered.	77.6 Jt @ 35°		
80.00	3.00	2.98	99.3%	80-81	80.7 Greisen, Altered Py Bi Mcg - greisen is fracture controlled and usually has qtz. sulphide veinlet (<1cm) core.	40% greisen 60% altered granite	80.7 Jt @ 25° (strike slip slickenside) 80.2 Gms/sulphide vein @ 38° 80.7 Gms/sulphide vein @ 27° 81.1 Joint @ 25° 81.6 Gms. vein @ 25° 81.8 " " @ 36°		Sp, py, cp, cass. + ? qtz (5mm) Sp, Py (1mm)
83.00	3.00	2.97	99%	83-86	86 Porphyritic Biotite Microgranite  3cm Aplite vein 1cm " " 1cm " " 2cm " "		85.4 vein @ 60° 86.3 vein @ 70° 86.6 vein @ 75° 86.8 vein @ 65°		
89.00	3.00	3.07	102.3%	89-90	90 10 cm Greisen vein		90.0 grs. vein @ 37°		

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 5

LOGGED BY JA LEVINGS FROM 75 TO 90

DATE 26/7/83

PAGE 6 OF 9

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DRILL ADVANCE

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	
				91	Porphyritic Biotite Microgranite			Joints    core axis		
97.00	3.00	2.98	99.3%	92		-91.8 Strong fract. controlled clay altn. of py. bi. msq 10cm chl grs from 92.6		-91.8 Joints @ 65° +11 to core Main fracture. drn ~11° core Grs veins @ 35°	trace sulphide -gn, py	
				93				joints @ 22°		
				94						
95.00	3.00	2.95	98.3%	95						
				96						
				97						
98.00	3.00	3.04	101.3%	98						
				99						
				100						
101.00	3.00	2.83	94.3%	101						
				102						
				103						
104.00	3.00	3.05	101.6%	104						
				105						

SCALE 1:100 (1cm = 1m)

419067

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 5

LOGGED BY JA LEVINGS FROM 90 TO 105

DATE 26/7/83

PAGE 7 OF 9

# DRILL ADVANCE

# LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				106	Porphyritic Biotite Microgranite	Occasional selvedge clay		105.7 joint @ 45-50°	
107.00	3.00	2.91	97%	107		Fresh rare hairline calcite veins.		106.5 joint @ 40°	
				108					
				109					
110.00	3.00	3.00	100%	110					
				111					
				112					
113.00	3.00	3.06	102%	113					
				114					
				115					
116.00	3.00	2.98	99.3	116				116.3 joint @ 54°	
				117					
				118					
119.00	3.00	3.02	100.6	119					
				120					

SCALE 1:100 (1cm = 1m)

419068

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 5

LOGGED BY JA LEVINGS FROM 105 TO 120

DATE 26/7/83

PAGE 8 OF 9

DRILL ADVANCE

LITHOLOGY

VISUAL PERCENTAGE MINERALISATION

DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION
				121	Porphyritic Biotite Microgranite	Fresh rare hairline calcite veins lets.			
				122	122m EOH CSB 5				

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CSB 5

LOGGED BY JA LEVINGS

FROM 120 TO 122 EOH

DATE 26/7/83

PAGE 9 OF 9

0  
1  
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8  
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10  
11  
12  
13  
14  
15

METRES	Cu	Pb	Zn	Ag	Mo	As	Sn	W								SAMPLE NUMBER
3.00	80	10	145	BLD	BLD	1	13	87								
5.00	50	10	100	BLD	BLD	1	5	59								
8.00	40	5	95	BLD	BLD	1	8	64								
11.00	35	5	85	BLD	BLD	1	6	59								
14.00																

419070

METRES	Cu	Pb	Zn	Ag	Mo	As	Sn	W								SAMPLE NUMBER
15																
16	45	5	85	BLD	BLD	BLD	9	58								
17	17.00															
18																
19	50	5	130	BLD	BLD	BLD	BLD	59								
20	20.00															
21																
22	60	5	95	BLD	BLD	BLD	BLD	97								
23	23.00															
24																
25	55	5	165	BLD	BLD	BLD	BLD	90								
26	26.00															
27																
28	45	BLD	85	BLD	BLD	BLD	BLD	68								
29	29.00															
30																

41501

071

419072

METRES	Cu	Pb	Zn	Ag	Mo	As	Sn	W								SAMPLE NUMBER
30																
31	65	BLD	105	BLD	BLD	BLD	3	73								
32	32.00															
33	45	BLD	85	0.5	BLD	BLD	BLD	70								
34																
35	35.00															
36	45	BLD	80	BLD	0.5	BLD	BLD	72								
37																
38	38.00															
39	45	BLD	95	BLD	BLD	2	7	61								
40																
41	41.00															
42	50	BLD	90	BLD	1.0	BLD	BLD	154								
43																
44	44.00															
45																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB 5

ASSAYED BY ANALABS

FROM 30 TO 45

DATE 10/8/83

PAGE 3 OF 9

METRES	Cu	Pb	Zn	Ag	Mo	As	Sn	W								SAMPLE NUMBER
45																
46	60	BLD	105	BLD	BLD	BLD	BLD	98								
47	47.00															
48	50	BLD	80	BLD	1.0	BLD	BLD	87								
49																
50	50.00															
51	60	5	90	BLD	BLD	BLD	3	65								
52																
53	53.00															
54	55	25	205	BLD	BLD	BLD	BLD	330								
55																
56	56.00															
57	45	135	280	BLD	BLD	BLD	16	107								
58	58.00															
58.03	10	460	665	BLD	1.5	BLD	35	BLD								Z 2778
59	59.00															
	5	25	95	0.5	1.5	BLD	BLD	BLD								Z 2779
60	60.00															

GROUND CORE ↑  
SPLIT CORE ↓

METRES	Cu	Pb	Zn	Ag	Mo	As	Sn	W								SAMPLE NUMBER
60.00	10	10	75	BLD	2.5	BLD	5	BLD								Z 2780
61.00	5	10	45	BLD	1.0	BLD	6	10								Z 2781
62.00	25	70	685	BLD	0.5	3	720	40								Z 2782
63.00	60	135	4700	BLD	3.5	BLD	1450	50								Z 2783
64.00	10	BLD	55	BLD	BLD	BLD	15	BLD								Z 2784
65.00	5	BLD	45	BLD	0.5	BLD	15	BLD								Z 2785
66.00	10	5	45	BLD	1.5	BLD	BLD	BLD								Z 2786
67.00	5	5	40	BLD	4.5	BLD	4	BLD								Z 2787
68.00	10	BLD	45	BLD	BLD	BLD	5	BLD								Z 2788
69.00	5	BLD	40	BLD	BLD	BLD	6	10								Z 2789
70.00	5	BLD	40	BLD	BLD	BLD	BLD	BLD								Z 2790
71.00	5	BLD	45	BLD	BLD	BLD	BLD	BLD								Z 2791
72.00	5	BLD	45	BLD	BLD	BLD	10	BLD								Z 2792
73.00	BLD	BLD	35	BLD	0.5	BLD	4	BLD								Z 2793
74.00	10	BLD	40	BLD	1.0	BLD	7	15								Z 2794
75.00																

METRES	Cu	Pb	Zn	Ag	Mo	As	Sn	W								SAMPLE NUMBER
75	75.00	5	BLD	35	BLD	BLD	BLD	BLD	BLD							Z 2795
76	76.00	320	875	6100	4.5	3.0	BLD	70	45							Z 2796
77	77.00	5	50	210	BLD	0.5	BLD	20	10							Z 2797
78	78.00	5	BLD	55	BLD	BLD	BLD	15	BLD							Z 2798
79	79.00	5	10	65	BLD	BLD	BLD	15	BLD							Z 2799
80	80.00	60	70	2150	BLD	BLD	4	70	10							Z 2800
81	81.00	5	110	465	BLD	BLD	BLD	45	BLD							Z 2801
82	82.00	5	BLD	50	BLD	BLD	BLD	4	BLD							Z 2802
83	83.00															SPLIT CORE ↑ GROUND CORE ↓
84		50	5	90	BLD	BLD	BLD	BLD	69							
86	86.00															
87		45	5	90	BLD	BLD	BLD	BLD	64							
89	89.00															

METRES	Cu	Pb	Zn	Ag	Mo	As	Sn	W								SAMPLE NUMBER
90																
91	75	10	130	BLD	BLD	BLD	5	125								
92.00																
93	75	85	260	BLD	BLD	BLD	16	150								
94																
95.00																
96	40	5	75	BLD	BLD	BLD	7	61								
97																
98.00																
99	60	5	85	BLD	BLD	BLD	BLD	82								
100																
101.00																
102	60	BLD	95	BLD	BLD	1	BLD	62								
103																
104.00																
105																

076

219072

METRES	Cu	Pb	Zn	Ag	Mo	As	Sn	W								SAMPLE NUMBER
105																
106	50	BLD	85	BLD	BLD	BLD	8	80								
107.00																
108	50	BLD	85	BLD	BLD	BLD	BLD	57								
109																
110																
111	60	5	90	BLD	BLD	BLD	4	70								
112																
113																
113.00																
114	70	BLD	105	BLD	BLD	BLD	BLD	92								
115																
116																
116.00																
117	60	BLD	90	BLD	BLD	BLD	BLD	76								
118																
119																
119.00																
120																

COMSTAFF PROPRIETARY LIMITED

ASSAY RESULT SHEET FOR

DDH CSB.5

ASSAYED BY ANALABS

FROM 105 TO 120

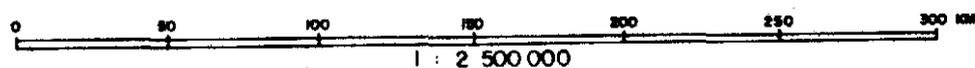
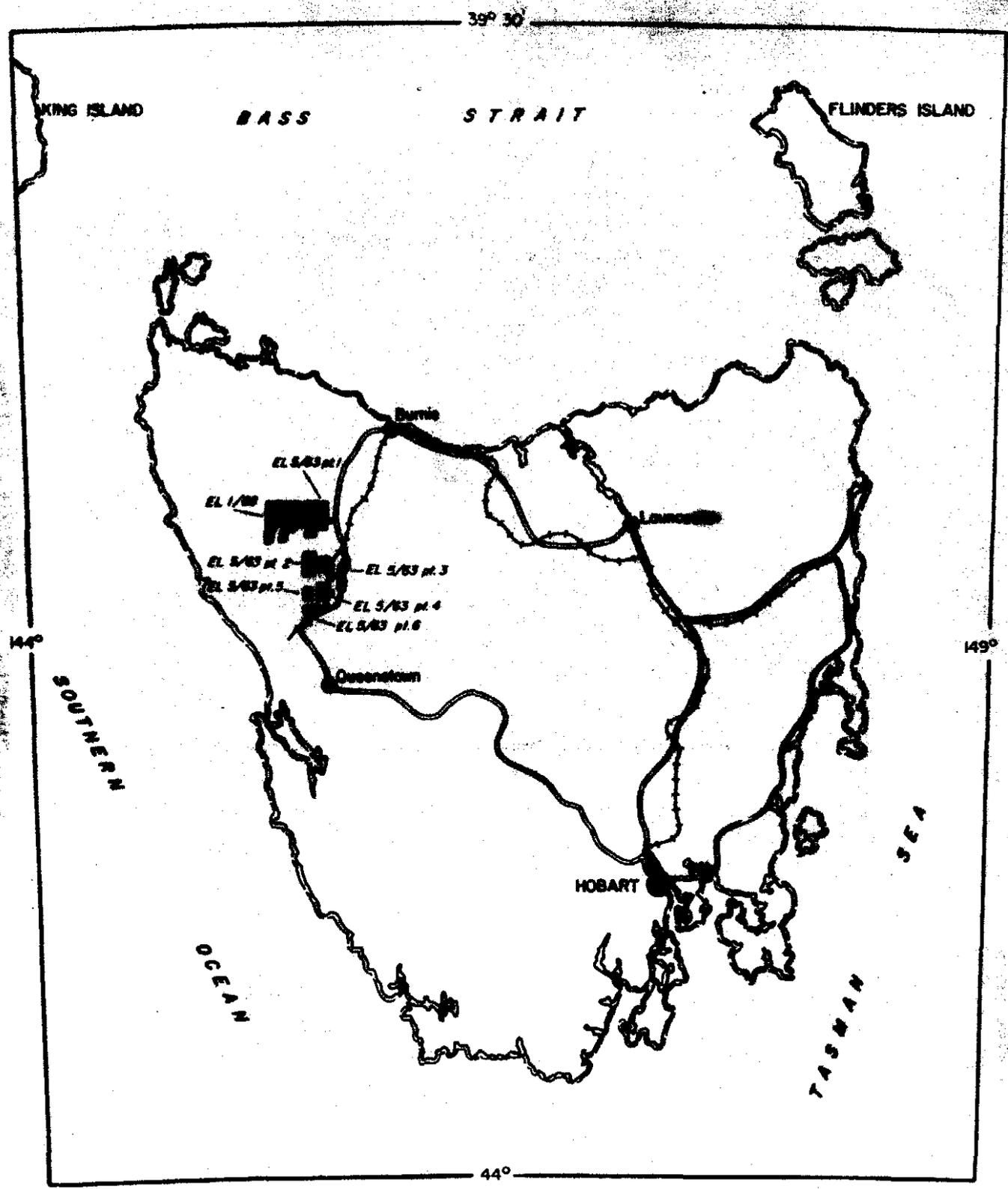
DATE 10/8/83

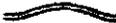
PAGE 8 OF 9



078

419079



-  Major roads
-  Major railways
-  Major towns
-  Comstaff lease areas

**COMSTAFF PROPRIETARY LIMITED**

**LOCATION OF COMSTAFF LEASES**

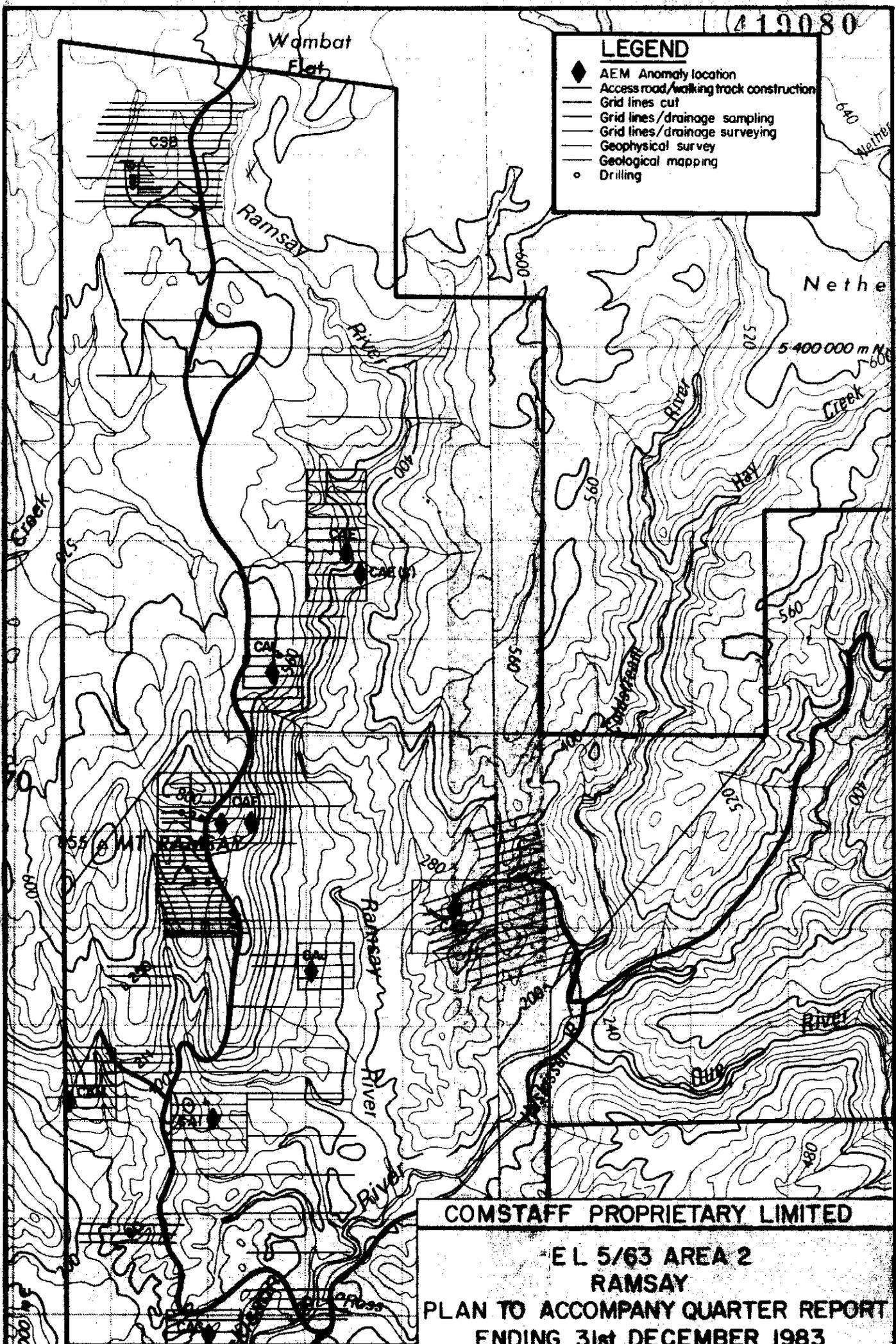
**IN TASMANIA**

079

419080

**LEGEND**

- ◆ AEM Anomaly location
- Access road/Walking track construction
- Grid lines cut
- Grid lines/drainage sampling
- Grid lines/drainage surveying
- Geophysical survey
- Geological mapping
- Drilling



**COMSTAFF PROPRIETARY LIMITED**

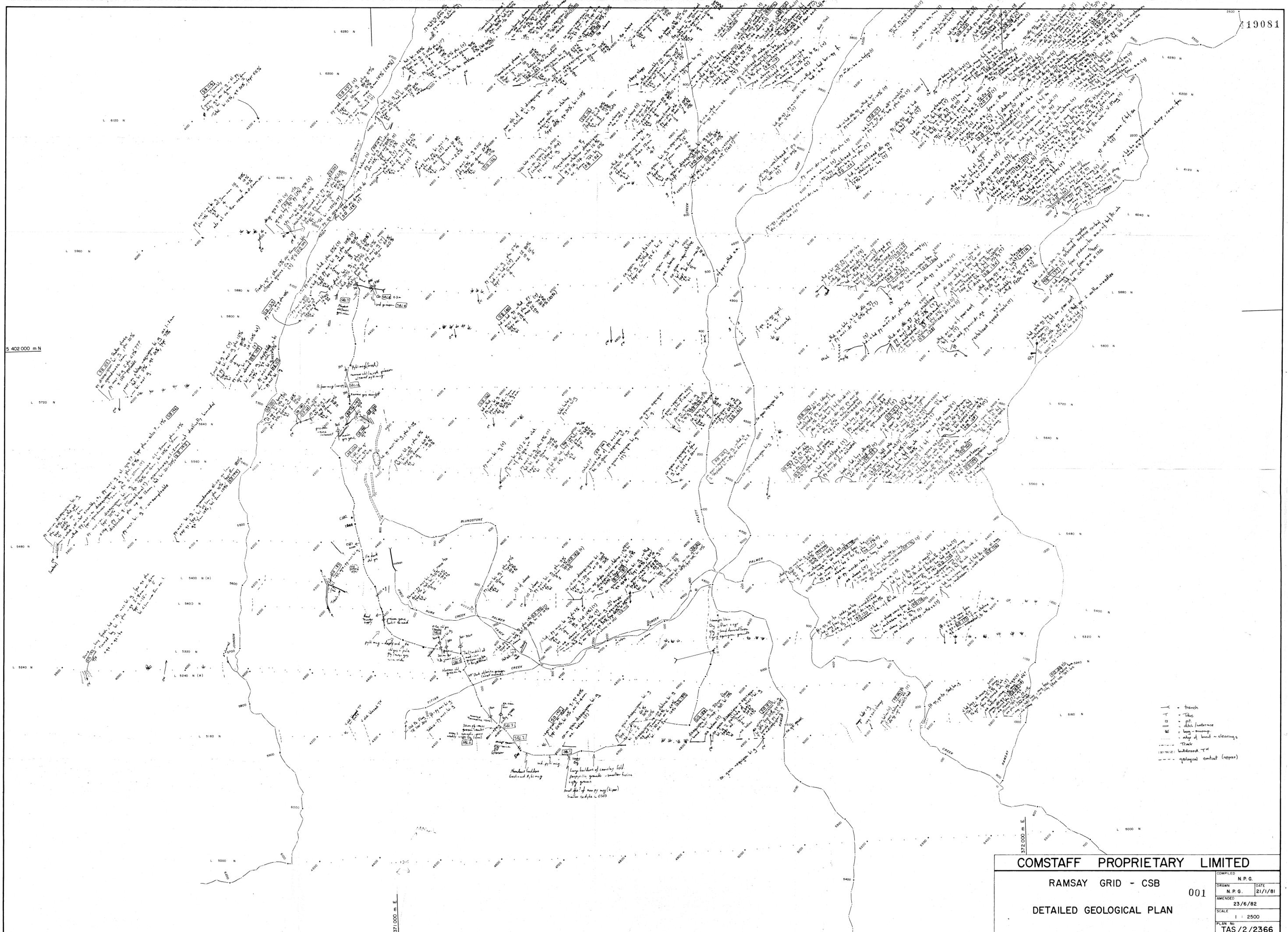
**E L 5/63 AREA 2**

**RAMSAY**

**PLAN TO ACCOMPANY QUARTER REPORT**

**ENDING 31st DECEMBER 1983**

COMPILED JAL	DRAWN GEODRAFT	SCALE 1 : 50 000	TAS/2/1799
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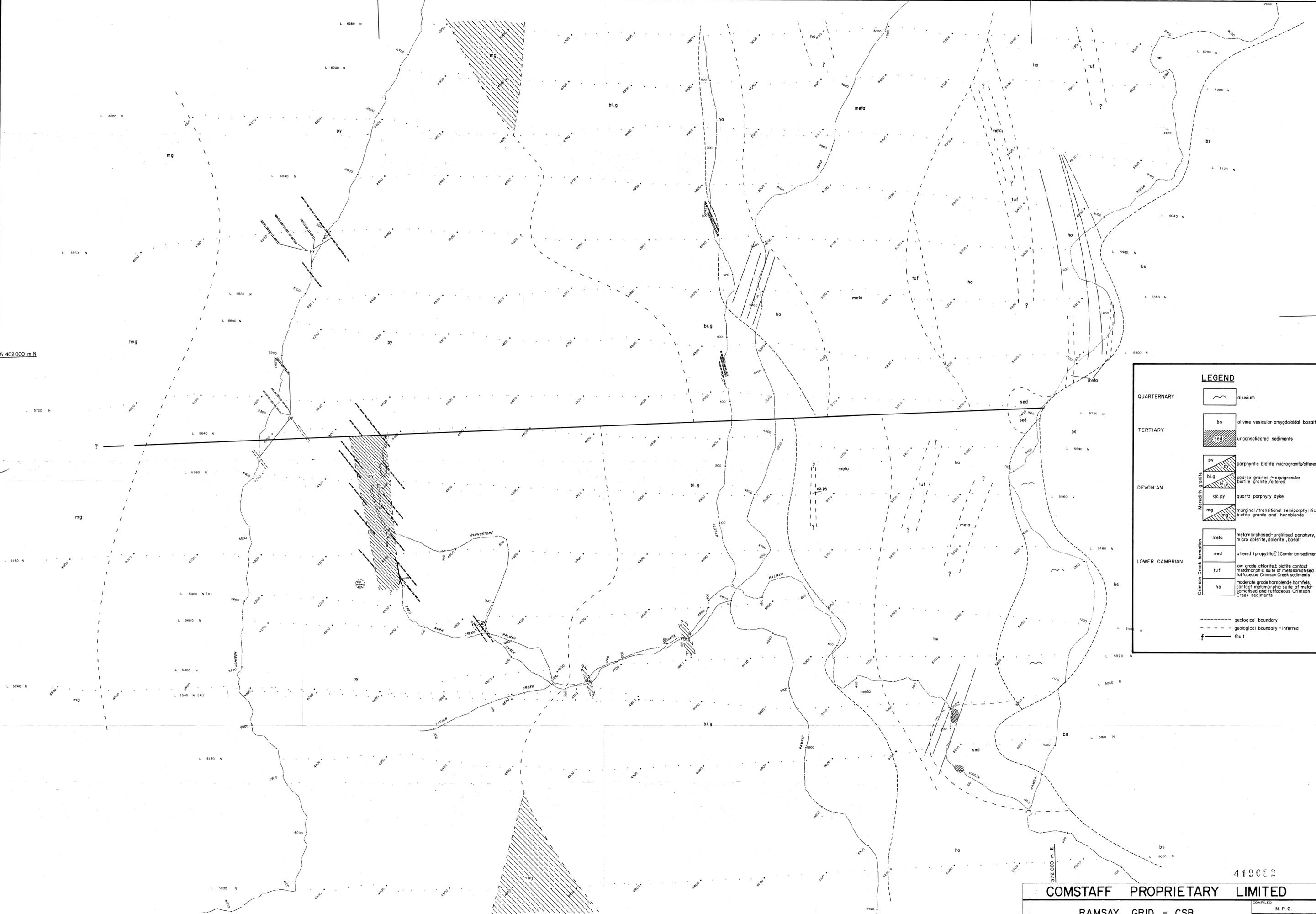
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

