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Vol 1 of 14.
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PROJECT NAME:

COMSTAFF PROPRIETARY LIMITED

TITLE:

REPORT ACCOMPANYING LICENCE RENEWAL APPLICATION FOR EXPLORATION LICENCE 5/63 TASMANIA

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Queenstown K55-05 Sheets

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TEXT PAGES NO: 8

PLAN NOS: See List of Plans

TABLE NOS: Table 1

APPENDICES: 7

AUTHOR/S: G F Pigott

DATE: 22nd May 1981

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

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COMSTAFF PROPRIETARY LIMITED

REPORT ACCOMPANYING LICENCE RENEWAL APPLICATION FOR EXPLORATION LICENCE 5/63

TASMANIA

We hereby apply for renewal of Exploration Licence 5/63 over the existing area of 364 square kilometres for a further period of six months ending 31st December 1981. In support of our application for renewal we set out below a summary of the work undertaken and currently in progress in the six months ending 30th June 1981, along with estimated expenditure figures. Also set out is our proposed work programme for the latter six months of 1981, along with the budget. Each section of the EL is discussed separately: summary plans, compilations of results and copies of reports are appended.

Work Completed

EL 5/63 Section 1 Arthur River (Plan TAS-2-2597)

Detailed geological mapping, sediment and constant volume heavy concentrate sampling were carried out in the Deep Gully Creek area north of Mount Bischoff, and work is still in progress. This work programme is designed to prospect for strike extensions to the Mount Bischoff tin deposit, and to investigate the economic potential of the Bischoff Series/Lr Cambrian Crimson Creek Formation contact zone. Plotting and compilation of the data will proceed, with the details reported in due course.

EL 5/63 Section 2 Ramsay (Plan TAS-2-2590)

Intensive prospecting activity continued in this segment of the tenement. Geological mapping, sediment and heavy concentrate sampling were carried out in the northern sector south of Wombat Flats. This work was aimed at locating the sources of anomalous Sn values in previously collected samples. Results of this work are still being compiled.

A grid was established over the area around the old South Bischoff Tin Mine. An integrated programme of geological mapping, ground magnetic surveying, soil and sediment sampling was completed. Detailed investigations of the mine workings included channel sampling and mapping. Significant tin values have been found in a greisen vein system revealed in four adits and an old costean. A report on this work is in preparation and should be ready by the end of June.

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Grid CAE north was completed, surveyed, geologically mapped and soil sampled. This grid lies across the contact between the Crimson Creek Formation and the Ramsay sequence (possible equivalent to the Success Creek Formation). A Max-Min electromagnetic survey was carried out over the grid. This confirmed the existence of a major conductor indicated from the airborne Input survey. A ground magnetometer survey is currently in progress.

Geological mapping, a Max-Min electromagnetic survey and a ground magnetic survey were carried out over additional grid lines at CAL. These lines traverse the Meredith Granite-Crimson Creek Formation and Crimson Creek Formation-Ramsay Sequence contact zones. A coincident EM, ground magnetic and Cu, Pb and Zn soil anomaly has been defined associated with a calc silicate unit.

Grid extensions were completed over the skarn alteration zone on CAF. Geological mapping, geochemical soil and rock sampling, ground magnetic and electromagnetic surveys were carried out. Two diamond drill holes are planned to determine the economic potential of the skarn mineralisation, the details of which are presented herewith as an appendix "Diamond Drilling Proposals to test a skarn at Mt Ramsay" together with appropriate plans and sections. The drilling was scheduled to commence in mid April but the rig has been delayed until early June.

Electromagnetic and ground magnetic surveys are currently underway on grid CAJ. Results will be integrated with work previously carried out and a full assessment made of the project.

Grid CAI was established over the area of the CAI Input EM anomaly. It has been surveyed and geochemically auger sampled. Geological mapping and ground magnetic surveys remain to be completed, but the proposed electromagnetic survey has had to be postponed until the next summer field season.

Grid CAM was established in order to investigate the CAM Input EM anomaly close to the western boundary of the EL. Surveying, geochemical sampling, detailed geological mapping and ground magnetic surveys were completed. A rock sequence similar and possibly equivalent to the Success Creek Formation was outlined abutting the Crimson Creek Formation. Anomalous geochemical values in Pb and Zn have been found. The planned electromagnetic survey was postponed until next season.

Grid CAG was established over Input anomaly CAG close to the southern boundary of our tenement. the grid was surveyed and soil sampled.

Results of geological mapping, geochemical sampling and geophysical surveys carried out to date are presented herewith as an appendix "A compilation of results from work carried out in the Ramsay Area EL 5/63 Part 2."

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EL 5/63 Section 4 Chester-Pinnacles (Plan TAS-2-2591)

An induced polarisation survey was completed over the East Chester-Pinnacles grid lines. It was decided not to proceed with SP or EM surveys following a detailed assessment of the profile data. Following a study of all available geological, geochemical and geophysical data two diamond drill holes were proposed. The drill objective is to determine the source of geochemical and geophysical ahomalies associated with acid tuffs and sediments overlying the East Chester andesites. The details are presented herewith as an appendix "Diamond Drilling Proposals at East Chester" together with copies of all relevant plans, profiles and sections. The drilling was scheduled to commence in mid May but because of delays will now not begin until mid July at the earliest.

EL 5/63 Section 6 East Renison (Plan TAS-2-2592)

Diamond drilling of the Base Metal-Tin zone at the GAR (Fentons) Prospect continued. To date 20 drill holes have been completed - a total of 5672.5m. So far 1733m have been drilled in this six monthly period to 20th May 1981, and drilling is continuing.

The cassiterite-sulphide mineralisation occurs in a series of vein filled fissures. A mixture of quartz, carbonate and brecciated country rock forms the gangue material. The western most vein complex is the most persistent. It may be traced from drillhole XI southwards to RBE 21 - a strike length of at least 900m. It is the main target for the current drilling programme. Ore grade/width intersections vary enormously suggesting that the mineralisation is concentrated in discrete shoots within the fissure zone.

Samples of the Pb-Zn intersections in RBE 5 and 10A were investigated mineralogically by Amdel, and a composite of the two samples which comprised quarter core, was treated metallurgically. A report on this work is presented herewith as an appendix "Preliminary Mineralogical and Metallurgical Evaluation of Two Samples of Lead-Zinc Ore." The results are extremely encouraging and are summarised as follows:-

Head analyses of the two samples

RBE 5 157.3 - 168.1m $\frac{1}{4}$ core

RBE 10A 220.0 - 228.1m $\frac{1}{4}$ core

	RBE 5	RBE 10A
Pb, %	20.3	15.4
Zn, %	3.54	3.59
Ag, ppm	543	406
Cu, %	0.18	0.19
As, %	0.58	0.48
Sn, ppm	441	524

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Mineralogical analyses of the two samples are as follows:

Mineral	RBE 5	RBE 10A
Quartz, %	35-40	30
Siderite-Rhodochrosite, %	25-30	35
Dolomite, %	5	2
Chlorite, %	-	2
Galena, %	23	18
Sphalerite, %	6	6
Chalcopyrite, %	0.5	0.5
Arsenopyrite, %	1.3	1.0
Pyrite*, %	1.5-2.0	1.0-1.5
Pyrrhotite	-	4-5
Tetrahedrite	Trace	Trace

* includes some marcasite

The samples consist predominantly of quartz, an Fe-Mn carbonate (siderite-rhodochrosite) and galena, together with minor to trace proportions of other minerals. RBE 10A differs from RBE 5 in containing minor chlorite and pyrrhotite, which are not present in RBE 5. In both samples lead is present as galena and zinc is present as sphalerite. The Fe content of the sphalerite is 5-6% in both samples, indicating that the maximum grade of zinc concentrate obtainable is 61-62% Zn. Tetrahedrite occurs mainly as minute inclusions in galena and contains 28-30% Ag. However, most of the silver is probably in solid solution in galena, although this needs to be confirmed by further work. Copper is present as chalcopyrite (with a minor proportion in tetrahedrite) and arsenic is present as arsenopyrite. Tin is present as very small grains of stannite and cassiterite, closely associated with sphalerite and chalcopyrite.

In ground material of both samples liberation of galena is excellent at particle sizes below 0.42 mm and unliberated galena is mainly locked with sphalerite or quartz/carbonates. Sphalerite is not as well liberated as galena, the liberation increasing from 45-50% in the -0.42+0.21 mm fraction to 75-80% in the -0.075+0.053 mm fraction; unliberated sphalerite is mainly locked with galena or quartz/carbonate. Liberation of chalcopyrite is poor throughout the -0.42+0.053 mm size range but liberation of pyrite, arsenopyrite and pyrrhotite is the range 70-90% at particle sizes finer than 0.105 mm. Grinding to pass about 0.105 mm should be adequate for effective liberation of most minerals.

Flotation testing (lead flotation followed by zinc flotation) indicates that it is possible to obtain extremely high lead and silver recoveries into an extremely high-grade lead concentrate. The best result (Test 2) was 98.4% of the lead and 95.0% the silver recovered into a lead concentrate assaying 77.9% Pb, 1.93% Zn and 2050 ppm Ag. Lead and silver flotation results were found to be relatively insensitive to feed size over the range tested (80% passing 92 um to 80% passing 48 um). Although it is possible to achieve a relatively high recovery

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of zinc from the tailings of the lead flotation stage, it is difficult to produce a high-grade zinc concentrate because of dilution with liberated pyrite and arsenopyrite. The best zinc flotation recovery achieved was 79.7% (90.4% zinc recovery from lead flotation tailings) into a concentrate containing 43.7% Zn and 4.45% As. Much of the tin tends to report into the zinc concentrate.

Quartz-carbonate-pyrrhotite-chalcopyrite veins are associated with a cross cutting talc-carbonate-serpentinite body east of the main Base Metal zone. These veins are more discontinuous and appear so far to be of limited economic potential.

The grade/width intersections in the main Base Metal-Tin zone are shown projected onto a longitudinal section (Plan TAS-2-2257). Significant intersections of possibly economic mineralisation are listed in Table 1. The detailed drill logs, analytical data, plans and sections are presented in the appendix. Drill hole locations are shown in plan on TAS-2-2117, 2118.

TABLE 1

	Drilled Interval	dw	Angle	Hw	% rec	Sn %	Cu %	Pb %	Zn %	Ag	As %
RBE 15	260.40-265.50	5.10	54°	3.82	100	0.08	0.8	0.3	1.8	21.0	1.0
RBE 16	271.00-273.35	2.35	53.5	1.75	100	1.3	0.03	0.04	0.22	1.5	0.35
	273.35-277.80	4.45	53.5	3.31	100	0.14	0.14	0.44	2.5	26.0	0.45
RBE 17	232.50-233.95	1.45	50.25	1.03	100	0.06	0.03	0.29	1.0	13.0	0.42
	245.80-247.50	1.70	50.25	1.20	100	0.04	0.12	0.49	2.3	29.0	0.63
RBE 18	184.45-188.30	3.85	10.5°	0.7m	100	0.029	0.07	2.67	2.90	70.0	0.77
	218.75-219.91	1.16	28.0	0.5m	100	0.022	0.017	2.91	2.24	50.0	0.68
	235.25-237.13	1.89	71.0	1.75	100	0.067	0.31	0.47	1.64	31.0	1.51
RBE 19	232.40-235.00	2.60	30.0	1.30	100	0.01	0.01	2.80	0.46	32.8	-
	251.70-253.20	1.50				0.11	0.06	0.95	1.84	30.5	-
	287.35-290.00	2.65				0.02	0.03	1.13	1.28	31.7	-
	294.95-298.35	3.40				0.03	0.08	2.07	1.54	38.3	-
RBE 20		No split core results available									
RBE 21	214.65-215.80	1.15				0.06	0.07	3.80	4.96	98.2	-
	230.50-231.75	1.25				0.01	0.04	0.04	3.51	12.2	-
	303.65-305.0	1.35	55°	1.11	100	0.03	0.08	5.16	3.83	124.4	-

RBE 22 has been completed, the final depth being 500.2m

RBE 23 " " " " " " " 502.0m

No analytical results are available

Two further diamond drill holes are planned for the current period

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Intensive exploration is being carried out to the south and west of the area currently being evaluated. As portrayed on the attached plan (TAS-2-2592) this includes mise a la masse and ground magnetic surveys, geological mapping, hand and power auger sampling. On GAR south coincident geochemical and geophysical anomalies present obvious drill targets along strike from Fentons Prospect. On GAT widespread glacial cover precludes geochemical sampling over much of the grid. A ground magnetic survey is currently in progress. Geological mapping has been carried out on the Railway line, main water courses and the Pieman River. A comprehensive review of all available data has been undertaken on the area south of GAT bordering the western part of the tenement. It is intended that this work should highlight prospective diamond drill targets, within the down faulted block of Crimson Creek Formation sediments east of the Bassett-Federal Fault. Herewith as an appendix are the results of geological mapping, geochemical sampling and geophysical surveys carried out over the grids:-

"A compilation of results from work carried out at GAR, East Renison - EL 5/63 Part 6."

Expenditure

Expenditure on the tenement during the period 1.1.81 to 30.3.81 has been $272,657 with an estimated $453,584 to be expended in April, May and June bringing the six monthly total to $726,241.

Proposed Programme

1. Arthur River EL 5/63 Section 1 (Plan TAS-2-2598)

   Target Sn

   1.1 Continue the programme of detailed geological mapping, heavy concentrate sampling and stream sediment sampling in the Deep Gully and Belmont drainage basins.

   1.2 Compile a geological map from all available data in order to define prospective areas to be investigated during the next summer season.

2. Ramsay EL 5/63 Section 2 (Plan TAS-2-2594)

   Target Sn W (Cu Ag)

   2.1 Establish closer spaced grid lines over the South Bischoff area and extend the existing grid to the north. These lines will be geologically mapped, auger sampled and geophysically surveyed.

   2.2 Complete the geological surveys over grid CAE and compile an interim report on the area.

   2.3 Compile a report on the work carried out on grid CAL incorporating diamond drilling proposals.

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2.4 Complete the current phase of diamond drilling on the CAF skarn zone. Following core logging and sampling a report on progress will be compiled.

2.5 Complete a report on grid CAJ.

2.6 Carry out the proposed electromagnetic survey on grid CAI and complete the geological mapping and ground magnetic surveys.

2.7 Carry out the proposed electromagnetic survey on grid CAM, and carry out detailed geological mapping and geochemical sampling in the creeks draining the area.

2.8 Geologically map grid CAG and carry out ground magnetic and electromagnetic surveys.

3. Chester-Pinnacles EL 5/63 Section 4 (Plan TAS-2-2595)

Target Pb Zn Ag (Au, Cu)

3.1 Diamond drill the coincident geochemical and geophysical anomalies associated with the acid tuff/sediment sequence overlying the East Chester Andesites.

3.2 Review all data and compile a report on the area.

3.3 Extend the IP coverage to the east particularly across the East Chester Andesite.

4. East Renison EL 5/63 Section 6 (Plan TAS-2-2596)

Target Sn Pb Zn Ag

4.1 Complete the current programme of diamond drilling planned to intersect the Base Metal-Tin zone at RL -100m.

4.2 Test for continuity, ore grade and width in individual ore shoots by further diamond drilling.

4.3 Diamond drill selected targets on grid GAR south along strike from Fentons Prospect.

4.4 Complete the ground magnetic survey over grid GAT and collect power auger samples over areas of anomalous geochemistry.

4.5 Compile a stage report on all aspects of the work so far carried out in the evaluation of the prospect.

4.6 Further mineralogical work should be directed to determining more precisely how the silver and tin occur in the ore. Further metallurgical work should mainly be directed to improving zinc flotation and the following test work is suggested:

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1) Tests on conventional zinc flotation, to examine the use of other collectors and the effects of pH and copper sulphate additions.

2) Tests to see if much higher zinc concentrate grades are possible at lower zinc recoveries.

4.7 Diamond drill targets selected from the work now being carried out on grid GAT, and on GAP west.

4.8 Examine the geological, geochemical and geophysical data from the southern and south western sectors of the tenement, particularly in the light of the encouraging results from diamond drilling on ML. These significant Sn values occur in a hydrothermally altered conglomerate, which, it appears, may be traced northwards from the ML into EL 5/63.

Proposed Budget July-December 1981

Arthur River (Section 1)	23,981
Ramsay (Section 2)	103,788
Chester-Pinnacles (Section 4)	65,806
East Renison (Section 6)	561,062
Total	$754,637

Approved by

R J Kernick
EXPLORATION MANAGER

Compiled by
G F Pigott
Senior Geologist

22nd May 1981

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List of Plans in Appendices of:

REPORT ACCOMPANYING LICENCE RENEWAL APPLICATION FOR EXPLORATION LICENCE 5/63 TASMANIA

By G.F. Pigott, Comstaff Pty Ltd

All plan number prefixed by TAS/2/

Appendix 2: A compilation of results from work carried out in the Ramsay area E.L. 5/63 Part 2.

A. Ramsay Grid CSB Profiles of topography, magnetics, E.M., Geochem, Geology

Plan No.	Pocket No.	Scale.	Topic
2588	1	1:2500	Line 5960N
2587			5720N
2586			5480N
2585			5240N
2584			5000N
2375			Ramsay Grid - CSB Geological Interpretation
2366			Detailed Geological Plan
2372			Ramsay Grid - CSB Geochemical grid auger sampling Ni ppm
2371	2		Ramsay Grid - CSB Geochemical grid auger sampling As ppm
2370			Ramsay Grid - CSB Geochemical grid auger sampling Sn ppm
2369			Ramsay Grid - CSB Geochemical grid auger sampling Zn ppm
2368			Ramsay Grid - CSB Geochemical grid auger sampling Pb ppm
2367			Ramsay Grid - CSB Geochemical grid auger sampling Cu ppm

b. Ramsay Grid - CAM

2450			Detailed geological plan
2458			Ground magnetic contours
2459	2456		Geochemical grid auger sampling As in ppm
2457	3		Sn
2455			Ni
2454			Zn
2453			Pb
2452			Cu

c. Ramsay Grid - CAL Profiles topo, mag, crone, geochem, geology

2248		Line 5480N
2247		5240N
2246	4	4640N
2245		4520N

Ramsay Grid - CAL Geochemical grid auger sampling

2175	4	As ppm
2174		Ni ppm
1839		W ppm
1838		Sn ppm
1837		Zn ppm
1836		Pb ppm
1835	5	Cu ppm

d. Ramsay Grid - CAI Geochemical grid auger sampling

2460	As ppm
2448	W
2447	Sn
2446	Ni
2445	Zn
2444	Pb
2443	Cu

Ramsay Grid CAE (Extension) Geochemical grid auger sampling

2523		Asppm
2522		W
2521	6	Sn
2520		Ni
2519		Zn
2518		Pb
2517		Cu

e. Ramsay Grid CAF

2410		Detailed geological plan
1845		
2419	7	Ground magnetic contours
2164	2436	As ppm
1850		W
1849		Sn
2418		As
2417		W
2416		Sn

f. Ramsay Grid CAF (5) Topo, Mag, E.M., Geochem, Geol

2472		L 4580N profiles
2471		L 4520N
2470		L 4460N
2469	8	L 4400N
2468		L 4340N
2467		L 4280N

g. Ramsay Grid CAF

1852	8		Line 4880N Profiles Topo, Mag, Crone, Geochem. Profiles of (e) extensions of lines: Topo, Mag, Crone, Geochem, Geology.
2256			L 4760N
2255			L 5000N
2254			L 5240N

Appendix 4: A compilation of results from work carried out in the East Chester area E.L. 5/63 Part 4.

East Chester Grid EAB

Geology and A° and C geochemical results for Cu, Pb, Zn, Ba, Mn

2537	1	1:5000	Line 3950S section
2536			3750
2535			3550
2534			3350
2533			3150
2532			2950
2531			2750
2530			2540
2529	2		2340
2528			2130
2527			1930
2526			1730
2525			1530
2511		1:2500	L 2340S profiles Section of proposed drillhole 'A'
2512			L 2950S profiles Section of proposed drillhole 'B'
2429		1:5000	Contoured resistivity plan of N=2 showing distinctive anomalies.
2428			Contoured chargeability plan of N=2 showing distinctive anomalies.

East Chester grid geophysical results

Topo profile with I.P., SP., Mag, Crone

2299	3		L 3950S
2298			3750
2297			3550
2296			3350
2295			3150
2294			2950
2293			2750

2292	4	1:5000	2540	
2291			2340	
2290			2130	
2289			1930	
2288			1730	
2287			1530	
			Geochemical Grid Auger Sampling	
2324			Mn ppm	
2323			Ba	
2320	5		Cu	
2321			Pb	
2322			Zn	
1565			Detailed Geological Plan	

Appendix 6: Fentons (GAR) Prospect - Results of diamond drilling, incorporating drill logs, drill sections and analytical results.
Surveyed points on lines, Sections of drillholes, Detailed geological section.

2578	1	1:500	L 4820N, DDH RBE	22	
2559			L 4160N,	21	
2406			4880	20	
2405			4280	19,	Geochemical Results for As Ni
2404					Pb Zn Ag
2403					Geochemical Results for Sn Cu W
2402					Geological Details
2342			4340N	18,	Geochem. Results for As Ni
2341	2				Pb Zn Ag
2340					Sn Cu W
2339					Geological Details
2338			4400	17,	Geochem. results for As Ni Au
2337					Pb Zn Ag
2336					Sn Cu W
2335					Geological Details
2334			4460	16,	Geochem. Results for As Ni Au
2333	3				Pb Zn Ag
2332					Sn Cu W
2331					Detailed Geol. Sectio

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2316	3	1:500	L4520, DDH RBE 15, Geochem. Results for As Ni Au
2315			Pb Zn Ag
2314			Sn Cu W
2313			Geological Details
2398		1:2500	Mise à la Masse survey results Summary of results.
2397	4		
2396			Mise à la Masse survey results for DDH RBE 19, 245m depth
2395			
2394			18, 234m
2393			
2392			17, 235m
2391			
2390			16, 300m
2389	5		
2388			277m
2387			
2386			14, 254.9m
2385			
2384			Mise à la Masse survey results for DDH RBE 12, 233m depth
2383			
2382	6		12, 221m
2381			
2380			11, 234m
2379			215.8m
2378			10A, 251m
2377			222.8m
2376			7, 67.7m

Apendix 7: A compilation of results from work carried out at GAR and GAT East Renison - E.L. 5/63 Part 6.

2514	1	1:5000	Renison Grid - GAT Base plan
2177		1:2500	- GAR Grid auger sampling W ppm
2130			As
2128			Sn
2126			Zn
2124	2.		Pb
2122			Ni
2120			Cu
2326			GAR magnetic intensity contours
2325			

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LIST OF PLANS - contained in Vol 1

TAS-2-2597	Section 1 Arthur River Plan showing work completed 1.1.81-30.6.81	1:50 000
TAS-2-2590	Section 2 Ramsay Plan showing work completed 1.1.81-30.6.81	1:50 000
TAS-2-2591	Section 4 Chester-Pinnacles Plan showing work completed 1.1.81-30.6.81	1:50 000
TAS-2-2592	Section 6 Renison East Plan showing work completed 1.1.81-30.6.81	1:50 000
TAS-2-2257	Renison Grid GAR Longitudinal Section along the Pb-Zn-Ag-Sn Lode	1:2 500
TAS-2-2117	Renison Grid GAR (N) Location of drill holes and adits	1:2 500
TAS-2-2118	Renison Grid GAR (S) Location of drill holes and adits	1:2 500
TAS-2-2598	Section 1 Arthur River Plan showing proposed work 1.7.81-31.12.81	1:50 000
TAS-2-2594	Section 2 Ramsay Plan showing proposed work 1.7.81-31.12.81	1:50 000
TAS-2-2595	Section 4 Chester-Pinnacles Plan showing proposed work 1.7.81-31.12.81	1:50 000
TAS-2-2596	Section 6 Renison East Plan showing proposed work 1.7.81-31.12.81	1:50 000

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LIST OF APPENDICES

1. Diamond drilling proposals to test a skarn at Mount Ramsay EL 5/63 Part 2.

2. A compilation of results from work carried out in the Ramsay Area EL 5/63 Part 2.

3. Diamond drilling proposals at East Chester EL 5/63 Part 4.

4. A compilation of results from work carried out in the East Chester Area EL 5/63 Part 4.

5. Preliminary Mineralogical and Metallurgical evaluation of Two samples of Lead-Zinc Ore. An Amdel service report.

6. Fenton GAR Prospect Results of diamond drilling, incorporating drill logs, drill sections and analytical results.

7. A compilation of results from work carried out at GAR and GAT East Renison EL 5/63 Part 6.

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APPENDIX 1

Diamond Drilling Proposals to test a skarn at Mount Ramsay EL 5/63 Part 2

Two diamond drill holes are proposed at grid CAF on the south east slopes of Mount Ramsay.

Proposed Holes	Hole A	Hole B (approx)
collared at grid coordinates:	600m on LW Road	4540E/4880N
national coordinates:	371955E/5394706N	371835E/5395156N
azimuth:	258° TN	252° TN
declination:	50°	50°
estimated length:	150-200m	250-300m

Objective

To determine the economic potential of the skarn mineralisation adjacent to the Meredith Granite.

Geology

Rock units assigned to the Crimson Creek Formation make up the sedimentary sequence on CAF. The rocks comprise a tuffaceous turbiditic sequence of labile lithic wacke, tuffaceous greywacke, siltstone and argillite with finely bedded pelitic horizons. Basic tuff, basalt and micro dolerite units occur in the sequence.

Measured dips and strikes indicate that the rocks dip and face westwards into the granite but there is some drag folding and faulting.

The granite over the western sector of the grid is mainly a coarse grained equicrystalline biotite granite. Along the contact with the sediments the granite is a porphyritic adamellite, which is heavily tourmalinised in parts and may be patchily greisenised.

The sedimentary and volcanic rock units at CAF are hornfelsed. The metamorphic mineral assemblages represent low to medium amphibole facies within a contact aureole. The highest grade of thermally metamorphosed rocks occur along the granite contact. These rocks form as a distinctive zone of skarn mineral assemblages. The only recognisable sedimentary rocks within the zone are finely banded pelites with the bedding outlined by compositional banding of fine calc silicate minerals. Bands, veins and sills of coarsely crystalline amphibolite form Fe-Mg rich skarn suites. These distinctive rocks are composed of ferrohastingsite or hornblende with interstitial magnetite, phlogopite and fluorite. Relict banding may sometimes be recognised within these rocks.

...2.

Mineralisation

Pyrrhotite, magnetite fluorite and tourmaline mineralisation occur in varying amounts throughout the skarn zone. Old workings in the form of a 40m adit, dumps, shallow pits and trenches have been located, mapped and sampled. In addition rock chip and C horizon soil samples have been collected. The results indicate that there is a zone of W mineralisation with subsidiary Sn, associated with the northern sector of the skarn and a zone of Sn mineralisation with subsidiary As in the south. the proposed drill holes are planned to test each of these zones.

The best W values so far found are from a 6m channel sampled zone in the adit which analysed 650ppm W and 240 ppm Sn. The best Sn values are found in rocks within the southern part of the grid, e.g.:-

	Sn	F
4400N/4540E	1400	3179
4400N/4555E	1200	2771
4340N/4530E	1050	3067

Soil Geochemistry

Anomalous geochemical responses in Sn, W and As occur over the skarn zone. These are illustrated on the accompanying plans and sections. The entire skarn zone is anomalous in Sn with the highest values in the south. A well defined W anomaly occurs in the north coincident with the Sn. Anomalous As values are associated with the southern Sn zone.

Geophysics

The skarn zone is readily defined by the ground magnetic responses. The highest readings occur over the eastern contact of the zone possibly indicating a greater concentration of magnetite. In the north the anomaly extends eastwards from the mapped skarn suite and from the soil geochemical anomalies. This suggests that although the rock units dip westwards into the granite that the zone of skarn mineralisation dips to the east. The magnetic "low" over the western portion of the skarn is thought to be due to east dipping granite/skarn contact.

Drill Targets

Hole A: The target for proposed drill hole A is the southern sector of the mineralised skarn. The hole is planned to determine the source of the anomalous Sn value in the soils and rocks and to test the magnetic anomalies. The hole should traverse the skarn, pass into tourmalinised porphyritic adamellite and terminate in non mineralised granite.

Hole B: The target for proposed drill hole B is the northern sector of the mineralised skarn. The hole is planned to determine the source of the anomalous W and Sn value in the soils and rocks and to test the magnetic anomalies including that which lies east of the mapped skarn rocks. The hole should traverse the skarn zones and tourmalinised rocks to terminate in non mineralised equicrystalline biotite granite.

...3.

Hole A should be drilled first. The proposed collar position is readily accessible and a pad can easily be established. Apart from testing the mineralisation in the skarn and granite, important, structural and zonal information should be forthcoming. The dip of the mineralisation and of the granite/skarn contact will be established. This information is required to determine the final collar position for drill hole B and for subsequent drill holes. Hole B as proposed assumes an easterly dip for both the skarn mineralisation and the granite/skarn contact of 50°. The collar position is only approximate until these dips are known.

LIST OF ATTACHED PLANS *

PROPOSED DRILL HOLE A

TAS/2/2410	Grid CAF (South) Detailed geological plan showing proposed drill hole A	1:2 500
TAS/2/2419	Grid CAF (South) Ground Magnetic values and contours	1:2 500
TAS/2/2416	Grid CAF (South) Sn values in soils	1:2 500
TAS/2/2417	Grid CAF (South) W values in soils	1:2 500
TAS/2/2418	Grid CAF (South) As values in soils	1:2 500
TAS/2/2469	Grid CAF (South) Section 4400N showing proposed drill hole A	1:2 500

PROPOSED DRILL HOLE B

TAS/2/1845	Grid CAF (North) Detailed geological plan showing proposed drill hole B	1:2 500
TAS/2/2436	Grid CAF (North) Ground Magnetic values and contours	1:2 500
TAS/2/1849	Grid CAF (North) Sn values in soils	1:2 500
TAS/2/1850	Grid CAF (North) W values in soils	1:2 500
TAS/2/2164	Grid CAF (North) As values in soils	1:2 500
TAS/2/1852	Grid CAF (North) Section along line 4880N showing proposed drill hole B	1:2 500

* APPENDIX 2

COMSTAFF PTY LTD

APPENDIX 3

Diamond Drilling Proposals at East Chester

EL 5/63 Part 4

Two diamond drill holes are proposed at grid EAB at East Chester.