001

DETAILED GEOLOGICAL PLAN

COMPILED	N.P.G.
DRAWN	DATE
N.P.G.	21/1/81
AMENDED	
	23/6/82
SCALE	1 : 2500
PLAN No	TAS/2/2366



**LEGEND**

QUATERNARY		alluvium
TERTIARY		olivine vesicular amygdaloidal basalt
		unconsolidated sediments
DEVONIAN		porphyritic biotite microgranite/alterred
		coarse grained ~ equigranular biotite granite/alterred
		quartz porphyry dyke
		marginal/transitional semiporphyritic biotite granite and hornblende
LOWER CAMBRIAN		metamorphosed-uralitised porphyry, micro dolerite, dolerite, basalt
		alterred (propylitic?) Cambrian sediments
		low grade chlorite & biotite contact metamorphic suite of metasedimented tuffaceous Crimston Creek sediments
		moderate grade hornblende hornfels, contact metamorphic suite of metamorphosed and tuffaceous Crimston Creek sediments
		geological boundary
		geological boundary - inferred
		fault

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

002

GEOLOGICAL INTERPRETATION

COMPILED	N. P. G.
DRAWN	GEODRAFT
AMENDED	22/4/83
SCALE	1 : 2500
PLAN No	TAS/2/2375

419082

371,000 m E



5 402 000 m N

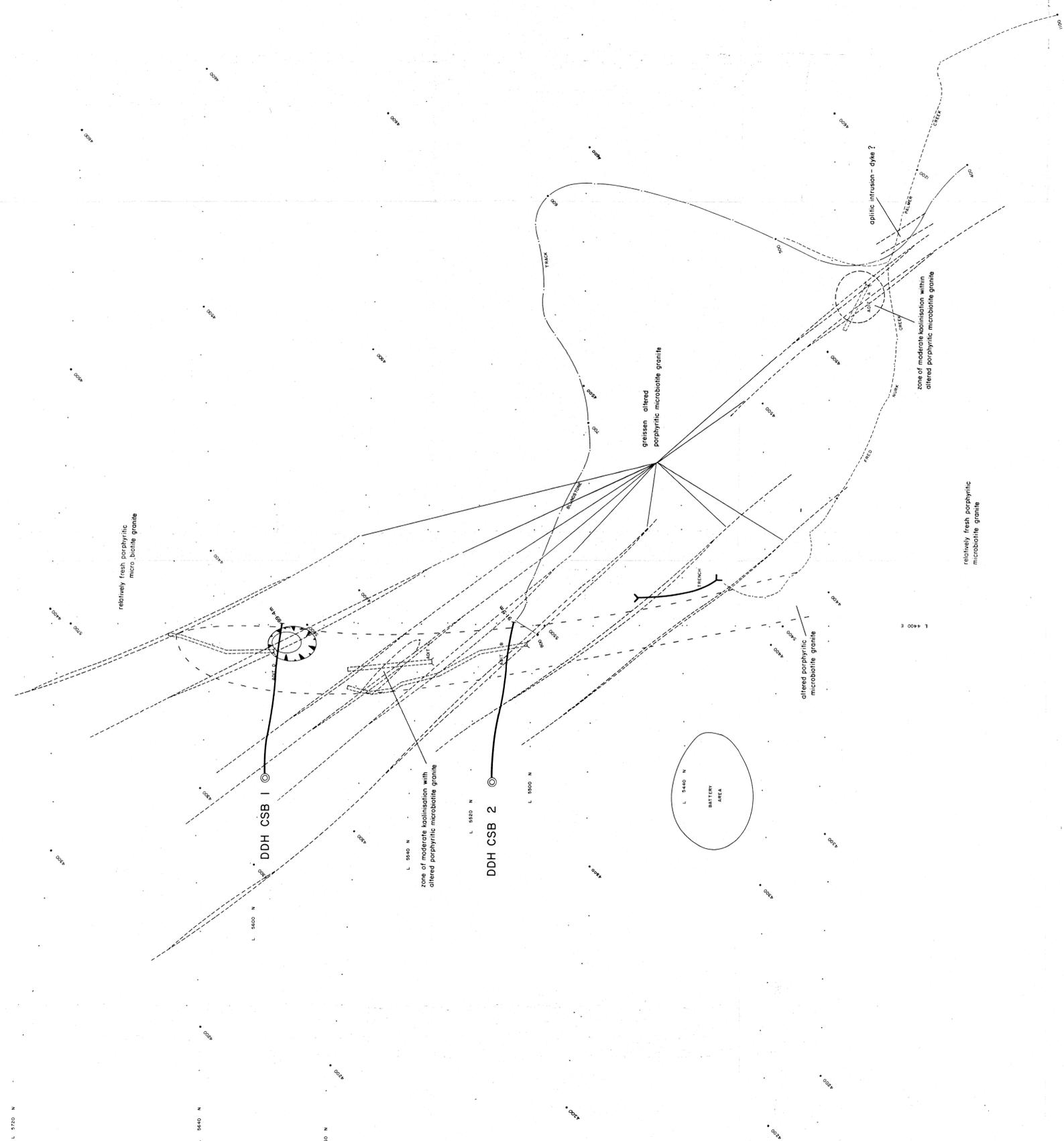
5 401 500 m N

419083

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 003  
 PLAN OF SOUTH BISCHOFF MINE AREA  
 GEOLOGICAL DETAILS

COMPILED	DRAFT
DRAWN	DATE
G. CRAFT	7/11
AMENDED	
SCALE	1 : 1000
PLAN NO	TAS/2/3113



371,000 m E

5,401,500 m N

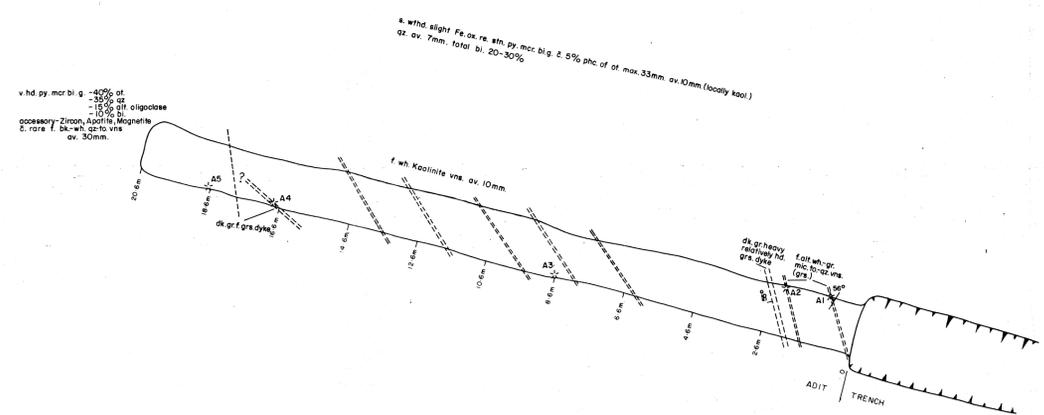
419084

COMSTAFF PROPRIETARY LIMITED

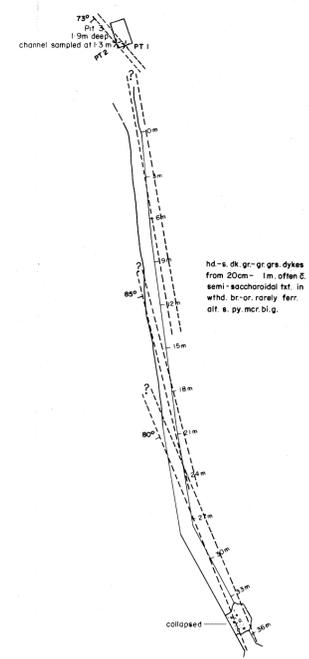
COMPILED N. P. GREEN	
DRAWN GEODRAFT	DATE 21/4/83
AMENDED	
SCALE 1 : 1000	
PLAN NO TAS / 2 / 3114	

RAMSAY GRID - CSB 004  
 PLAN OF SOUTH BISCHOFF MINE AREA  
 GEOLOGICAL INTERPRETATION

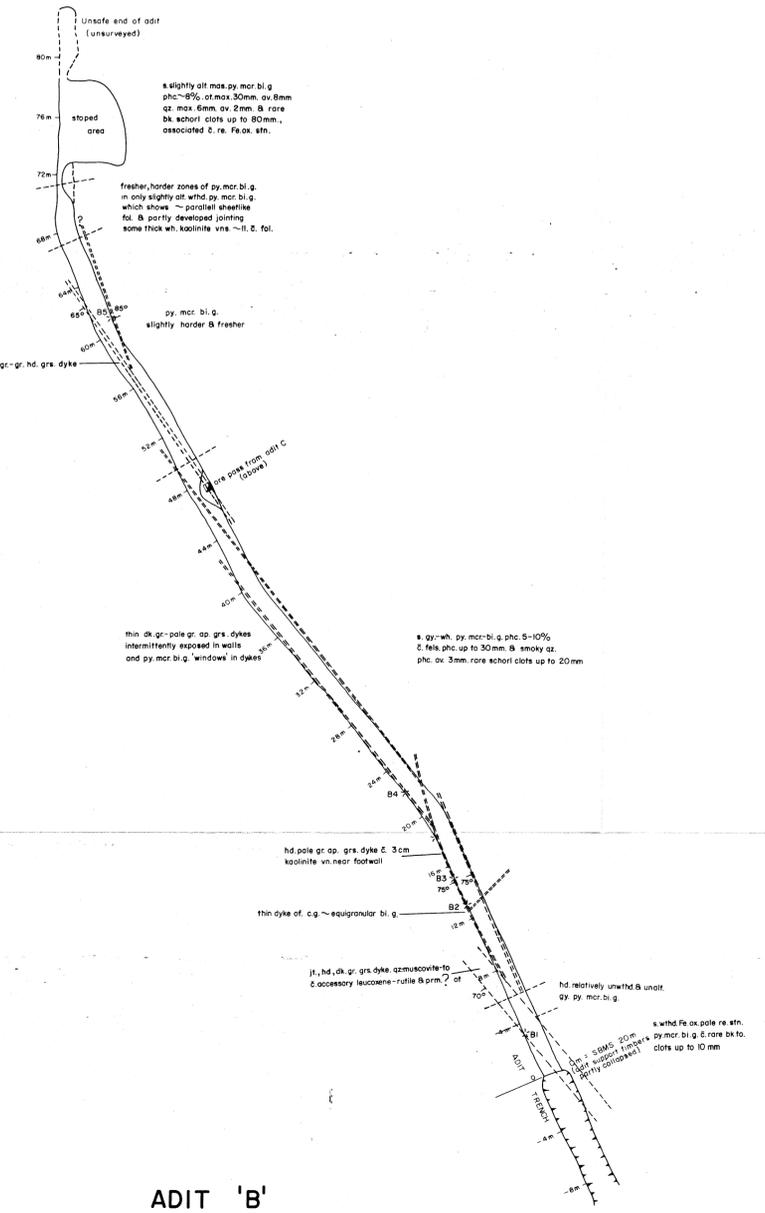
5,402,000 m N



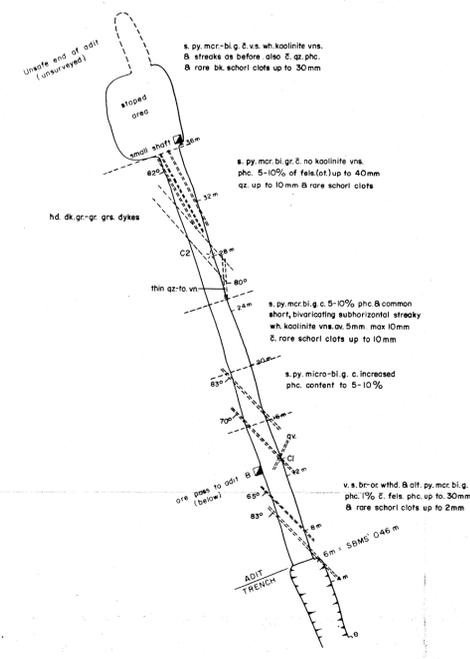
**ADIT 'A'**  
SCALE - 1 : 100



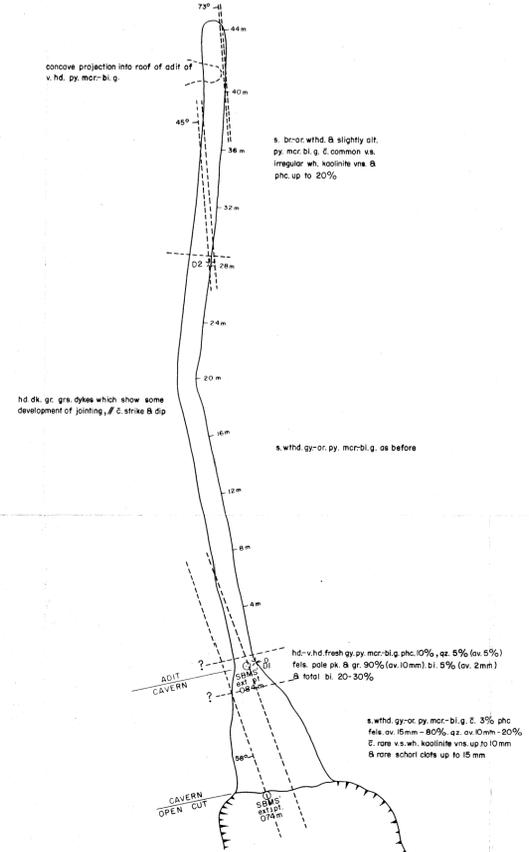
**MAIN COSTEAN**  
SCALE - 1 : 250



**ADIT 'B'**  
SCALE - 1 : 250



**ADIT 'C'**  
SCALE - 1 : 250



**ADIT 'D'**  
SCALE - 1 : 250



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

☆ = ROCK SAMPLE LOCATION

419085

**COMSTAFF PROPRIETARY LIMITED**

RAMSAY GRID - CSB 005  
SOUTH BISCHOFF MINE AREA, PLAN OF  
ADITS A, B, C, D & MAIN COSTEAN  
DETAILED GEOLOGICAL PLAN

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



5 402 000 m. N.

5 401 500 m. N.

419086

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 006  
 PLAN OF SOUTH BISCHOFF MINE AREA  
 GROUND MAGNETIC CONTOUR PLAN

COMPILED	DATE
DRAWN	DATE
AMENDED	
SCALE	1 : 1000
PLAN No	TAS/2/3115



419087

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 007

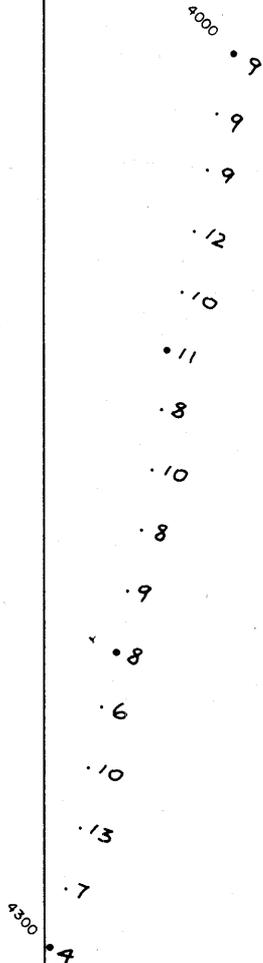
GEOCHEMICAL GRID AUGER SAMPLING  
COPPER RESULTS in ppm

COMPILED	H. PAPAS
DRAWN	H. PAPAS
DATE	21/1/81
AMENDED	23/6/82
SCALE	1 : 2500
PLAN No	TAS / 2 / 2367

080

5 402 542 m N

L 6240 N

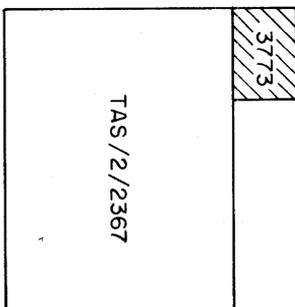


371 000 m E

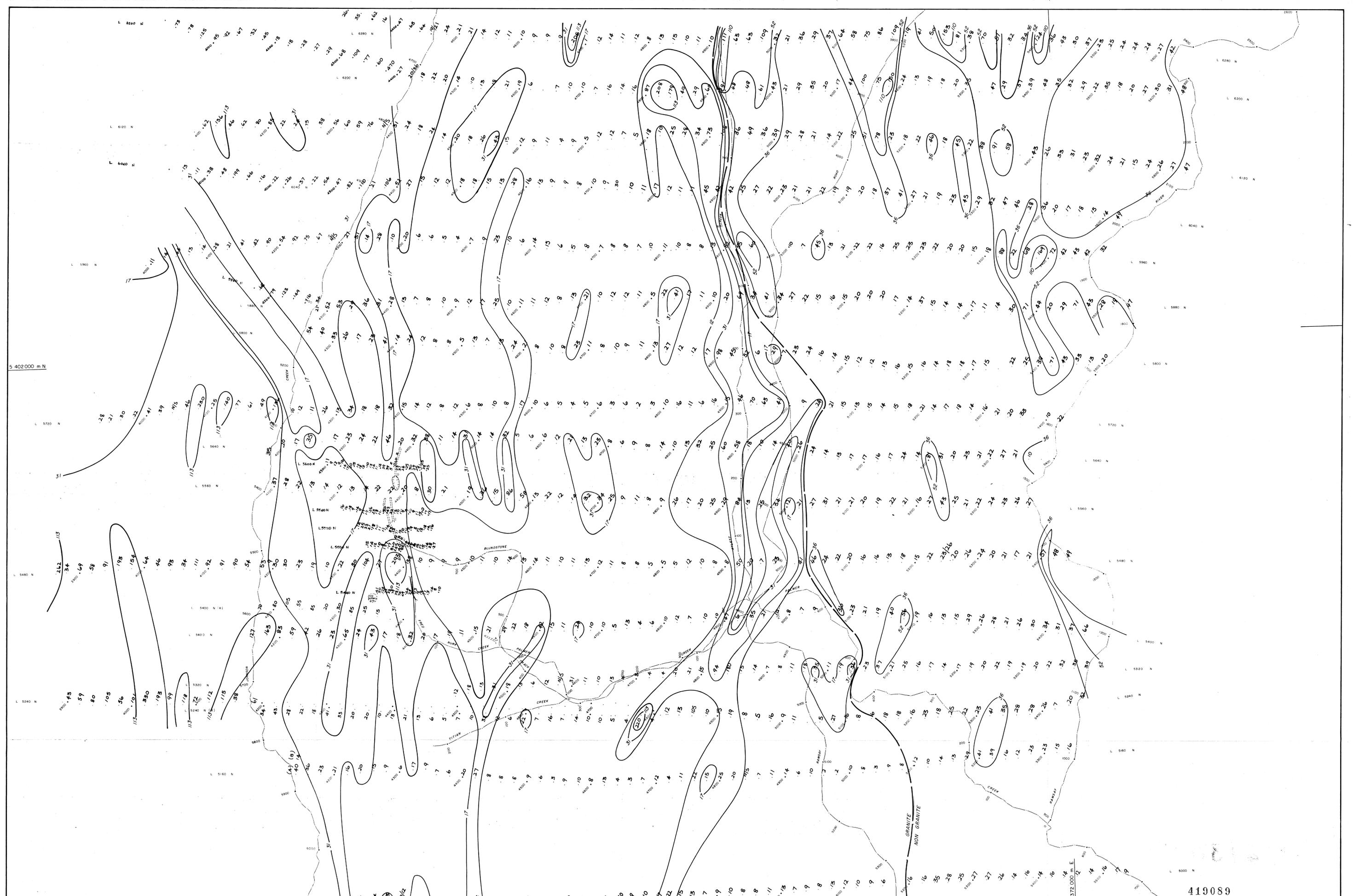
419088

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB  
 GEOCHEMICAL GRID AUGER SAMPLING  
 COPPER RESULTS in ppm



COMPILED J. A. LEVINGS	DRAWN H. PAPAS	DATE 16/12/83	AMENDED
LEASE No. EL 5/63	AREA 2	SCALE 1 : 2500	PLAN No. TAS/2/3773



419089

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 008  
 GEOCHEMICAL GRID AUGER SAMPLING  
 LEAD RESULTS in ppm

COMPILED	H. PAPAS
DRAWN	H. PAPAS
DATE	21/1/81
AMENDED	23/6/82
SCALE	1 : 2500
PLAN NO.	TAS/2/2368

180

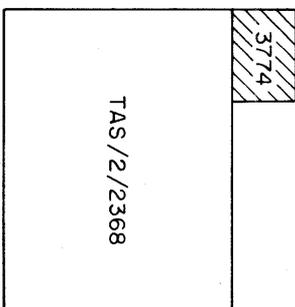
5 402 542 m N

L 6240 N

4000 • 6  
 • 53  
 • 92  
 • 51  
 • 50  
 • 54  
 • 36  
 • 32  
 • 192  
 • 31  
 • 33  
 • 19  
 • 68  
 • 28  
 • 15  
 4300 • 21

371 000 m E

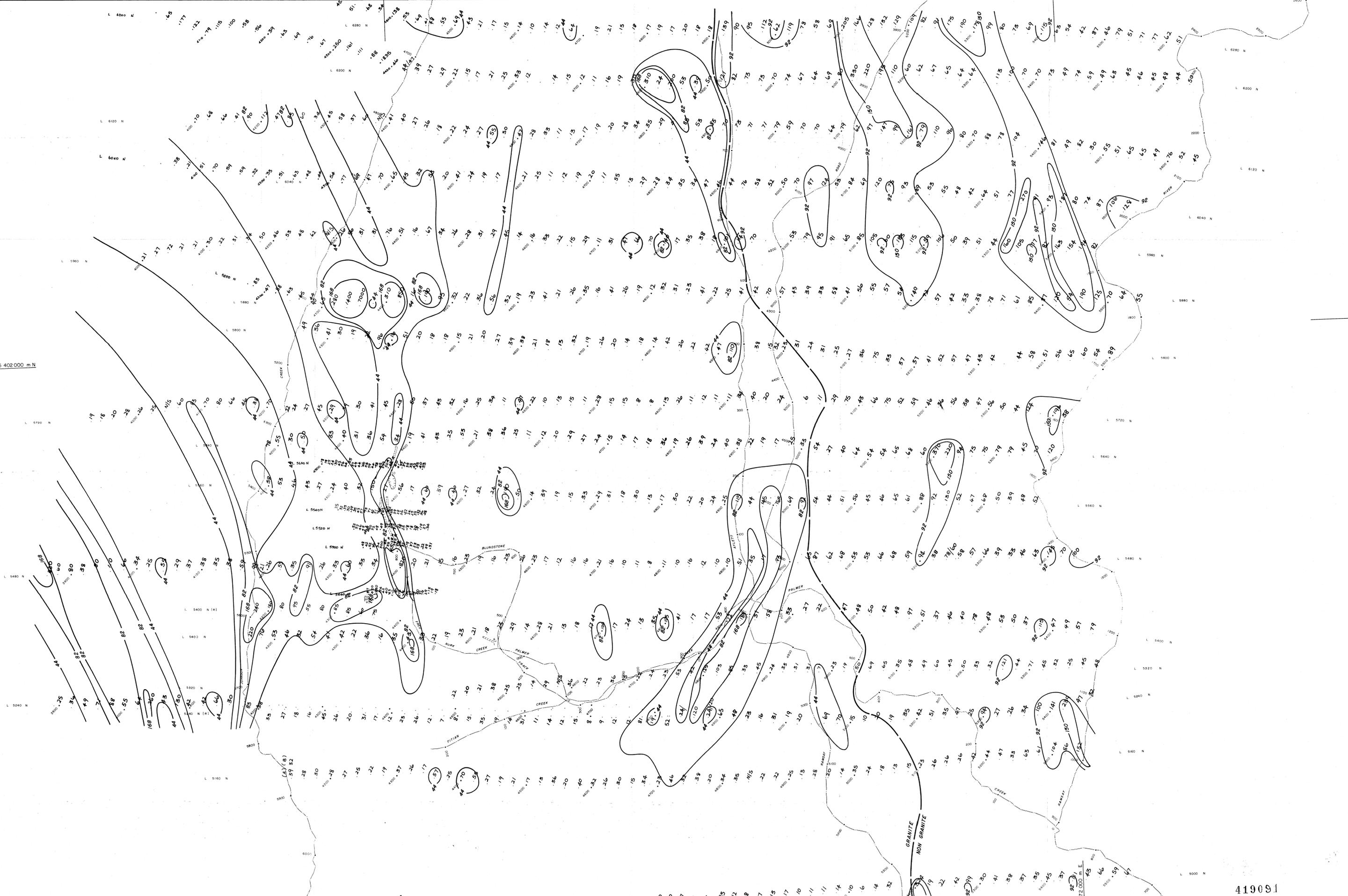
419090



COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB  
 GEOCHEMICAL GRID AUGER SAMPLING  
 LEAD RESULTS in ppm

COMPILED J.A. LEVINGS	DRAWN H. PAPAS	DATE 16/12/83	AMENDED
LEASE No EL 5/63	AREA 2	SCALE 1 : 2500	PLAN No TAS/2/3774



419091

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 003  
 GEOCHEMICAL GRID AUGER SAMPLING  
 ZINC RESULTS in ppm

COMPILED	DATE
DRAWN	21/1/81
AMENDED	23/6/82
SCALE	1 : 2500
PLAN No	TAS / 2 / 2369

082

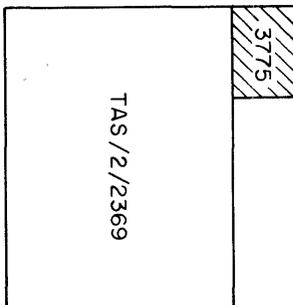
S 402 542 m. N

L 6240 N

4000 • 35  
 • 83  
 • 94  
 • 184  
 • 72  
 • 164  
 • 100  
 • 53  
 • 65  
 • 51  
 • 70  
 • 50  
 • 131  
 • 189  
 • 60  
 4300 • 44

371 000 m E

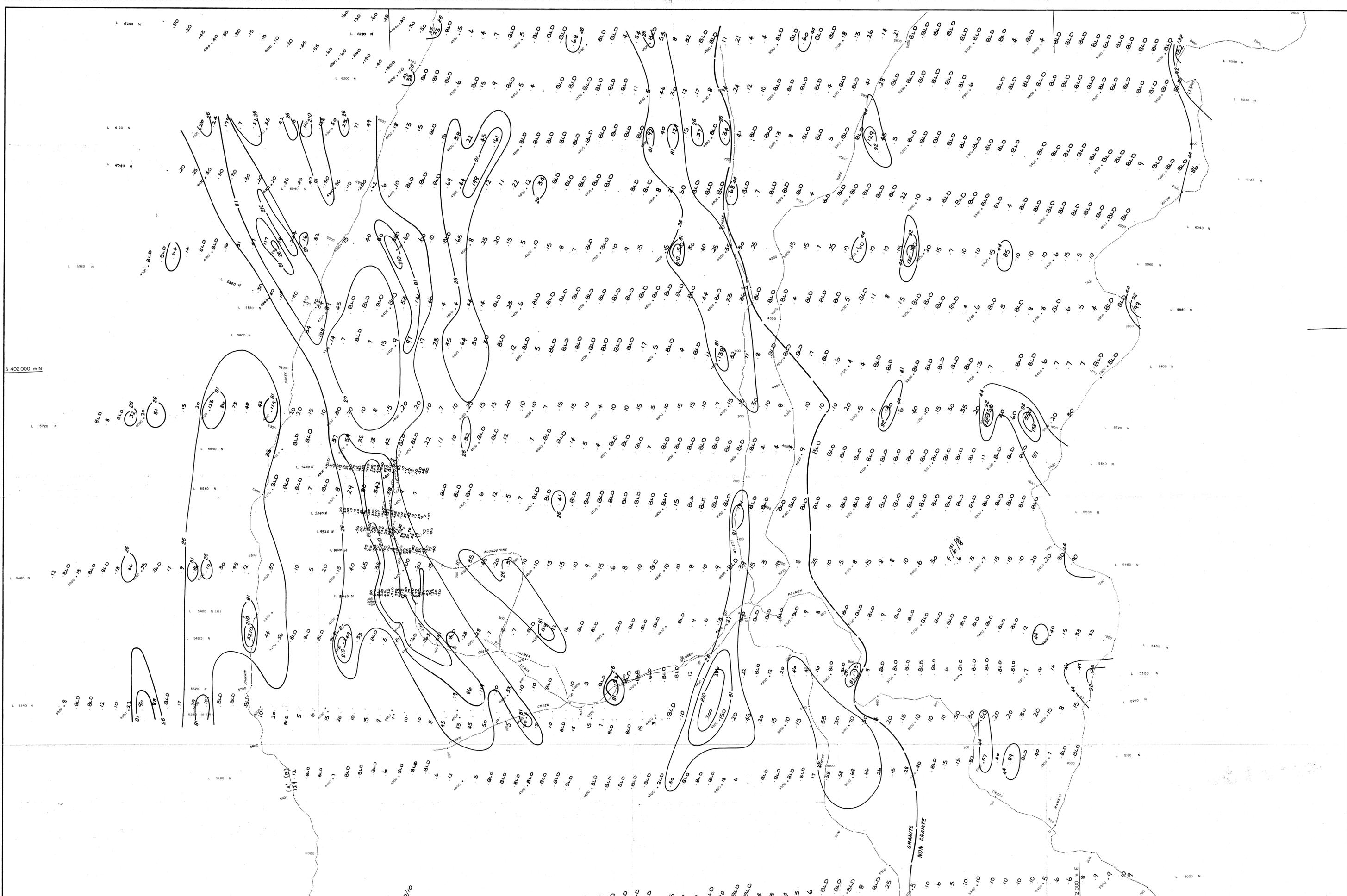
419092



COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB  
 GEOCHEMICAL GRID AUGER SAMPLING  
 ZINC RESULTS in ppm

COMPILED J. A. LEVINGS	DRAWN H. PAPAS	DATE 16/12/83	AMENDED
LEASE No EL 5/63	AREA 2	SCALE 1 : 2500	PLAN No TAS/2/3775



COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 010

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

COMPILED	H. PAPAS
DRAWN	H. PAPAS
DATE	21/1/81
AMENDED	23/6/82
SCALE	1 : 2500
PLAN NO.	TAS/2/2370

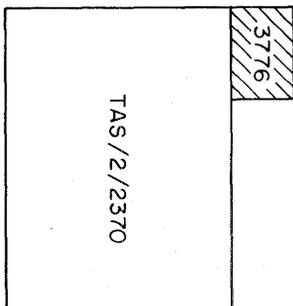
083

5 402 542 m N

L 6240 N

4000 • 25  
 .20  
 .50  
 .60  
 .15  
 • 30  
 .30  
 .20  
 .30  
 .20  
 • 20  
 .15  
 .220  
 .90  
 .110  
 4300 • 150

371 000 m E



419093

COMSTAFF PROPRIETARY LIMITED			
RAMSAY GRID - CSB GEOCHEMICAL GRID AUGER SAMPLING TIN RESULTS in ppm			
COMPILED J. A. LEVINGS	DRAWN H. PAPAS	DATE 16/12/83	AMENDED
LEASE No. EL 5/63	AREA 2	SCALE 1 : 2500	PLAN No. TAS/2/3776

5 402 000 m N



419094

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB 011

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

COMPILED	H. PAPAS
DRAWN	H. PAPAS
DATE	21/1/81
AMENDED	23/6/82
SCALE	1 : 2500
PLAN No	TAS / 2 / 237

08A

5 402 542 m N

L 6240 N

4000

• 2

• 4

• 7

• 2

• 3

• 3

• 1

• 3

• 7

• 3

• 1

• 1

• 5

• x

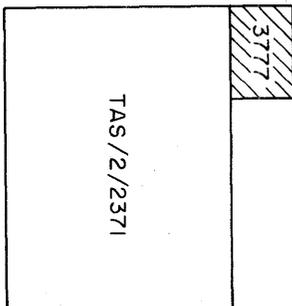
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4300

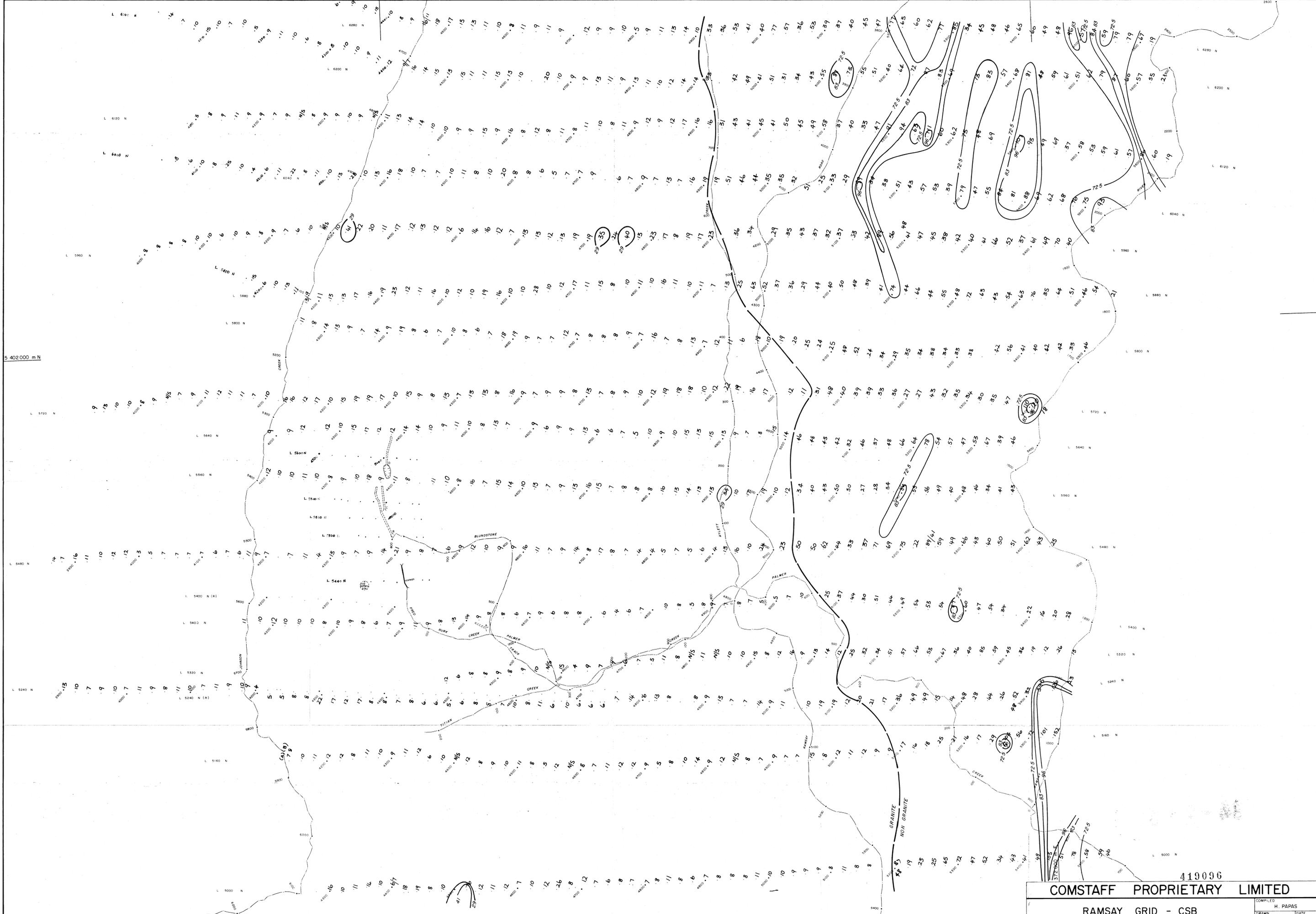
• 1

371 000 m E

419095



COMSTAFF PROPRIETARY LIMITED			
RAMSAY GRID - CSB GEOCHEMICAL GRID AUGER SAMPLING ARSENIC RESULTS in ppm			
COMPILED J.A. LEVINGS	DRAWN H.PAPAS	DATE 16/12/83	AMENDED
LEASE No EL 5/63	AREA 2	SCALE 1 : 2500	PLAN No TAS/2/3777



5 402.000 m N

419096

COMSTAFF PROPRIETARY LIMITED

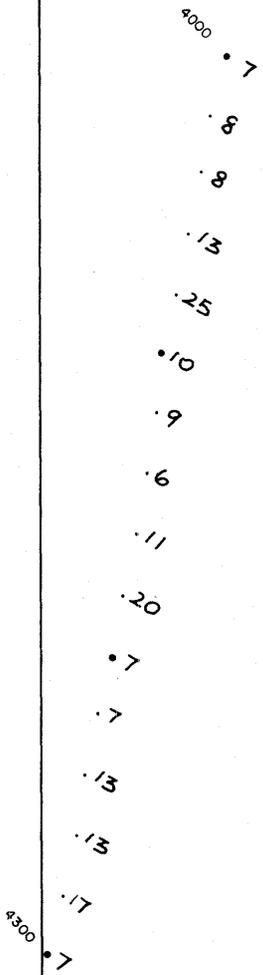
RAMSAY GRID - CSB  
 GEOCHEMICAL GRID AUGER SAMPLING  
 NICKEL RESULTS in ppm 012

COMPILED	H. PAPAS
DRAWN	H. PAPAS
DATE	21/1/81
AMENDED	23/6/82
SCALE	1 : 2500
PLAN No	TAS/2/2372

085

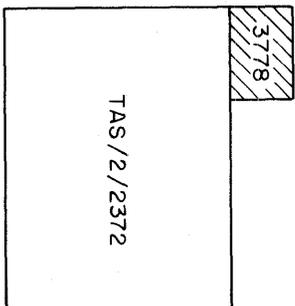
5 402 542 m N

L 6240 N

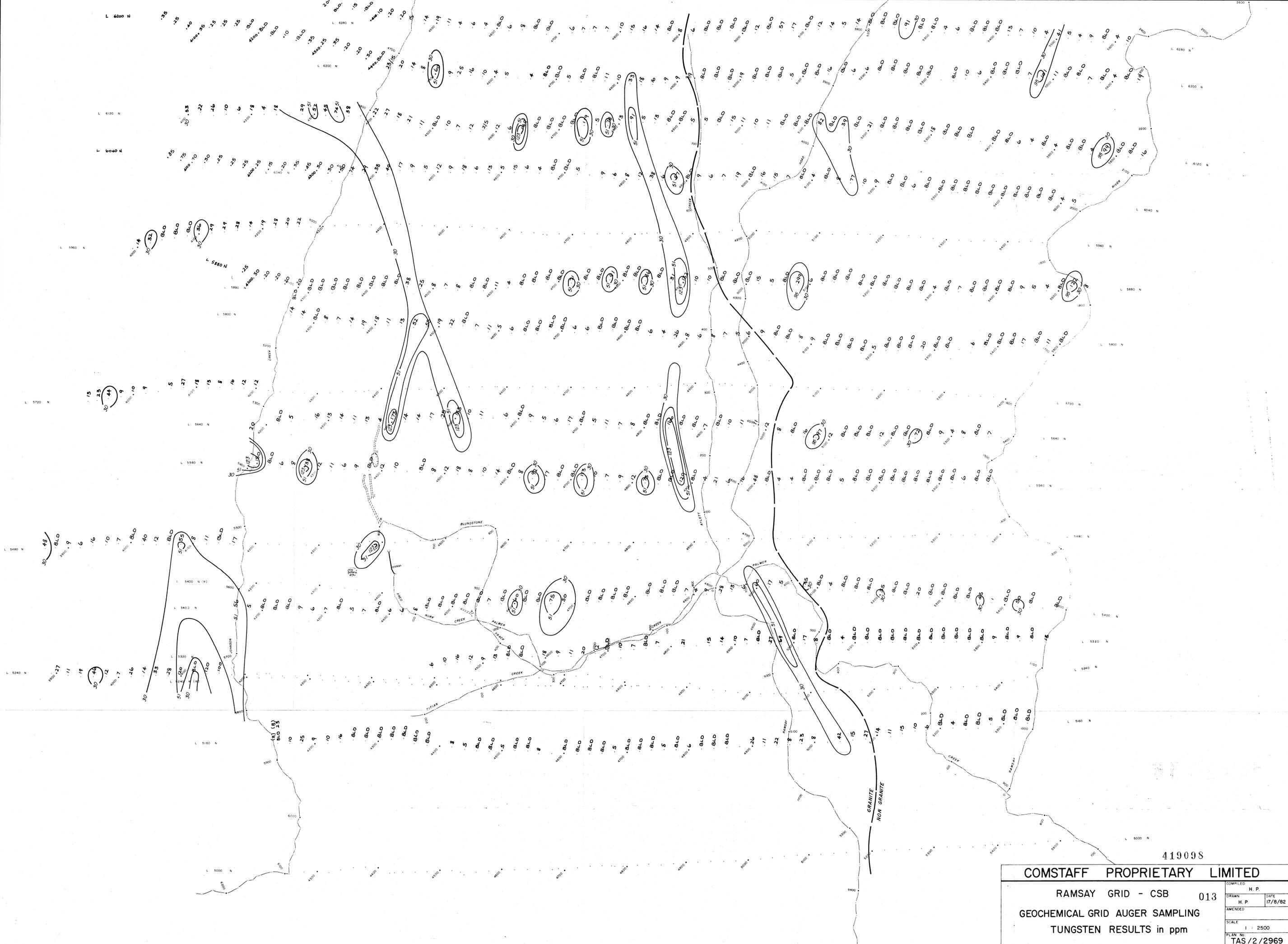


371 000 m E

419097



COMSTAFF PROPRIETARY LIMITED			
RAMSAY GRID - CSB GEOCHEMICAL GRID AUGER SAMPLING NICKEL RESULTS in ppm			
COMPILED J. A. LEVINGS	DRAWN H. PAPAS	DATE 16/12/83	AMENDED
LEASE No EL 5/63	AREA 2	SCALE 1 : 2500	PLAN No TAS/2/3778



419098

<b>COMSTAFF PROPRIETARY LIMITED</b>	
RAMSAY GRID - CSB	013
GEOCHEMICAL GRID AUGER SAMPLING	
TUNGSTEN RESULTS in ppm	
COMPILED	H. P.
DRAWN	DATE
AMENDED	17/8/82
SCALE	1 : 2500
PLAN NO.	TAS / 2 / 2969

086

5 402 542 m N

L 6240 N

4000 • BLD  
 .20  
 .20  
 .20  
 • BLD  
 .15  
 .20  
 .20  
 .20  
 .15  
 .15  
 .15  
 .25  
 • BLD  
 .10  
 4300 • BLD

371 000 m E

419099

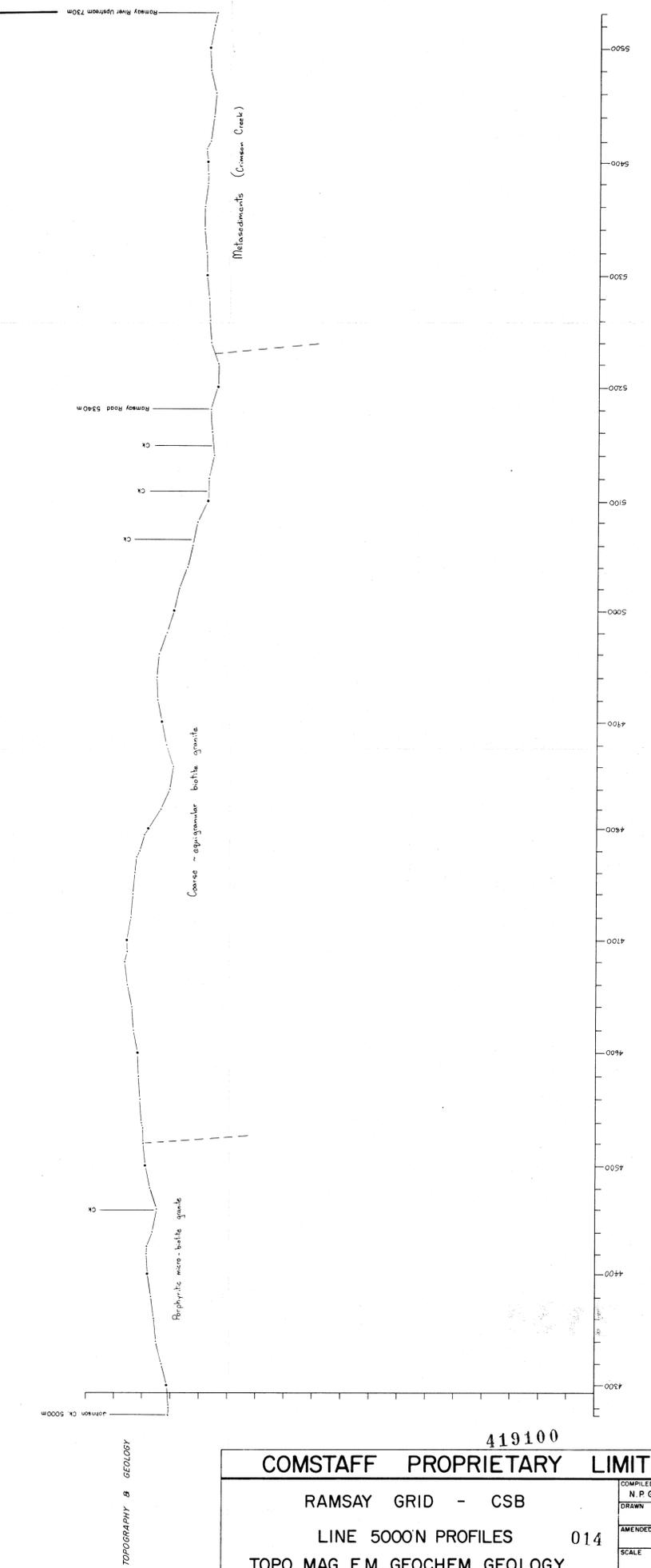
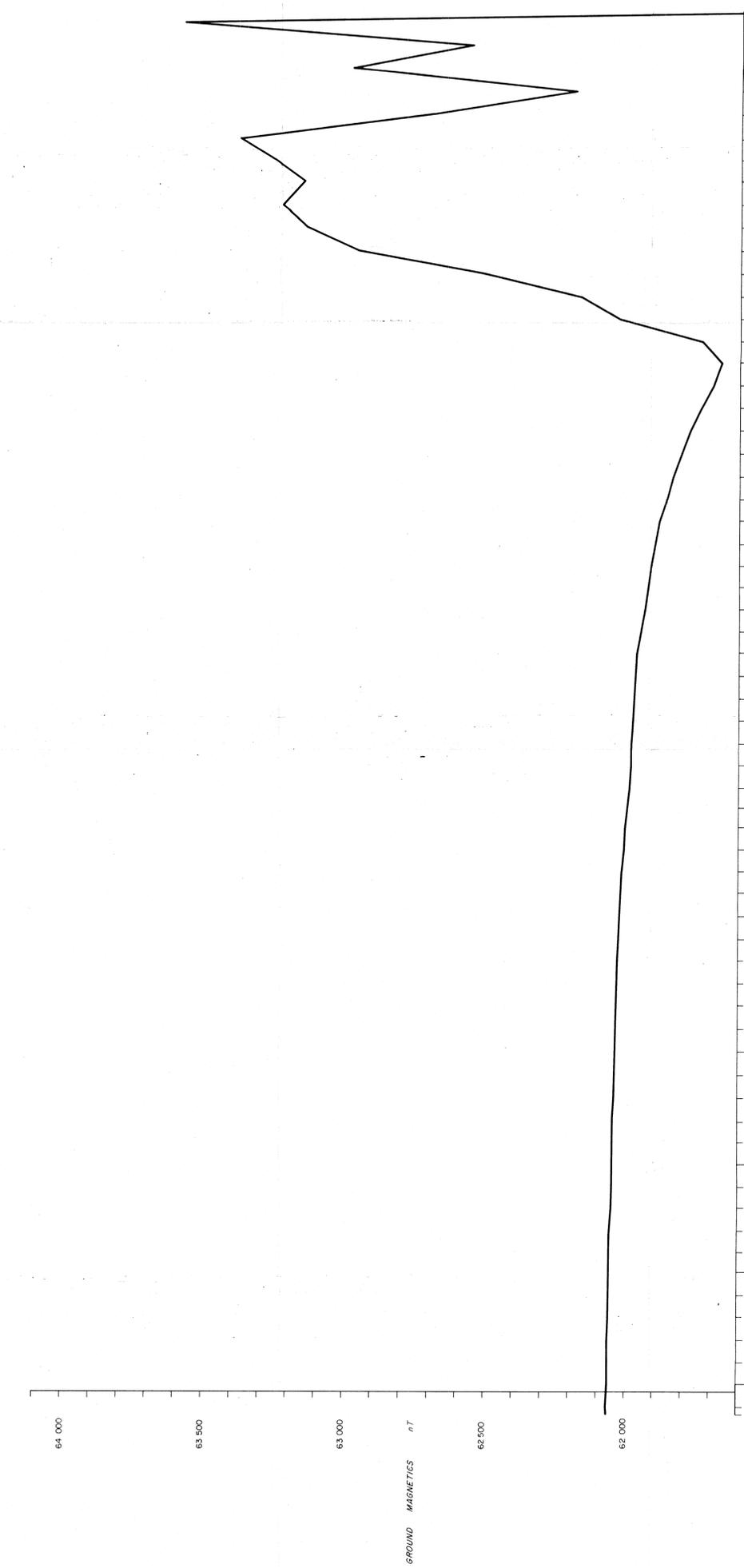
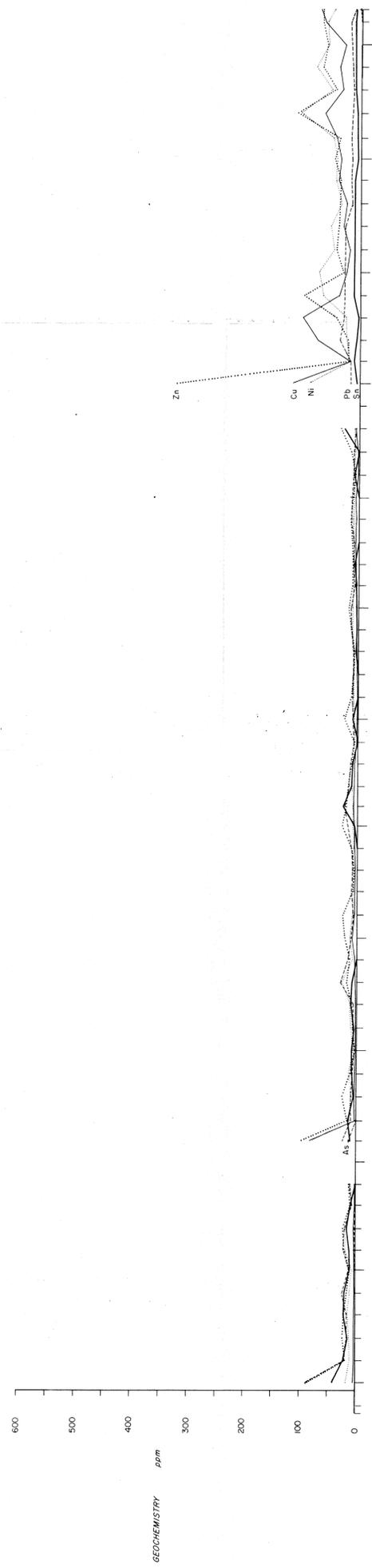
TAS/2/2969