Proposed holes	Hole A	Hole B
collared at grid coordinates:	2340S/1220W	2950S/1440W
national coordinates:	378887E 5384505N	378283E 5384303N
azimuth:	160°TN	155°TN
declination:	50°	65°
estimated length:	300m	250m

Objective

To determine the source of geochemical and geophysical anomalies associated with acid tuffs and sediments overlying the East Chester andesites.

Geology

The geology at grid EAB consists of a central zone of andesitic lavas and pyroclastics flanked by sequences of acid volcanics and sediments. The andesites are exposed in a broad anticlinal structure which plunges to the north east. Lavas dominate the sequence with pyroclastics prominent along the western flank. The lavas are microporphyritic in plagioclase, are flow banded and contain amygdales filled by deuteric quartz. The pyroclastics are mainly lapilli tuffs to almost agglomeratic in sections. Typically the rocks are massively bedded, heavily stained with iron and manganese and deeply weathered.

The eastern Volcanic sequence appears to be essentially sub aerial with ignimbrites, ash fall tuffs, rhyolites and rhyodacites. Thin shaley units occur within the andesites close to the eastern contact. The Induced Polarisation surveys have not shown any distinct anomalies associated either with the contact zone or the overlying rocks.

The western Volcanic-Sedimentary Sequence on the other hand was probably deposited within an intravolcanic basin. The sequence is dominated by water lain lithic and crystal tuffs with agglomerate, quartz feldspar porphyry and breccia. Interbedded with these pyroclastic units are grey, pyritic, cherty sediments, laminated pyritic grey siltstones and black pyritic shales. The sequence suggests rapidly changing conditions of deposition probably in a marine shallow water environment. Such a volcanic setting makes the area prospective for volcanogenic exhalative ores.

...2.

Mineralisation

Pyritic ferruginous bedded cherts are exposed at the western end of costean 2950S and may be traced south into costean 3350S. Galena in thin quartz veinlets occurs within these cherty sediments. Sphalerite and chalcopyrite in silicified shale occurs as float at 2950S/1440W. To the north in costean 2540S and 2340S the interbedded siltstones, shales and fine tuff horizons are ubiquitously pyritic and silicified. Chloritic alteration patches within pyroclastic units also contain pyrite. A 6m chip sampled section in costean 2340S analysed at 0.14% Pb (with 15 ppm Cu, 75 ppm Zn and 560 ppm Ba) from a siliceous flow banded rhyolite. A 3m section in the same costean analysed at 0.14% Pb (with 75 ppm Cu, 690 ppm Zn and 240 ppm Ba) from weathered tuffaceous siltstone immediately overlying the andesite.

Stratigraphically equivalent rock units exposed in the western limb of the Burns Peak Syncline are essentially tuffaceous with a very minor sedimentary component. A mineralised silicified zone within sericitised acid tuff was exposed in an access track (called Leo's Find) and subsequently traced along strike by a series of excavations. The rocks are pyritic with minor sphalerite, galena and chalcopyrite essentially in quartz veinlets, and are distinctly anomalous in barium. Significant values from rock chip sampling within this zone are:-

Location	Sample type	Cu	Pb	Zn	Ba	Ag
39m on 2540S track	grab sample over 40cm	0.15%	0.11%	4.55%	14.4%	17.8ppm
Costean 3 38-39m	chip sample	0.12%	0.13%	0.21%	400ppm	n/a
Costean 4 16-19m	chip sample	20ppm	55ppm	80ppm	1.6%	n/a
Costean 5 8-11m	chip sample	10ppm	60ppm	20ppm	1.0%	n/a

If this mineralised zone represents a proximal facies then the distal facies where a concentration of massive sulphides could occur, may be represented by the interbedded tuffs and sediments in the eastern limb of the syncline.

Soil Geochemistry

Anomalous Ao geochemical responses in Pb, Zn and Cu occur in soil samples over the contact zone between the andesites and the western volcanic sedimentary sequence. These responses have been confirmed by costean and auger sampling as originating from within the acid rocks and interbedded sediments rather than the andesites.

...3.

On line 2340S the anomalous Ao values from 1000W-1060W, viz:-

	Pb	Zn	Cu	Ba	Mn
1000E	430	98	14	40	n/a
1020E	490	190	12	420	510
1040E	780	400	12	540	1540

can be related to rhyolitic tuffs and siliceous black shales exposed in the costean (see section on mineralisation). The Chief Divisional Geologist, East in a memorandum dated 5th March 1980 drew attention to the fact that the shales were not the sole source of the anomalous material, and pointed out that the peak values were in the volcanic units.

On line 2950S the costean did not extend far enough west to test the anomalous Ao responses from 1340W-1380W, viz:-

	Pb	Zn	Cu	Ba	Hg (ppb)
1340W	1150	36	40	260	140
1360W	330	42	20	480	140
1380W	60	24	6	520	85

however auger sampling over the zone confirmed the existence of the anomaly viz:-

	Pb	Zn	Cu	Ba	Mn
1340W	860	210	24	220	4050
1360W	425	63	22	360	855
1380W	295	295	15	460	142

Geophysics

The only strong IP anomaly on the EAB grid occurs over the contact zone between the andesites and the western Volcanic-Sedimentary sequence. To a large extent the response is formational due to:-

(a) a contrast in the geophysical properties between the massively bedded andesites and the finely bedded acid volcanics and tuffs, and

(b) units of pyritic carbonaceous shale units within the volcanic-sedimentary sequence.

However, it is important to note that the black shales inter-bedded with the andesites on the south eastern flank of the anticline do not give rise to an IP anomaly. There are no anomalous IP patterns over the contact between the andesites and the eastern volcanic sequence.

...4.

It is evident that contributing factors to the anomalous IP responses along the north western flank of the andesites could be disseminated sulphide mineralisation within the volcanics as well as base metal mineralisation in the shales. Certainly the IP anomaly on line 2950S cannot be related to black shales but rather to finely bedded tuffs and pyritic cherts as exposed in the costean. Indeed the only shales noted on this line occur upslope from both the anomalous IP and Pb/Zn anomalies. As regards line 2340S the Chief Divisional Geologist, East comments (5.3.1980):-

"The IP and SP patterns on line 2340S suggest to me that their sources are not confined to the shale - that is there could be considerable disseminated sulphide mineralisation flanking the shale horizon. Furthermore, going back to the INPUT data, it might be argued that if the pyritic, carbonaceous shale is the source of the geochemical and ground geophysical effects then there should perhaps have been a formational INPUT response but, as you know, there are no INPUT responses over EAB."

Drill Targets

The target for the proposed drill holes A and B is volcanogenic base metal mineralisation within waterlain acid tuffs and pyritic sediments overlying a pile of massive andesitic volcanics. The widespread occurrence of pyrite, the zones of silicification and sericitisation and the presence of cherty sediments indicate that suitable chemical trap sites existed for the deposition of base metals. The source of these metals could either be from circulating hydrothermal and meteoric waters within the andesite pile or from contemporaneous exhalative mineralisation.

Hole A Drill hole A is planned to (1) determine the source of the anomalous Pb and Ba values in the soils and rocks; (2) traverse through the acid volcanic-sedimentary units and penetrate into the andesites; (3) determine the source of the IP response where there are contributing black shale units; (4) obtain subsurface samples below the zone of leaching to allow for an understanding of the dispersion of the elements in the volcanogenic sequence.

Hole B Drill hole B is planned to (1) determine the source of the anomalous Pb, Zn, Cu and Ba values in the Ao and C horizon soil samples; (2) traverse through the acid volcanic-sediment pile which includes mineralised grey cherts and terminate in the andesites; (3) determine the source of the IP anomaly where there is no apparent contribution from black shale units.

...5.

Depending on the results forthcoming from the drilling of hole A it may prove necessary to alter the collar position and length of hole B. If the andesite-acid volcanic contact is found to be steeply dipping to the NW or even dipping to the SE then a hole drilled on azimuth 335° collared in the andesites would be called for. If, on the other hand, the contact is found to be shallow dipping to the NW then a longer hole, say 450m, collared at approximately 1680W would be required.

025

920026

LIST OF ATTACHED PLANS*

TAS/2/1565	East Chester EAB Detailed Geological Plan showing proposed drill holes	1:5 000
TAS/2/2428	East Chester EAB Contoured chargeability plan n=2	1:5 000
TAS/2/2291	East Chester EAB Line 2340S Induced polarisation profile	1:5 000
TAS/2/2294	East Chester EAB Line 2950S Induced polarisation profile	1:5 000
TAS/2/2511	East Chester EAB Line 2340S Section of Proposed hole A	1:2 500
TAS/2/2512	East Chester EAB Line 2950S Section of Proposed hole B	1:2 500

* APPENDIX 4

920027

EL 1/68

EL 5/63 AREA 1

AREA CEDED TO METALS EXPLORATION P/L

WARATAH

LUINA

GRID 1

GRID 2

GRID 3

GRID 4

37B

29A

25A

19A

63A

59B

44A

19C

21G

18C

5A

57A

HAB

HAC

5 420 000 mE

5 410 000 mN

380 000 mE

370 000 m E

380 000m

PURSELLS PLAIN

BELLS PLAIN

BELMONT PLAIN

ARTHUR DAM

WARATAH RESERVOIR

BISCHOFF RESERVOIR

MAGNET DAM

ROUSES CORNER

WOMBAT FLAT

CHALMERS HEATH

BUTLERS

LEGEND

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

5 cm

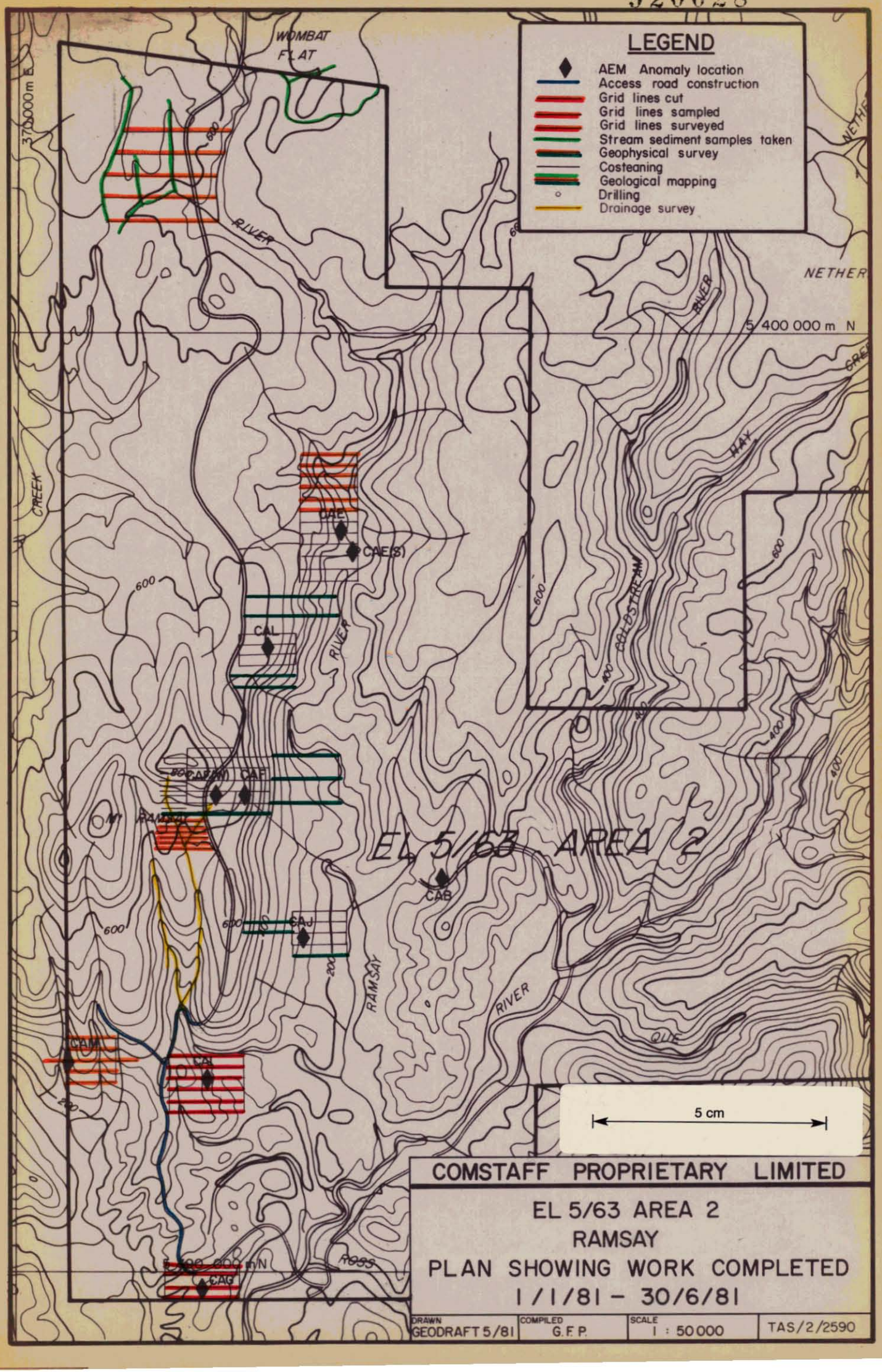
COMSTAFF PROPRIETARY LIMITED

EL 1/68
ARTHUR RIVER 3689
PLAN SHOWING WORK COMPLETED
1/1/81 – 30/6/81 3689

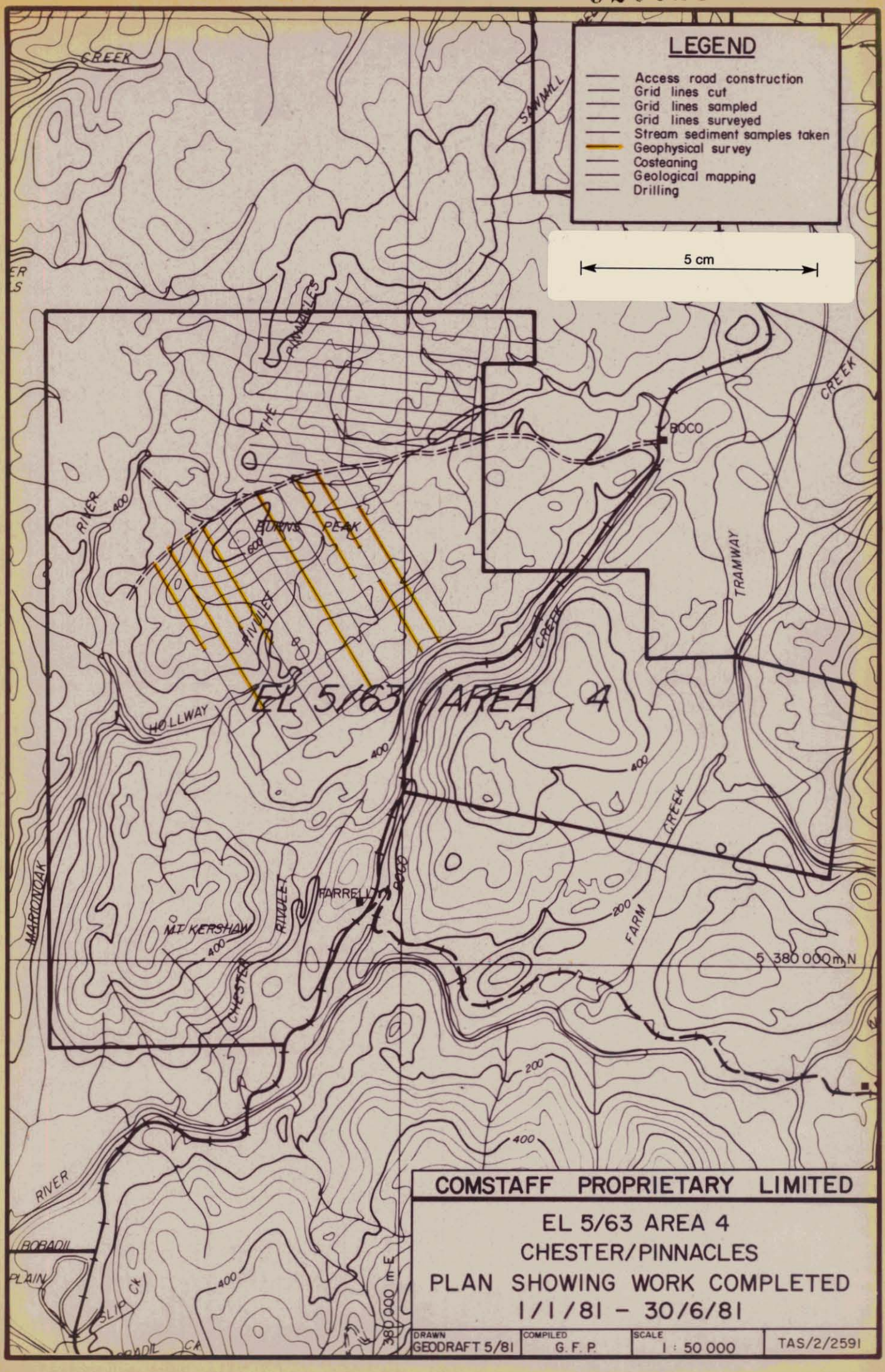
DRAWN		SCALE	
GEODRAFT 5/81	G F P	1 : 50 000	TAS/2/2597

920028

026


LEGEND
AEM Anomaly location
Access road construction
Grid lines cut
Grid lines sampled
Grid lines surveyed
Stream sediment samples taken
Geophysical survey
Costeaning
Geological mapping
Drilling
Drainage survey
WOMBAT FLAT
370 000m E
5 400 000 m N
RIVER
CREEK
NETHER
HAY
RAMSAY
ROSS
CAE
CAE(S)
CAL
CAF(N)
CAF
CAJ
CAB
CAM
CAK
CAG
EL 5/63 AREA 2
600
400
5 cm
COMSTAFF PROPRIETARY LIMITED
EL 5/63 AREA 2
RAMSAY
PLAN SHOWING WORK COMPLETED
1/1/81 - 30/6/81
DRAWN GEODRAFT 5/81
COMPILED G.F.P.
SCALE 1 : 50000
TAS/2/2590

027



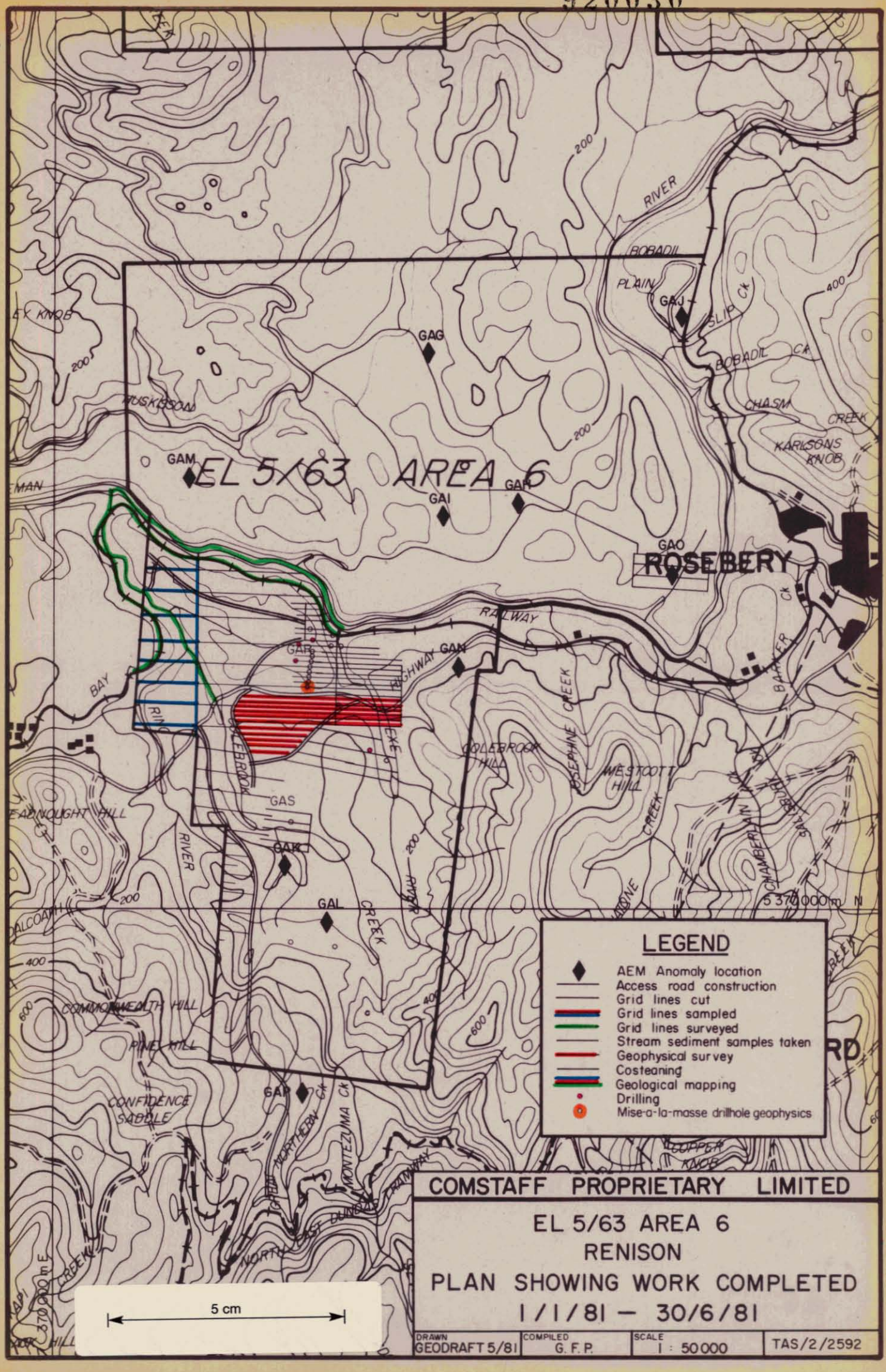
COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 4
CHESTER/PINNACLES
PLAN SHOWING WORK COMPLETED
1/1/81 - 30/6/81

DRAWN	COMPILED	SCALE	
GEODRAFT 5/81	G. F. P.	1 : 50 000	TAS/2/2591

920030

028


EL 5/63 AREA 6
ROSEBERY
GAG
GAM
GAI
GAP
GAO
GAN
GAR
GAS
GAK
GAL
GAJ
RIVER
BOBADIL PLAIN
BOBADIL CK
SLIP CK
CHASM CREEK
KARLSONS KNOB
RAILWAY
HIGHWAY
COLEBROOK HILL
WESTCOTT HILL
JOSEPHINE CREEK
CHAMBERLAIN CREEK
BAKER CK
DARWIN CREEK
BAY
RING
COLEBROOK
EAGLE
EAGLE HAWK HILL
DALCOATH HILL
COMMONWEALTH HILL
PINEY HILL
CONFIDENCE SADDLE
NORTHERN MONTEZUMA CK
MONTEZUMA TRAMWAY
COOPER KNOB
5 370 000m N
5 cm
LEGEND
AEM Anomaly location
Access road construction
Grid lines cut
Grid lines sampled
Grid lines surveyed
Stream sediment samples taken
Geophysical survey
Costeaning
Geological mapping
Drilling
Mise-a-la-masse drillhole geophysics
COMSTAFF PROPRIETARY LIMITED
EL 5/63 AREA 6
RENISON
PLAN SHOWING WORK COMPLETED
1/1/81 – 30/6/81
DRAWN GEODRAFT 5/81
COMPILED G. F. P.
SCALE 1 : 50000
TAS/2/2592

S

N

ROAD CUTTING

(GOSSAN)
7.5 m HW
1.10% Pb
98.2 ppm S
0.12% Zn
710 ppm Ag

ADIT 4940 N 5300

1.0m HW
600ppm Sn
0.15% Pb
0.01% Zn
10.5 ppm Ag

RBE 6
RBE 7
RBE 10A
RBE 11
RBE 12
RBE 14
RBE 15
RBE 16
RBE 17
RBE 18
RBE 19
RBE 20
RBE 21
RBE 22
RBE 23
RBE 5
RBE 9

150 m
+ 100 m
+ 50 m
mean sea level
- 50 m
- 100 m
- 150 m
- 200 m
250 m
- 300 m
- 350 m
400 m
- 450 m
- 500 m

5 372 100 m N
5 373 000 m N

920031

5 cm

3888

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
LONGITUDINAL SECTION ON 372875 m E
ALONG THE LEAD/ZINC/SILVER/TIN LODE
FROM LINE 4220 N TO LINE 5300 N

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	26/9/80
AMENDED	23/5/81
SCALE	1 2500
PLAN No.	TAS/2/2257

372 000 m E

373 000 m E

5 373 000 m N

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 5250 W

L 4750 W

GAMMA

TRACK

TRACK

ALPHA

BETA

PIPEMAN

RIVER

EAST TIE LINE

EXTENDED

DDH RBE 8

DDH RBE 20

DDH RBE 22

DDH RBE 10/10A

DDH RBE 11

DDH RBE 23

DDH RBE 12

DDH RBE 14

DDH RBE 15

DDH RBE 16

DDH RBE 17

DDH XII

DDH RBE 3

DDH RBE 7

DDH RBE 5

DDH RBE 9

ADIT 5187N/4750W

ADIT 5000N/4800W

ADIT 4940N/4920W

FERNYNS ADIT

ADIT 4827N/4750W

184.97m

264.64m

301.71m

EMU BAY RAILWAY

920032

5 cm

3690

TAS/2/2117

TAS/2/2118

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

LOCATION OF DRILLHOLES AND ADITS

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	16/5/80
AMENDED (REDRAFTED 20/8/80)	23/5/81
SCALE	1 2500
PLAN No	TAS/2/2117

5 372 000 m N

372 000 m E

373 000 m E

DDH RBE 19

DDH RBE 18

DDH RBE 21

DDH RBE 13

DDH RBE 1

MURCHISON HIGHWAY

EXE RIVER

EASTERN TIE LINE

L 1452 EXE RIVER

L 1607 EXE RIVER

L 1760 EXE RIVER

L 1960 EXE RIVER

TAS/2/2117

TAS/2/2118

SHEET INDEX

TN

920033

5 cm

3691

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

LOCATION OF DRILLHOLES AND ADITS

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	16/5/80
AMENDED (REDRAFTED 3/11/80)	2/4/81
SCALE	1 2500
PLAN No	TAS/2/2118