3779

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB  
 GEOCHEMICAL GRID AUGER SAMPLING  
 TUNGSTEN RESULTS in ppm

COMPILED J. A. LEVINGS	DRAWN H. PAPAS	DATE 16/12/83	AMENDED
LEASE No EL 5/63	AREA 2	SCALE 1 : 2500	PLAN No TAS/2/3779



419100

**COMSTAFF PROPRIETARY LIMITED**

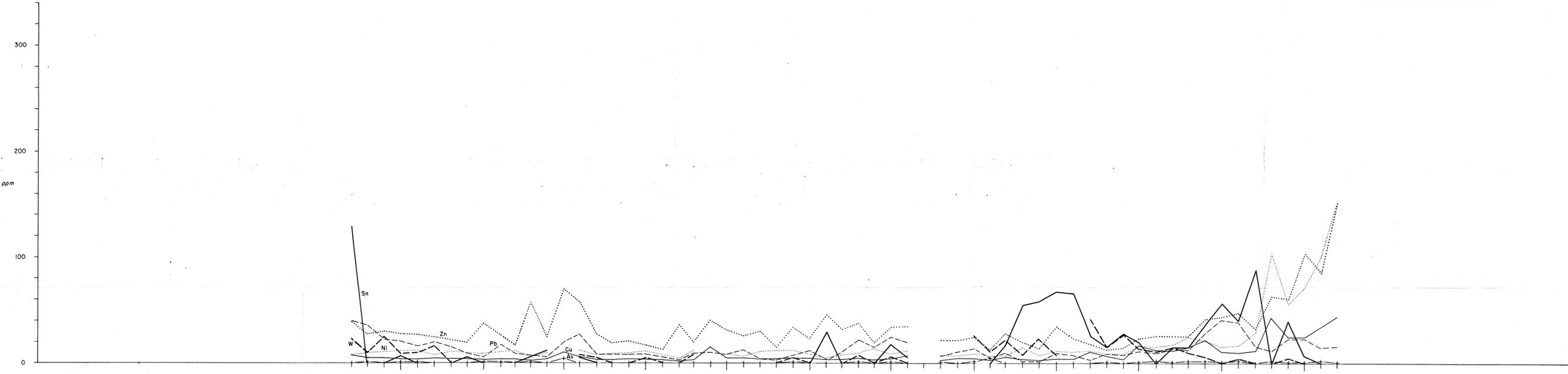
RAMSAY GRID - CSB

LINE 5000N PROFILES 014

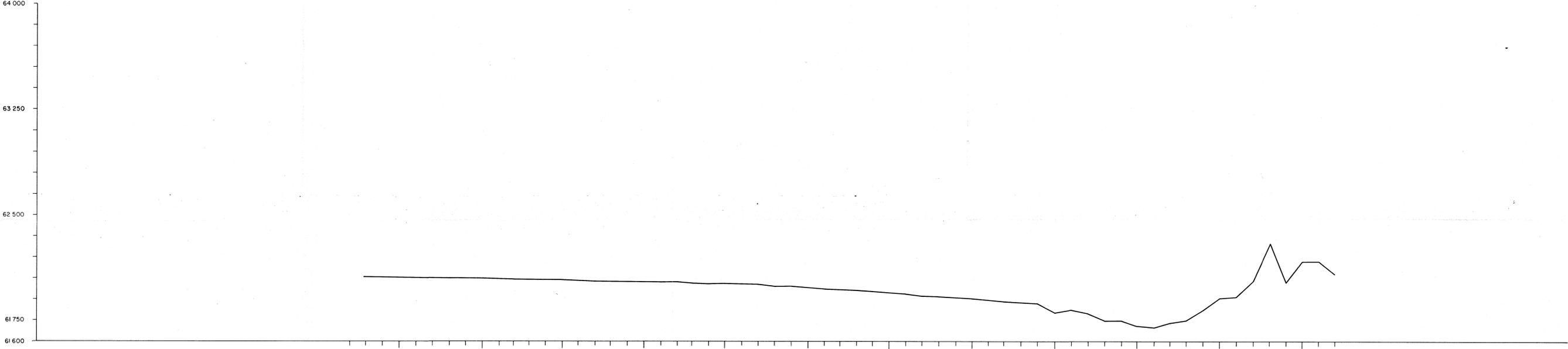
TOPO, MAG, E.M., GEOCHEM, GEOLOGY

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

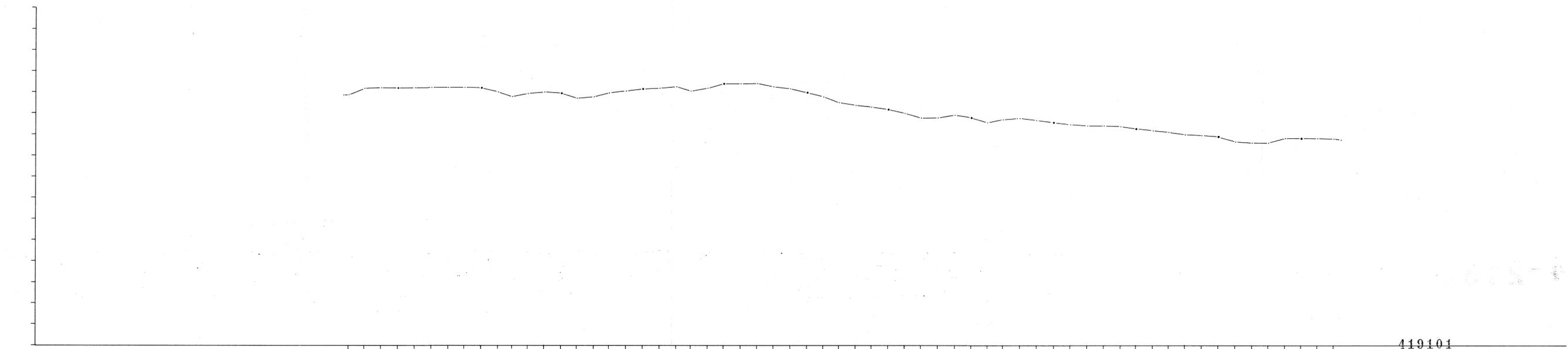
GEOCHEMISTRY ppm



GROUND MAGNETICS nT



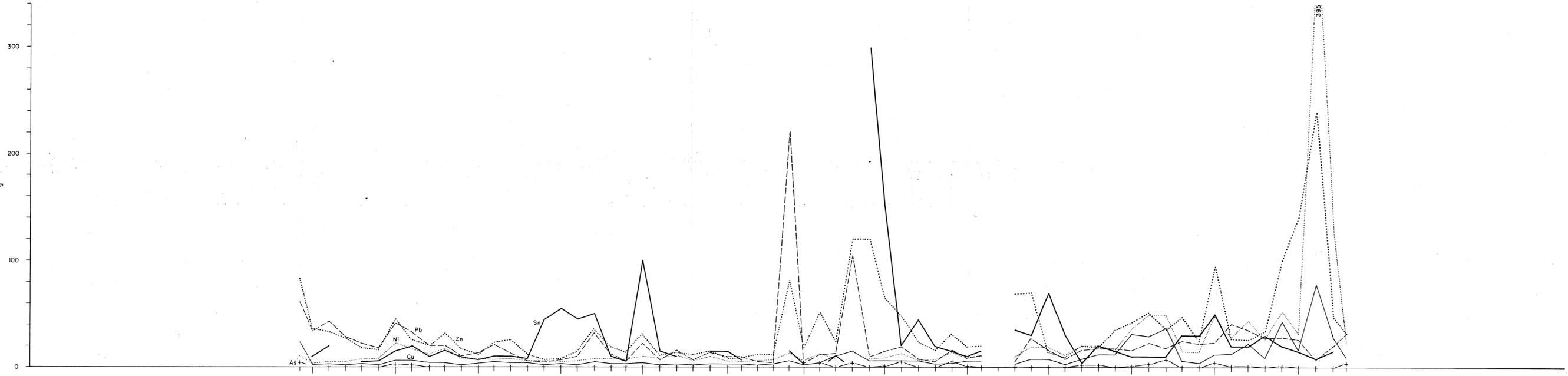
TOPOGRAPHY & GEOLOGY



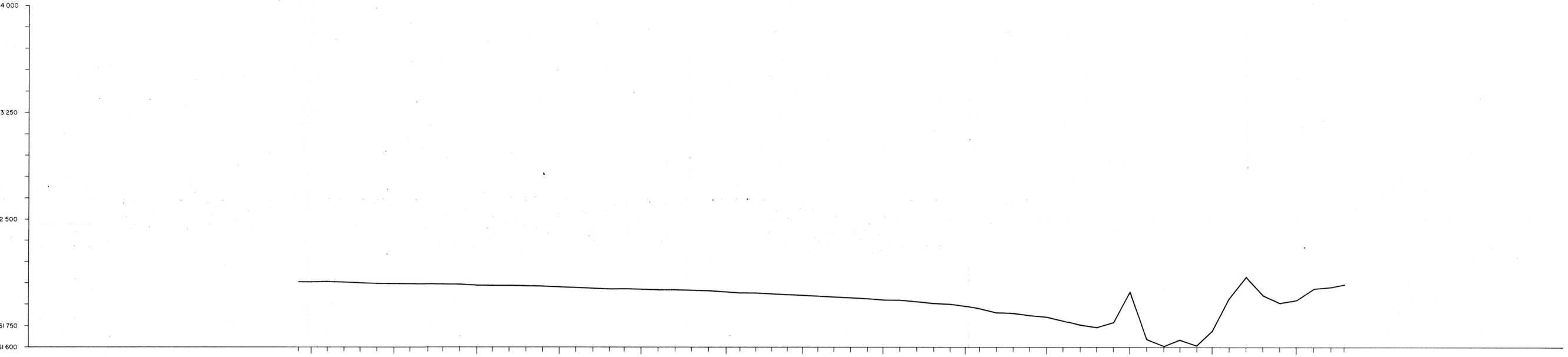
419101

<b>COMSTAFF PROPRIETARY LIMITED</b>		COMPILED N. P. GREEN
LEASE NO. EL 5/63	AREA 2	DRAWN GEODRAFT
AMENDMENTS 1 8 2 9 3 10 4 11 5 12 6 13 7 14		DATE MAY 1983
		SCALE 1 : 2500
		REF. NO. TAS/2/3223
		RAMSAY GRID - CSB 015 COMPOSITE SECTION OF LINE 5160 N TOPO, MAG, GEOCHEMISTRY, GEOLOGY

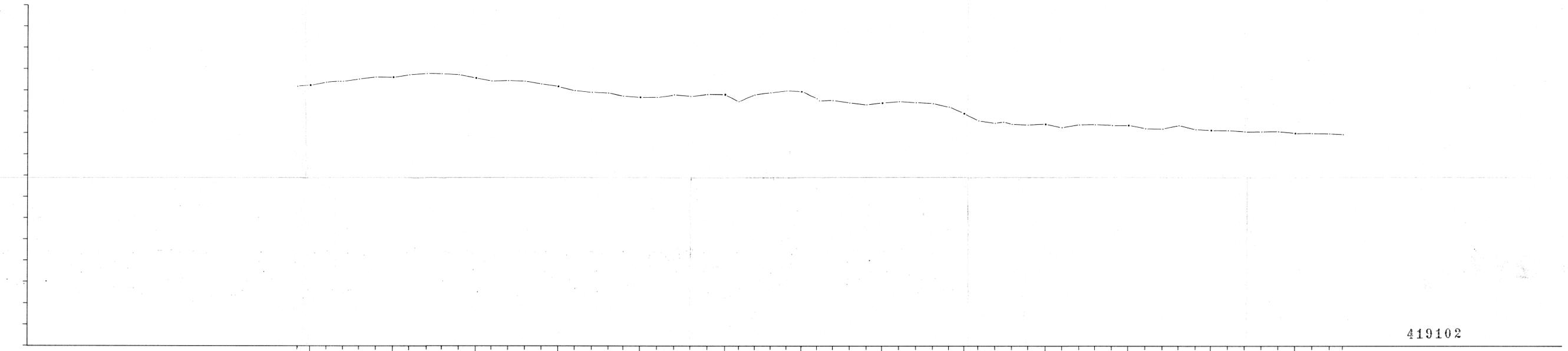
GEOCHEMISTRY ppm



GROUND MAGNETICS nT

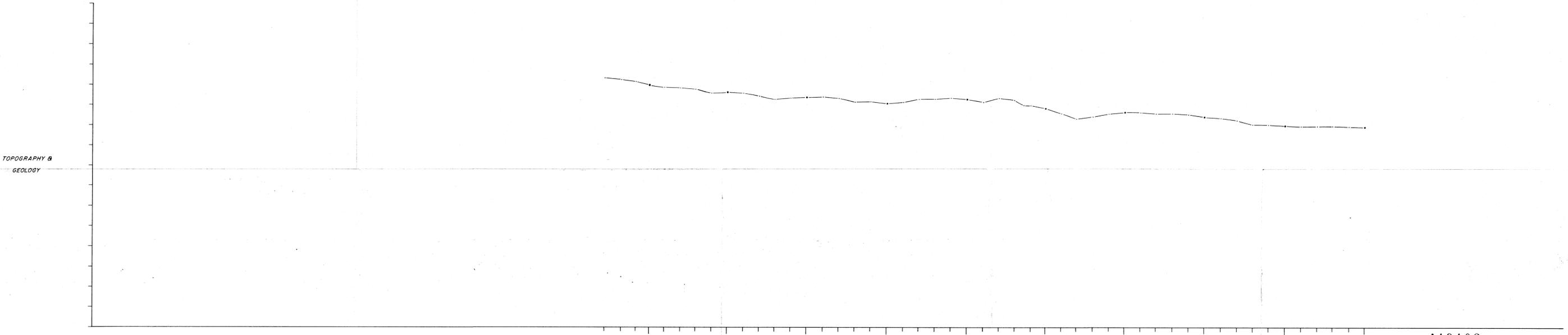
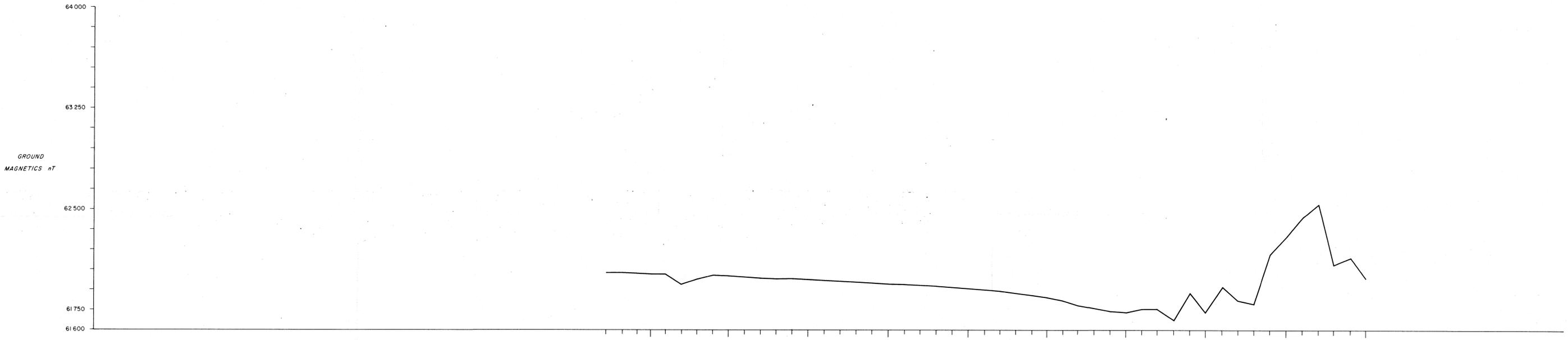
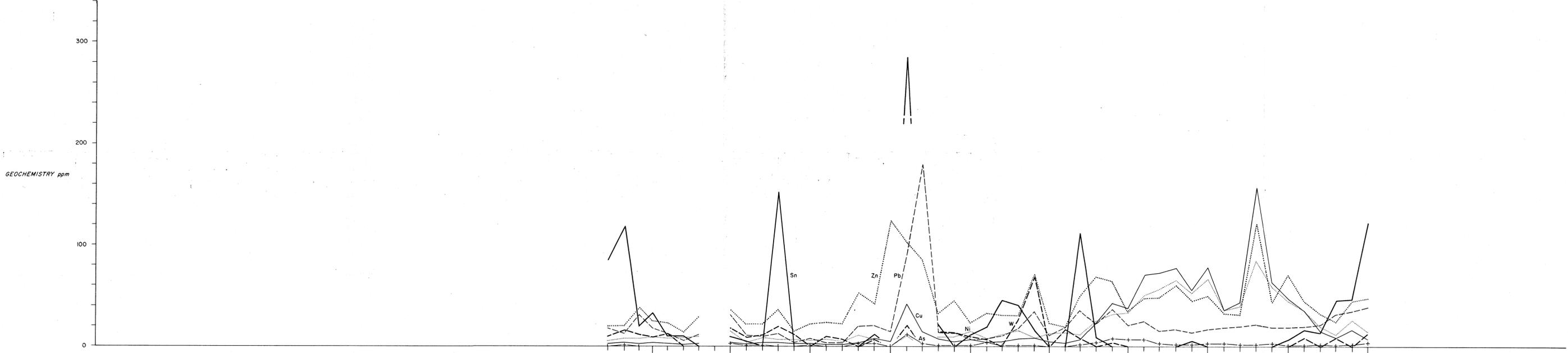


TOPOGRAPHY & GEOLOGY



419102

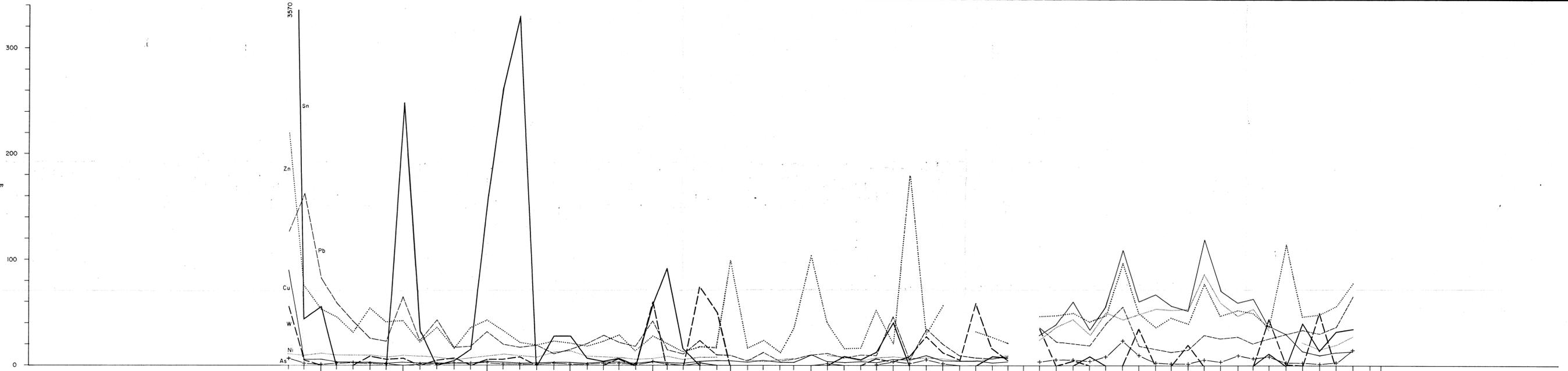
<b>COMSTAFF PROPRIETARY LIMITED</b>		<b>RAMSAY GRID - CSB 016</b>	
LEASE No	EL 5/63	COMPILED	N. P. GREEN
AREA	2	DRAWN	GEODRAFT
AMENDMENTS		DATE	MAY 1983
1	25/3/83	8	
2		9	
3		10	
4		11	
5		12	
6		13	
7		14	
		SCALE	1 : 2500
		REF No	TAS/2/2585
		COMPOSITE SECTION OF LINE 5240 N TOPO, MAG, GEOCHEMISTRY, GEOLOGY	



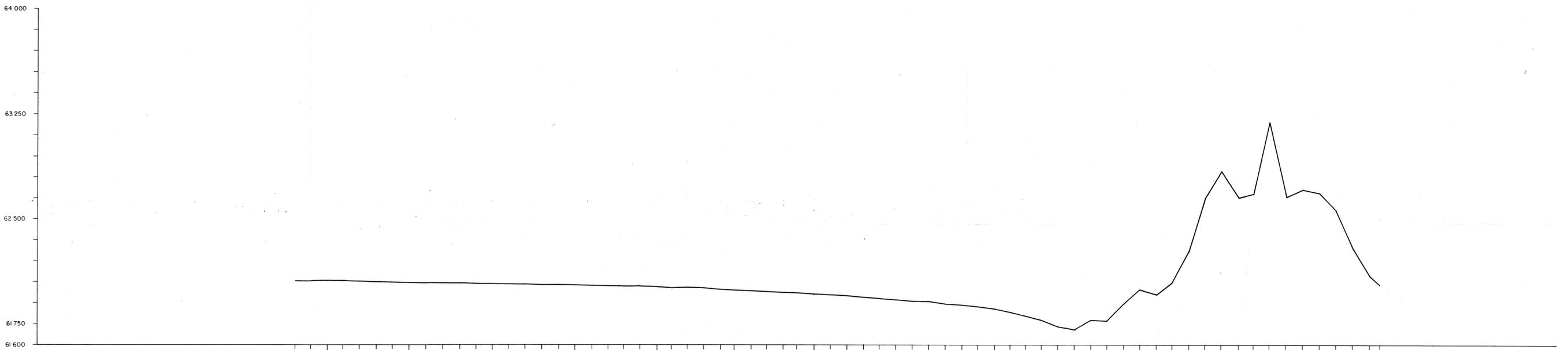
419103

<b>COMSTAFF PROPRIETARY LIMITED</b>		RAMSAY GRID - CSB 017 COMPOSITE SECTION OF LINE 5320 N TOPO, MAG, GEOCHEMISTRY, GEOLOGY	COMPILED N. P. GREEN
LEASE No. EL 5/63	AREA 2		DRAWN GEO DRAFT
AMENDMENTS		DATE MAY 1983	SCALE 1 : 2500
1 8		REF No. TAS/2/3224	
2 9			
3 10			
4 11			
5 12			
6 13			
7 14			

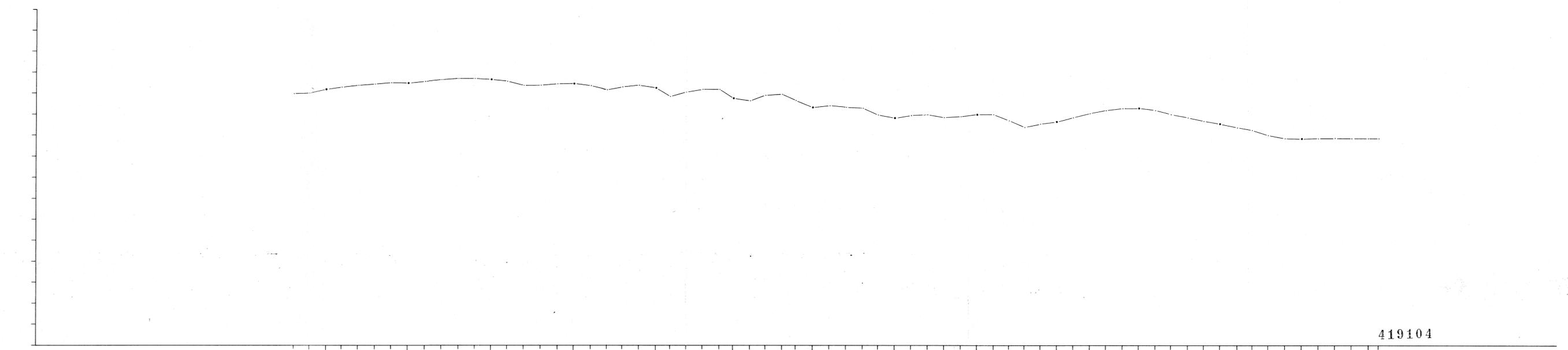
GEOCHEMISTRY ppm



GROUND MAGNETICS nT

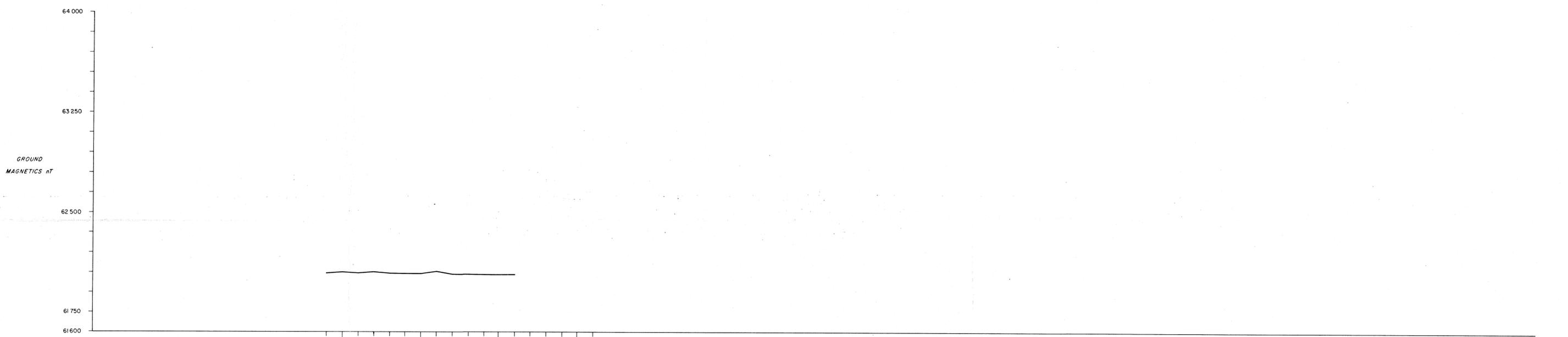
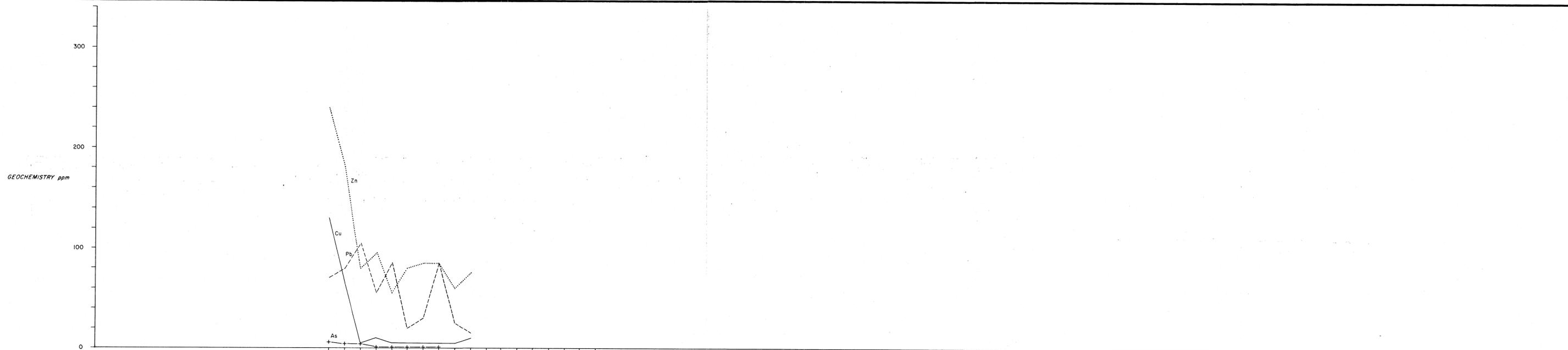


TOPOGRAPHY & GEOLOGY



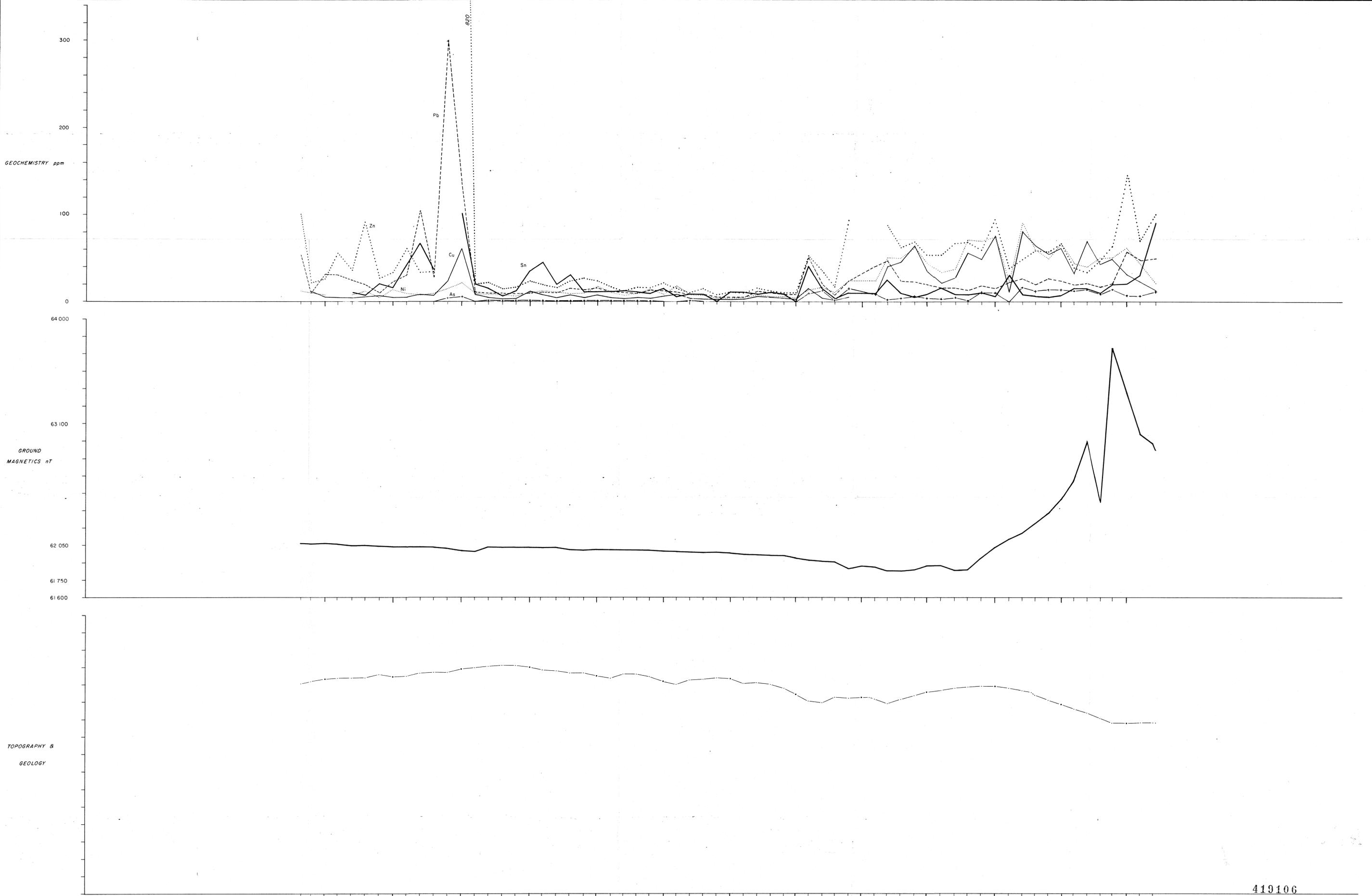
419104

<b>COMSTAFF PROPRIETARY LIMITED</b>		<b>RAMSAY GRID - CSB 018</b>	
LEASE No	EL 5/63	<b>COMPOSITE SECTION OF LINE 5400 N TOPO, MAG, GEOCHEMISTRY, GEOLOGY</b>	
AREA	2		
AMENDMENTS	8	COMPILED	N. P. GREEN
1	9	DRAWN	GEO DRAFT
2	10	DATE	MAY 1983
3	11	SCALE	1 : 2500
4	12	REF No	TAS/2/3225
5	13		
6	14		
7			



419105

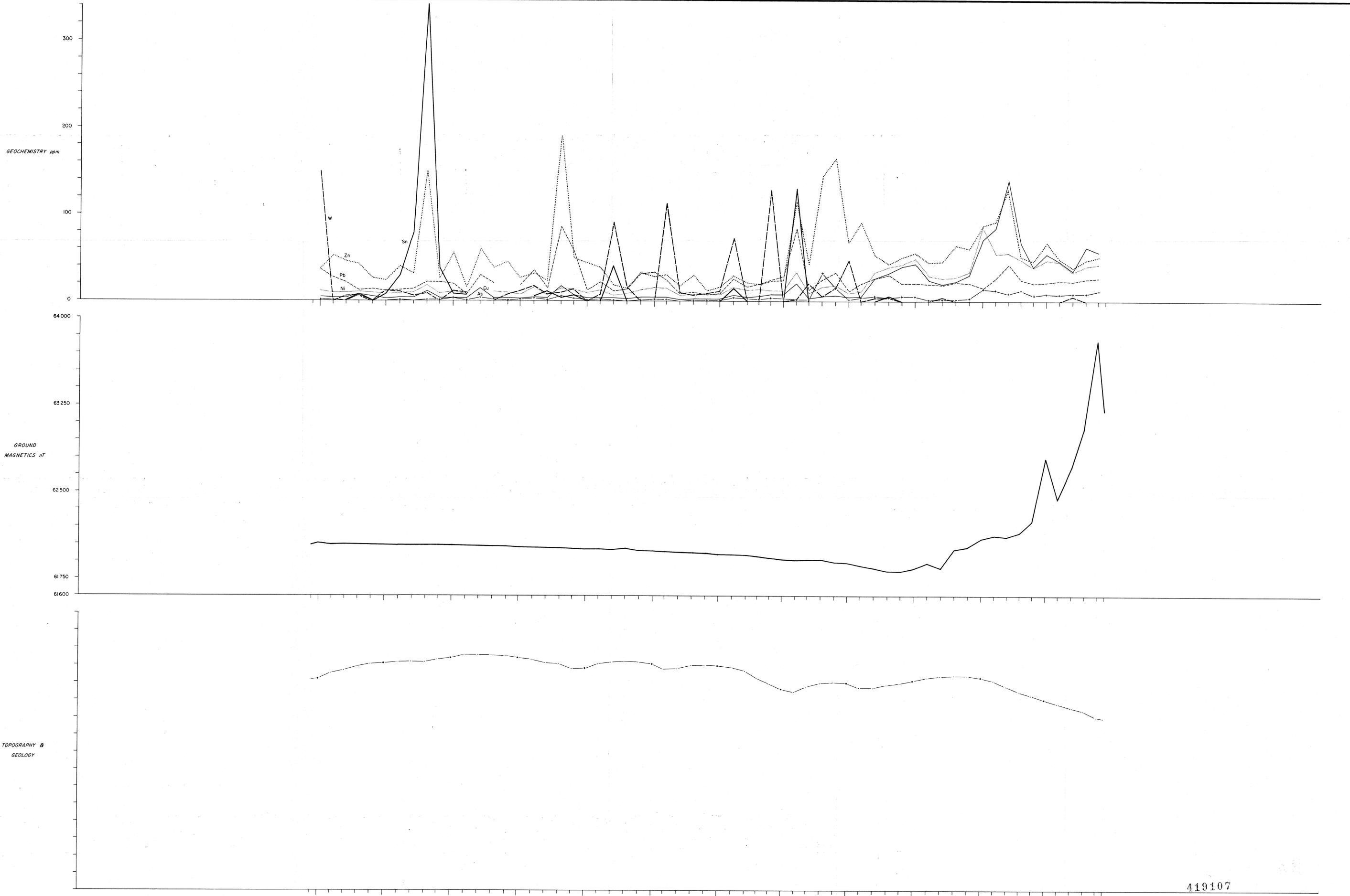
<b>COMSTAFF PROPRIETARY LIMITED</b>		
LEASE No EL 5/63	RAMSAY GRID - CSB 019	COMPILED N. P. GREEN
AREA 2		DRAWN GEO DRAFT
AMENDMENTS	COMPOSITE SECTION OF LINE 5400 N(R) TOPO, MAG, GEOCHEMISTRY, GEOLOGY	DATE MAY 1983
1 8		SCALE 1 : 2500
2 9		REF No TAS/2/3226
3 10		
4 11		
5 12		
6 13		
7 14		



419106

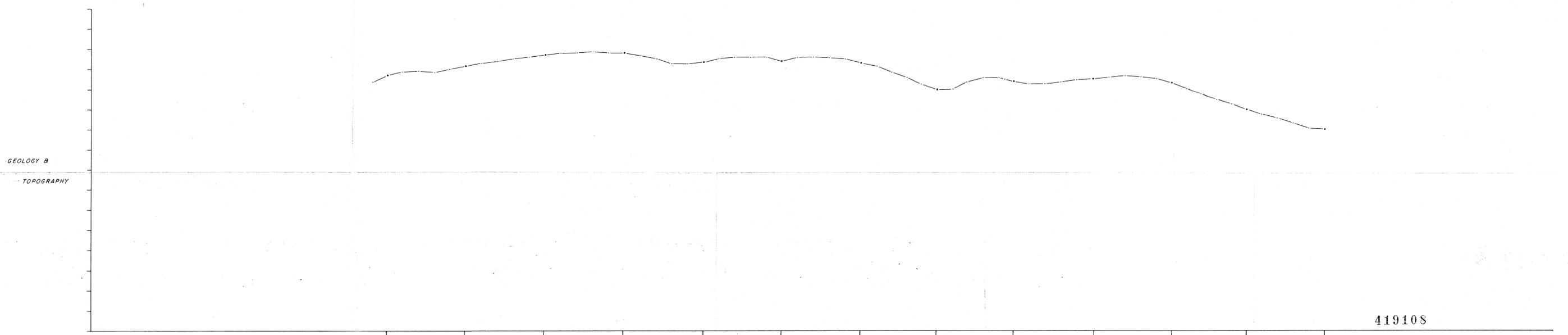
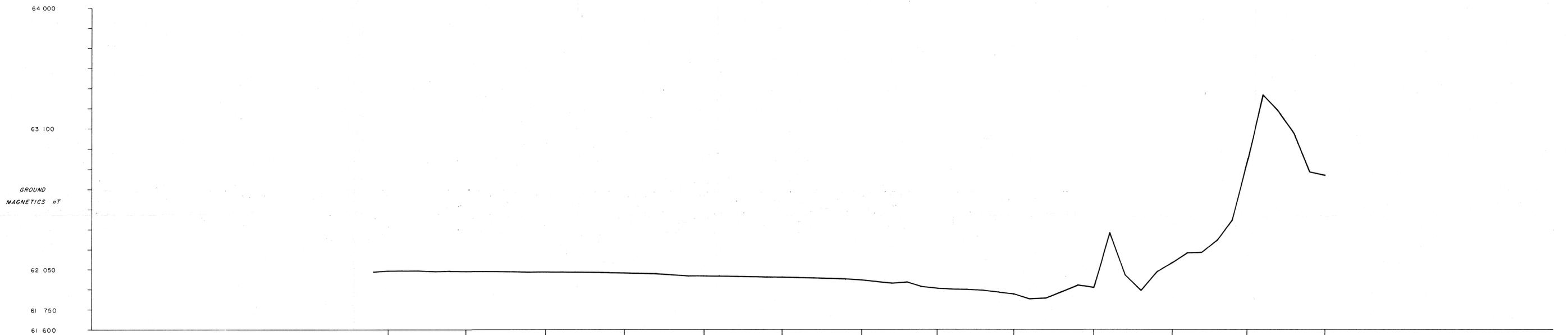
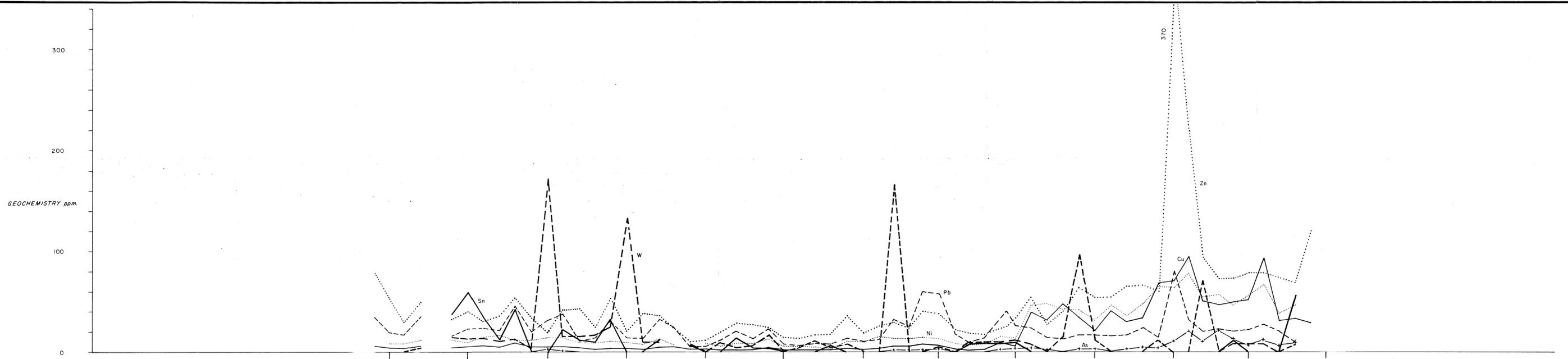
<b>COMSTAFF PROPRIETARY LIMITED</b>	
LEASE No <b>EL 5/63</b>	COMPILED N. P. GREEN
AREA <b>2</b>	DRAWN GEODRAFT
AMENDMENTS 1 25/3/83 8 2 9 3 10 4 11 5 12 6 13 7 14	DATE MAY 1983
	SCALE 1 : 2500
	REF No TAS/2/2586

**RAMSAY GRID - CSB 020**  
**COMPOSITE SECTION OF LINE 5480 N**  
**TOPO, MAG, GEOCHEMISTRY, GEOLOGY**



419107

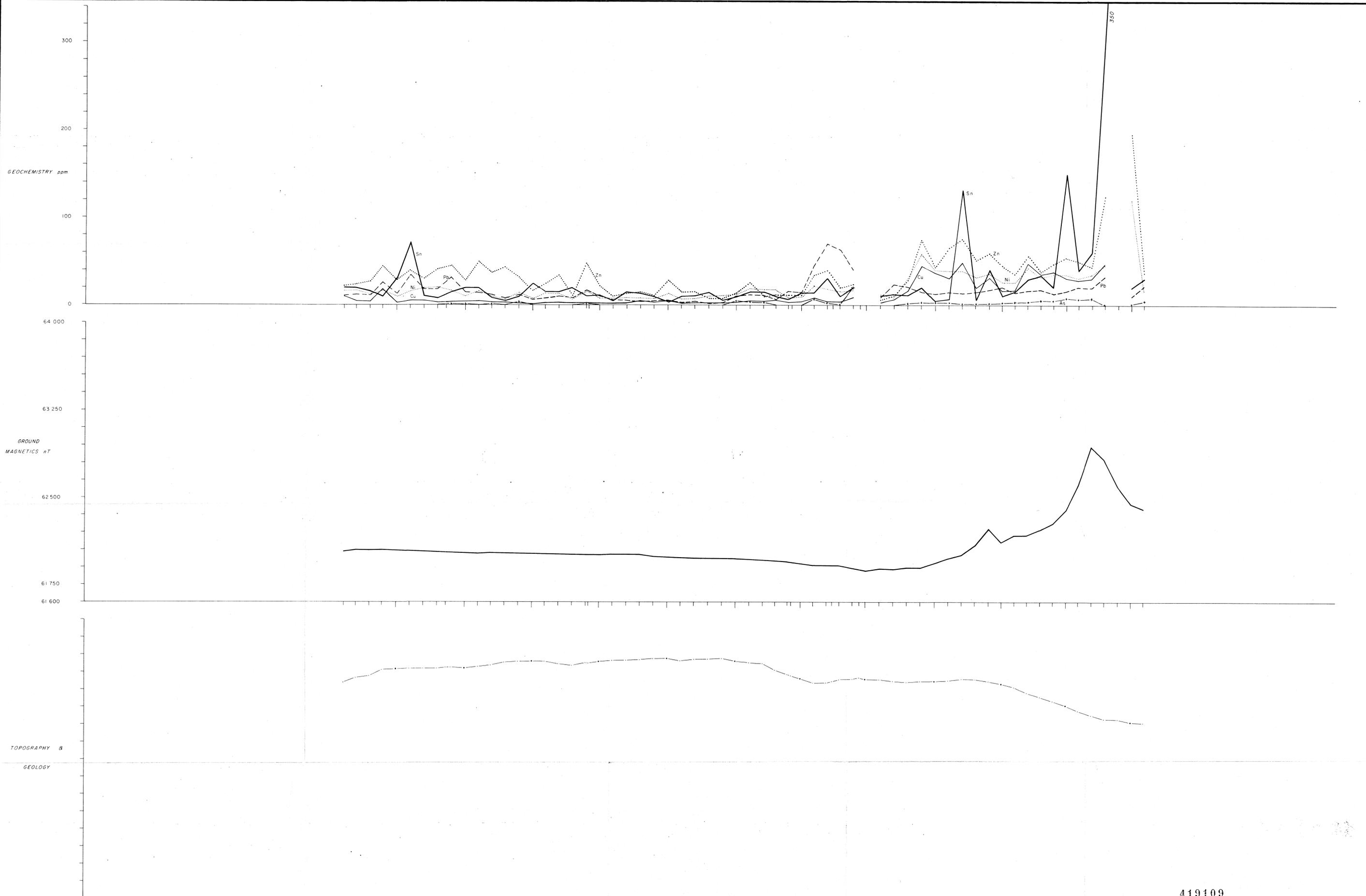
<b>COMSTAFF PROPRIETARY LIMITED</b>		<b>RAMSAY GRID - CSB 021</b>	
LEASE No <b>EL 5/63</b>	COMPILED N. P. GREEN	<b>COMPOSITE SECTION OF LINE 5560 N TOPO , MAG , GEOCHEMISTRY , GEOLOGY</b>	
AREA <b>2</b>	DRAWN GEO DRAFT		
AMENDMENTS	DATE	<b>REF No TAS/2/3227</b>	
1	MAY 1983		
2			
3			
4			
5			
6			
7			



419108

<b>COMSTAFF PROPRIETARY LIMITED</b>		COMPILED N. P. GREEN
LEASE NO. EL 5/63	2	DRAWN GEODRAFT
AREA		DATE MAY 1983
AMENDMENTS		SCALE 1 : 2500
1 8		REF NO. TAS/2/3228
2 9		
3 10		
4 11		
5 12		
6 13		
7 14		

RAMSAY GRID - CSB 022  
COMPOSITE SECTION OF LINE 5640 N  
TOPO, MAG, GEOCHEMISTRY, GEOLOGY



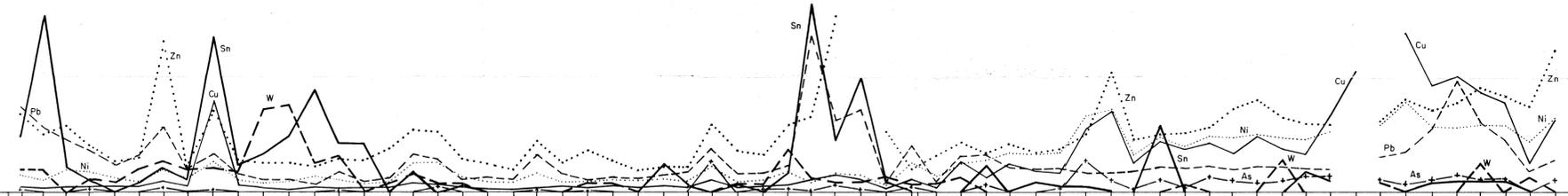
419109

COMSTAFF PROPRIETARY LIMITED	
LEASE No EL 5 / 63	COMPILED N P GREEN
AREA 2	DRAWN GEODRAFT
AMENDMENTS 1 25/3/83 8 2 9 3 10 4 11 5 12 6 13 7 14	DATE MAY 1983
	SCALE 1 : 2500
	REF No TAS/2/2587