920034

EL 1/68

EL 5/63 AREA I

AREA CEDED TO METALS EXPLORATION P/L

LUINA

WARATAH

GRID 1

GRID 2

GRID 3

GRID 4

HAB

HAC

37B

29A

25A

19A

19C

21G

18C

63A

44A

57A

5A

BELLS PLAIN

BELMONT PLAIN

5 420 000 mE

5 410 000 mN

380 000 mE

370 000 mE

WARATAH RESERVOIR

BISCHOFF RESERVOIR

ARTHUR DAM

MAGNET DAM

CHAMPION HEATH

WOMBAT FLAT

LEGEND

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

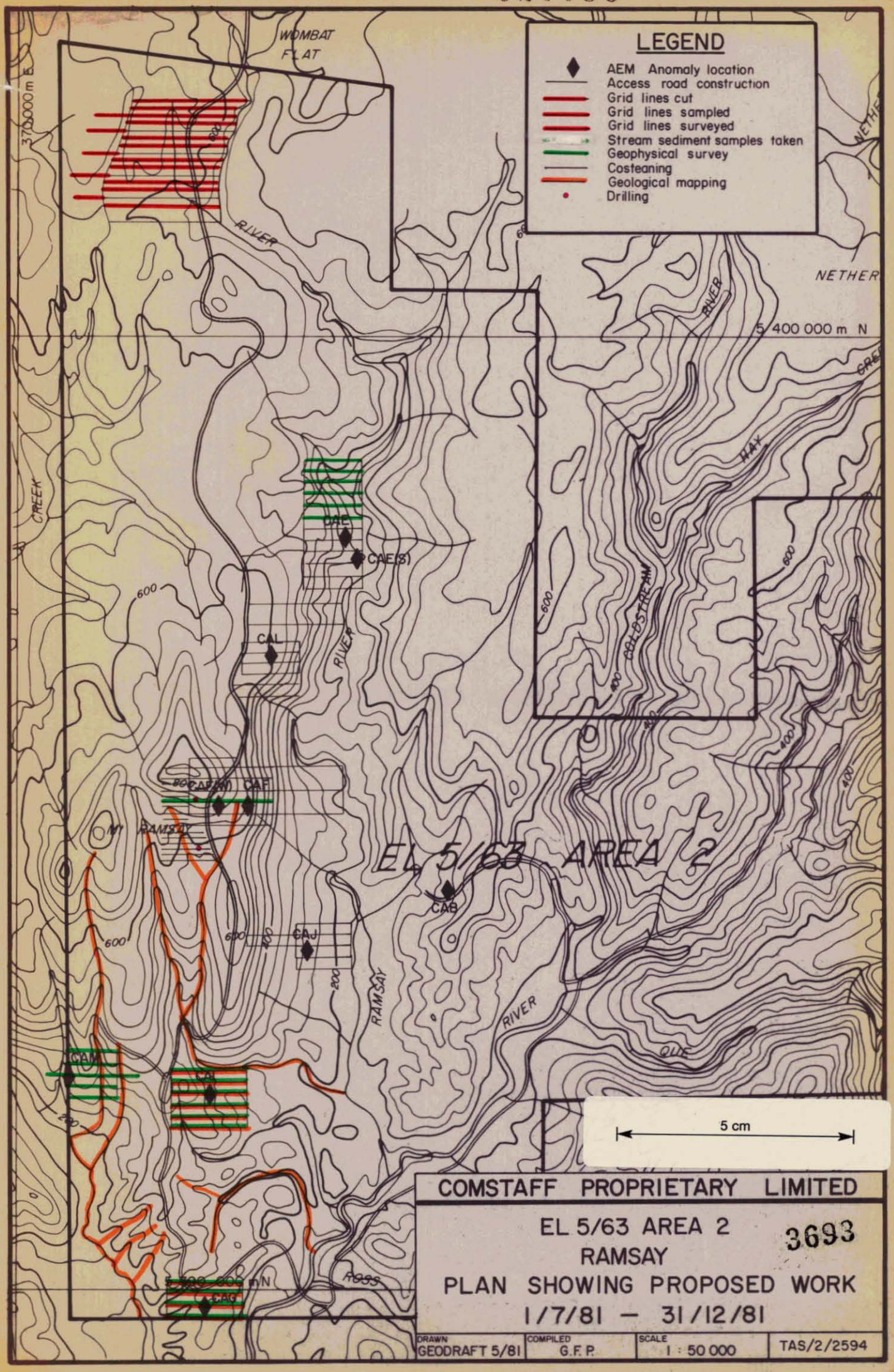
5 cm

COMSTAFF PROPRIETARY LIMITED

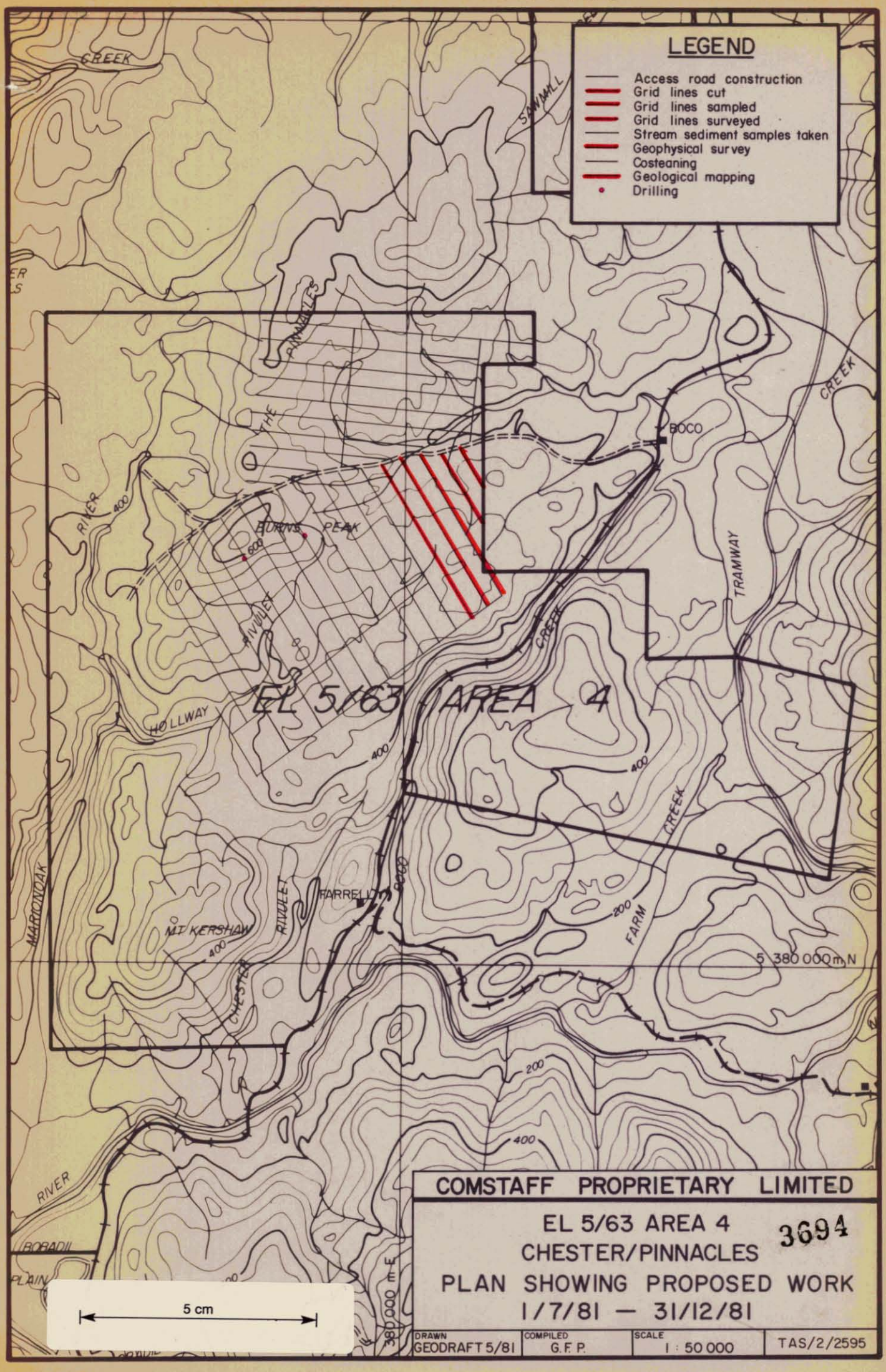
EL 1/68 3692
ARTHUR RIVER
PLAN SHOWING PROPOSED WORK
1/7/81 - 31/12/81

DRAWN	COMPILED	SCALE	
GEODRAFT 5/81	G.F.P	1 : 50 000	TAS/2/2598

920035


LEGEND
AEM Anomaly location
Access road construction
Grid lines cut
Grid lines sampled
Grid lines surveyed
Stream sediment samples taken
Geophysical survey
Costeaning
Geological mapping
Drilling
WOMBAT FLAT
RIVER
NETHER
5 400 000 m N
CREEK
HAY
COLDSTREAM
CAE
CAE(S)
CAL
CAF
CAB
CAJ
CAM
CAI
CAG
RAMSAY
EL 5/63 AREA 2
ROSS
5 cm
COMSTAFF PROPRIETARY LIMITED
EL 5/63 AREA 2
RAMSAY
PLAN SHOWING PROPOSED WORK
1/7/81 – 31/12/81
3693
DRAWN GEODRAFT 5/81
COMPILED G.F.P.
SCALE 1 : 50 000
TAS/2/2594

920036

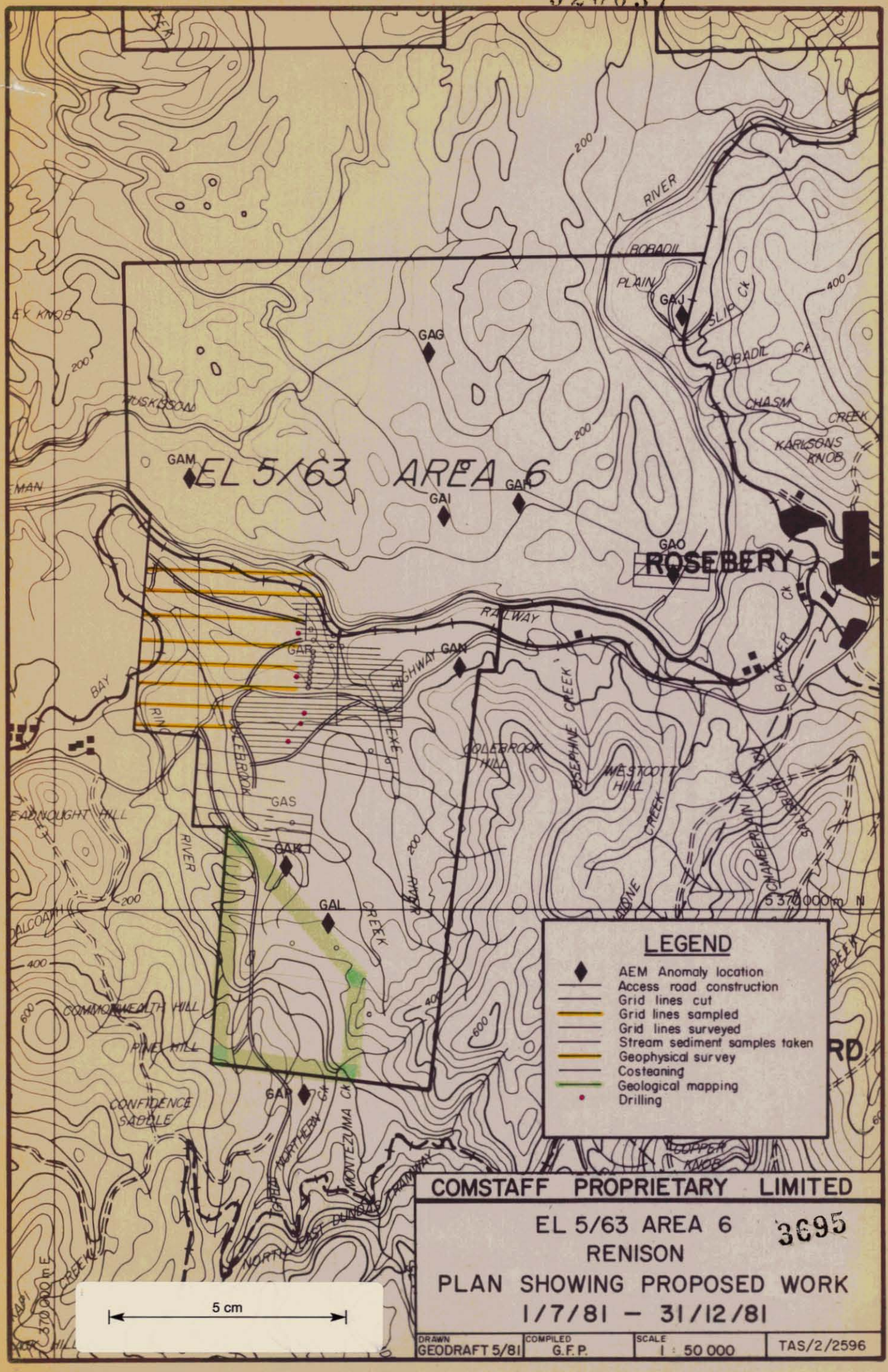


COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 4 3694
CHESTER/PINNACLES
PLAN SHOWING PROPOSED WORK
1/7/81 — 31/12/81

DRAWN	COMPILED	SCALE	
GEODRAFT 5/81	G.F.P.	1 : 50 000	TAS/2/2595

920037



COMSTAFF PROPRIETARY LIMITED

EL 5/63 AREA 6 3695

RENISON

PLAN SHOWING PROPOSED WORK

1/7/81 – 31/12/81

DRAWN	COMPILED	SCALE	
GEODRAFT 5/81	G.F.P.	1 : 50 000	TAS/2/2596

APPENDIX 2

A Compilation of results from work carried out

in the Ramsay Area EL 5 / 63 Part 2

920039

Appendix 2: A compilation of results from work carried out in the Ramsay area E.L. 5/63 Part 2.

A. Ramsay Grid CSB Profiles of topography, magnetics, E.M., Geochem, Geology

Plan No.	Pocket No.	Scale.	Topic
2588	1	1:2500	Line 5960N
2587			5720N
2586			5480N
2585			5240N
2584			5000N
2375			Ramsay Grid - CSB Geological Interpretation
2366			Detailed Geological Plan
2372			Ramsay Grid - CSB Geochemical grid auger sampling Ni ppm
2371	2		Ramsay Grid - CSB Geochemical grid auger sampling As ppm
2370			Ramsay Grid - CSB Geochemical grid auger sampling Sn ppm
2369			Ramsay Grid - CSB Geochemical grid auger sampling Zn ppm
2368			Ramsay Grid - CSB Geochemical grid auger sampling Pb ppm
2367			Ramsay Grid - CSB Geochemical grid auger sampling Cu ppm

b. Ramsay Grid - CAM

2450			Detailed geological plan
2458			Ground magnetic contours
2459	2456		Geochemical grid auger sampling As in ppm
2457	3		Sn
2455			Ni
2454			Zn
2453			Pb
2452			Cu

c. Ramsay Grid - CAL Profiles topo, mag, crone, geochem, geology

2248		Line 5480N
2247		5240N
2246	4	4640N
2245		4520N

Ramsay Grid - CAL Geochemical grid auger sampling

2175	4	As ppm
2174		Ni ppm
1839		W ppm
1838		Sn ppm
1837		Zn ppm
1836		Pb ppm
1835	5	Cu ppm

d. Ramsay Grid - CAI Geochemical grid auger sampling

2460		As ppm
2448		W
2447		Sn
2446		Ni
2445		Zn
2444		Pb
2443		Cu

Ramsay Grid CAE (Extension) Geochemical grid auger sampling

2523		Asppm
2522		W
2521	6	Sn
2520		Ni
2519		Zn
2518		Pb
2517		Cu

e. Ramsay Grid CAF

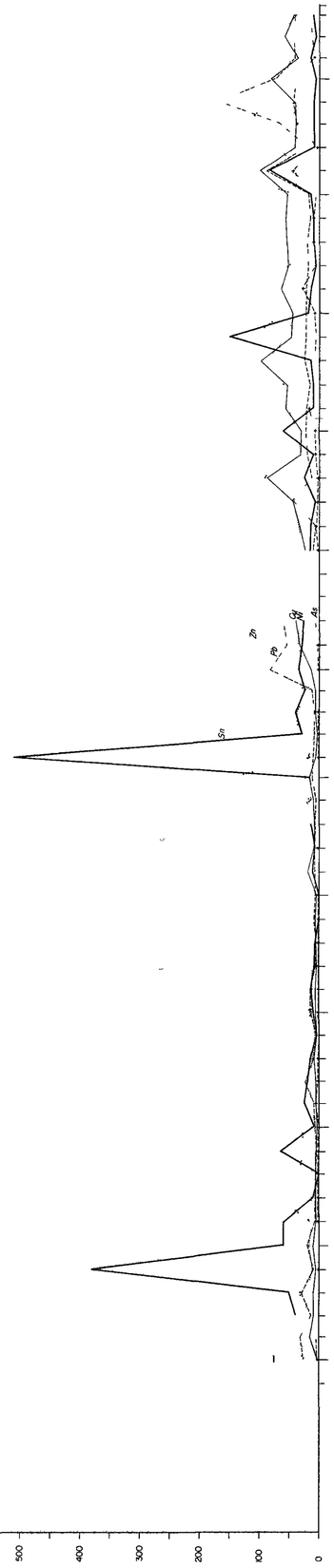
2410		Detailed geological plan
1845		
2419	7	Ground magnetic contours
2164		As ppm
1850		W
1849		Sn
2418		As
2417		W
2416		Sn

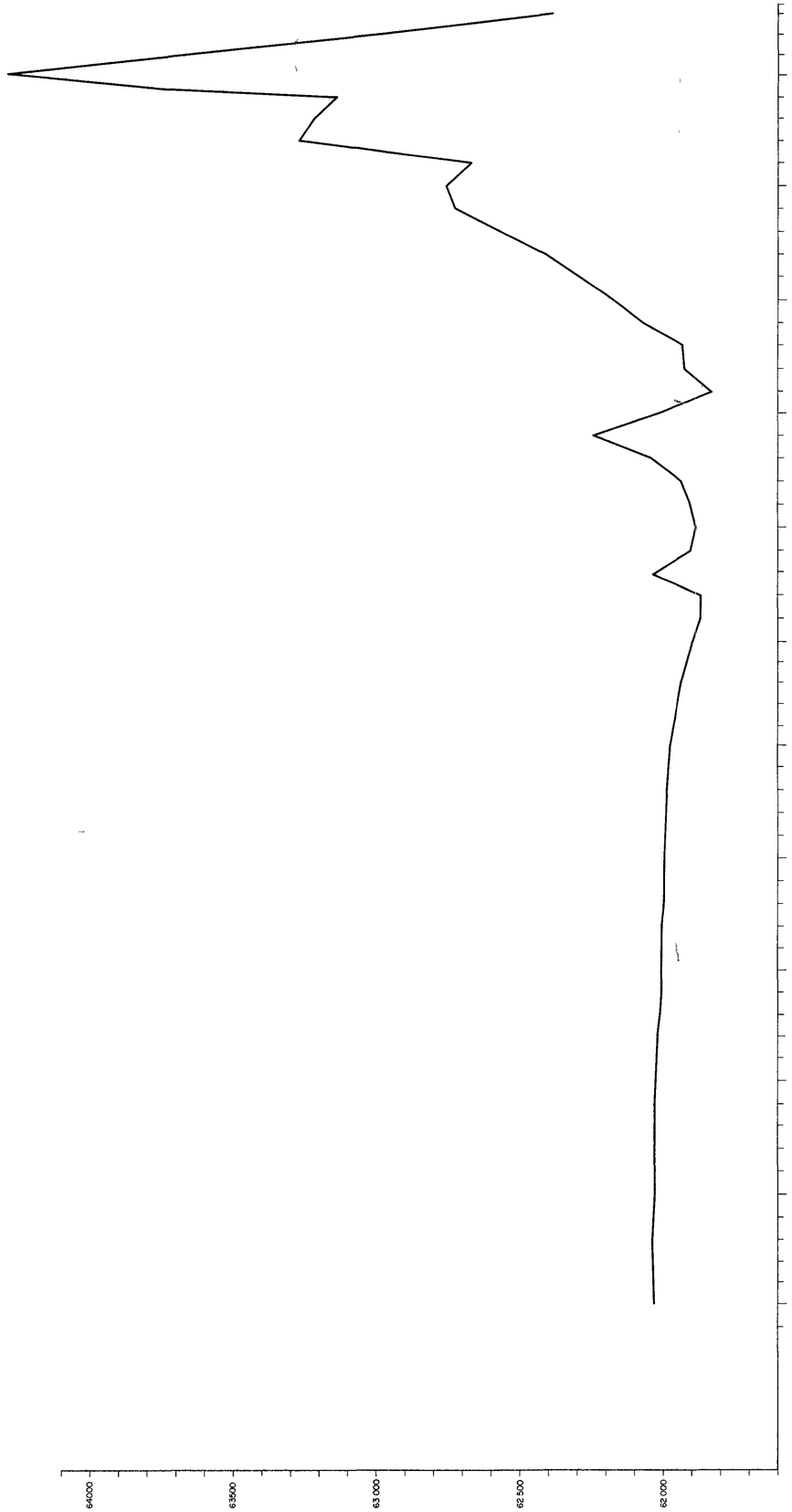
f. Ramsay Grid CAF (5) Topo, Mag, E.M., Geochem, Geol

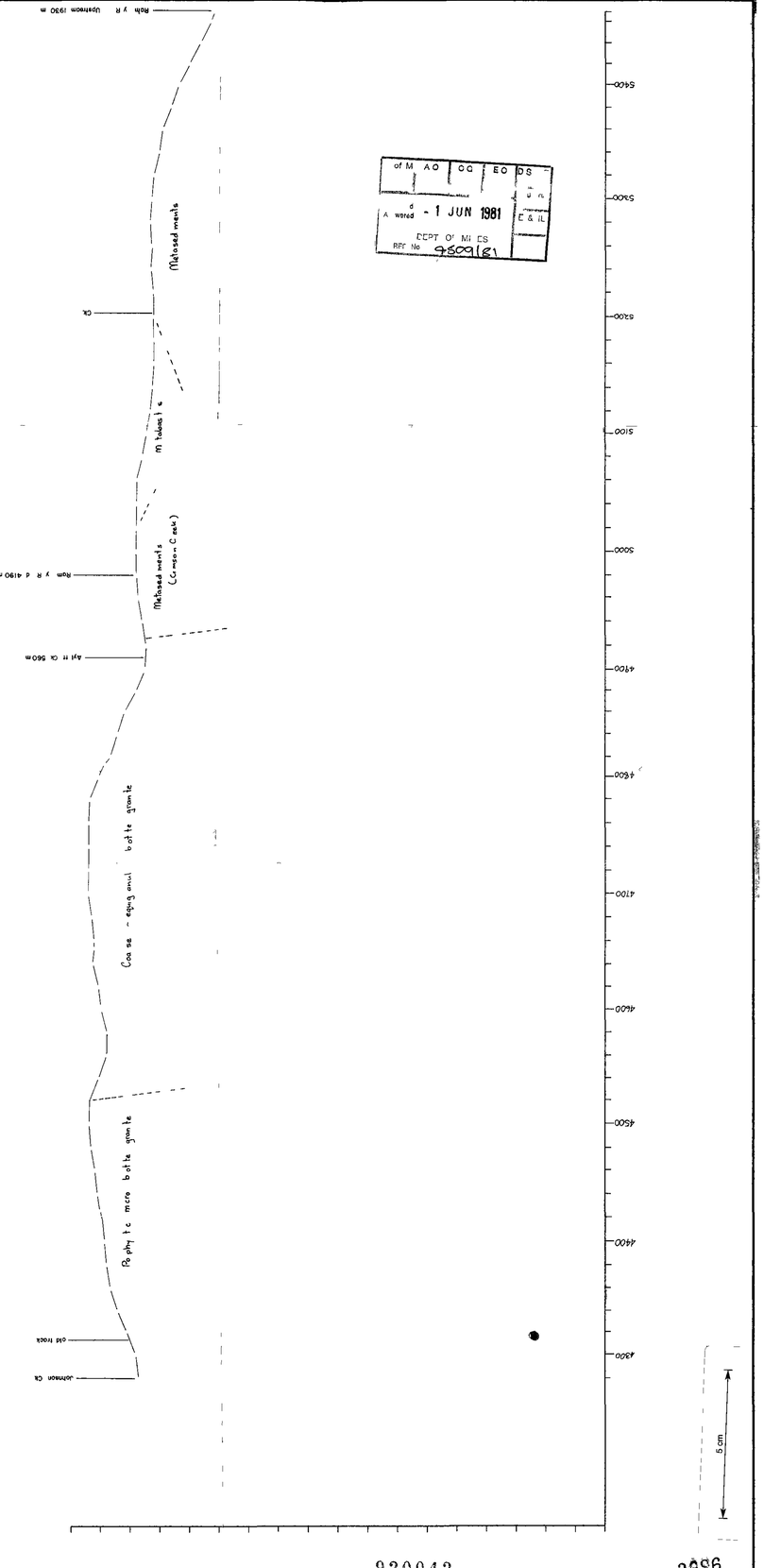
2472		L 4580N profiles
2471		L 4520N
2470		L 4460N
2469	8	L 4400N
2468		L 4340N
2467		L 4280N

g. Ramsay Grid CAF

1852	8	Line 4880N Profiles Topo, Mag, Crone, Geochem. Profiles of (e) extensions of lines: Topo, Mag, Crone, Geochem, Geology.
2256		L 4760N
2255		L 5000N
2254		L 5240N







of M | A O | C G | E O | D S
A worked - 1 JUN 1981
DEPT OF MINES
REF No 9509181
E & IL