RAMSAY GRID - CSB 023  
COMPOSITE SECTION OF LINE 5720 N  
TOPO, MAG, GEOCHEMISTRY, GEOLOGY

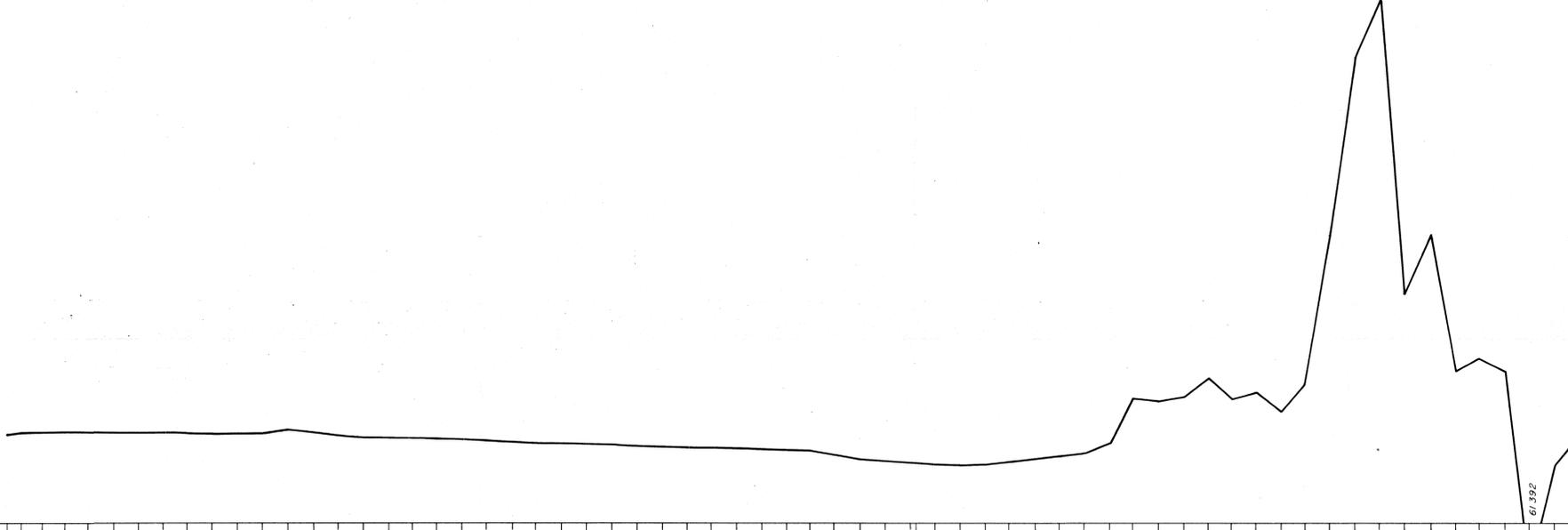
GEOCHEMISTRY ppm

300  
200  
100  
0

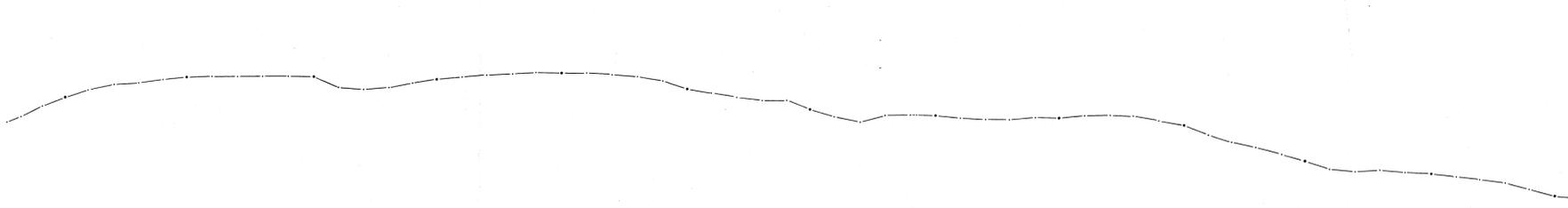


GROUND MAGNETICS nT

64 000  
63 250  
62 500  
61 756  
61 600



TOPOGRAPHY & GEOLOGY



419110

<b>COMSTAFF PROPRIETARY LIMITED</b>		<b>RAMSAY GRID - CSB 024</b>	
LEASE No <b>EL 5/63</b>	COMPILED N.P. GREEN	<b>COMPOSITE SECTION OF LINE 5800 N</b>	
AREA <b>2</b>	DRAWN GEODRAFT		
AMENDMENTS	DATE MAY 1983	<b>TOPO, MAG, GEOCHEMISTRY, GEOLOGY</b>	
1 8 2 9 3 10 4 11 5 12 6 13 7 14	SCALE 1 : 2500		
		REF No <b>TAS/2/3229</b>	

GEOCHEMISTRY ppm

300  
200  
100  
0

1400  
7000  
850  
Zn  
Sn

Cu  
Pb  
Ni  
As  
W

GROUND  
MAGNETICS nT

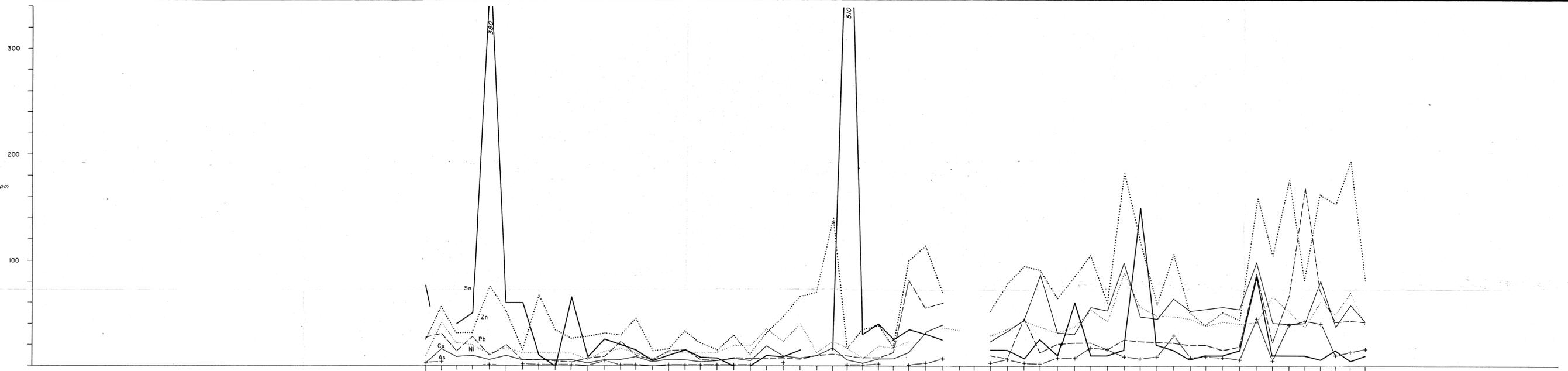
64 000  
63 250  
62 500  
61 750  
61 600

TOPOGRAPHY  
a GEOLOGY

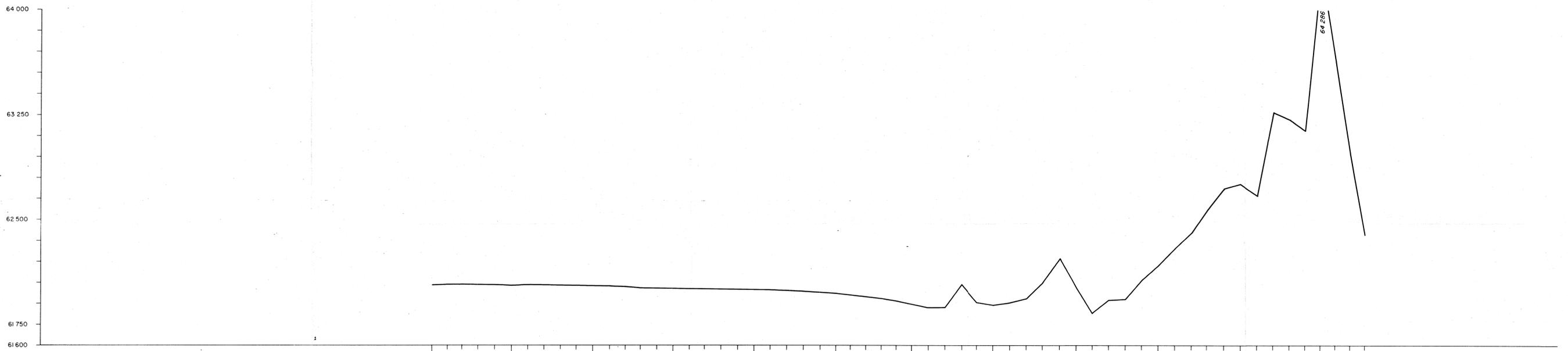
419111

<b>COMSTAFF PROPRIETARY LIMITED</b>		025
LEASE No EL 5/63	RAMSAY GRID - CSB	
AREA 2	COMPOSITE SECTION OF LINE 5880 N	
AMENDMENTS 1 8 2 9 3 10 4 11 5 12 6 13 7 14	TOPO, MAG, GEOCHEMISTRY, GEOLOGY	
		COMPILED N. P. GREEN
		DRAWN GEO DRAFT
		DATE MAY 1983
		SCALE 1 : 2500
		REF No TAS/2/3230

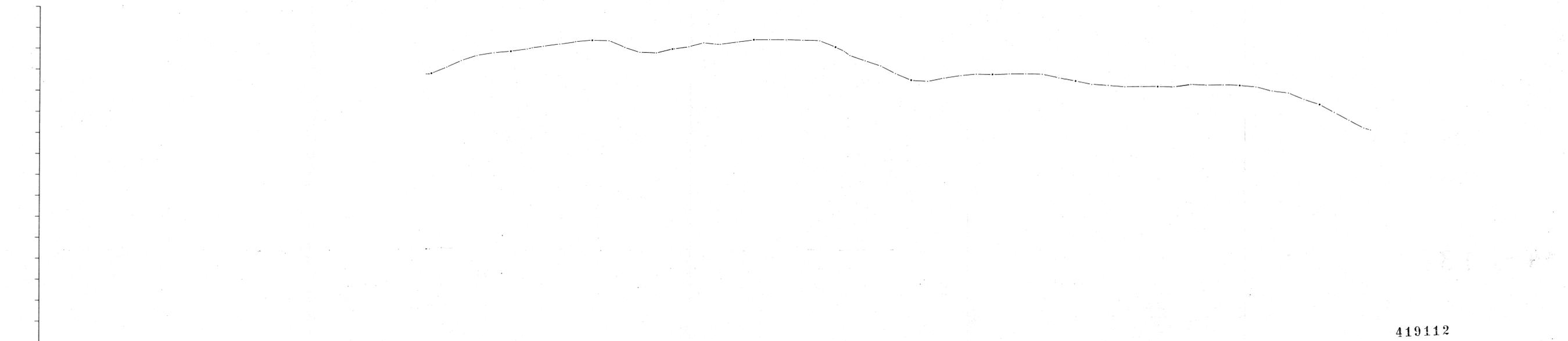
GEOCHEMISTRY ppm



GROUND MAGNETICS nT

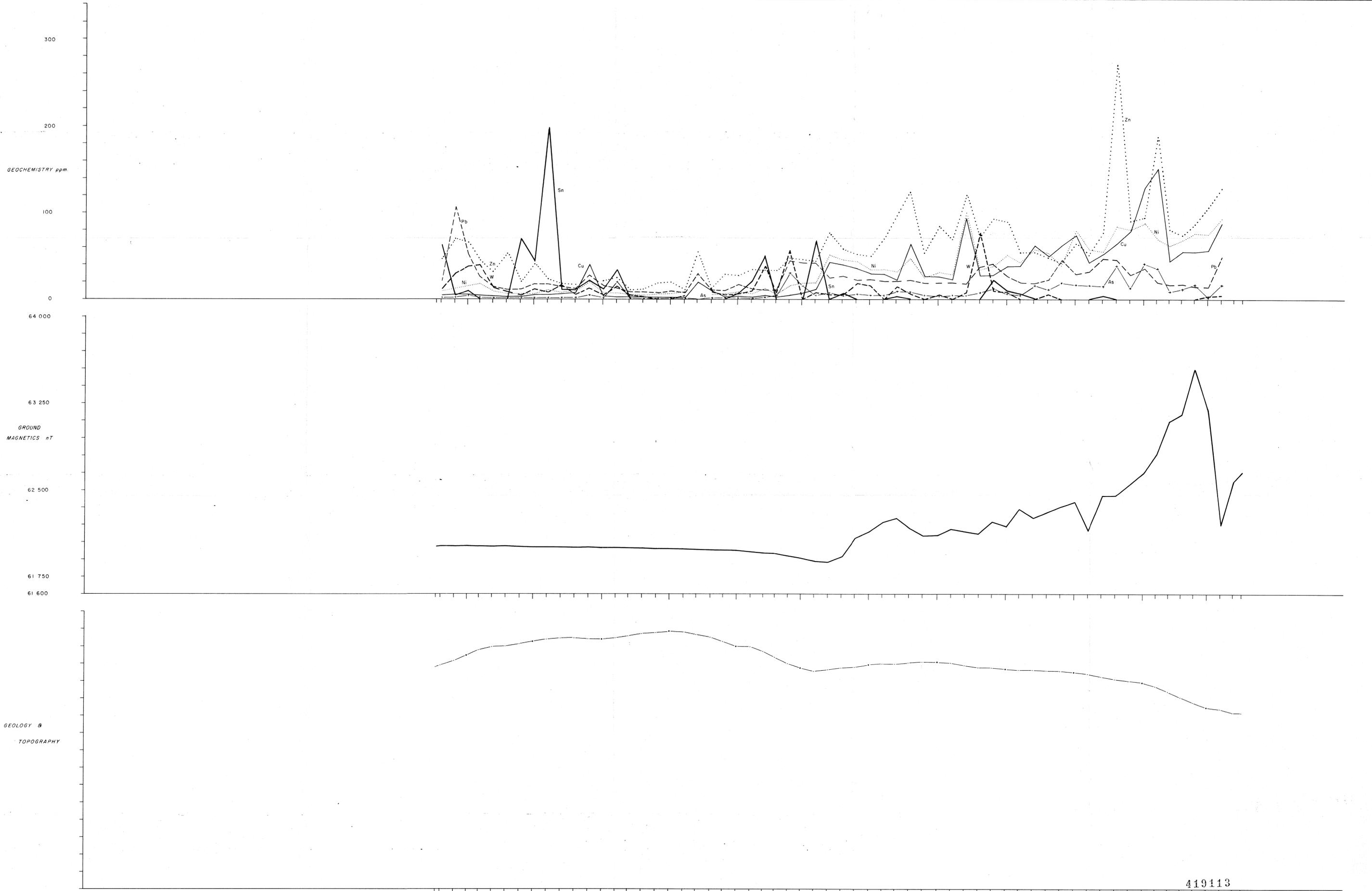


TOPOGRAPHY & GEOLOGY



419112

<b>COMSTAFF PROPRIETARY LIMITED</b>		<b>RAMSAY GRID - CSB</b>		<b>026</b>	<small>COMPILED</small> N. P. GREEN
<small>LEASE NO.</small>	EL 5/63	<small>AREA</small>	2	<small>DRAWN</small>	GEO DRAFT
<small>AMENDMENTS</small>	1 25/3/83	2	9	<small>DATE</small>	MAY 1983
3	10	4	11	<small>SCALE</small>	1 : 2500
5	12	6	13	<small>REF. NO.</small>	TAS/2/2588
7	14				
<b>COMPOSITE SECTION OF LINE 5960 N</b>		<b>TOPO, MAG, GEOCHEMISTRY, GEOLOGY</b>			

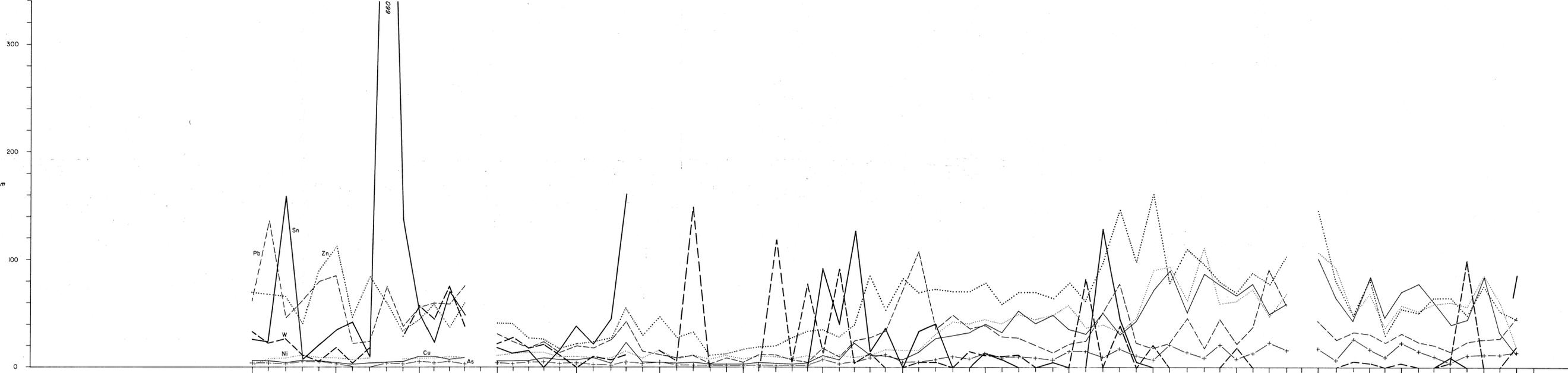


419113

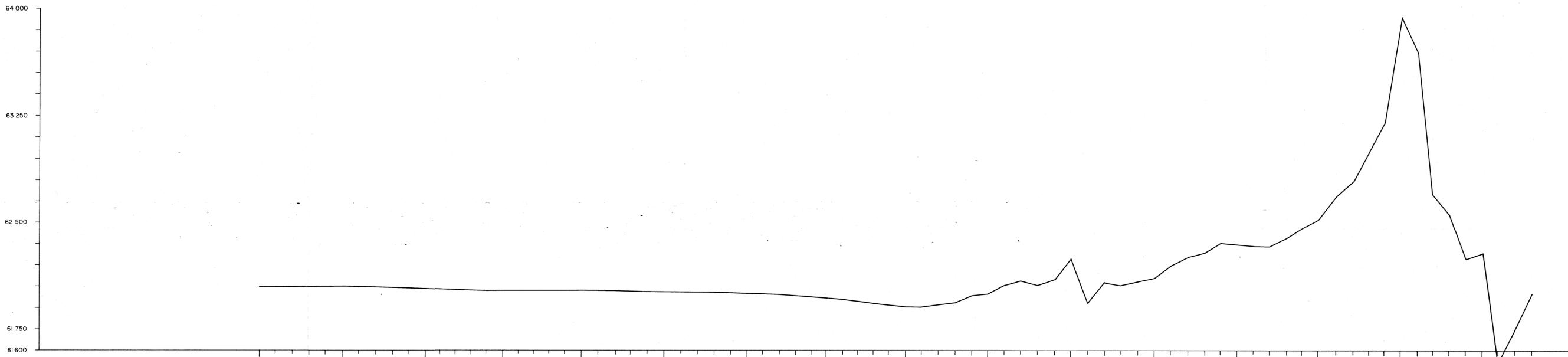
<b>COMSTAFF PROPRIETARY LIMITED</b>		COMPILED N. P. GREEN	
LEASE No <b>EL 5/63</b>	<b>2</b>	DRAWN GEODRAFT	
AREA		DATE MAY 1983	
AMENDMENTS		SCALE 1 : 2500	REF No TAS/2/3231
1	8		
2	9		
3	10		
4	11		
5	12		
6	13		
7	14		

RAMSAY GRID - CSB 027  
COMPOSITE SECTION OF LINE 6040 N  
TOPO, MAG, GEOCHEMISTRY, GEOLOGY

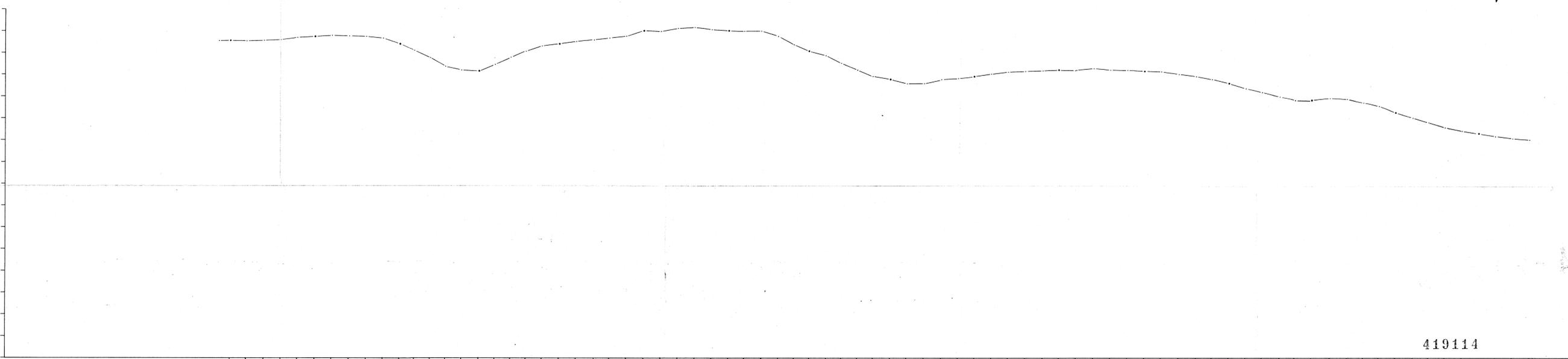
GEOCHEMISTRY ppm



GROUND MAGNETICS nT



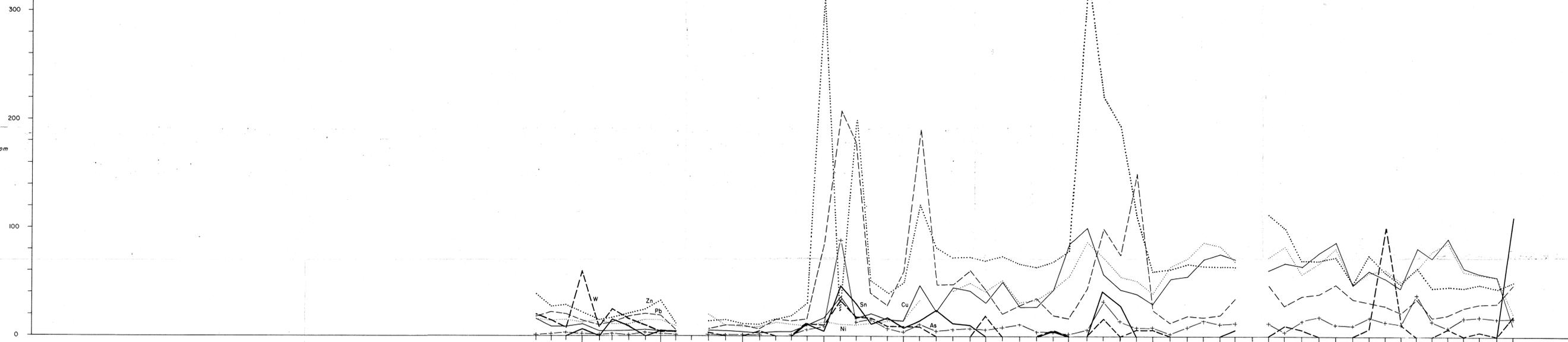
TOPOGRAPHY & GEOLOGY



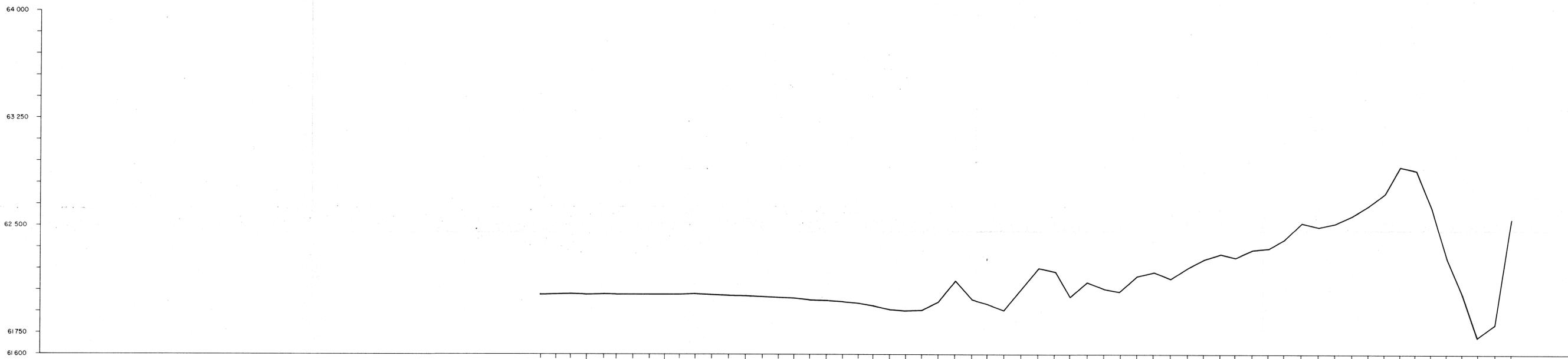
419114

<b>COMSTAFF PROPRIETARY LIMITED</b>		<b>RAMSAY GRID - CSB 028</b>	COMPILED N. P. GREEN
LEASE NO. EL 5/63	AREA 2		DRAWN GEODRAFT
AMENDMENTS		<b>COMPOSITE SECTION OF LINE 6120 N TOPO, MAG, GEOCHEMISTRY, GEOLOGY</b>	DATE MAY 1983
1	8		SCALE 1 : 2500
2	9		REF. NO. TAS/2/3232
3	10		
4	11		
5	12		
6	13		
7	14		