920042

3096

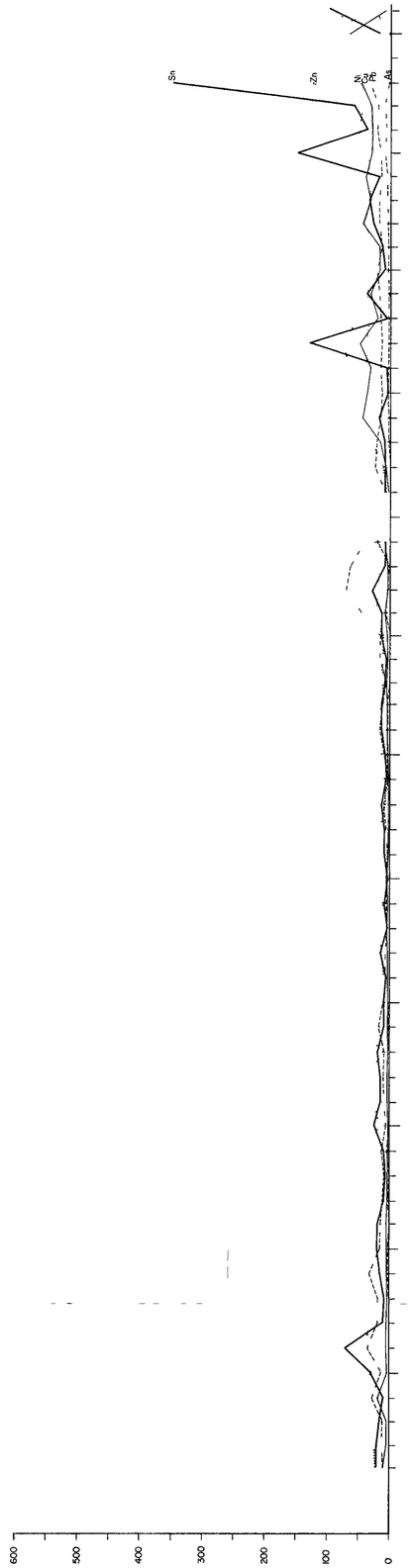
COMSTAFF PROPRIETARY LIMITED

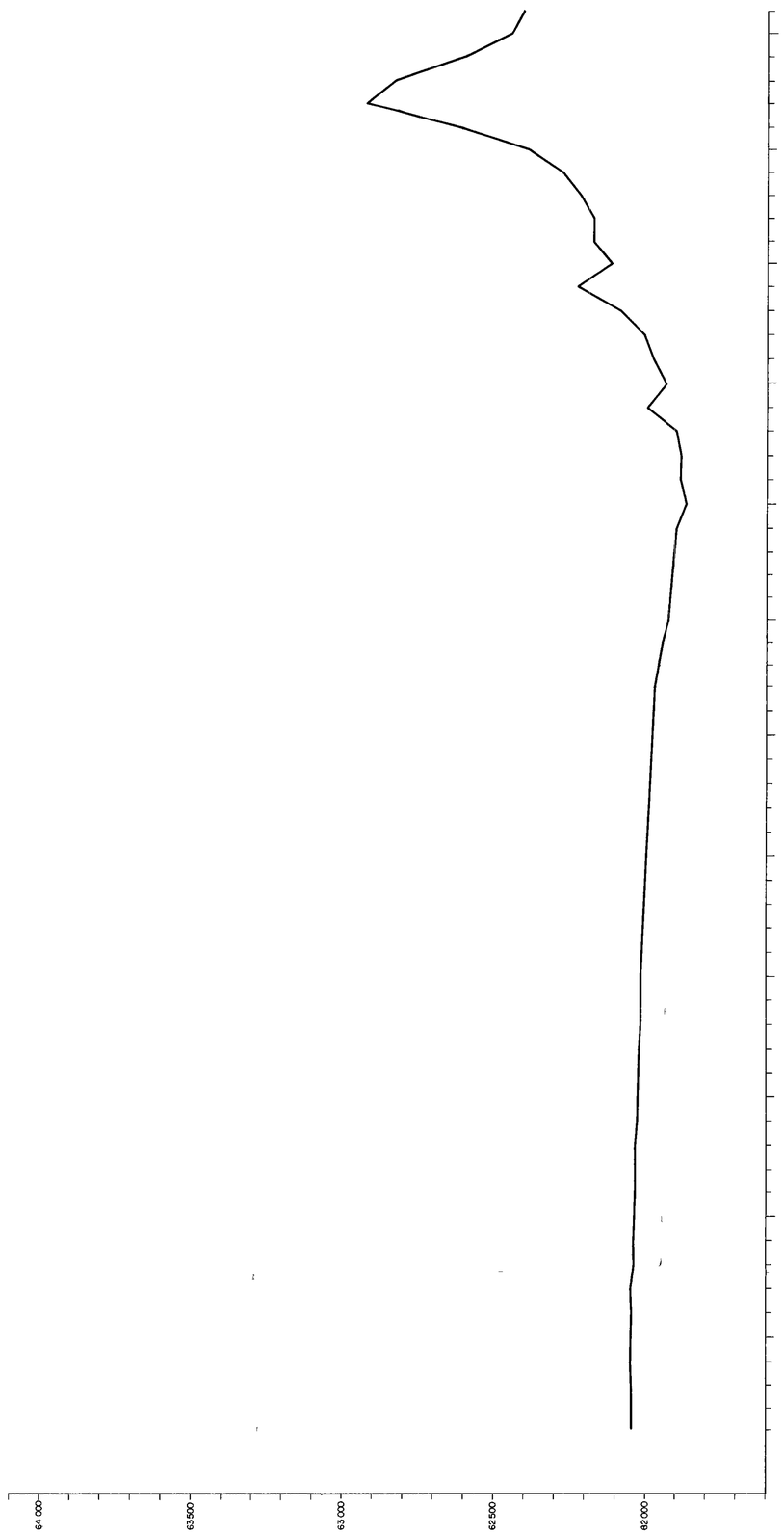
RAMSAY GRID - CSB

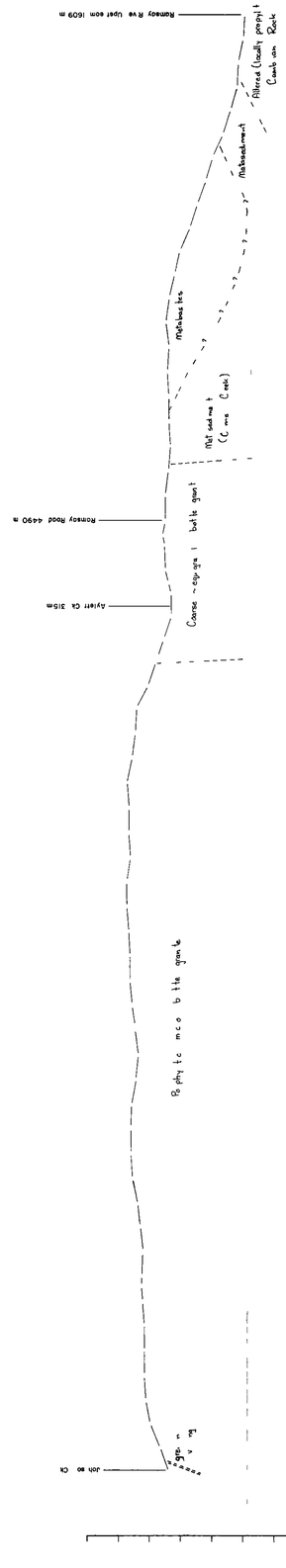
LINE 5960 N PROFILES

TOPO, MAG, EM, GEOCHEM, GEOLOGY

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







920043

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3697

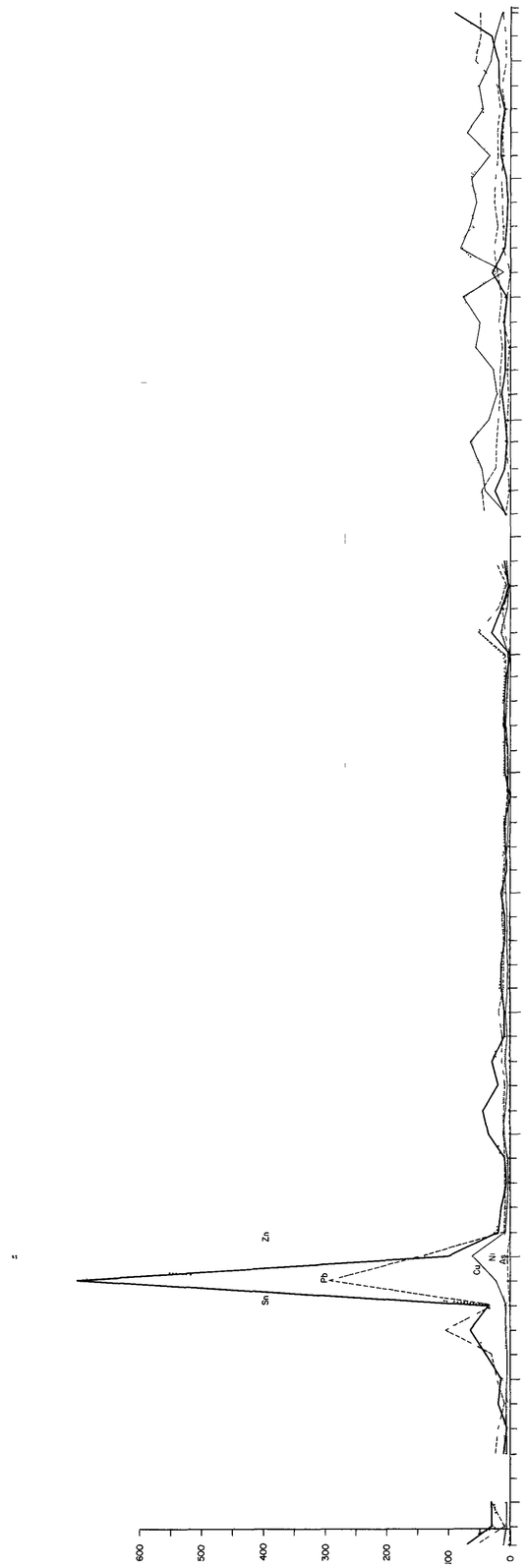
COMSTAFF PROPRIETARY LIMITED

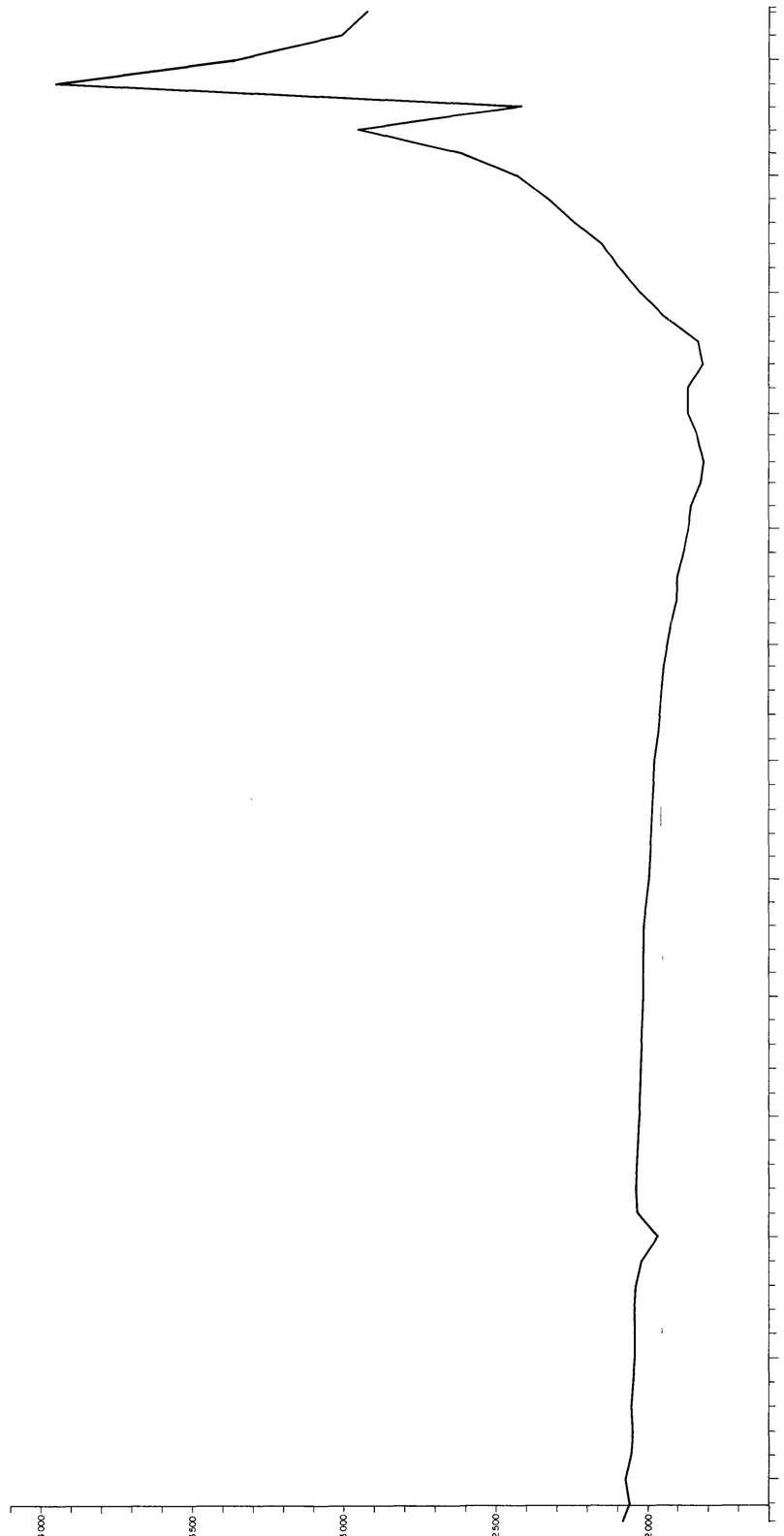
RAMSAY GRID - CSB

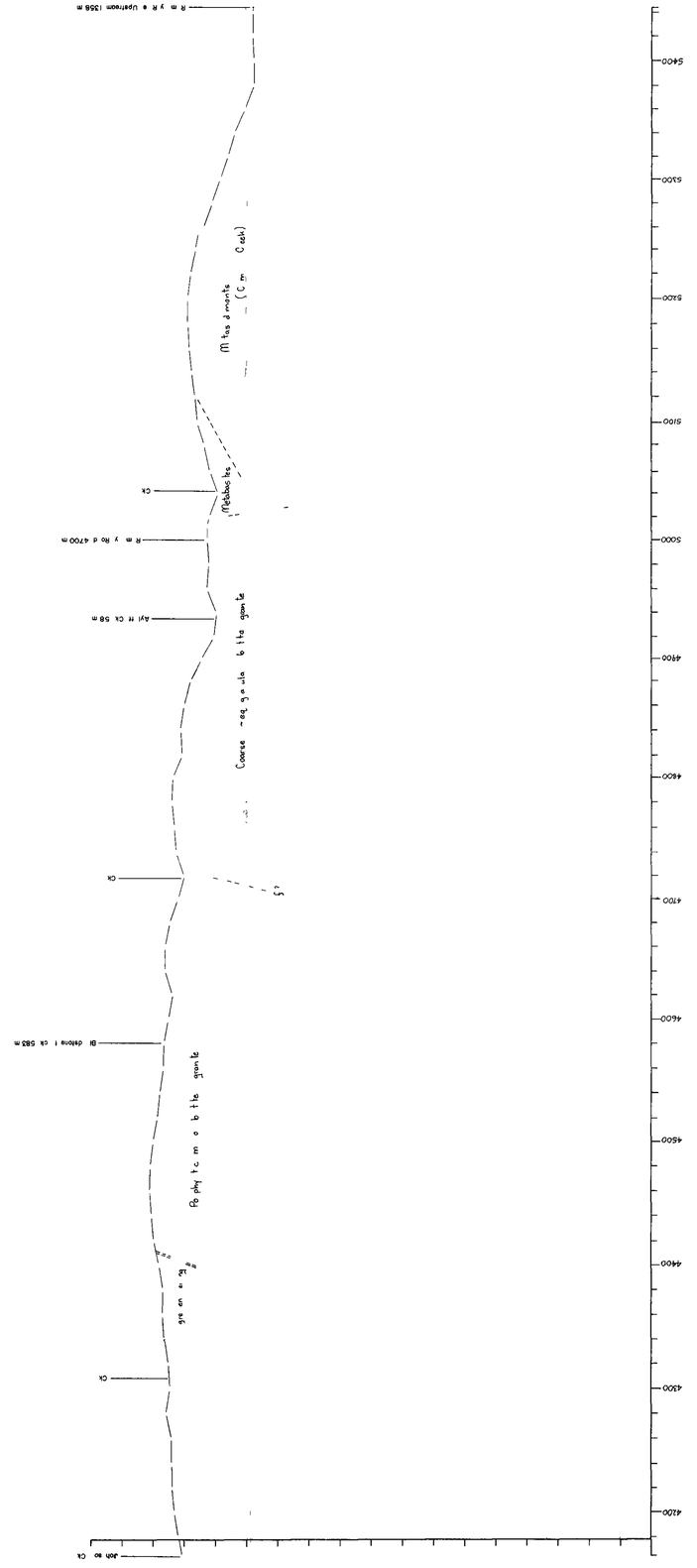
LINE 5720 N PROFILES

TOPO , MAG , EM , GEOCHEM , GEOLOGY

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







5 cm

920041 81-1604 Vol 2 OF 14

3098

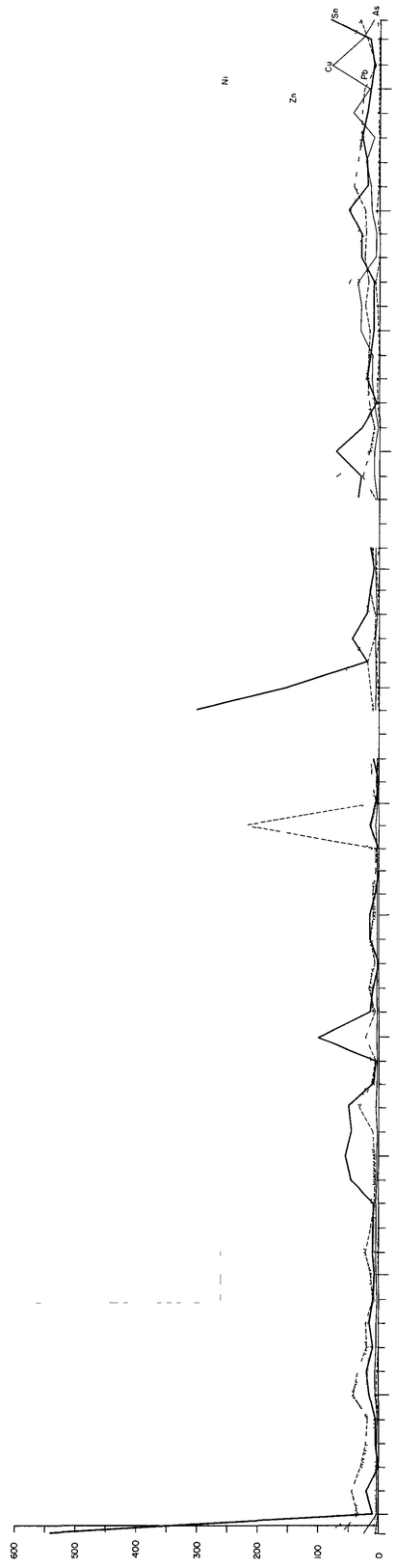
COMSTAFF PROPRIETARY LIMITED

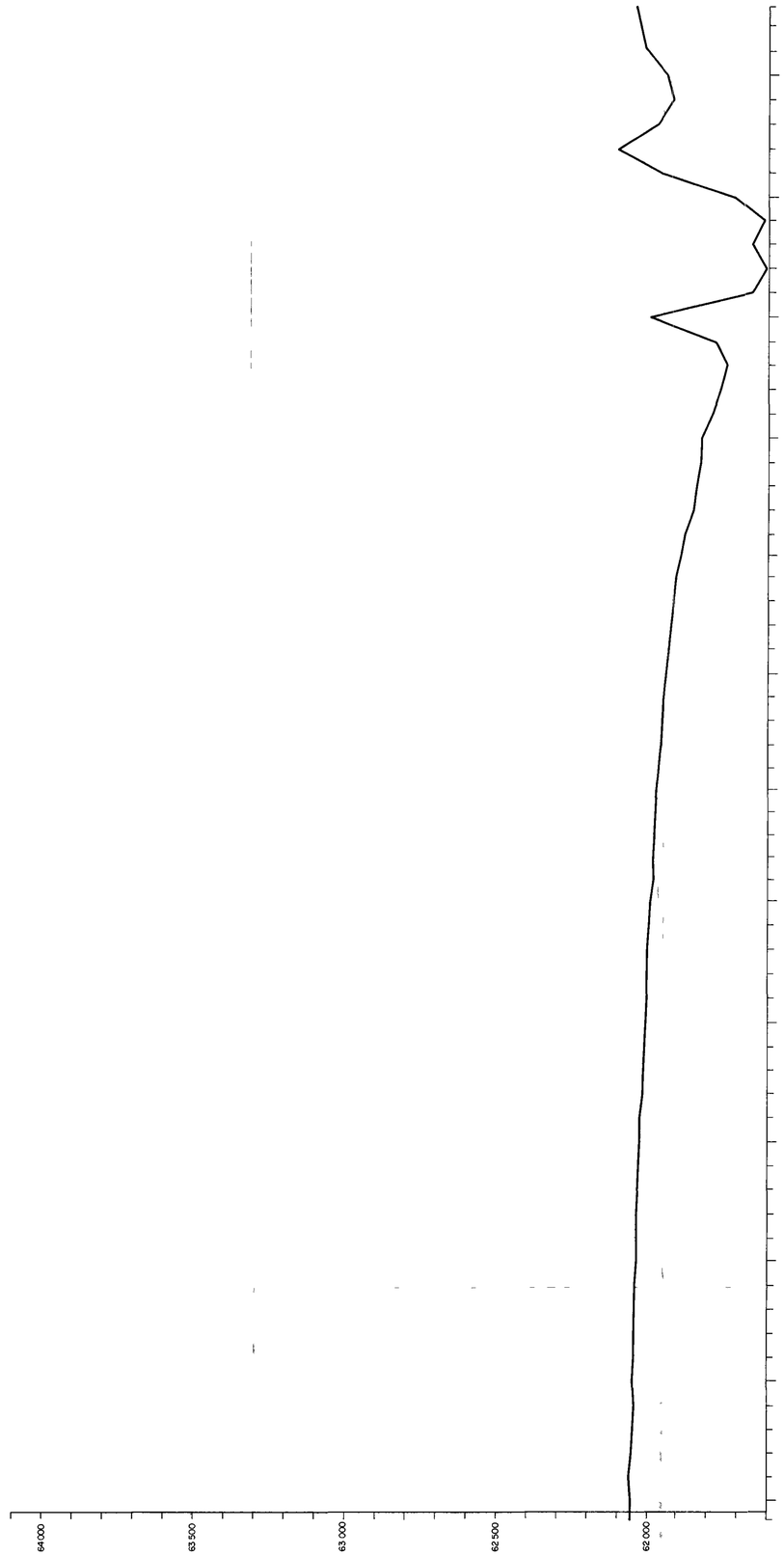
RAMSAY GRID - CSB

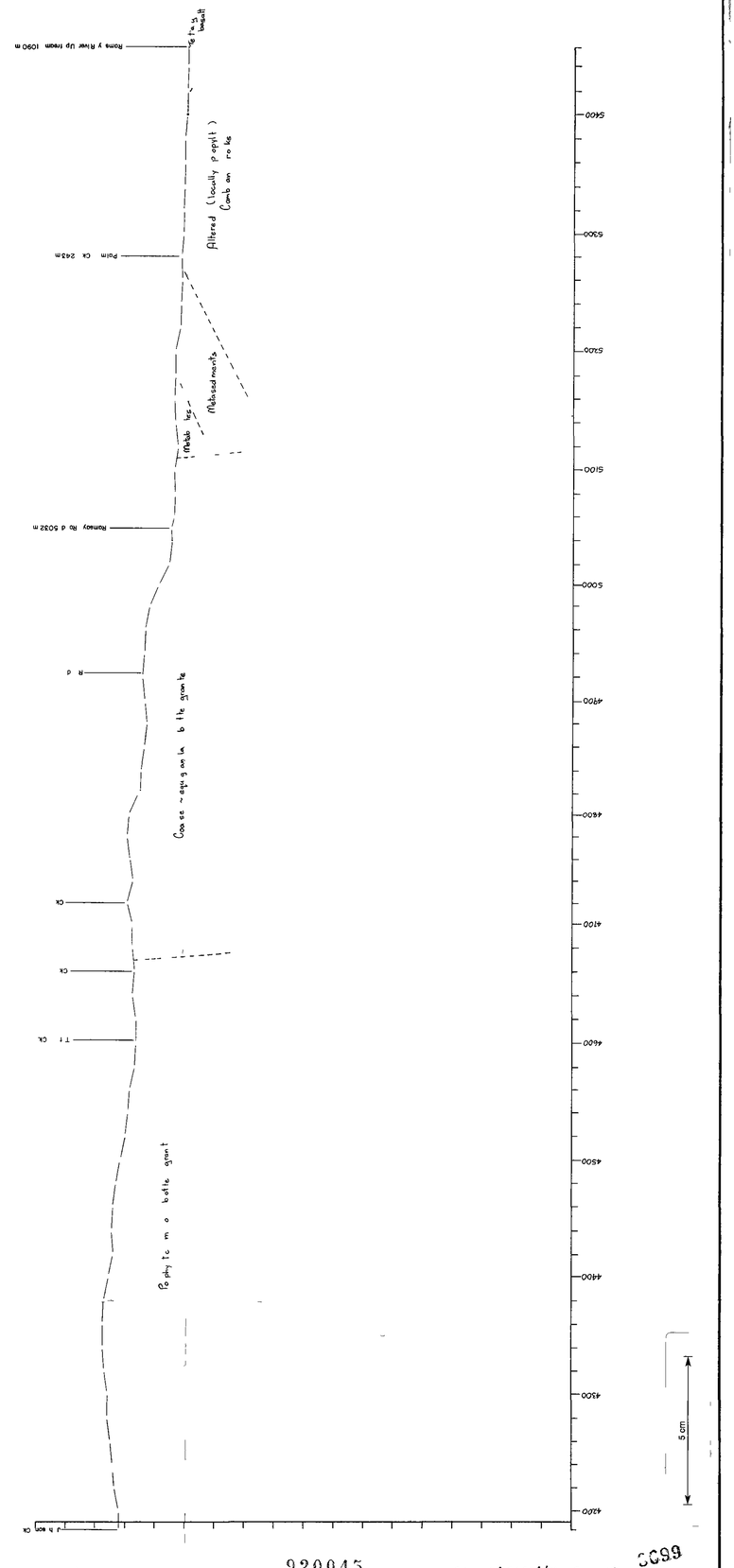
LINE 5480 N PROFILES

TOPO, MAG, EM, GEOCHEM, GEOLOGY

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







920045

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3099

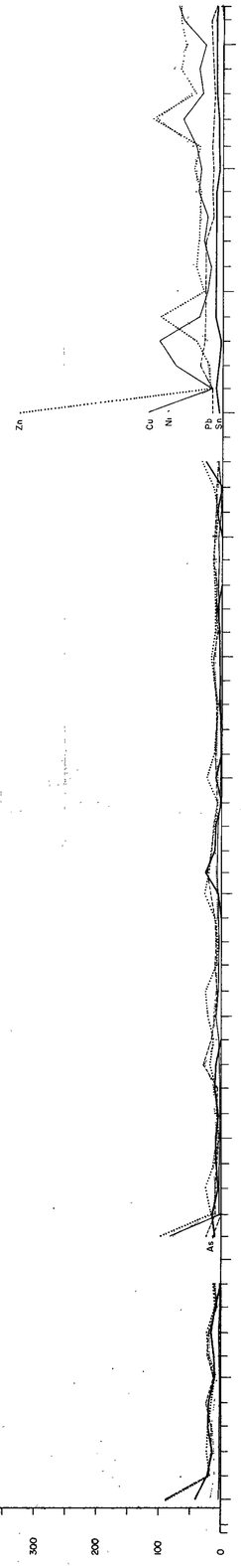
COMSTAFF PROPRIETARY LIMITED

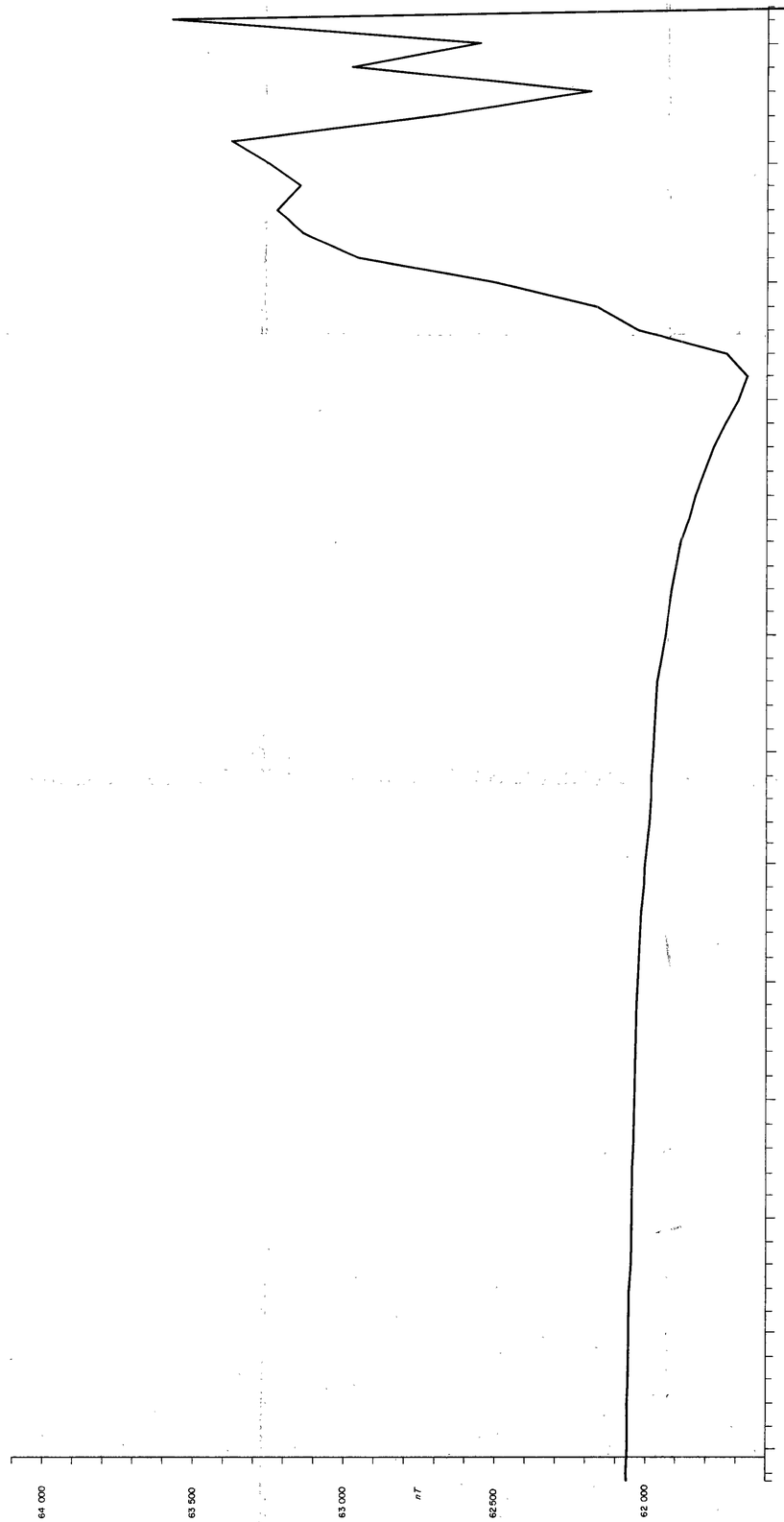
RAMSAY GRID - CSB

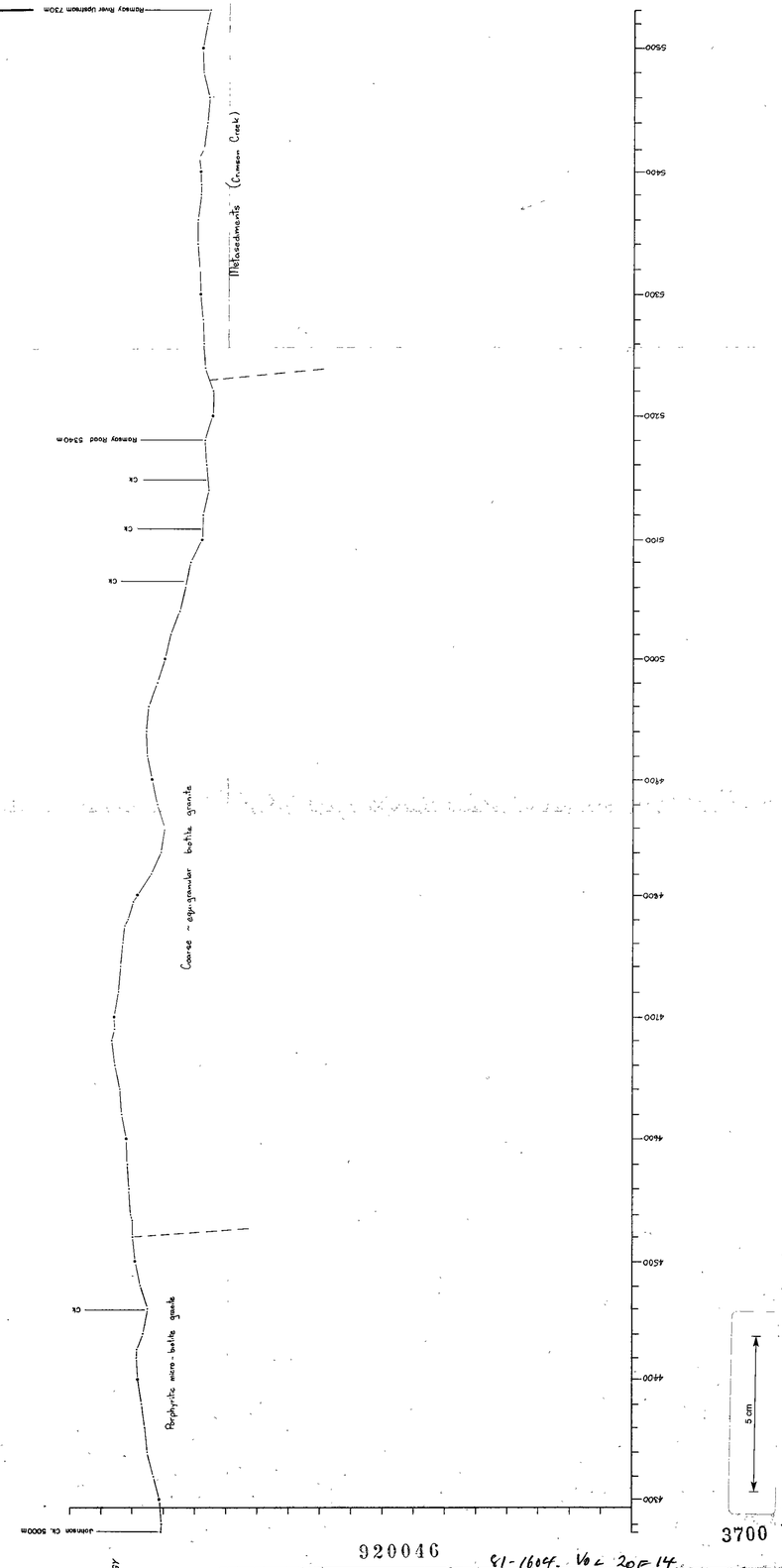
LINE 5240 N PROFILES

TOPO, MAG, EM, GEOCHEM, GEOLOGY

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







3700

920046

81-1604. Vol 2 OF 14.

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

LINE 5000N PROFILES

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

COMPILED	N.P.G. & GEODRAFT
DRAWN	DATE 19/5/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS 12/2584

5 402 000 m N

5 401 000 m N

371 000 m E.

372 000 m E.

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

BLUNDSTONE CREEK

FRED RUNK CREEK

PALMER CREEK

TRACK

JOHNSON CREEK

ROAD

ALLEY

RAMSAY

PALMER

RIVER

CREEK

py

g

ms

Tba

dr

acr

Tbf

GEOLOGICAL LEGEND

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

geological boundary

geological boundary - inferred

f——f fault

strike and dip of bedding

strike direction

5 cm

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COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

GEOLOGICAL INTERPRETATION

920047

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

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

DETAILED GEOLOGICAL PLAN

81-1604. Vers 2 of 14.

3702

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

920048

5 cm

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

Creek bed swamped by white sand

Rhyolite microadamellite ± fine pale gy f-grain flp vns up to 10cm
plus = 15% - 8.5% (4mm), felds 60% (20mm), qz 35% (5mm)
(euhedral) , subhedral , anhedral

Pg microgd
± matrix irregularly affgx
rich up to 60%
@ expense of biotite
+ felds

(c) Pg microgd
plus ± 5% + bi 10% (3mm), felds 70% (20mm), qz 20% (5mm)

(JON 001)
alt qz Pg microgd , matrix gr-gy
& bi alt to ∫ gr-gy micas = qrco ?
plus = qz 50%, felds 20% (20mm)
(4mm)

Pg microgd
plus = 5% + bi (5mm)
felds 60% (20mm)
qz 25% (7mm)

matrix - 30% bi
± f diss blk to

Well Jointed Greisen ± zoned, altd/fluid
JON 003 felds, qz 60%, ∫ gr old micas
± qz vns up to 30cm

Greisen ?, no bi,
qz plus as JON 003
± qz vns up to 2cm

Jointed altd co gr qz-Pg ?
± qz plus as 5mm in

JON 004 matrix ∫ br-gy old micas
- ∫ qz - felds
= co. qzsyen
Aplitic Cf qz-syenite

(SB) Pg microgd
Fresh, bd, densely Pg, plus = 50%
JON 005 = qz 30% (2mm), felds 60% (6mm) & 5%
bi, ∫ alt = 30%

altd pale br mf
qzsyen Aplitic like, ric
in gy-pale gy qtz-cbl vns
± dk gy-br vns

JON 006

Jointed Pg microgd
plus = 2%, felds, gy-br
bi - bit = 25%

Stretch of Cr, open,
after extensive sluicing
operations
pipes, water jet
nozzles etc

Swamp

JON 007

Swamp

Stretch of Creek paralleled
on right by open area of
extensive past sluicing
operations
pipes, railway tracks etc

JON 008

Pg microgd ± bk To, one
plus = 2% + felds 60% (4mm), qz 40% (4mm)
bi = 15 (2 - 8

felds - dom + pink pds ?

Pg microgd
plus = 15% + felds 60% (15mm), qz 20% (3mm)

SB 001
co. qzsyen g
bi 15% (3mm)
qz 30% (5mm)
felds 60% (8mm)

SB 002
co qzsyen g ± equigranular
qz 25% up to 15mm
felds 65% - 20mm
bi 10% " 5mm
± bk to clots up to 25mm
xtals
+ coarse aplocrinoidal-rockingham
xtal development

SB 003
co. qzsyen g
qz 25% - 20-
felds 55% - 20-
bi 15% - 10-
± bk to clots up to 25mm
xtals
+ coarse aplocrinoidal-rockingham
xtal development

SB 004 T/S
co. qzsyen g
± 25% bk
qz 30% (5mm)
felds 75% (5mm)
bi 15% (3mm)
± f - 2mm felds vns

SB 005
co. qzsyen g
± 25% bk
qz 30% (5mm)
felds 70% (5mm)
bi 15% (3mm)
± f - 2mm felds vns

SB 006
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 007
Pg microgd
plus = 15% + felds 60% (15mm), qz 20% (3mm)

SB 008
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 009
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 010 T/S
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 011
co. qzsyen g
± 25% bk
qz 30% (5mm)
felds 60% (8mm)

SB 012
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 013
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 014
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 015
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 016
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 017
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 018
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 019
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 020 ± SB 015 ± SB 010
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 021
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 022
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB 023
Pg microgd
plus = 5% + bi (5mm), felds (20mm), qz (8mm)

SB

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

BLUNDSTONE

CREEK

PALMER

TRACK

ATLEET

RAMSAY

JOHNSON

920049

5 cm

3703

81-1604. Vol 2 of 14

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

GEOCHEMICAL GRID AUGER SAMPLING

NICKEL RESULTS in ppm

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

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5560 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

CREEK

RIVER

ROAD

TRACK

BLUNDSTONE

PALMER

JOHNSON

ASHLEY

RAMSAY

5 cm

920050

81-1604. Vol 2/14. 370.4

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

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

5 402 000 m N

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

5 401 000 m N

371 000 m E

372 000 m E

BLUNDSTONE CREEK

JOHNSON CREEK

FRED MAIN CREEK

PALMER CREEK

TRACK

ST ELMO CREEK

ATLEY CREEK

ROAD

PALMER

RAMSAY

CREEK

RIVER

5 cm

3795

920051

81-1604. Vol 2/4.

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

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

5 402 000 m N

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

5 401 000 m N

371 000 m E

372 000 m E

BLUNDSTONE CREEK

FRED HUNK CREEK

JOHNSON CREEK

PALMER CREEK

ROCKS CREEK

WILLEYS CREEK

RAMSAY CREEK

5 cm

920052

3706

81-1604. Vol 2/14.

COMSTAFF PROPRIETARY LIMITED

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

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

5 402 000 m N

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

5 401 000 m N

371 000 m E

372 000 m E

BLUNDSTONE

FRED NUNN CREEK

PALMER

TRACK

CREEK

TITAN CREEK

ATLETT CREEK

JOHNSON CREEK

RIVER

RAMSAY

PALMER

CREEK

5 cm

920053

3707

41-1604. Vol 2/14.

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

GEOCHEMICAL GRID AUGER SAMPLING

LEAD RESULTS in ppm

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

5 402 000 m N

5 401 000 m N

371 000 m E

372 000 m E

L 5960 N

L 5720 N

L 5480 N

L 5240 N

L 5000 N

5 cm

920054

3708

81-1604. Vol 2/4ft.

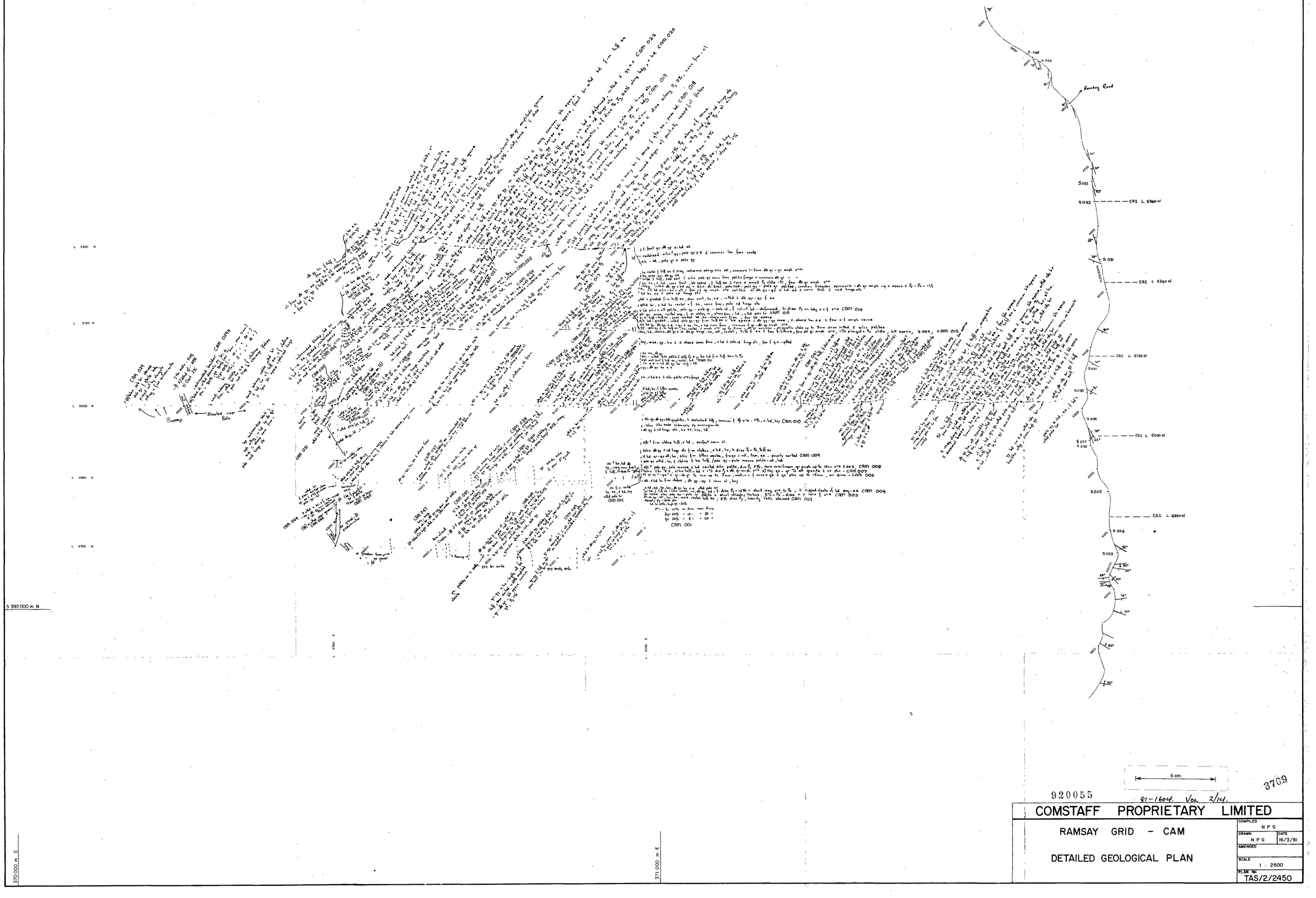
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CSB

GEOCHEMICAL GRID AUGER SAMPLING

COPPER RESULTS in ppm

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



920055

81-1604. Vol 2/14.

3709

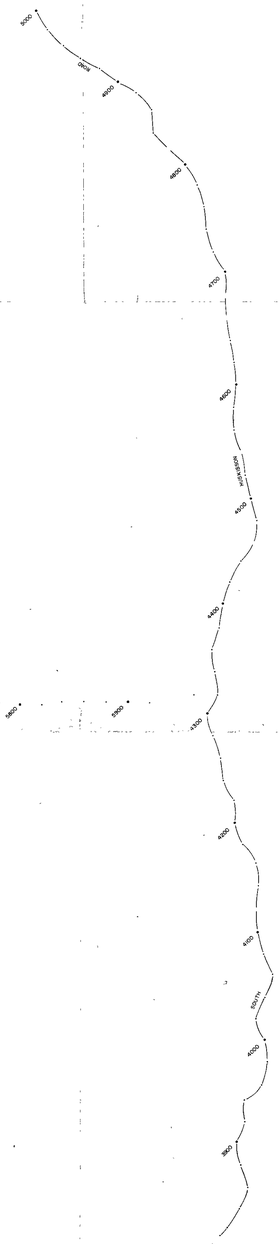
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAM

DETAILED GEOLOGICAL PLAN

COMPILED	N P G
DRAWN	N P G
DATE	16/3/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2450





NOTE :- contour separation 200 nT

5 cm

920056

81-1604. VOL 2/14.

3710

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAM

GROUND MAGNETIC CONTOURS

COMPILED	N P G
DRAWN	GEODRAFT
DATE	25/4/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2458

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

5 392 000 m N

L 4760 E

L 5360 E

370 000 m E

371 000 m E

920057

EI-1604. 4.2/14

3711

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAM

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2459

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

5 392 000 m N

370 000 m E

371 000 m E

L 4760 E

L 5240 E

5 cm

920058

3712

81-1604. Vol 2/4.

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAM

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2456

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

5 392 000 m N

370 000 m E

371 000 m E

4760 E

5240 E

WORSLEY

5 cm

3713

320059

81-1604. Vol 2/14

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAM

GEOCHEMICAL GRID AUGER SAMPLING

TUNGSTEN RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2457



920060

81-1604. Vol 2/14.

3714

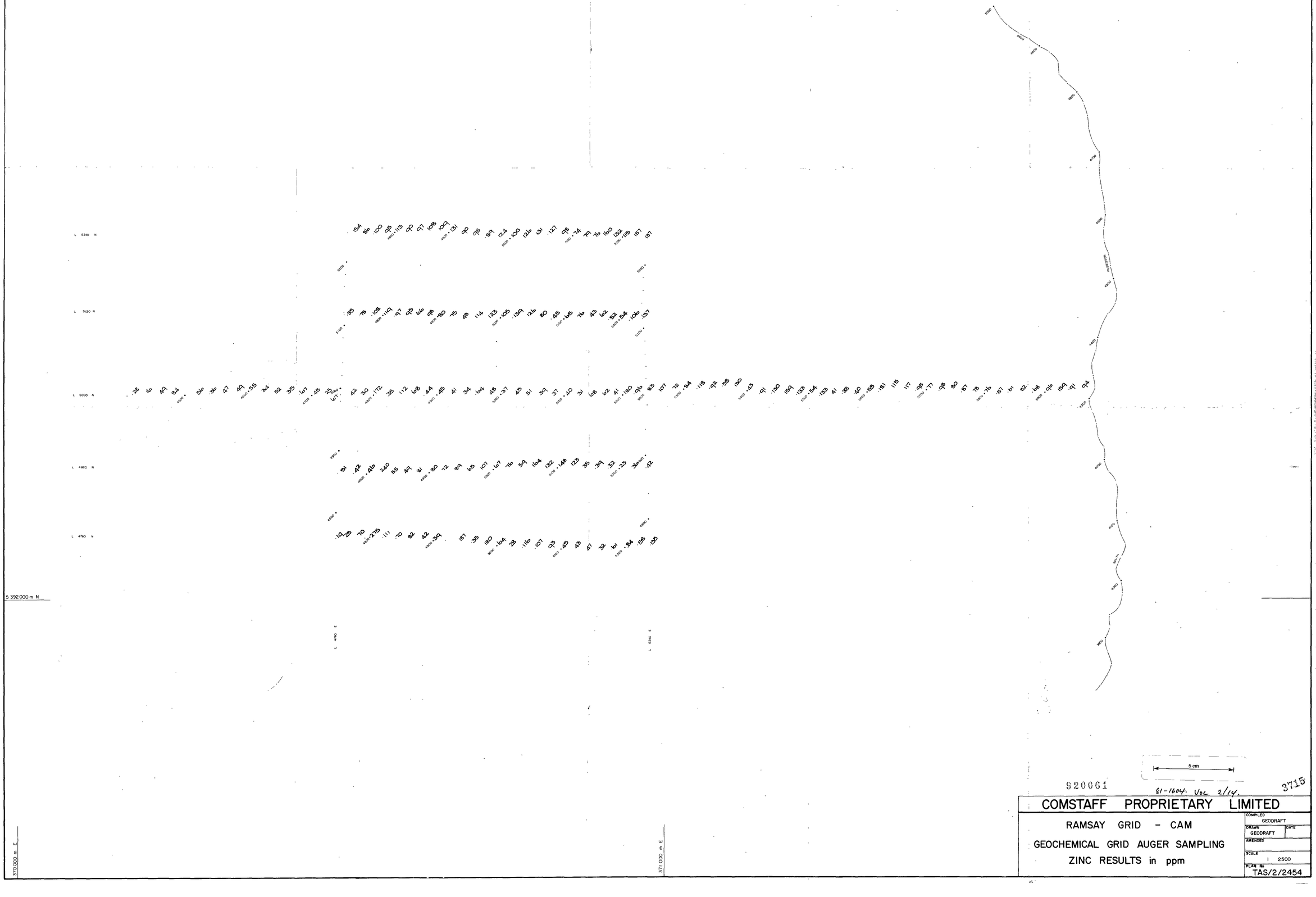
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAM

GEOCHEMICAL GRID AUGER SAMPLING

NICKEL RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	-
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2455



920061

81-1604. Voc 2/14.

3715

COMSTAFF PROPRIETARY LIMITED	
RAMSAY GRID - CAM GEOCHEMICAL GRID AUGER SAMPLING ZINC RESULTS in ppm	COMPILED: GEODRAFT DRAWN: GEODRAFT DATE: AMENDED: SCALE: 1 2500 PLAN No: TAS/2/2454



920062

81-1604. Vol 2/14.

3713

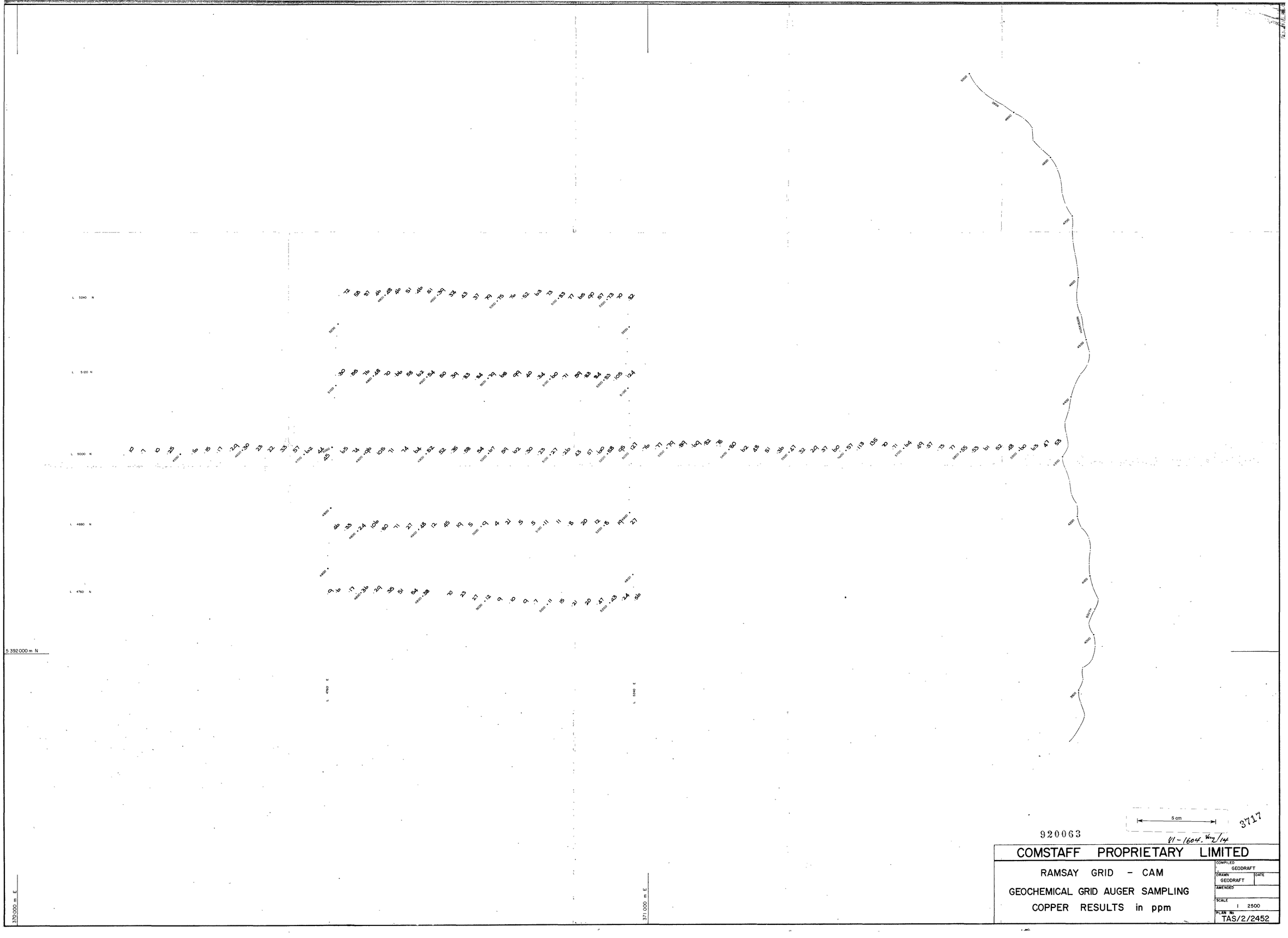
COMSTAFF PROPRIETARY LIMITED

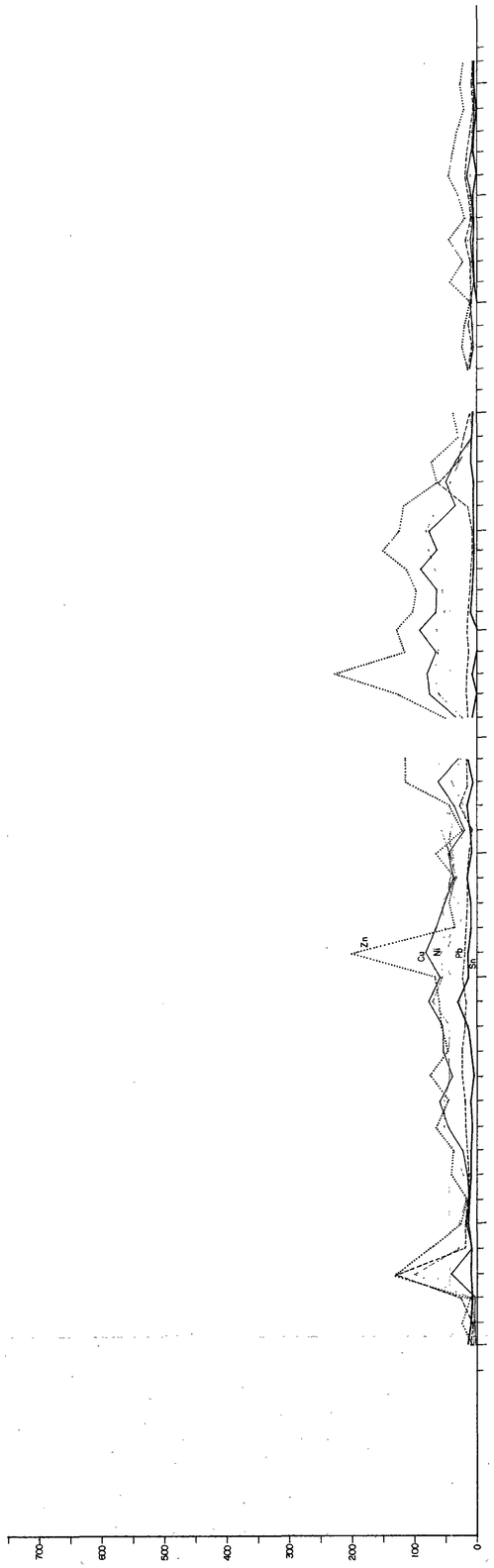
RAMSAY GRID - CAM

GEOCHEMICAL GRID AUGER SAMPLING

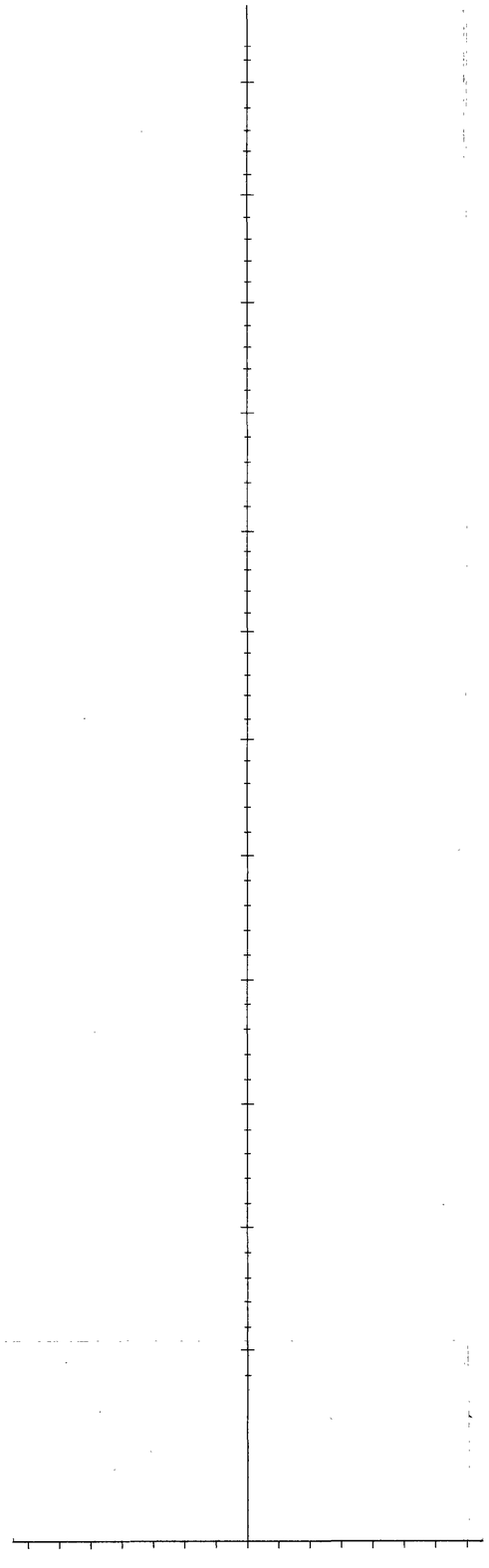
LEAD RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2453

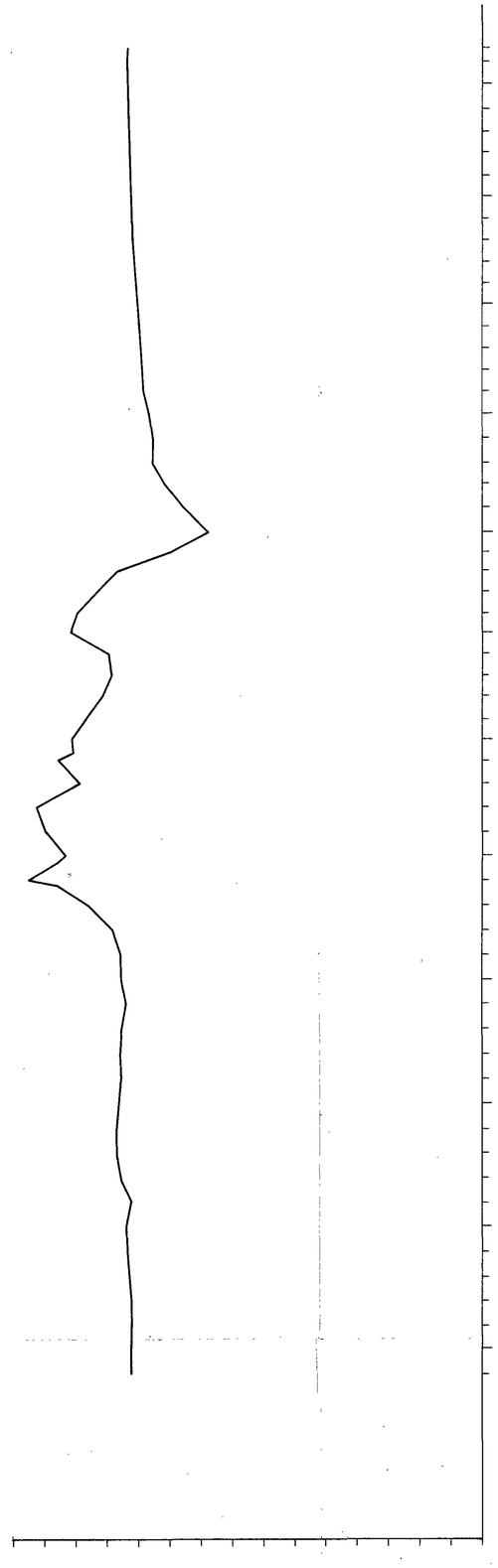

L 5240 N
L 5120 N
L 5000 N
L 4880 N
L 4760 N
5 392 000 m N
370 000 m E
371 000 m E
L 4760 E
L 5240 E
5000
4900
4800
4700
4600
4500
4400
4300
4200
4100
4000
3900
SOUTH
5 cm
920063
3717
91-1604. Vol 2/14
COMSTAFF PROPRIETARY LIMITED
RAMSAY GRID - CAM
GEOCHEMICAL GRID AUGER SAMPLING
COPPER RESULTS in ppm
COMPILED GEODRAFT
DRAWN GEODRAFT
DATE
AMENDED
SCALE 1 2500
PLAN No. TAS/2/2452



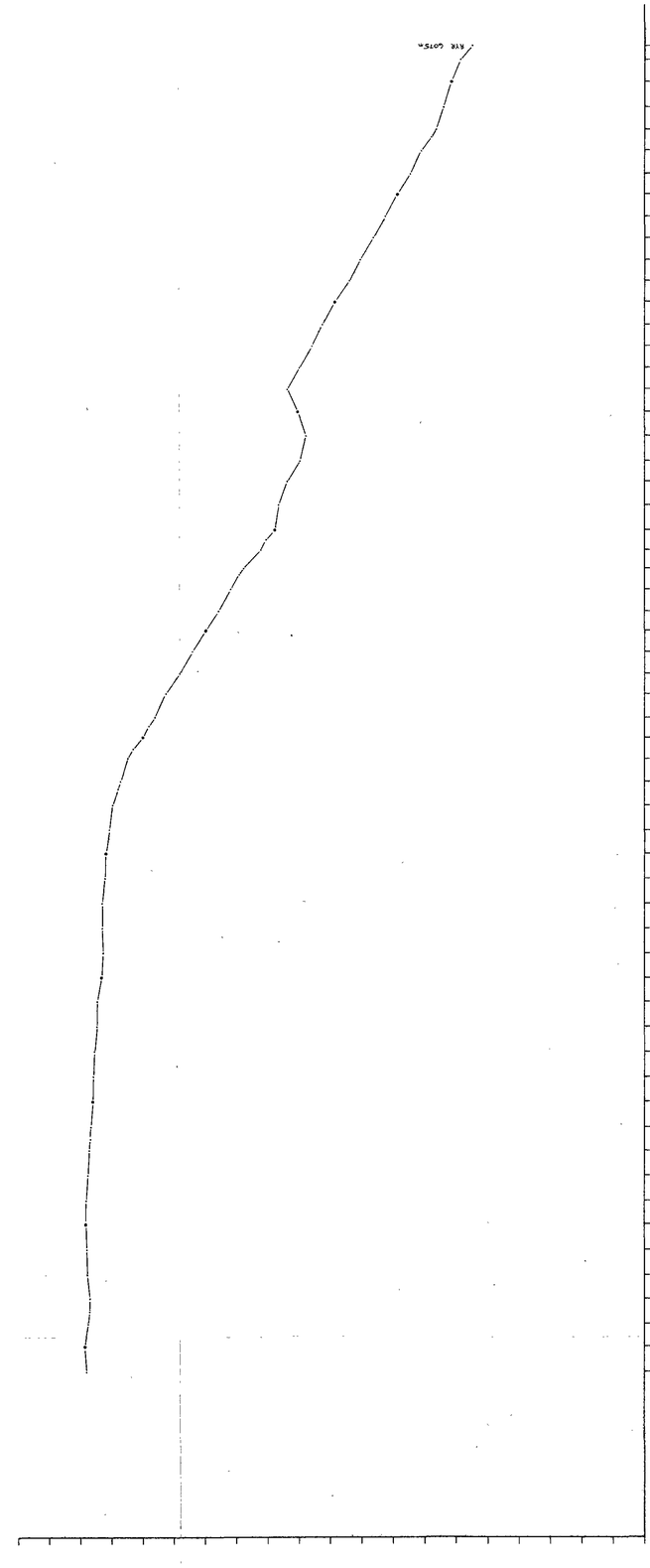
GEOCHEMISTRY ppm



CRONE



GROUND MAGNETICS nT



TOPOGRAPHY & GEOLOGY

920064

2718

81-1604. Vol 2/14.