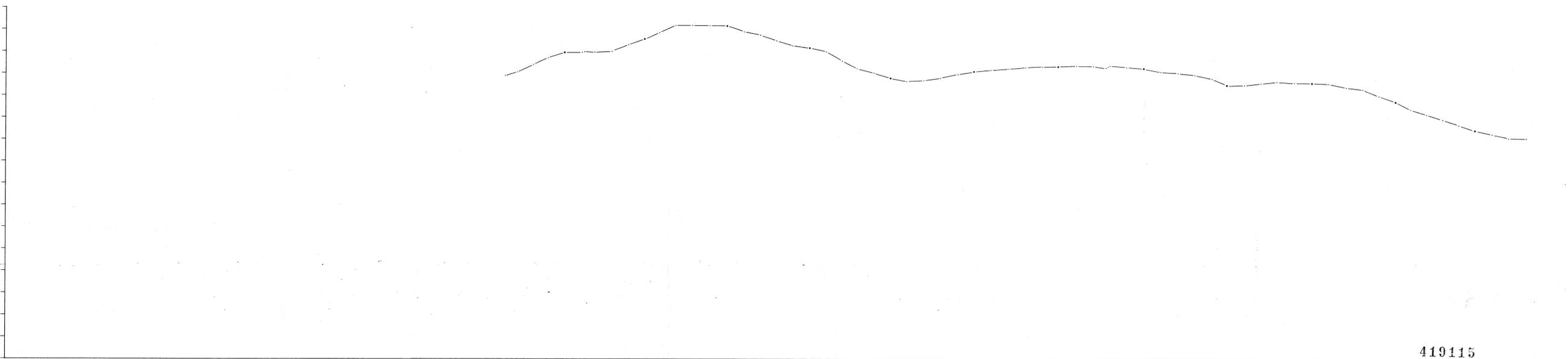
GEOCHEMISTRY ppm



GROUND MAGNETICS nT



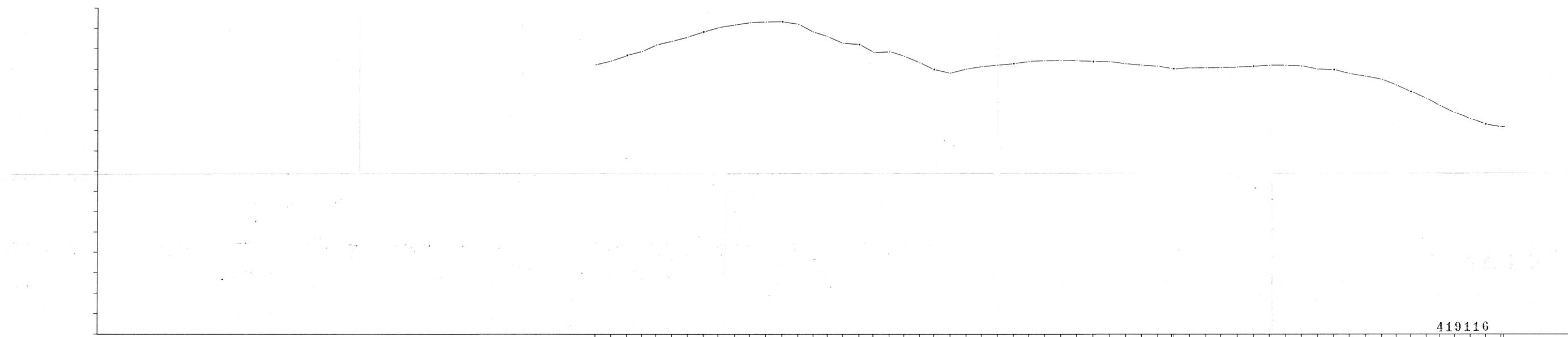
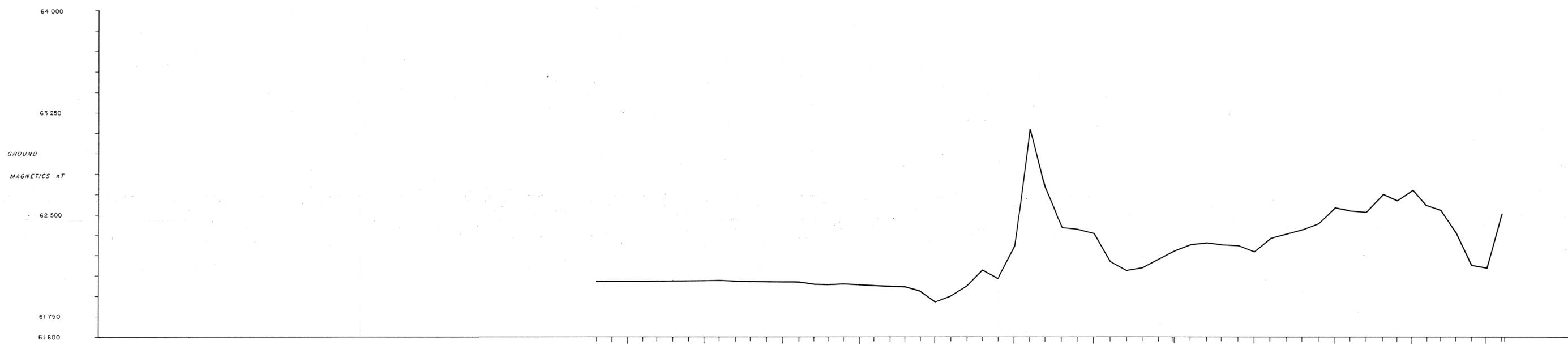
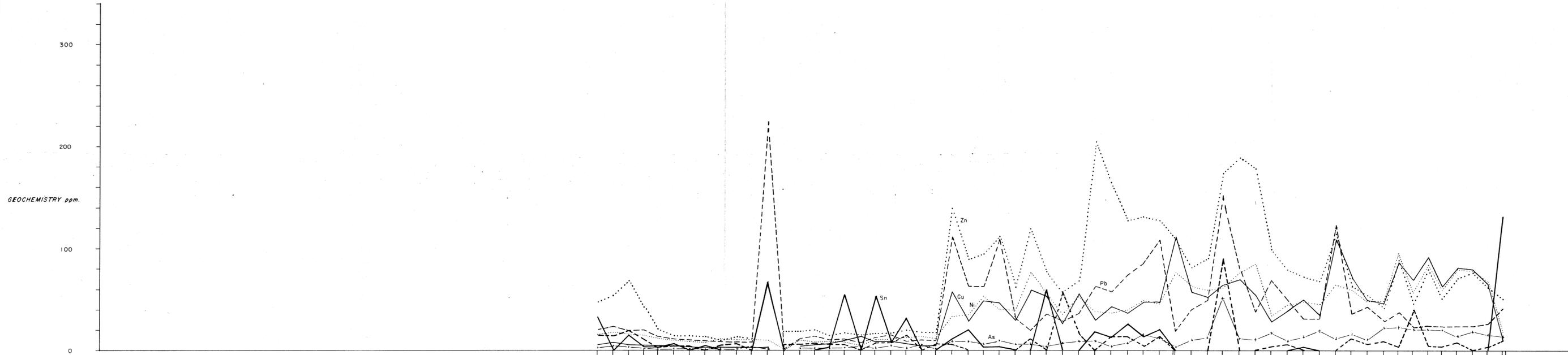
TOPOGRAPHY & GEOLOGY



419115

<b>COMSTAFF PROPRIETARY LIMITED</b>		029	COMPILED N. P. GREEN
LEASE NO EL 5/63	AREA 2	RAMSAY GRID - CSB	
AMENDMENTS		DATE MAY 1983	
1	8	SCALE 1 : 2500	
2	9	REF NO. TAS/2/3233	
3	10		
4	11		
5	12		
6	13		
7	14		

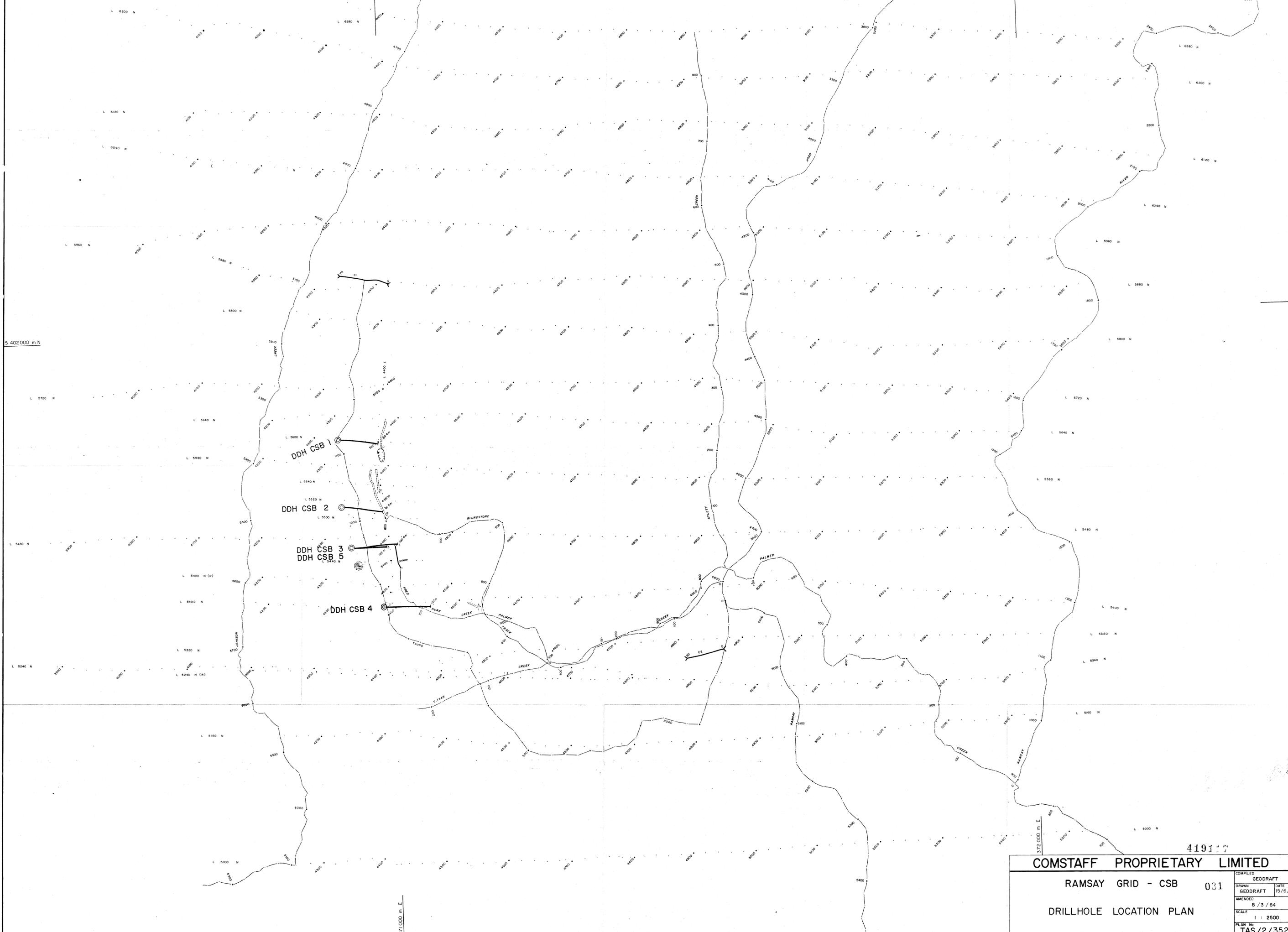
COMPOSITE SECTION OF LINE 6200 N  
TOPO, MAG, GEOCHEMISTRY, GEOLOGY



419116

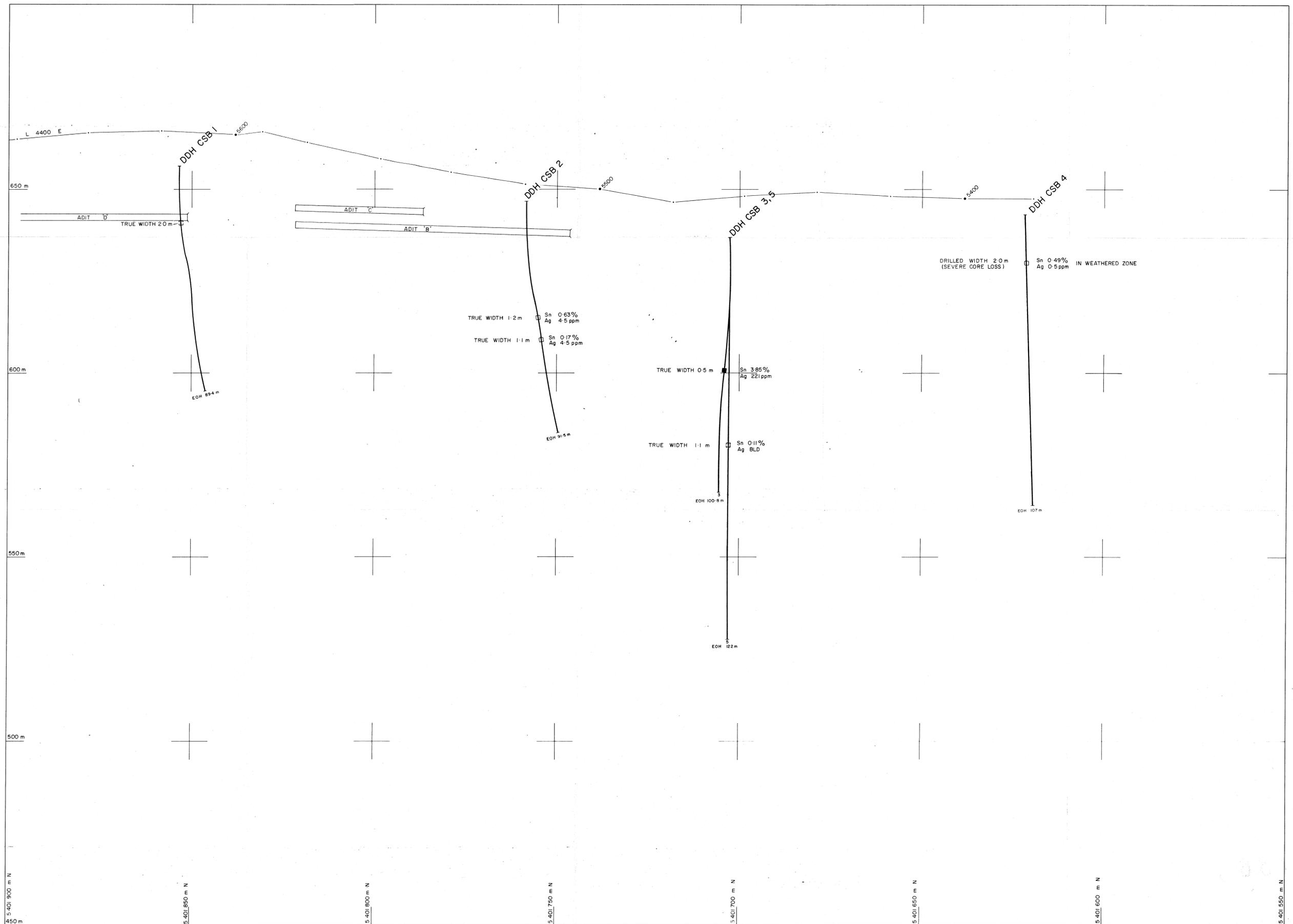
<b>COMSTAFF PROPRIETARY LIMITED</b>		<small>COMPILED</small> N. P. GREEN
<small>LEASE No</small> EL 5 / 63	<b>2</b>	<small>DRAWN</small> GEODRAFT
<small>AREA</small>		<small>DATE</small> 25 / 3 / 83
<small>AMENDMENTS</small>		<small>SCALE</small> 1 : 2500
1 8		<small>REF No</small> TAS/2/3234
2 9		
3 10		
4 11		
5 12		
6 13		
7 14		

RAMSAY GRID - CSB 030  
COMPOSITE SECTION OF LINE 6280N  
TOPO, MAG, GEOCHEMISTRY, GEOLOGY



419117

<b>COMSTAFF PROPRIETARY LIMITED</b>	
RAMSAY GRID - CSB	031
DRILLHOLE LOCATION PLAN	
COMPILED GEOGRAFT	DATE 15/6/83
DRAWN GEOGRAFT	DATE 8/3/84
AMENDED	SCALE 1 : 2500
PLAN NO. TAS/2/3525	



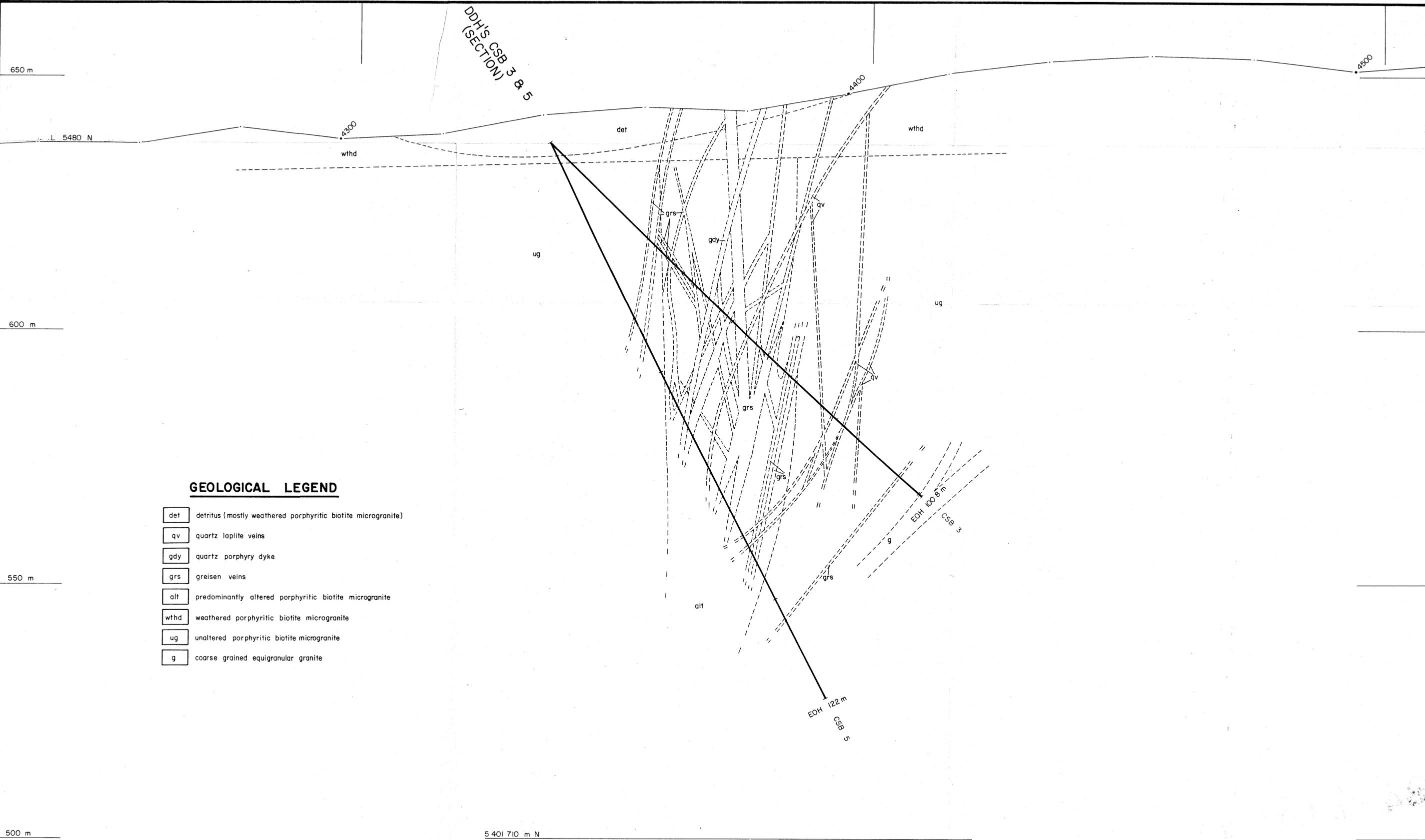
- STRUCTURAL INTERSECTION (NO VALUES)
- SUB-ECONOMIC INTERSECTION
- ECONOMIC INTERSECTION

419118

**COMSTAFF PROPRIETARY LIMITED**

TASK No. EL 5/63	AREA 2	RAMSAY GRID - CSB 032 LONG SECTION ABOUT 371 000m E SHOWING ECONOMIC DRILLHOLE INTERSECTIONS	DRAWN BY J. A. LEVINGS DATE 6/10/83 SCALE 1:500 REF. NO. TAS/2/3642
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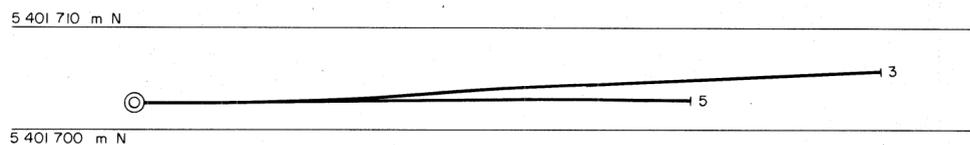




**GEOLOGICAL LEGEND**

- det detritus (mostly weathered porphyritic biotite microgranite)
- qv quartz laplite veins
- gdy quartz porphyry dyke
- grs greisen veins
- alt predominantly altered porphyritic biotite microgranite
- wthd weathered porphyritic biotite microgranite
- ug unaltered porphyritic biotite microgranite
- g coarse grained equigranular granite

DDH'S CSB 3 & 5  
(PLAN)



419120

COMSTAFF PROPRIETARY LIMITED

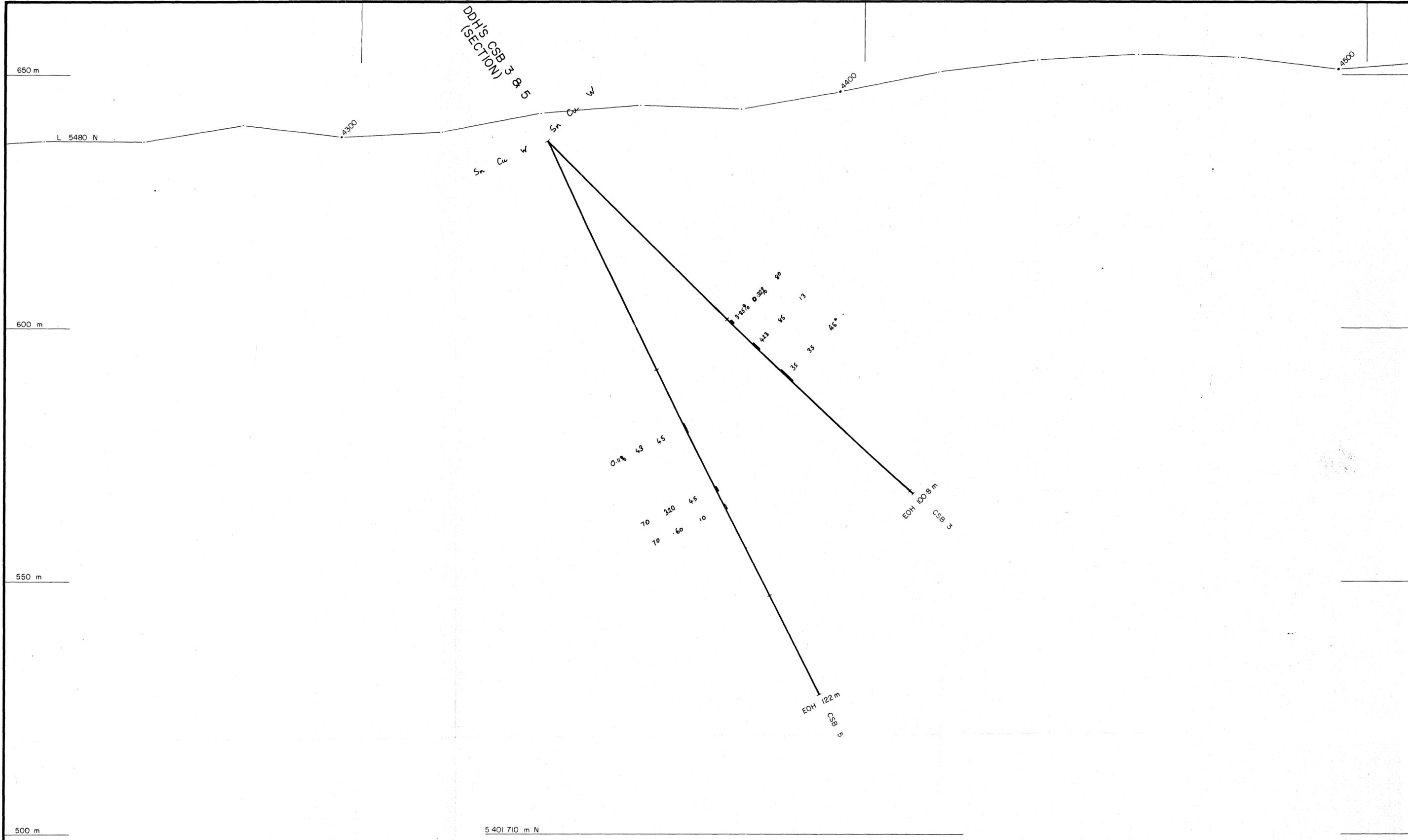
EL 5/63 AREA 2  
RAMSAY GRID - CSB  
SECTION OF DRILLHOLES DDH CSB 3 & 5  
GEOLOGICAL INTERPRETATION