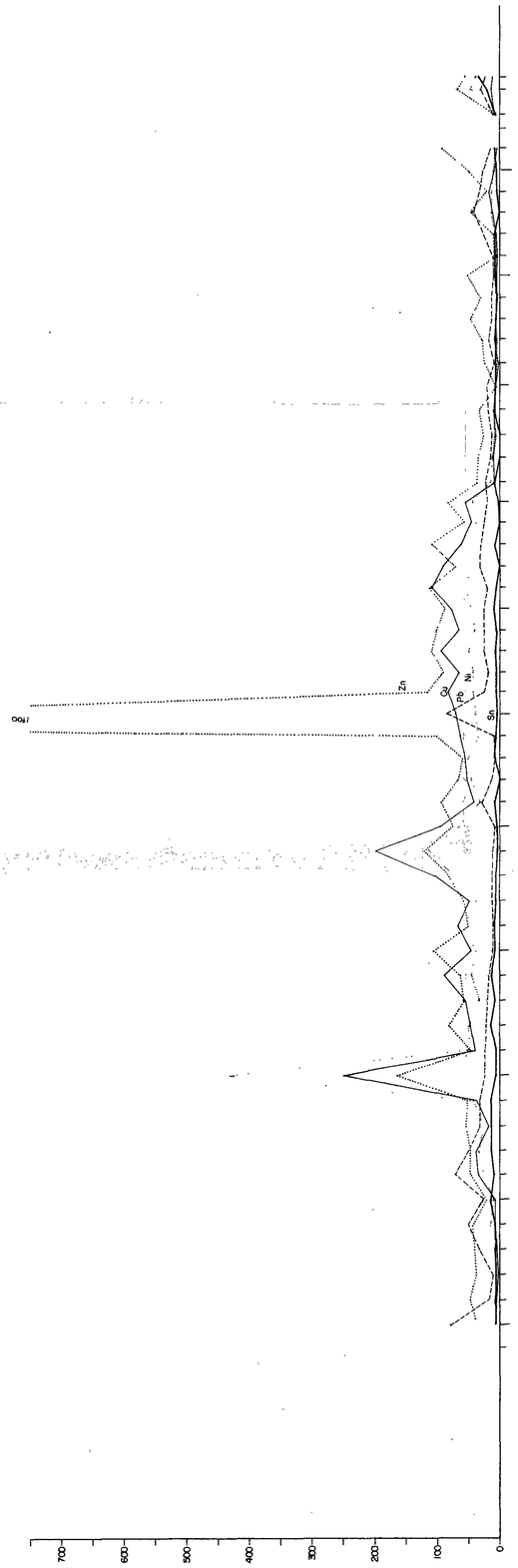
COMSTAFF PROPRIETARY LIMITED

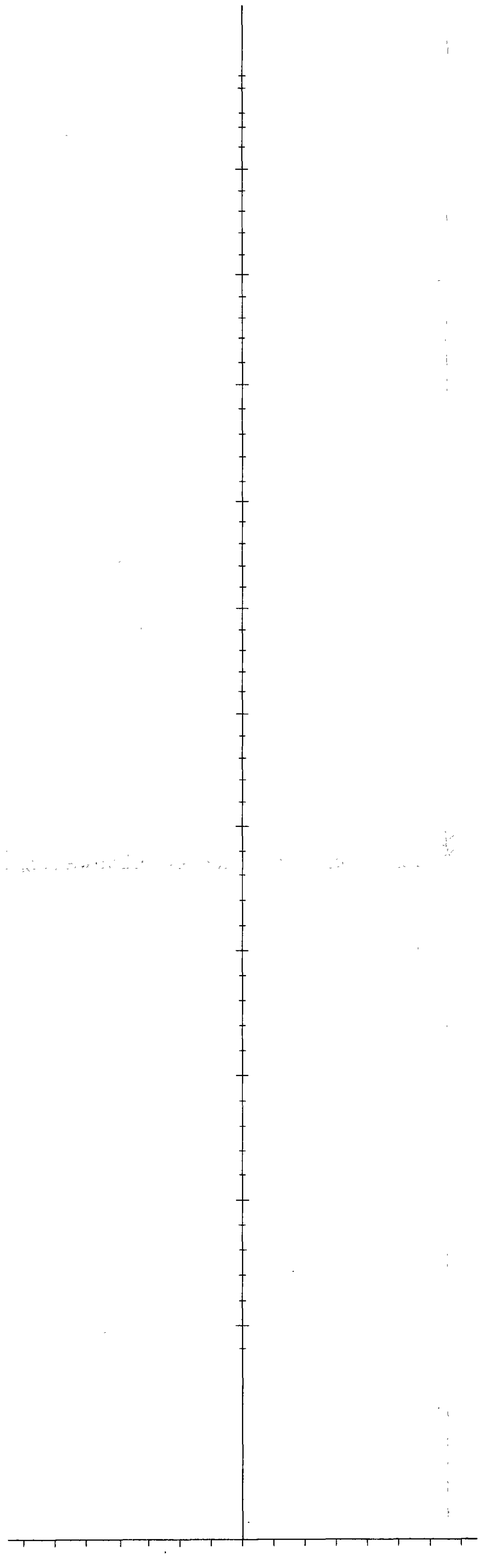
RAMSAY GRID - CAL

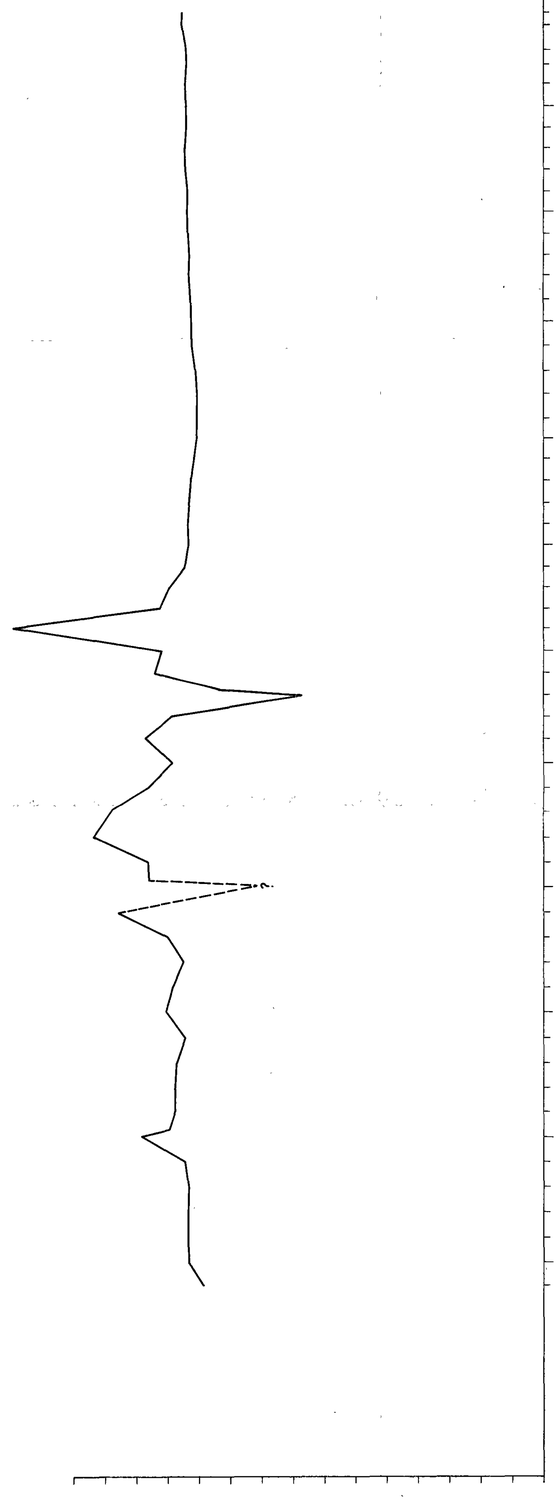
L 5480 N PROFILES

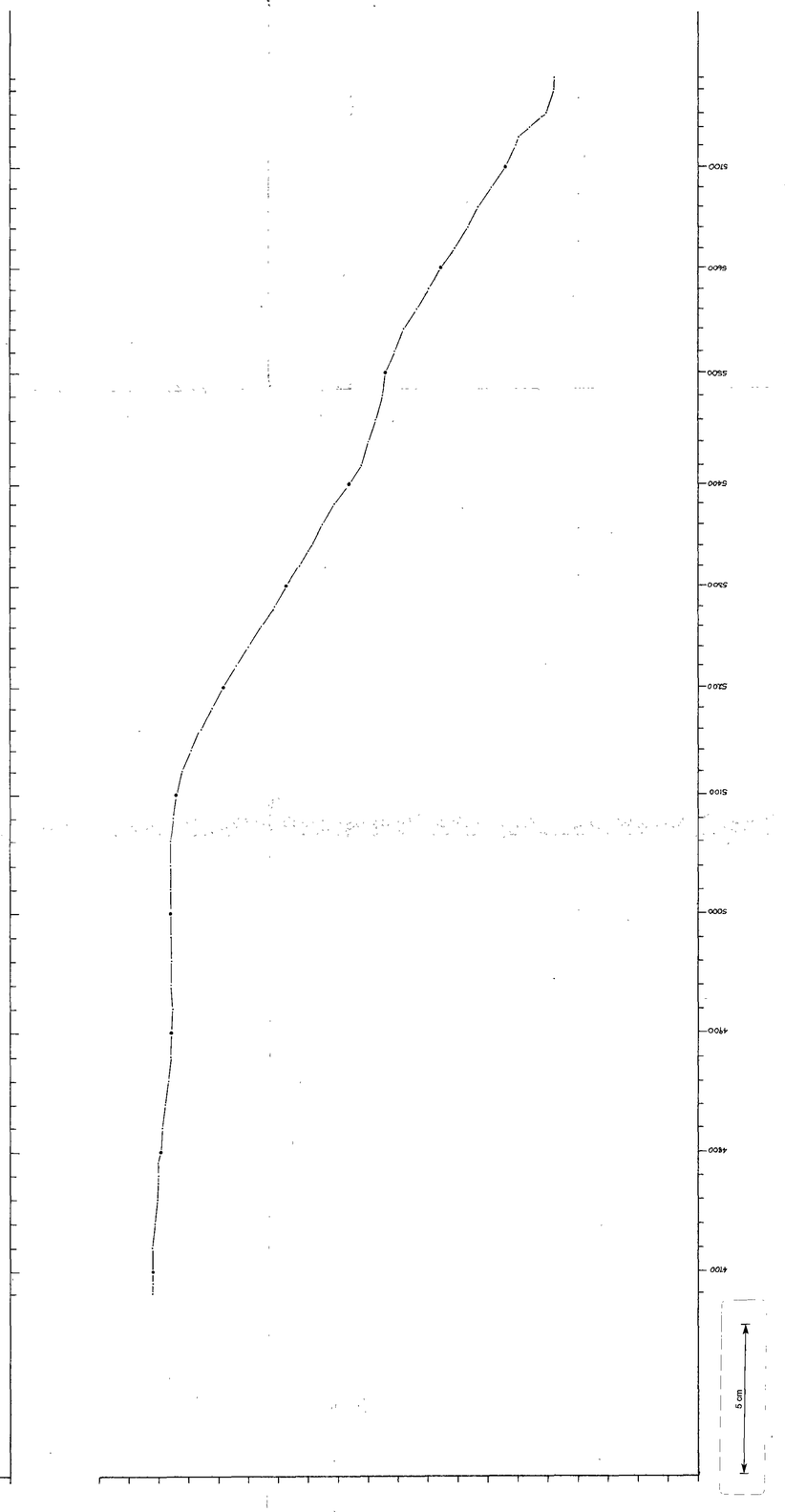
TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

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









920065

81-1604, Vol 2/14. 3719

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL

L 5240 N PROFILES

TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

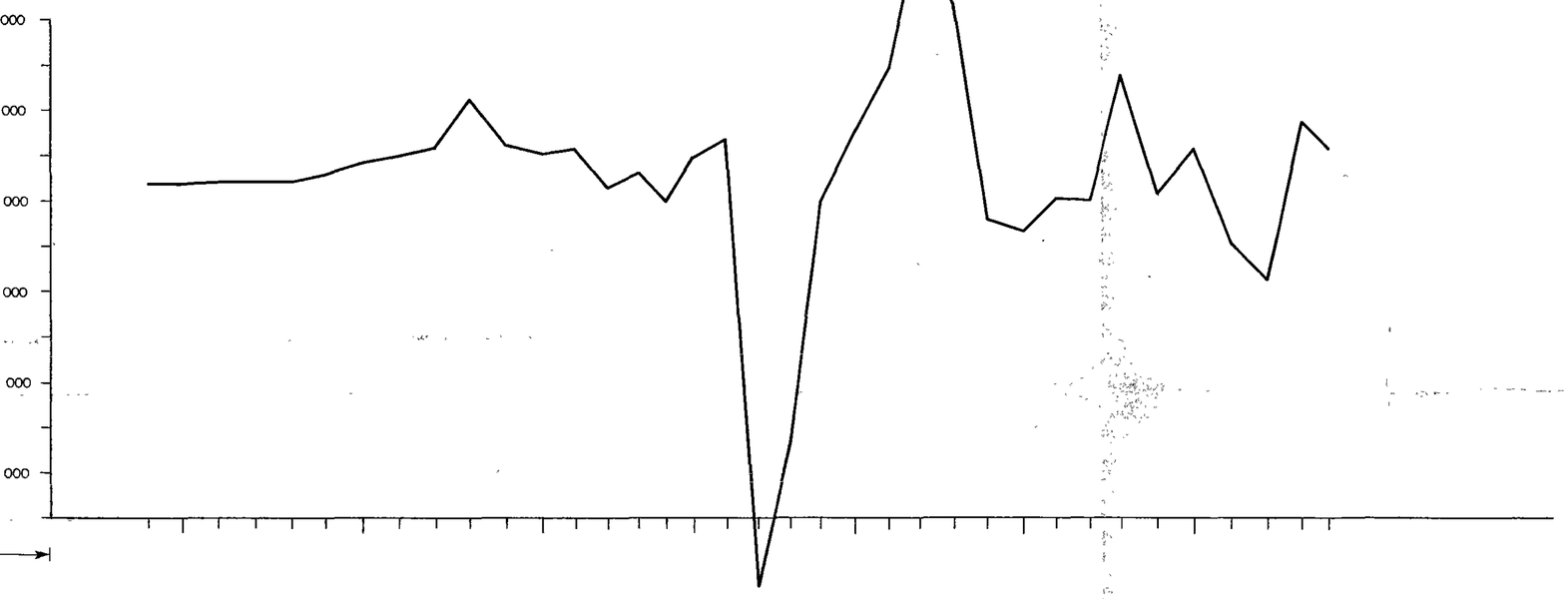
COMPILED	GEODRAFT & GFP
DRAWN	GEODRAFT
DATE	25/8/80
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2247

GEOCHEMISTRY ppm



CRONE

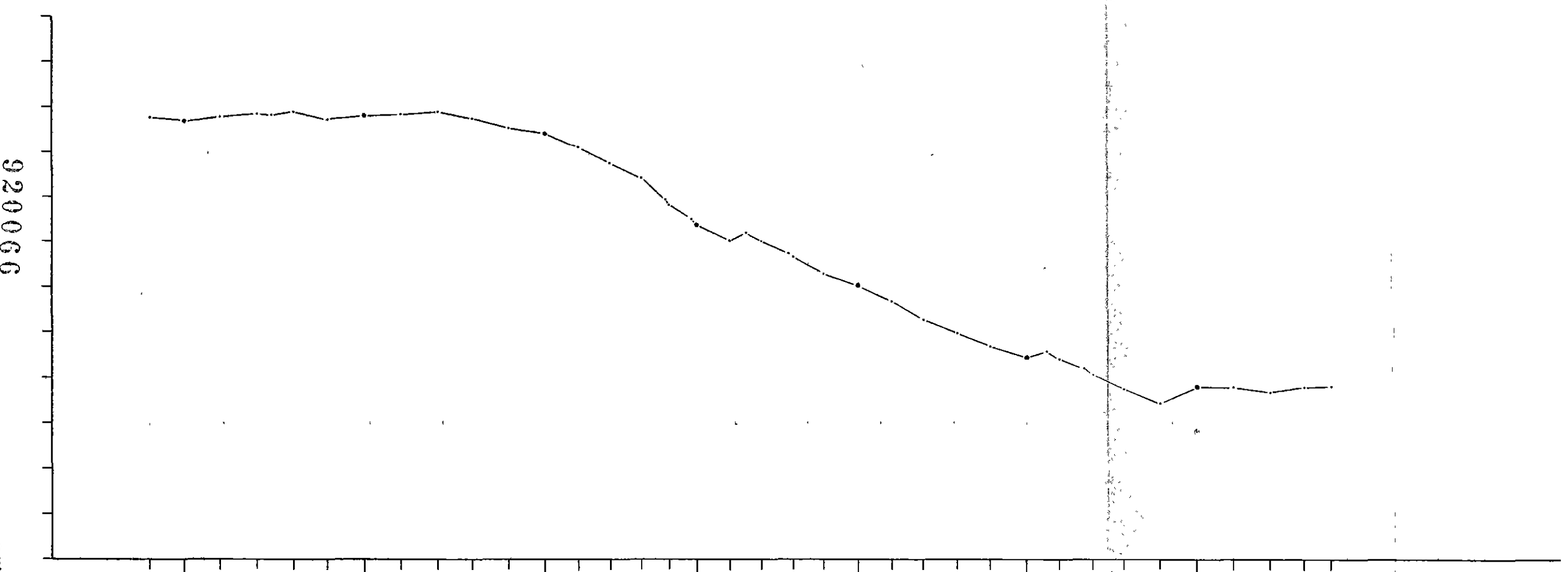
GROUND MAGNETICS nT



5 cm

GEOCHEMISTRY

a GEOLOGY



81-1604. Ucr 2/14.

92006

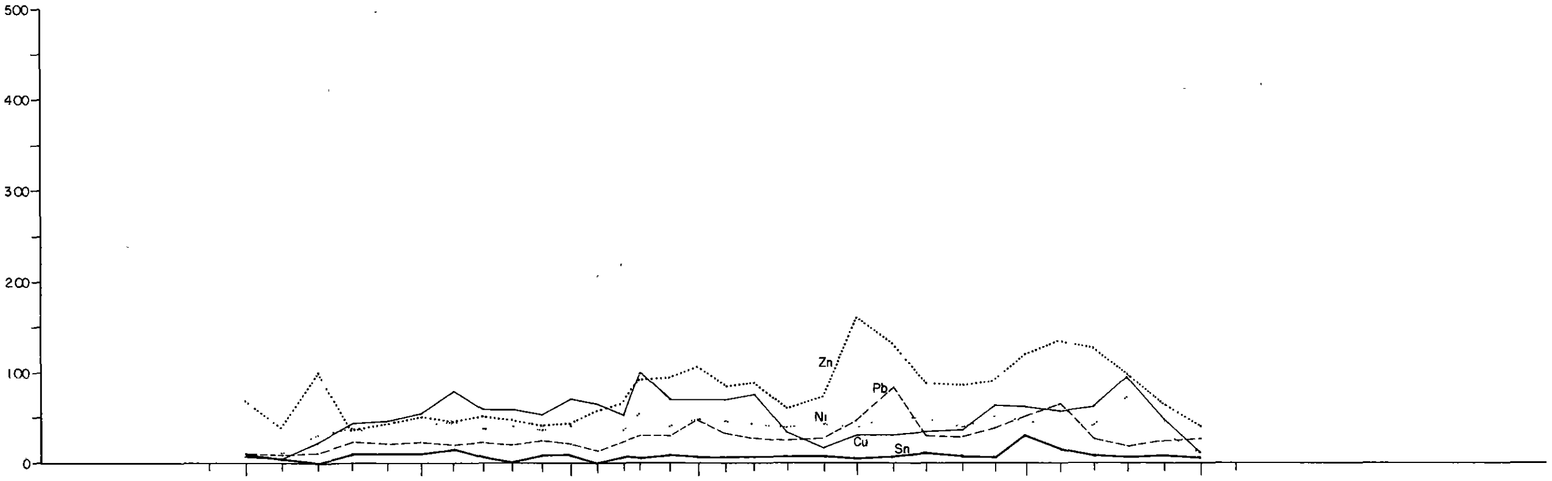
3720

COMSTAFF PROPRIETARY LIMITED

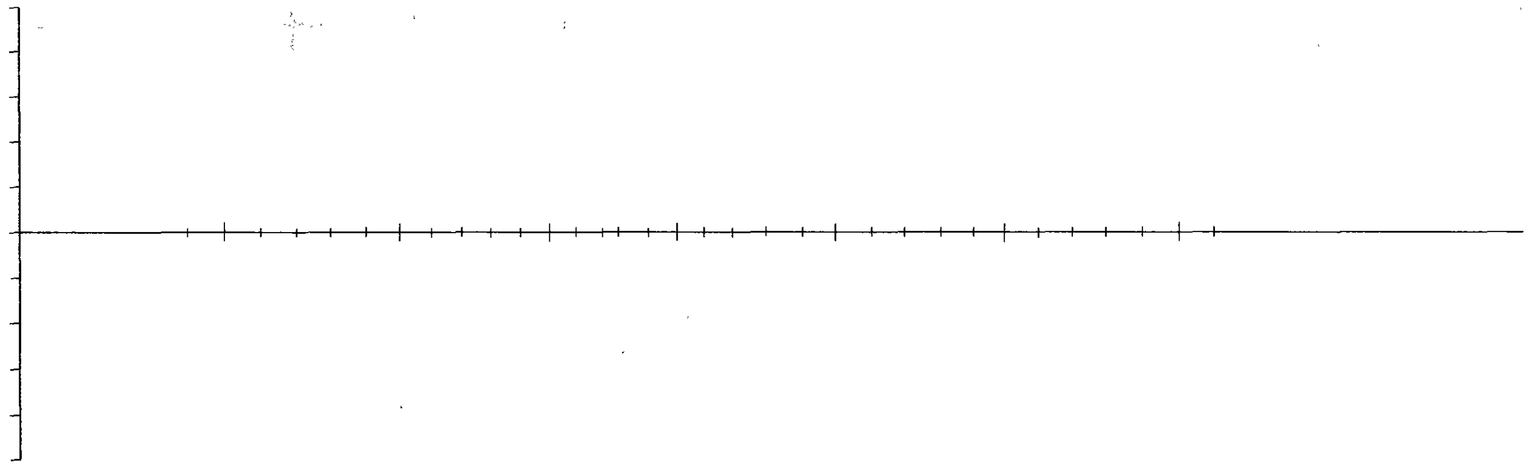
RAMSAY GRID - CAL
L 4640N PROFILES
TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

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

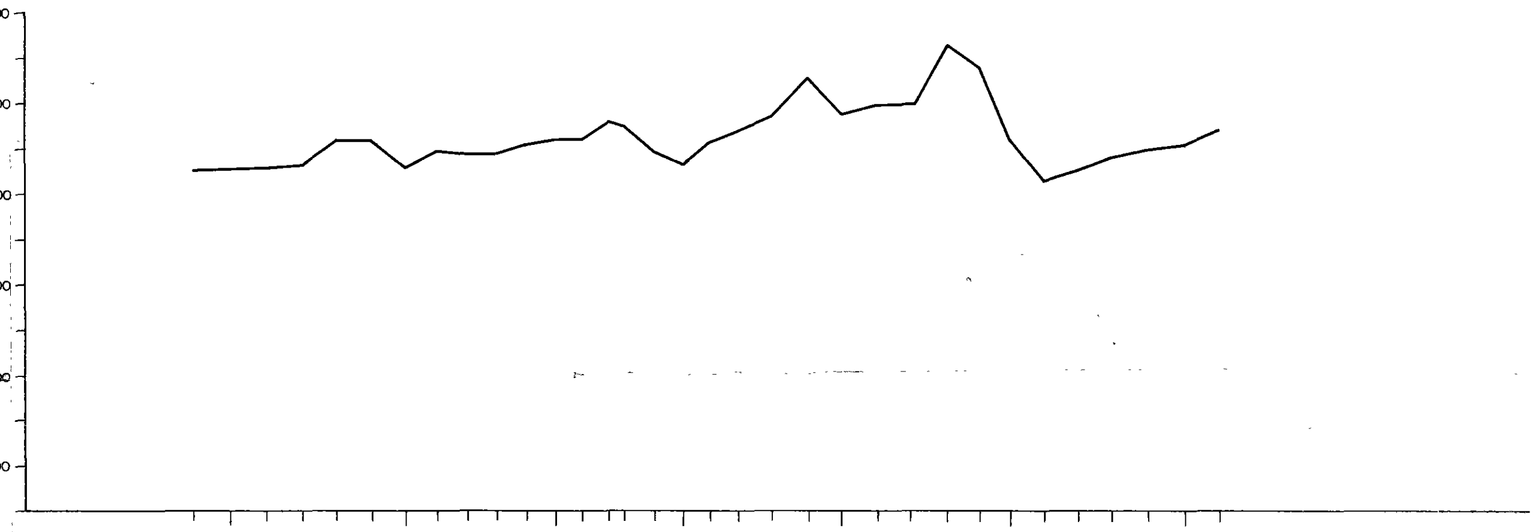
GEOCHEMISTRY ppm



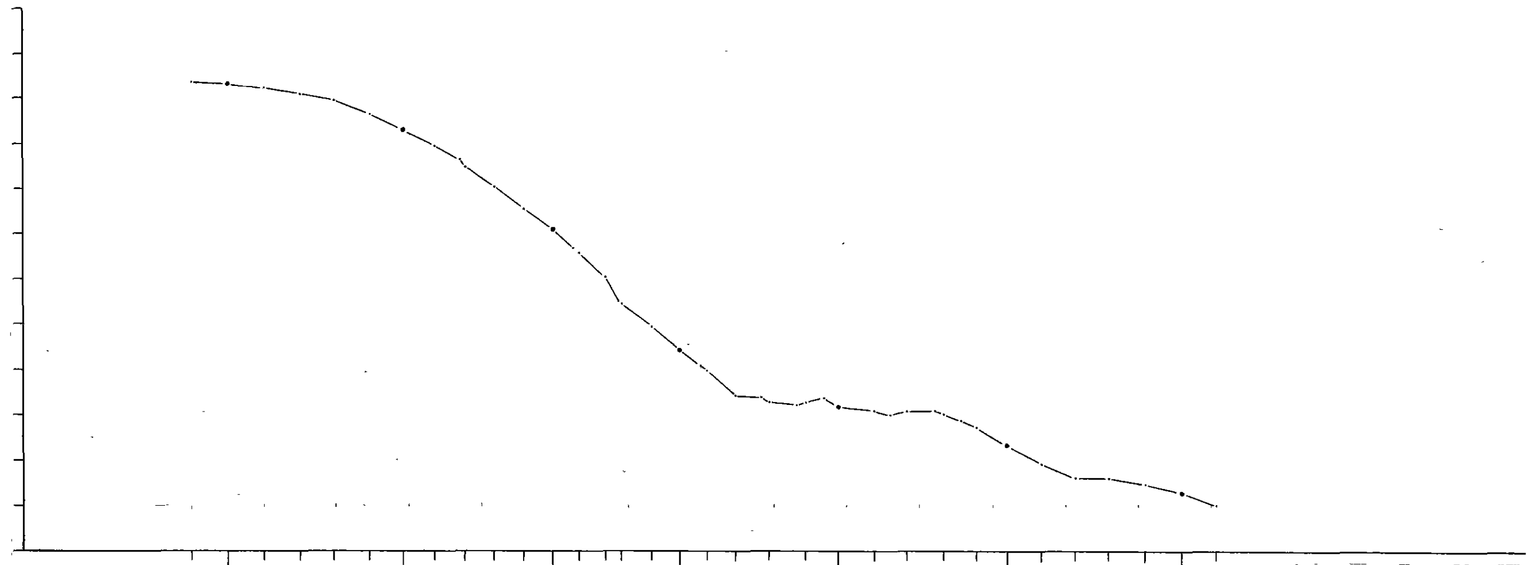
CRONE



GROUND MAGNETICS nT



TOPOGRAPHY & GEOLOGY



5 cm

92006?

84-1604. Vol 2/1+. 3721.

COMSTAFF PROPRIETARY LIMITED			
RAMSAY GRID - CAL L 4520 N PROFILES TOPO, MAG, CRONE, GEOCHEM, GEOLOGY			
DRAWN GEODRAFT 6/80	COMPILED G F P	SCALE 1 : 2500	TAS/2/2245

5 397 000 m N

372 000 m E

373 000 m E

CAL GRID

TIE LINE

RAMSAY

DESMOND

RIVER

CREEK

5cm

920068 81-1604. Vol 2/14. 3722

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	11/6/8
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2175

5 397 000 m N

372 000 m E

373 000 m E

L 5480 N

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

L 4640 N

L 4520 N

OSMOND

RIVER

CREEK

RAMSAY

TIE LINE

CAL GRID

5 cm

920069 91-1604. Vol 2/14 2723

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL
GEOCHEMICAL GRID AUGER SAMPLING
NICKEL RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	11/6/80
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2174

5 397 000 m N

372 000 m E

373 000 m E

CAL GRID

RAMSAY

OSMOND

OREAS

TIE LINE

5 cm

920070 81-1604. Vol 2/14 STR4

COMSTAFF PROPRIETARY LIMITED

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

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	11/4/79
AMENDED	25/8/80
SCALE	1 : 2500
PLAN No.	TAS/2/1839

5 397 000 m N

372 000 m E

373 000 m E

CAL GRID

TIE LINE

OSMOND

RAMSAY

5 cm

920071

81-1604 Vol 2/14

3725

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	11/4/79
AMENDED	25/8/80
SCALE	1 : 2500
PLAN No.	TAS/2/1838

5 397 000 m N

372 000 m E

373 000 m E

CAL GRID

TIE LINE

L 5480 N

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

L 4640 N

L 4520 N

OSMOND

RAMSAY CREEK

RIVER

5 cm

920072 81-1604. Vol 2/14. 3726

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL

GEOCHEMICAL GRID AUGER SAMPLING

ZINC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	11/4/79
AMENDED	9/6/80
SCALE	1 : 2500
PLAN No	TAS/2/1837

5 397 000 m N

372 000 m E

373 000 m E

L 5480 N

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

L 4640 N

L 4520 N

RAMSAY CREEK ROAD

OSMOND HIGHWAY

CAL GRID TIE LINE

5 cm

920073

81-1604. Von 2/14.