DRAWN: GEODRAFT8/83, COMPILED: J.A. LEVINGS, SCALE: 1:500, TAS/2/3382

371 100 m E

370 900 m E

371 000 m E



DDH'S CSB 3 & 5  
(SECTION)

DDH'S CSB 3 & 5  
(PLAN)

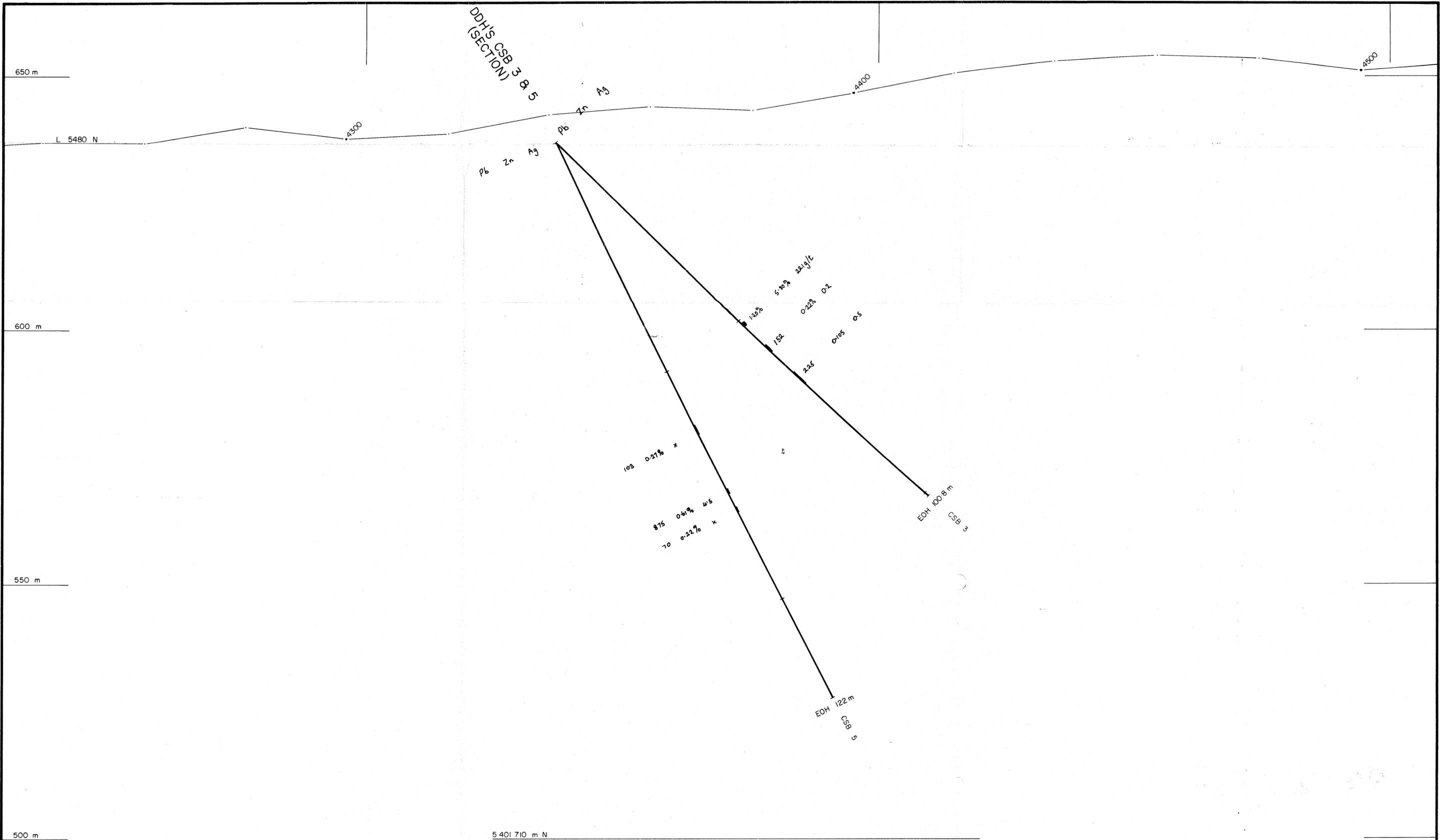
\* Ground Core : W contaminated

419121

**COMSTAFF PROPRIETARY LIMITED**

EL 5/63 AREA 2: 035  
RAMSAY GRID - CSB  
SECTION OF DRILLHOLES DDH CSB 3 & 5  
GEOCHEMICAL RESULTS FOR Sn, Cu, W

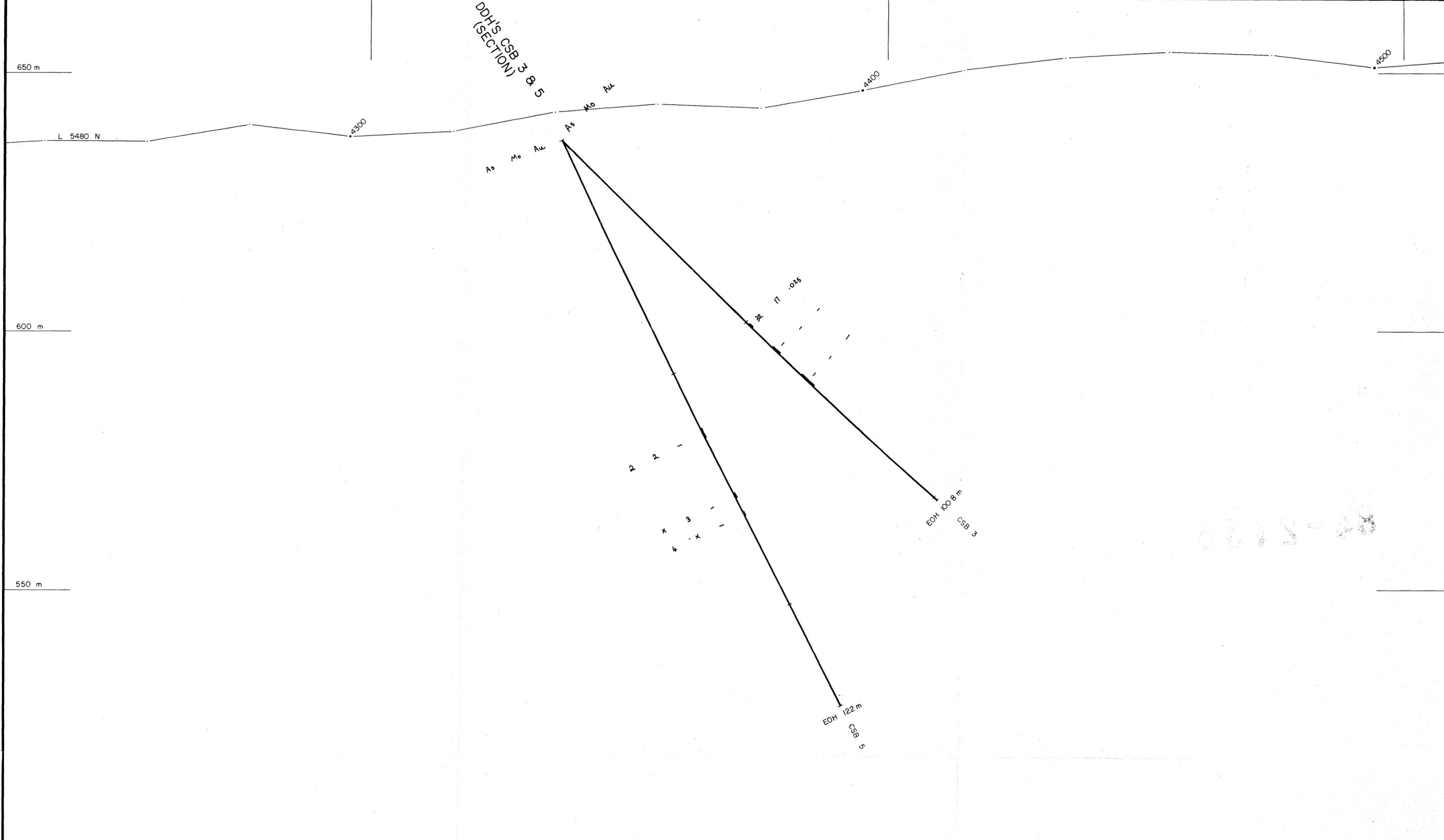
DRAWN H. PAPAS 8/83	COMPILED H. PAPAS	SCALE 1 : 500	TAS/2/3383
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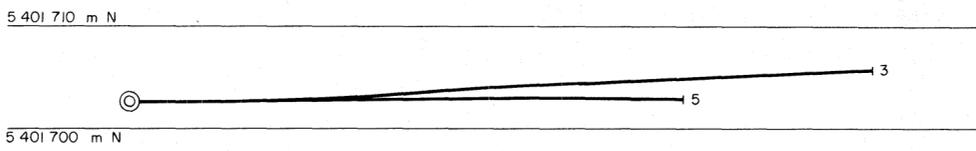
DDH'S CSB 3 & 5  
(SECTION)

DDH'S CSB 3 & 5  
(PLAN)

419122			
<b>COMSTAFF PROPRIETARY LIMITED</b>			
EL 5/63 AREA 2 036			
RAMSAY GRID - CSB			
SECTION OF DRILLHOLES DDH CSB 3 & 5			
GEOCHEMICAL RESULTS FOR Pb, Zn, Ag			
DRAWN H. PAPAS 8/83	COMPILED H. PAPAS	SCALE 1 : 500	TAS/2/3384

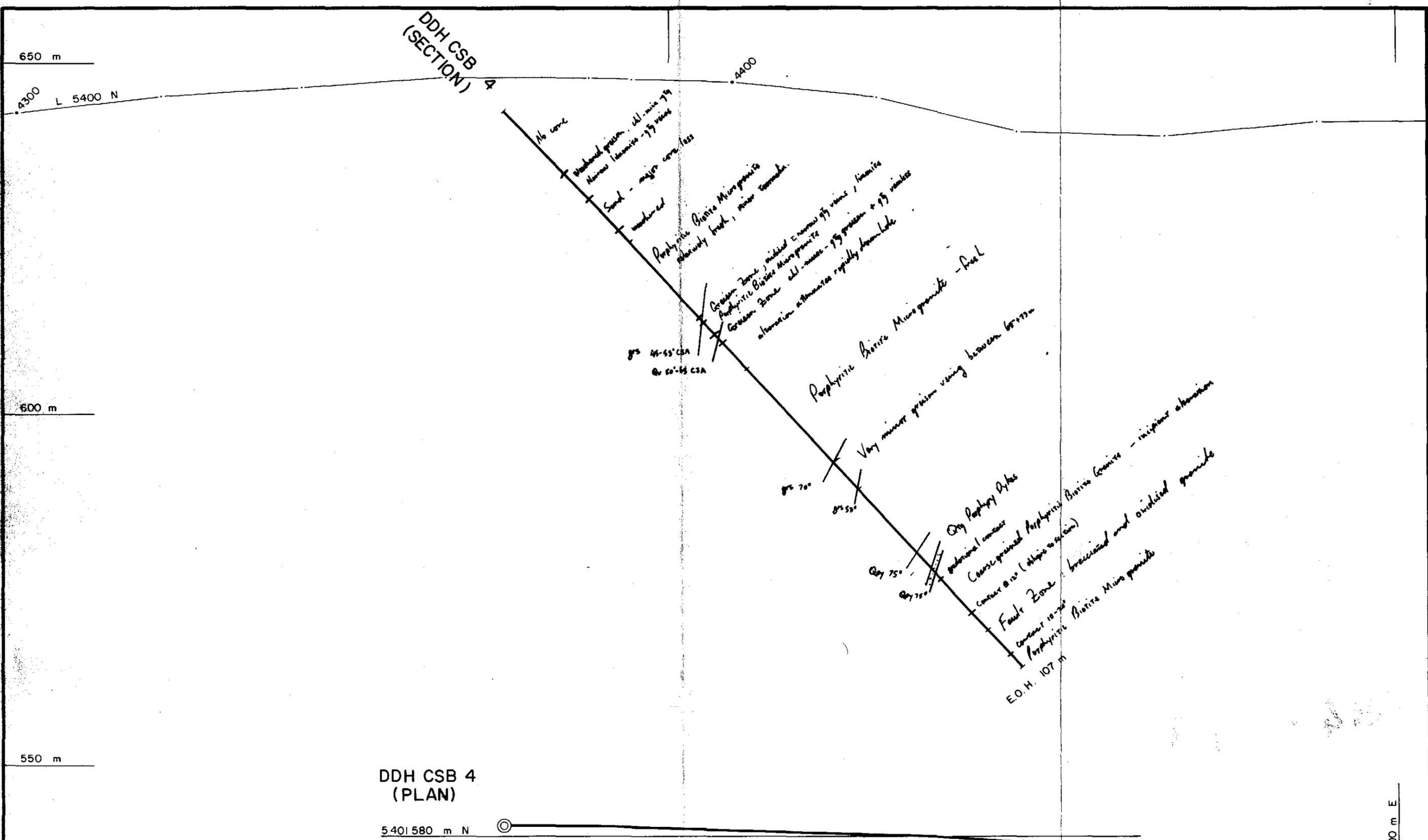


DDH'S CSB 3 & 5  
(PLAN)



- = not determined  
x = below level of detection

419123			
COMSTAFF PROPRIETARY LIMITED			
EL 5/63 AREA 2			037
RAMSAY GRID - CSB			
SECTION OF DRILLHOLES DDH CSB 3 & 5			
GEOCHEMICAL RESULTS FOR As, Mo, Au			
DRAWN H. PAPAS 8/83	COMPILED H. PAPAS	SCALE 1 : 500	TAS/2/3385



DDH CSB 4  
(PLAN)

5401580 m N

371000 m E

419124

COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 2 038  
RAMSAY GRID - CSB  
SECTION OF DRILLHOLE DDH CSB 4  
GEOLOGICAL DETAILS

DRAWN JAL 8/83	COMPILED J A LEVINGS	SCALE 1:500	TAS/2/3579
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371100 m E

DDH CSB 4  
(SECTION)

650 m

4300 L 5400 N

4400

porphyritic biotite microgranite

porphyritic biotite microgranite

greisen zones

f

500 m

porphyritic biotite microgranite

greisen zones

quartz porphyry dykes

fault zone

coarse grained porphyritic biotite granite

D.H. 107 m

550 m

coarse grained porphyritic biotite granite

f

DDH CSB 4  
(PLAN)

5 401 580 m N



371 000 m E

371 100 m E

419125

COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 2 039  
RAMSAY GRID - CSB  
SECTION OF DRILLHOLE DDH CSB 4  
GEOLOGICAL INTERPRETATION

DRAWN: GEODRAFT 8/83 | COMPILED: J A LEVINGS | SCALE: 1:500 | TAS/2/3580

DDH CSB  
(SECTION)

650 m

4300 L 5400 N

4400

600 m

550 m

DDH CSB 4  
(PLAN)

5401580 m N



371000 m E

E.O.H. 107 m

\* analyses contaminated : all < 150ppm  
0 = below level detection

371100 m E

419126

COMSTAFF PROPRIETARY LIMITED

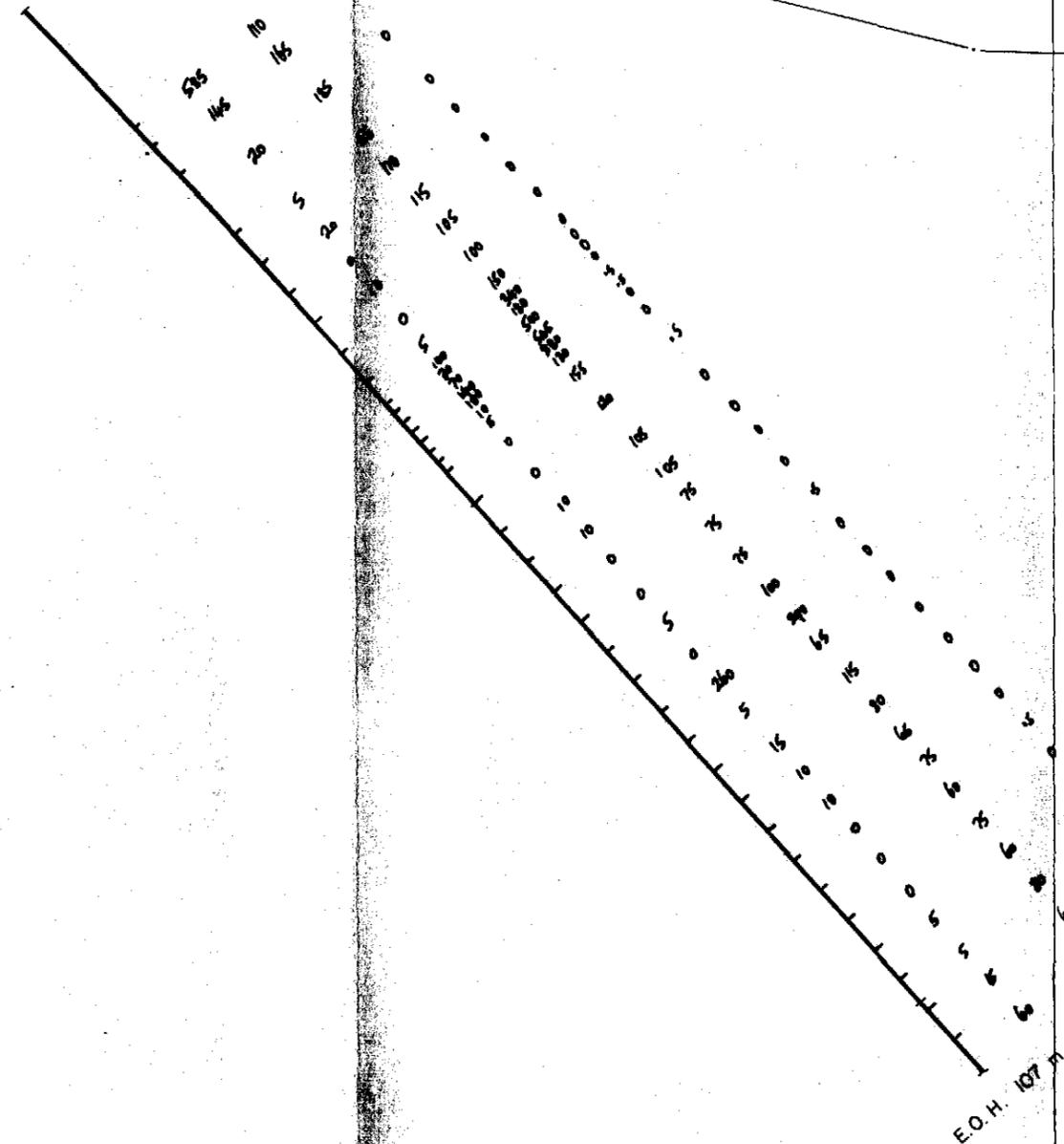
EL 5/63 AREA 2 040  
RAMSAY GRID - CSB  
SECTION OF DRILLHOLE DDH CSB 4  
GEOCHEMICAL RESULTS FOR Sn,Cu,W.

DRAWN H PAPAS 8/83 COMPILED H. PAPAS SCALE 1:500 TAS/2/3581

650 m

4300 L 5400 N

DDH CSB 4  
(SECTION)



550 m

DDH CSB 4  
(PLAN)

5401580 m N

*c = below level of detection*

371 000 m E

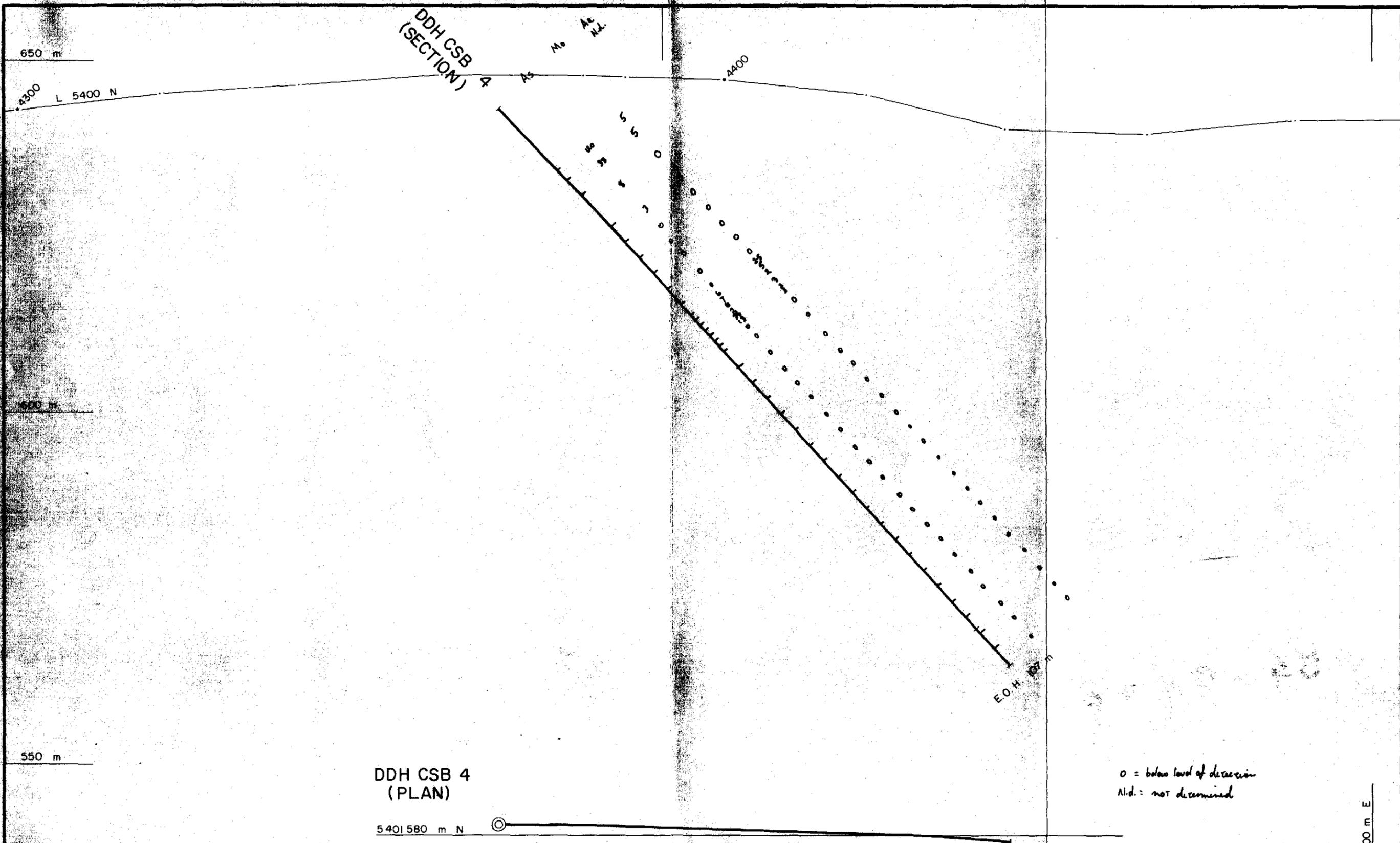
371100 m E

419127

COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 2 041  
 RAMSAY GRID - CSB  
 SECTION OF DRILLHOLE DDH CSB 4  
 GEOCHEMICAL RESULTS FOR Pb,Zn,Ag

DRAWN H PAPAS 8/83	COMPILED H PAPAS	SCALE 1:500	TAS/2/3582
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DDH CSB 4  
(PLAN)  
5401580 m N

o = below level of detection  
N.d. = not determined

419128

**COMSTAFF PROPRIETARY LIMITED**

EL 5/63 AREA 2 042  
RAMSAY GRID - CSB  
SECTION OF DRILLHOLE DDH CSB 4  
GEOCHEMICAL RESULTS FOR As, Mo, Au

DRAWN H PAPAN 8/83	COMPILED M PAPAN	SCALE 1:500	TAS/2/3583
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371 000 m E

371 000 m E