2727

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL

GEOCHEMICAL GRID AUGER SAMPLING

LEAD RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	11/4/79
AMENDED	9/6/80
SCALE	1 2500
PLAN No	TAS/2/1836

5 397 000 m N

372 000 m E

373 000 m E

L 5480 N

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

L 4640 N

L 4520 N

CAL GRID

TIE LINE

RAMSAY CREEK

RIVER

920071

91-1604. Vol 2/44

3728

5 cm

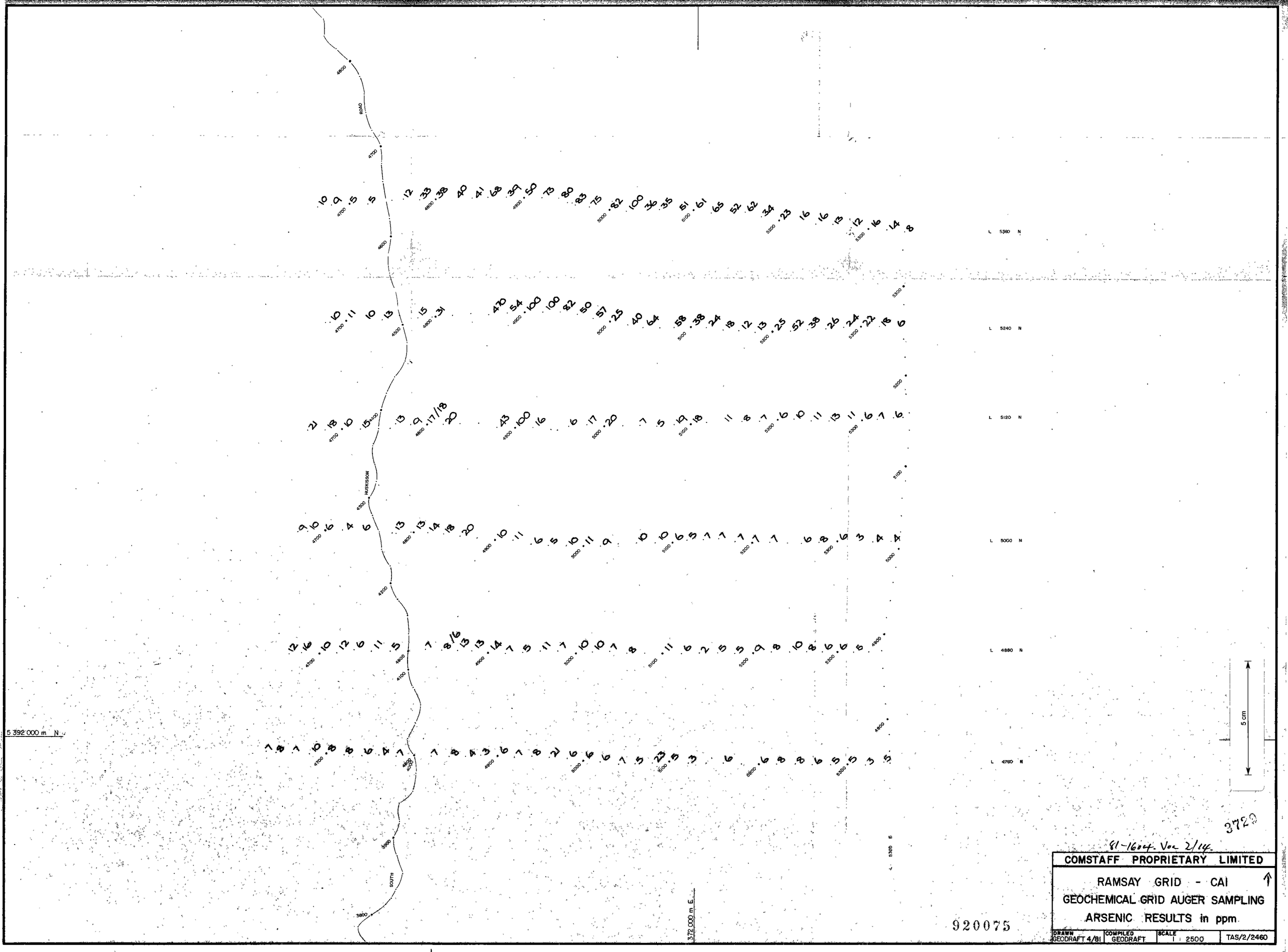
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAL

GEOCHEMICAL GRID AUGER SAMPLING

COPPER RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	4/79
AMENDED	9/6/80
SCALE	1 : 2500
PLAN No	TAS/2/1835



3729

81-1604. Vol 2/14.

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAI

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/81	GEODRAFT	1 : 2500	TAS/2/2460

920075

ROAD

HUSKISSON

SOUTH

5 392 000 m N

372 000 m E

L 5360 N

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

L 5380 E

5 cm

920076

3730

61-1604 Vol 2/14.

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAI

GEOCHEMICAL GRID AUGER SAMPLING

TUNGSTEN RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/81	GEODRAFT	1 : 2500	TAS/2/2448

ROAD

HUSKISSON

SOUTH

L 5360 N

L 5240 N

L 5120 N

L 5000 N

L 4880 N

L 4760 N

5 392 000 m N

372 000 m E

L 5320 E

81-1604. Vol 2/14. 3731

920077

5 cm

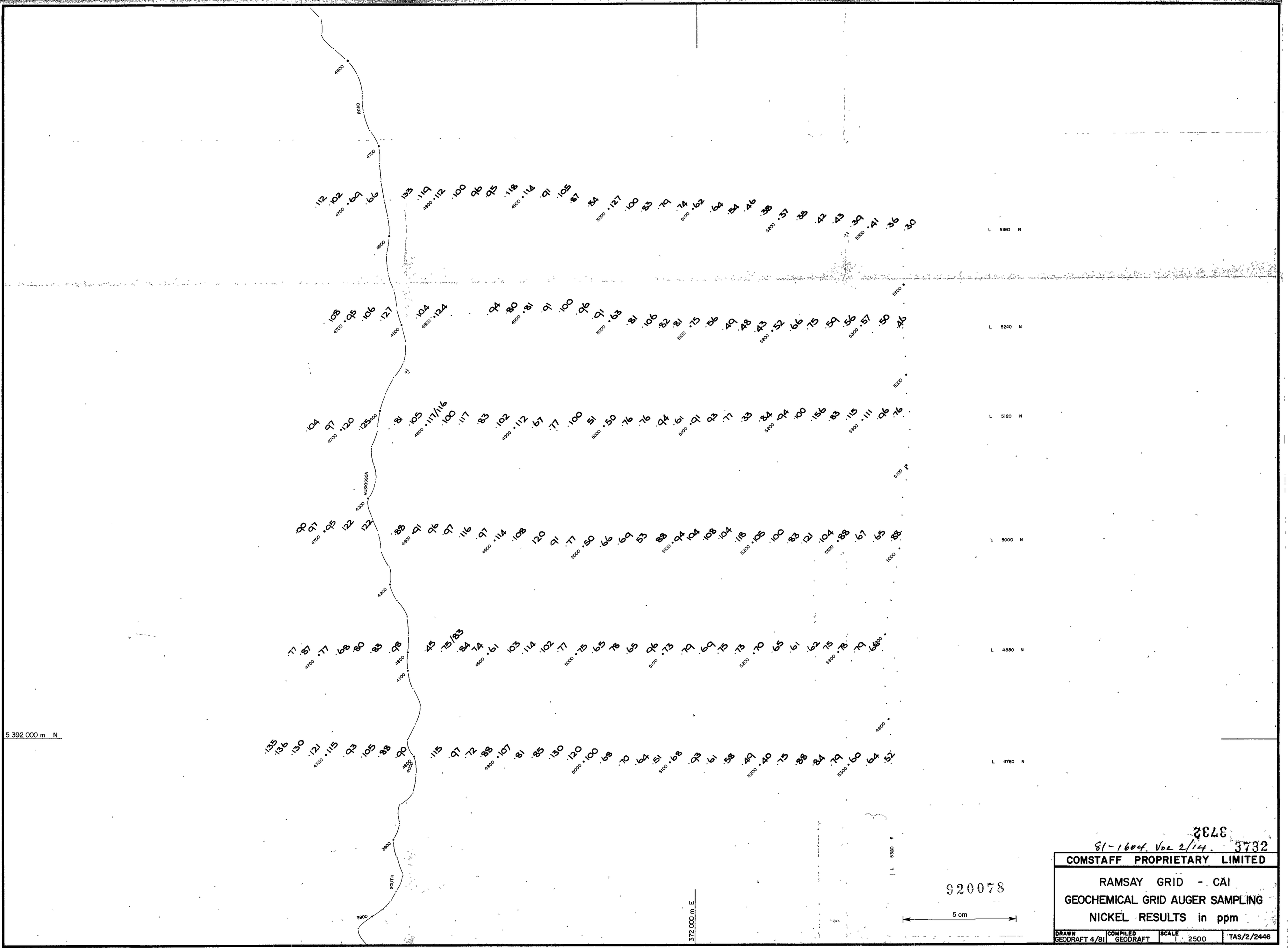
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAI

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/81	GEODRAFT	1 : 2500	TAS/2/2447



81-1604. Vol 2/14. 3732

3732

920078

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAI

GEOCHEMICAL GRID AUGER SAMPLING

NICKEL RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/81	GEODRAFT	1 : 2500	TAS/2/2446



920079

91-1604. Nov 2/14. 3733

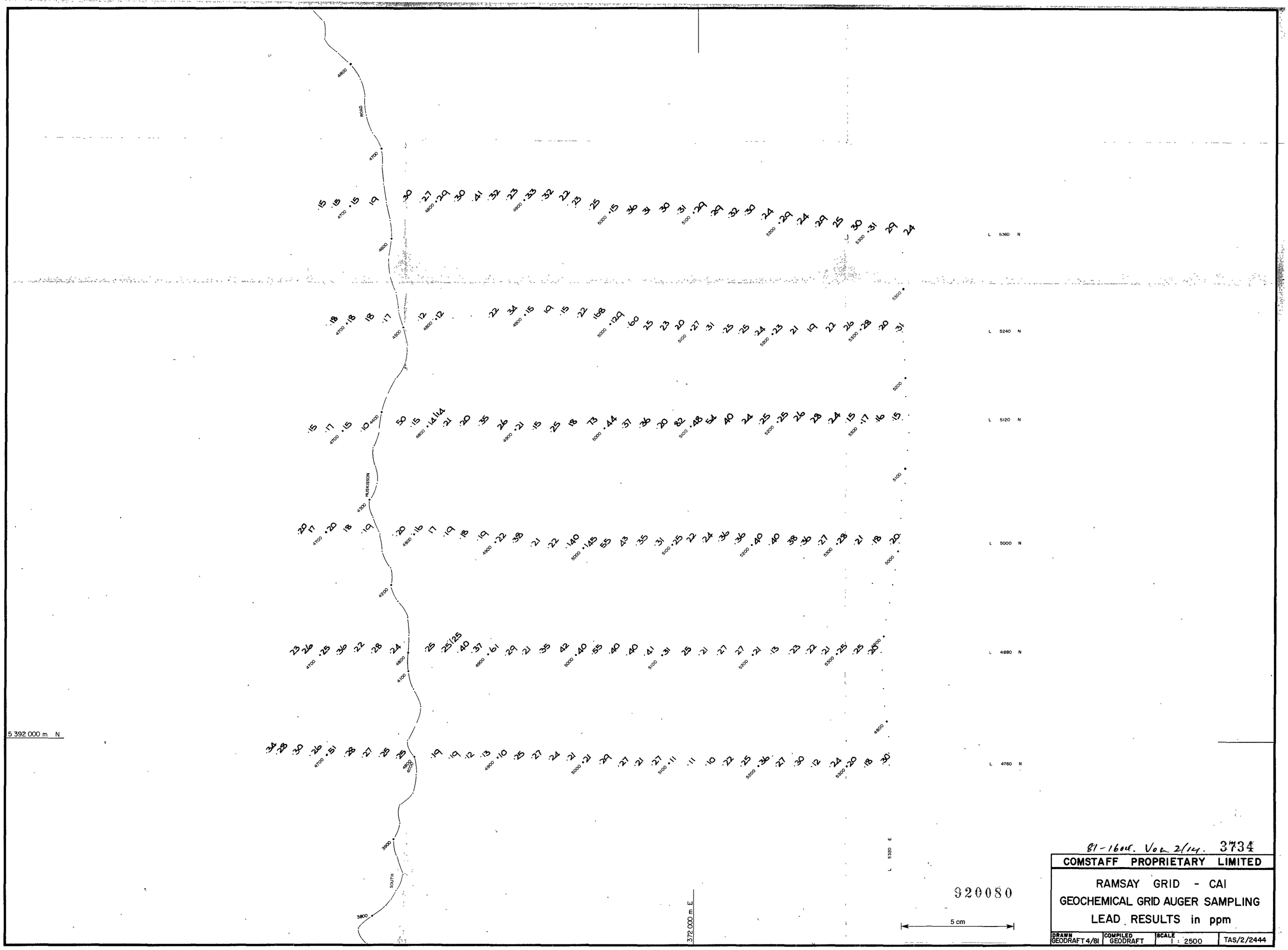
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAI

GEOCHEMICAL GRID AUGER SAMPLING

ZINC RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/81	GEODRAFT	1 : 2500	TAS/2/2445



920080

81-1604. Vol 2/14. 3734

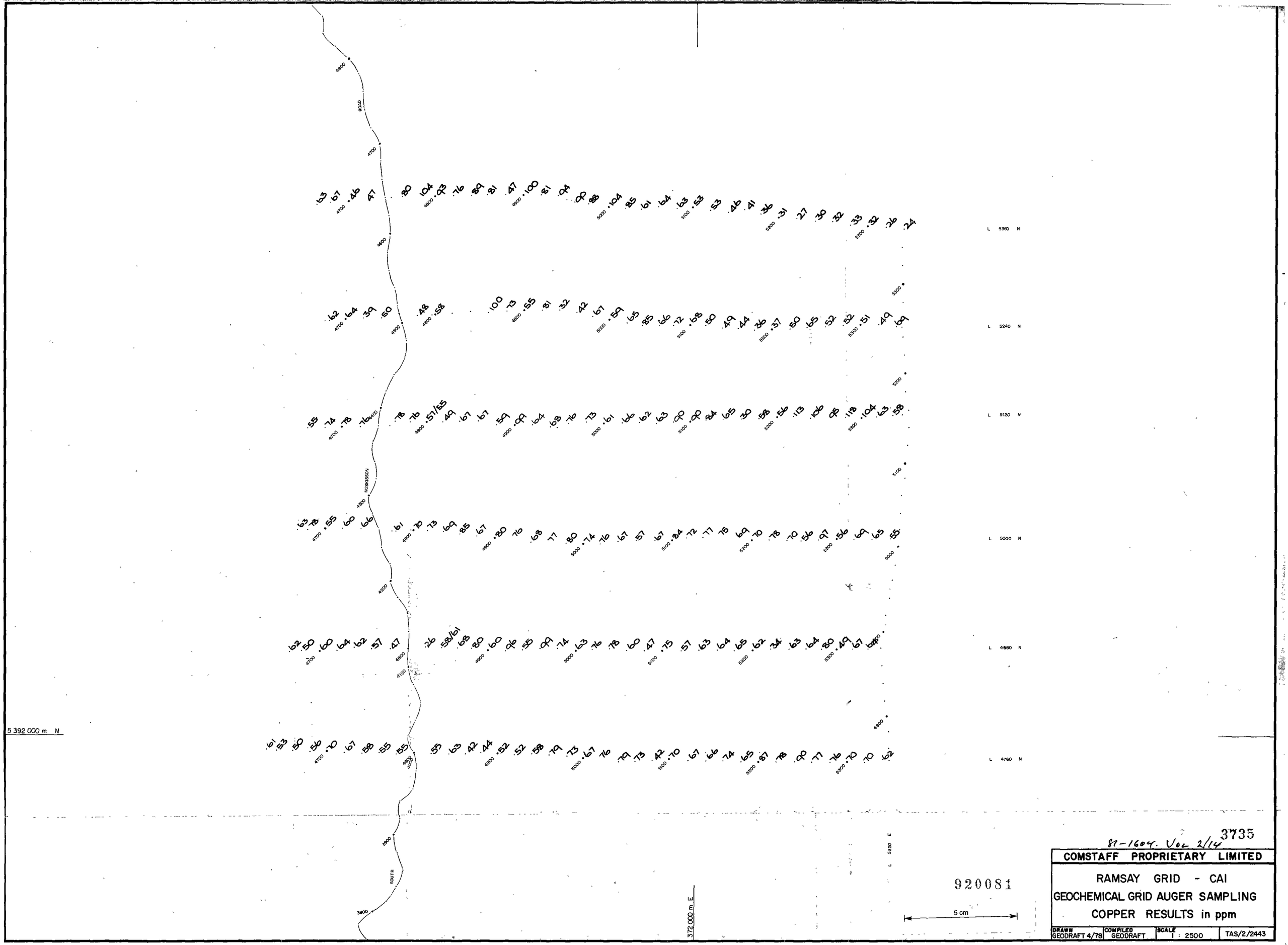
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAI

GEOCHEMICAL GRID AUGER SAMPLING

LEAD RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/81	GEODRAFT	1 : 2500	TAS/2/2444



3735

81-1604. Vol 2/14

920081

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAI

GEOCHEMICAL GRID AUGER SAMPLING

COPPER RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/78	GEODRAFT	1 : 2500	TAS/2/2443

L 6800 N

L 6560 N

L 6320 N

L 6080 N

L 5840 N

L 5600 N

L 5360 N

L 4560 E

5 399 000 m N

374 000 m E

EXISTING CAE GRID

5 cm

374 000 m E

920082 81-1604. Vol 2/14 3736

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAE (EXTENSION)

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	29/3/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2523

L 6800 N

L 6640 N

L 6480 N

L 6320 N

L 6160 N

L 6000 N

L 5840 N

L 5680 N

L 5520 N

L 5360 N

5 399 000 m N

L 4560 E

374 000 m E

EXISTING CAE GRID

RAMSAY

EXT. EXTENSION

ACCESS TRACK

GREEN CREEK

920083

374 000 m E

5 cm

81-1604. Vol 2/14. 3707

COMSTAFF PROPRIETARY LIMITED	
RAMSAY GRID - CAE (EXTENSION)	COMPILED: GEODRAFT
GEOCHEMICAL GRID AUGER SAMPLING	DRAWN: GEODRAFT; DATE: 29/3/81
TUNGSTEN RESULTS in ppm	AMENDED:
	SCALE: 1 : 2500
	PLAN No: TAS/2/2522

L 6800 N

L 6560 N

L 6320 N

L 6080 N

L 5840 N

L 5600 N

L 5360 N

5 399 000 m N

373 000 m E

374 000 m E

L 4880 E

L 5280 N

ESB EXTENSION

ACCESS

TRACK

GREEN

CREEK

RIVER

RAMSAY

EXISTING CAE GRID

5 cm

9200841-1604 Vol 2/14. 3738

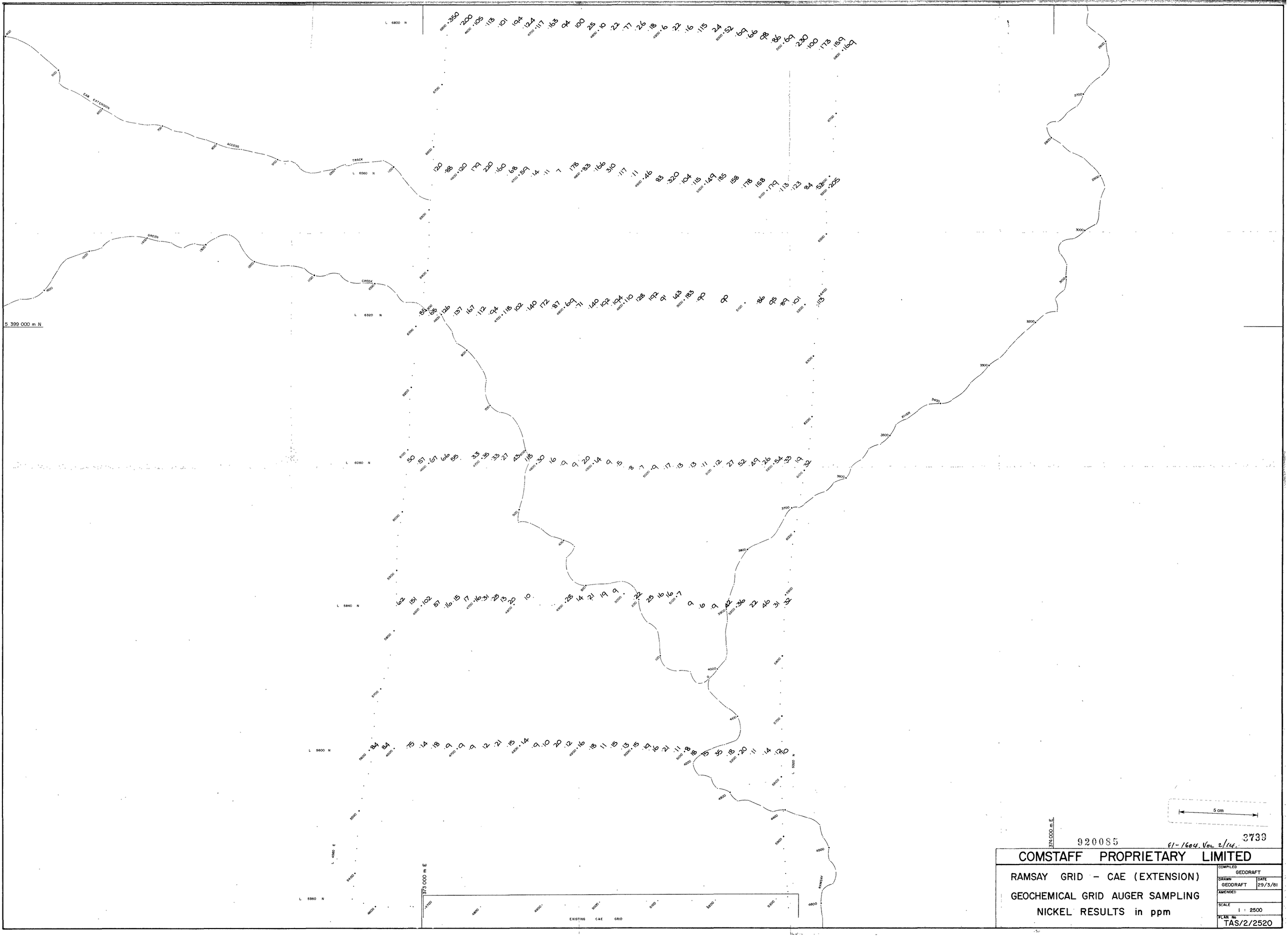
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAE (EXTENSION)

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	29/3/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2521



920085

6I-1604. Vol 2/14.

3739

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAE (EXTENSION)

GEOCHEMICAL GRID AUGER SAMPLING

NICKEL RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	29/3/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2520

ESM EXTENSION

ACCESS TRACK

GREEN CREEK

RIVER

RAMSAY

L 6800 N

L 6560 N

L 6320 N

5 399 000 m N

L 6080 N

L 5840 N

L 5600 N

L 5360 N

L 4560 E

373 000 m E

EXISTING CAE GRID

5 cm

374 000 m E

920086 81-1604. Vol 2/14. 3740

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAE (EXTENSION)

GEOCHEMICAL GRID AUGER SAMPLING

ZINC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	29/3/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2519

L 6800 N

L 6560 N

L 6320 N

L 6080 N

L 5840 N

L 5600 N

L 5360 N

5 399 000 m N

E&B EXTENSION

ACCESS

TRACK

GREEN

CREEK

River

RAMSAY

L 4560 E

373 000 m E

374 000 m E

EXISTING CAE GRID

5 cm

920087 61-1604. Vol 2/14. 3742

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAE (EXTENSION)

GEOCHEMICAL GRID AUGER SAMPLING

LEAD RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	29/3/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2518

ESB EXTENSION

ACCESS TRACK

GREEN CREEK

RAMSAY RIVER

L 6800 N

L 6560 N

L 6320 N

L 6080 N

L 5840 N

L 5600 N

L 5360 N

5 399 000 m N

374 000 m E

L 4560 E

EXISTING CAE GRID

5 cm

920088 81-1604. Vol 2/14. 3742.

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAE (EXTENSION)

GEOCHEMICAL GRID AUGER SAMPLING

COPPER RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	29/3/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2517

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4520 E

372 000 m E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREEK

CREEK

L W R

ROAD

RAMSAY

ACCESS TRACK

DDH A proposed.

5 cm

TAS/2/1845

TAS/2/2410

SHEET INDEX

920089

81-1604. Vol 2/14.

3743

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

DETAILED GEOLOGICAL PLAN

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


L 4220 E
L 4320 E
L 5360 N
L 5240 N
L 5120 N
L 5060 N
L 5000 N
L 4940 N
L 4880 N
L 4640 N
L 4760 N
L 4700 N
L 4640 N
5200
5300
4900
4800
4700
4600
4500
4400
4300
5100
5000
12400
12700
12800
12900
13000
13100
13200
13300
13400
13500
13600
13700
13800
13900
14000
14100
14200
14300
14400
14500
14600
14700
14800
14900
15000
15100
15200
15300
15400
15500
15600
15700
15800
15900
16000
16100
16200
16300
16400
16500
16600

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4320 E

372 000 m E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREEK CREEK

CAJ ACCESS TRACK

ROAD

RAMSAY

63000 nT

64000 nT

65000 nT

66000 nT

LWR

5 cm

920091

81-1604. Vol 2/14. 3745

SHEET INDEX

TAS/2/2436

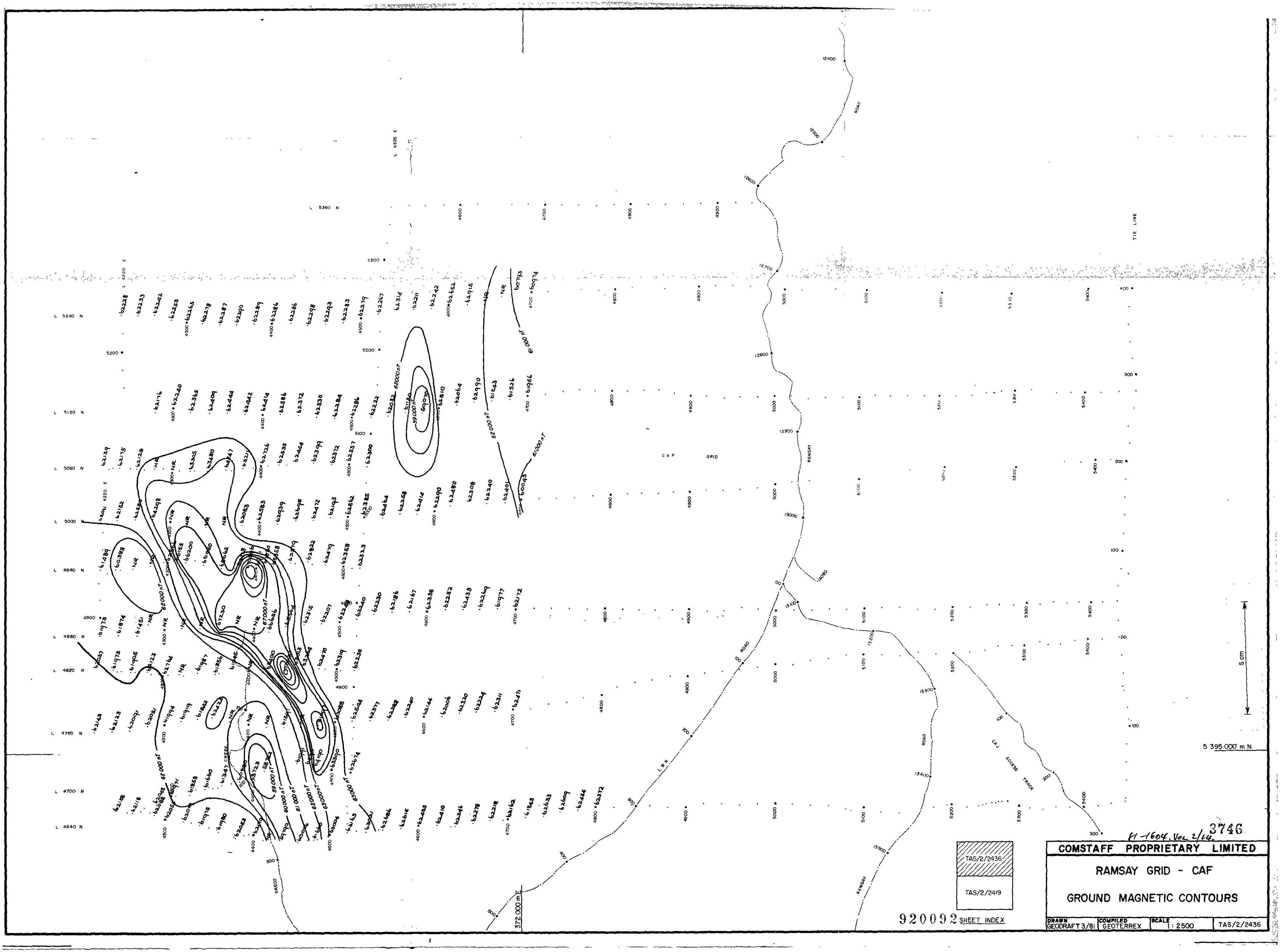
TAS/2/2419

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GROUND MAGNETIC CONTOURS

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



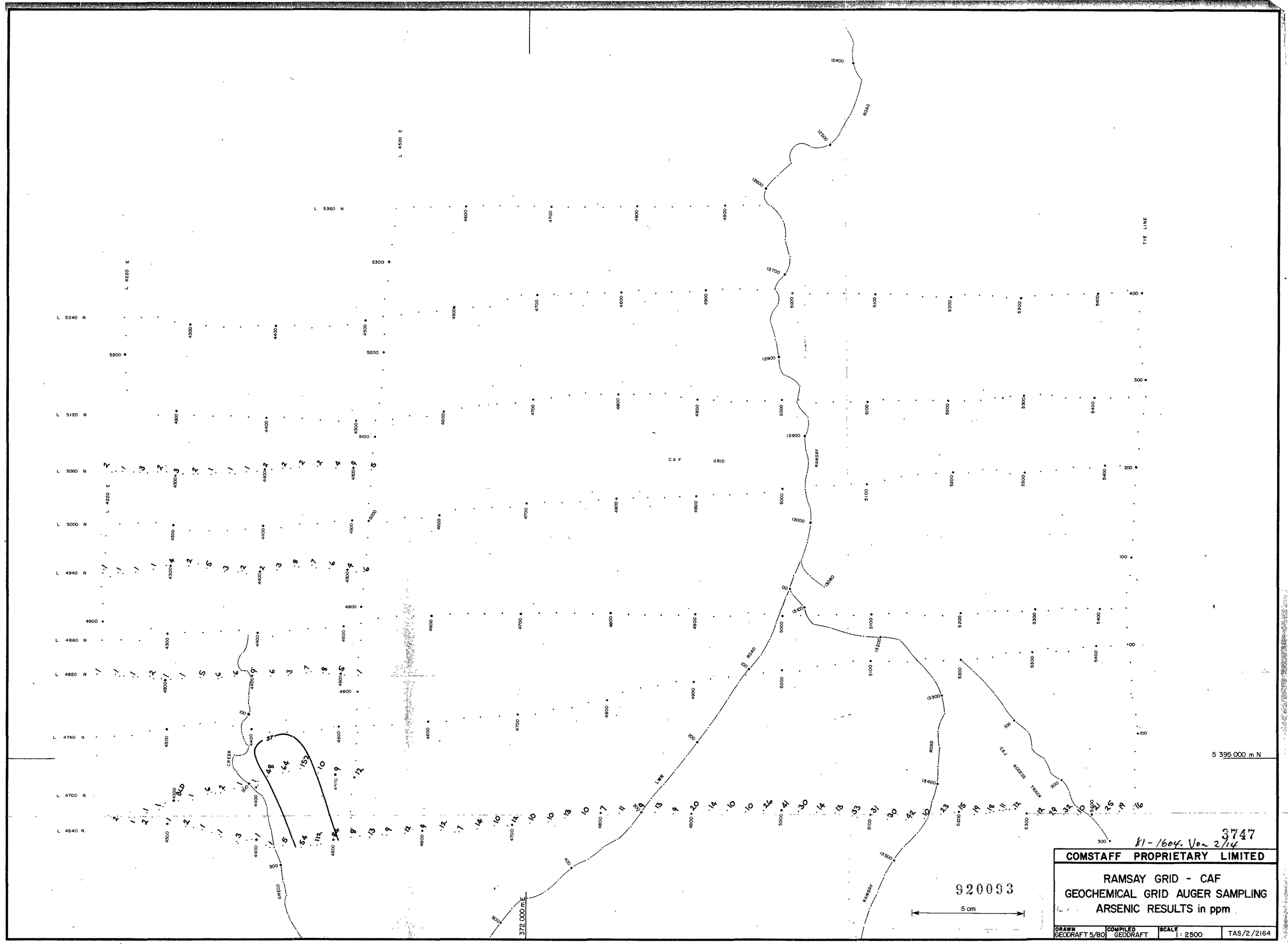
K1-1604. Vol 2/66. 3746

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

GROUND MAGNETIC CONTOURS

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



81-1604. Vol 2/14

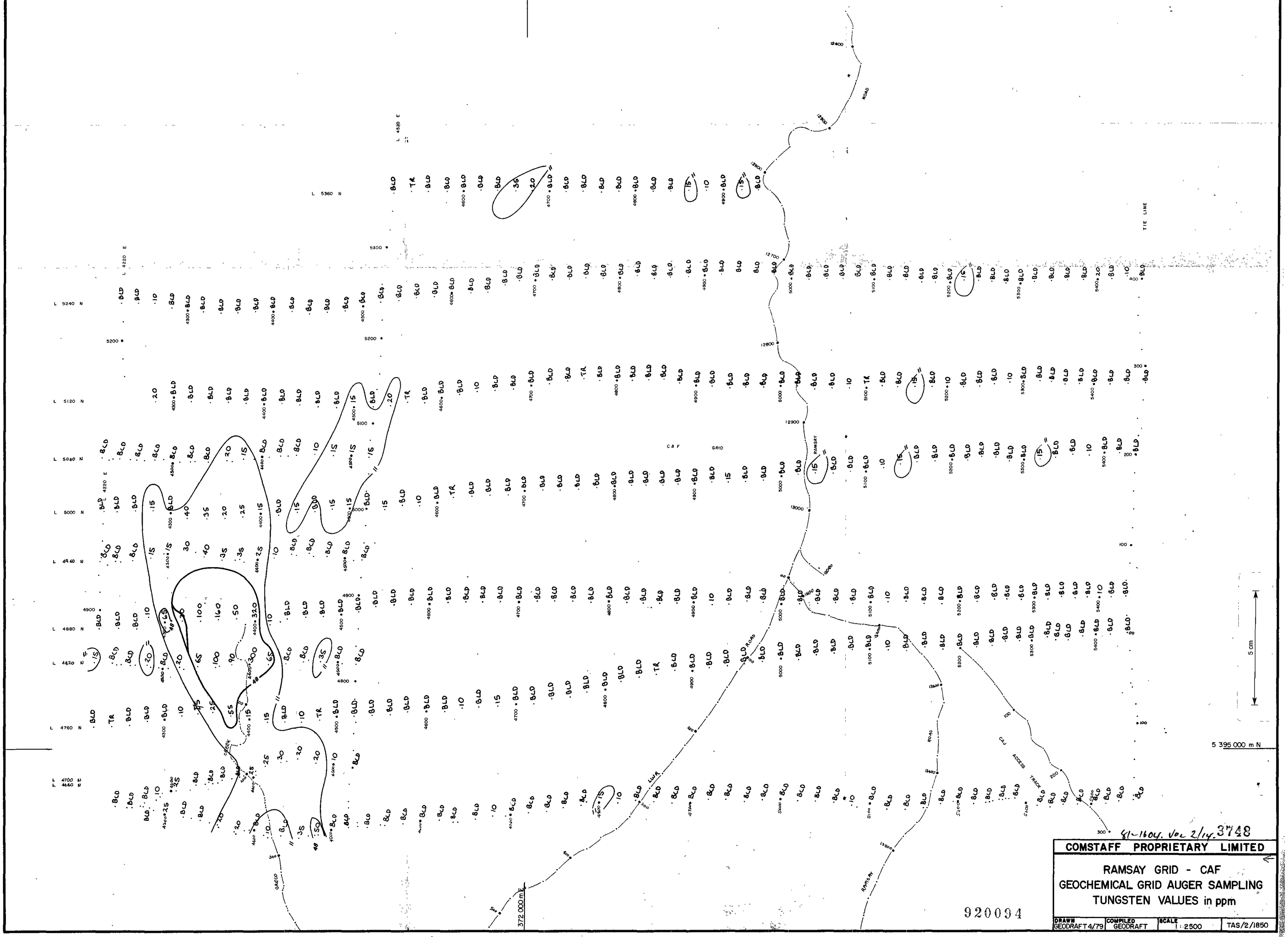
3747

920093

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
GEOCHEMICAL GRID AUGER SAMPLING
ARSENIC RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 5/80	GEODRAFT	1 : 2500	TAS/2/2164



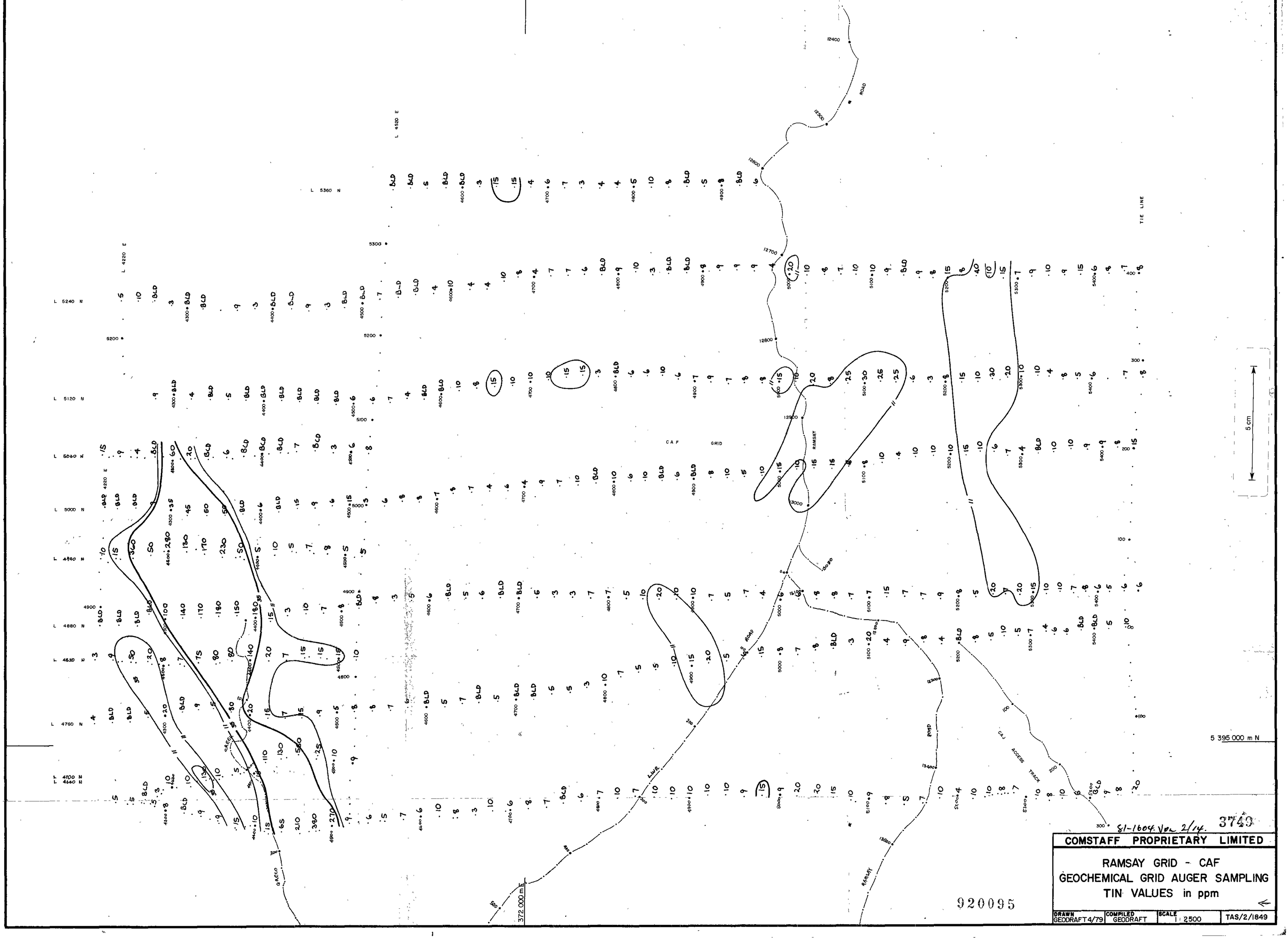
81-1604. Vol 2/14. 3748

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF
GEOCHEMICAL GRID AUGER SAMPLING
TUNGSTEN VALUES in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 4/79	GEODRAFT	1 : 2500	TAS/2/1850

920094



81-1604 Vol 2/14. 3749

COMSTAFF PROPRIETARY LIMITED			
RAMSAY GRID - CAF GEOCHEMICAL GRID AUGER SAMPLING TIN VALUES in ppm			
DRAWN GEODRAFT 4/79	COMPILED GEODRAFT	SCALE 1:2500	TAS/2/1849

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREEK

CREEK

ROAD

ACCESS TRACK

RAMSAY

L W R

L 4240 E

L 4520 E

372 000 m E

5 cm

81-1604. Vol 2/14. 3750

TAS/2/2164

TAS/2/2418

920036 SHEET INDEX

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID – CAF

GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 : 2500	TAS/2/2418

5 395 000 mN

L 4700 N

L 4640 N

L 4680 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4520 E

372 000 m E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREEN CREEK

CAJ ACCESS TRACK

RAMSAY ROAD

L W R

BLD

5 cm

TAS/2/1850

TAS/2/2417

920097 SHEET INDEX

81-1604. Vol 2/14. 3761

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID – CAF

GEOCHEMICAL GRID AUGER SAMPLING

TUNGSTEN RESULTS in ppm

DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 : 2500	TAS/2/2417

5 395 000 mN

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 4340 N

L 4280 N

L 4240 E

L 4520 E

372 000 m E

ORIGINAL CAF GRID

CAF SOUTH EXTENSION

GREEK

CREEK

ROAD

L W R

RAMSAY

ACCESS TRACK

CAJ

TAS/2/1849

TAS/2/2416

SHEET INDEX

920098

5 cm

81-1604. Vol 2/14. 3752

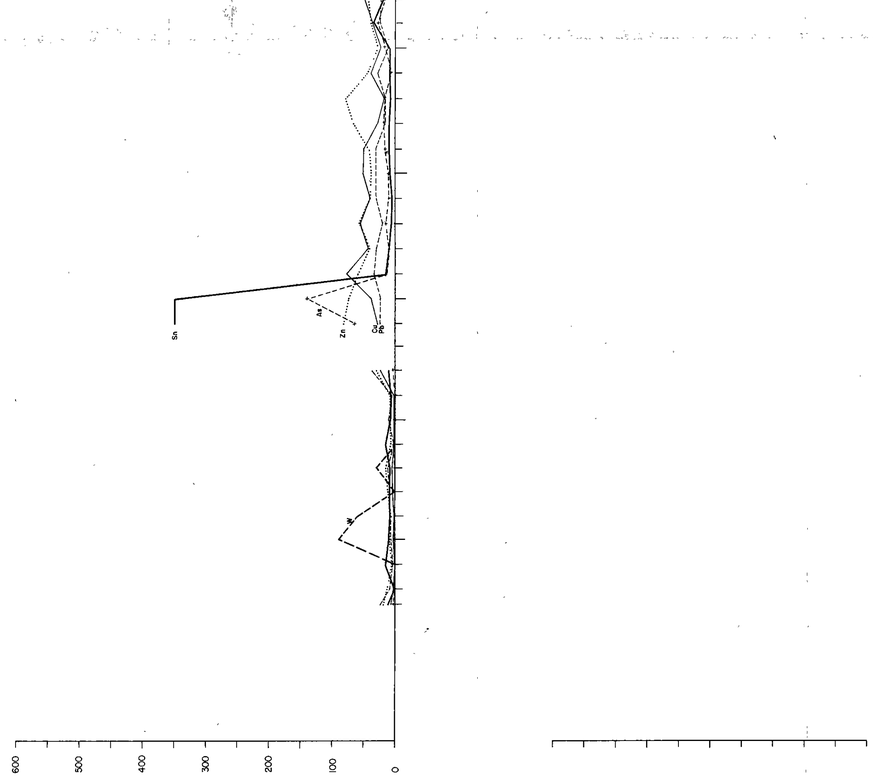
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

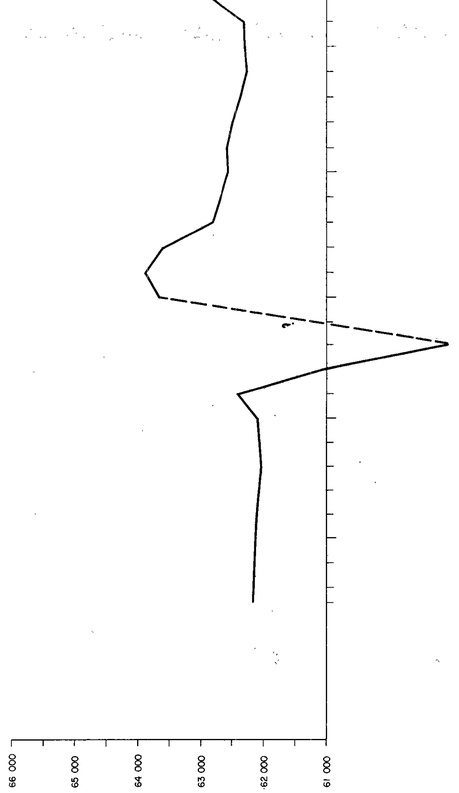
GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

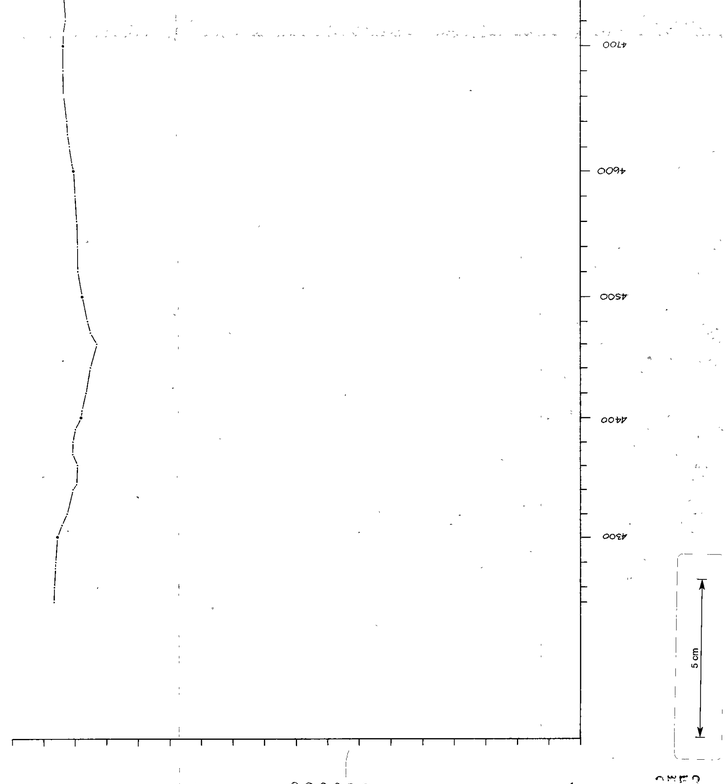
DRAWN	COMPILED	SCALE	
GEODRAFT 2/81	GEODRAFT	1 : 2500	TAS/2/2416



GEOCHEMISTRY ppm



MAGNETICS nT



TOPOGRAPHY & GEOLOGY

920099 81-1604. Vol 2/14. 2753

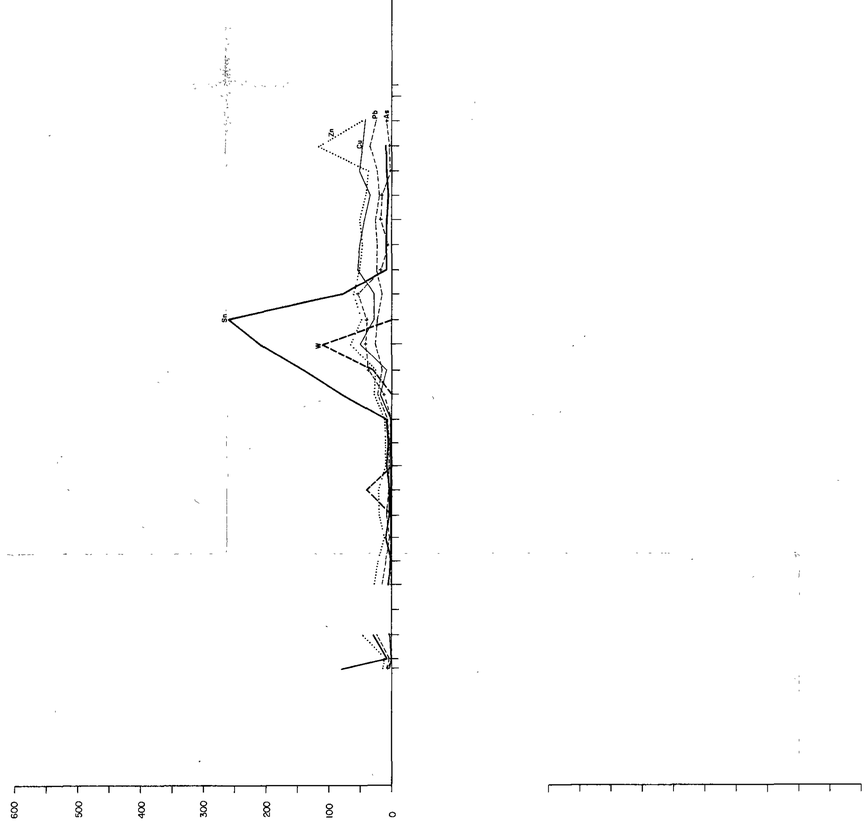
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF (S)

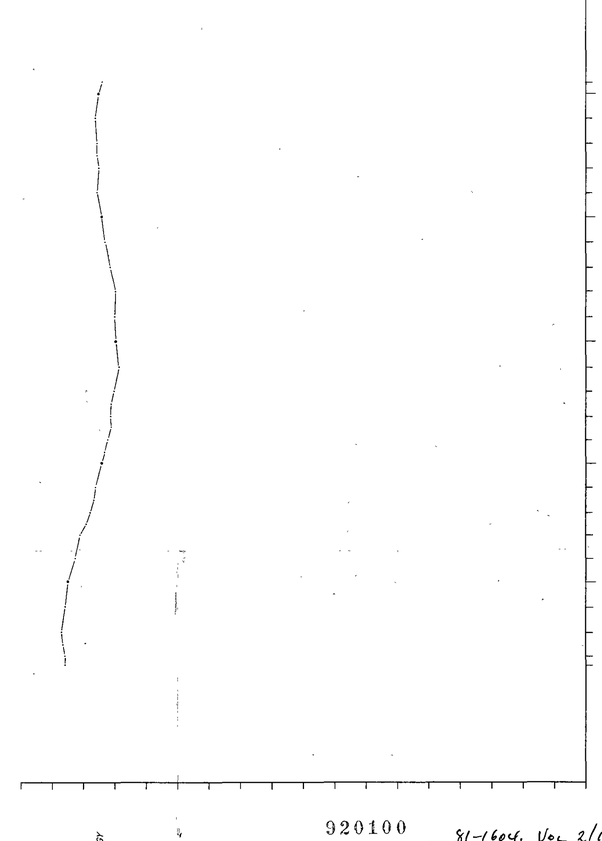
L 4580 N PROFILES

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

COMPILED	GEODRAFT & GFP
DRAWN	DATE 21/3/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2472





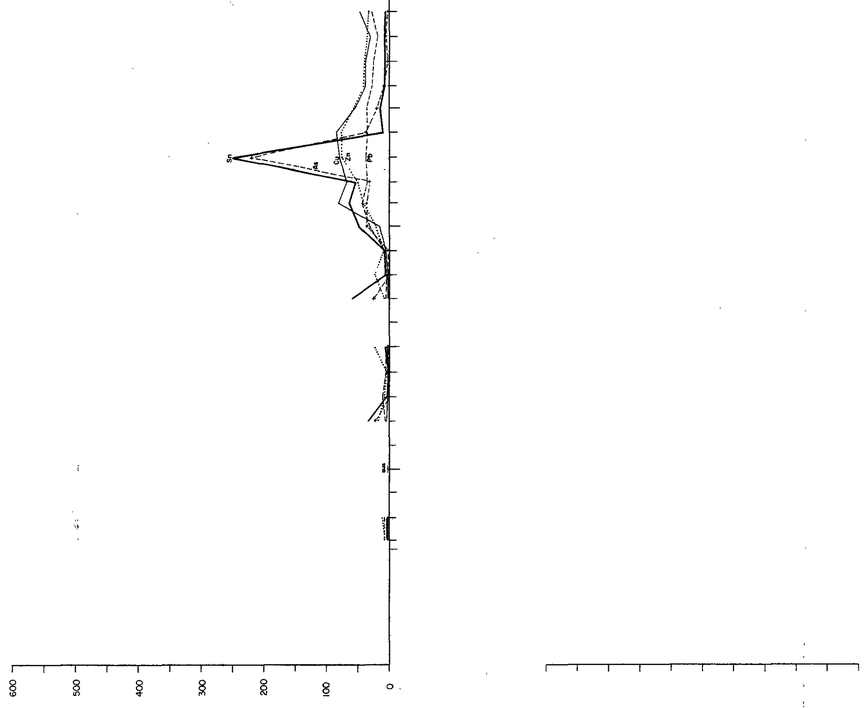


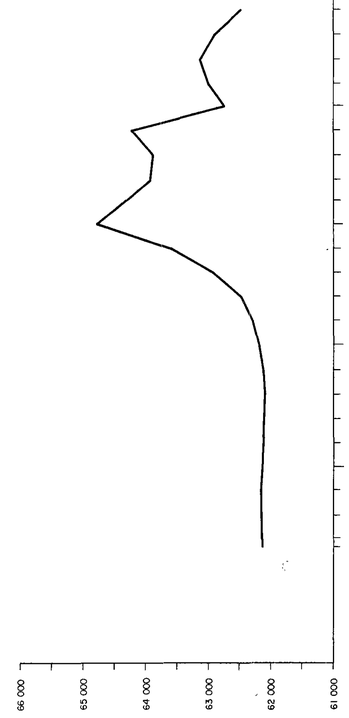
920100 81-1604. Vol 2/14. 3754

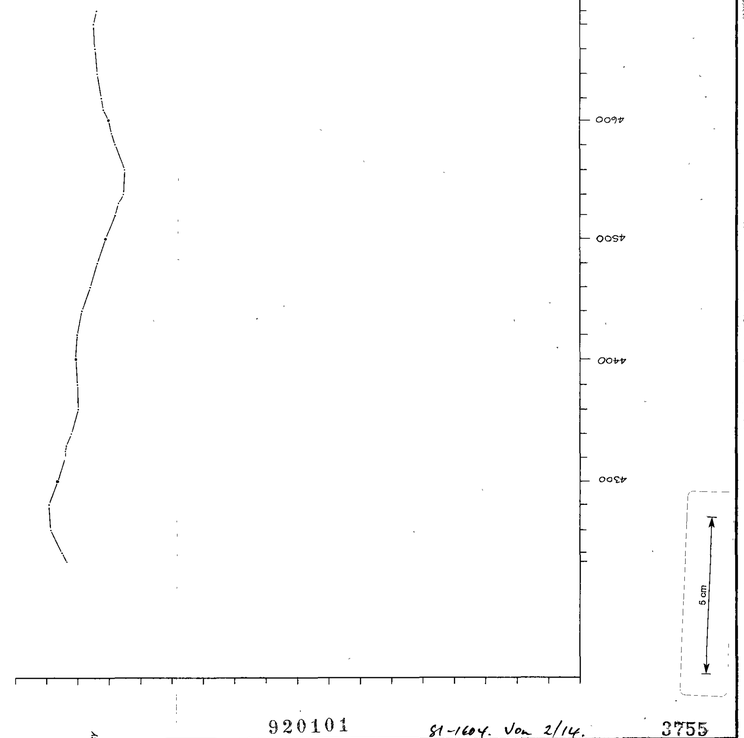
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF (S)
L 4520 N PROFILES
TOPO, MAG, E.M., GEOCHEMISTRY, GEOLOGY

COMPILED	GEODRAFT & GFP
DRAWN	DATE 21/3/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2471







920101 81-1604. Vol 2/14. 3755

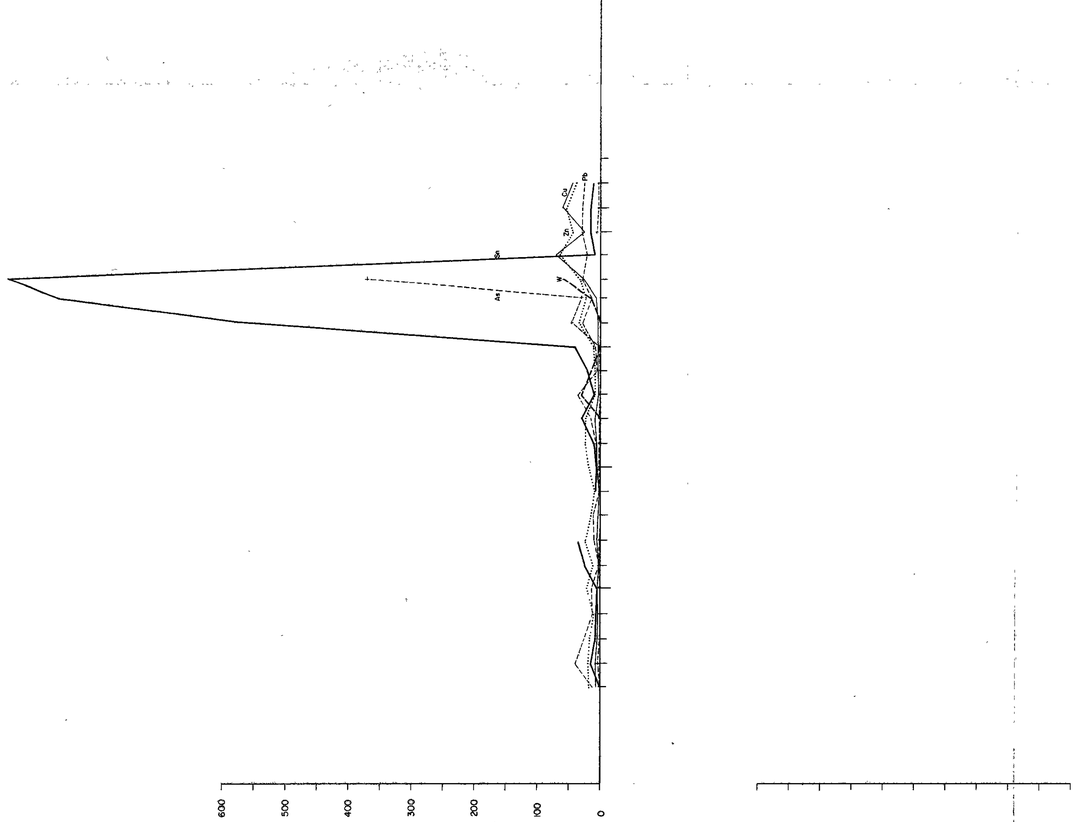
COMSTAFF PROPRIETARY LIMITED

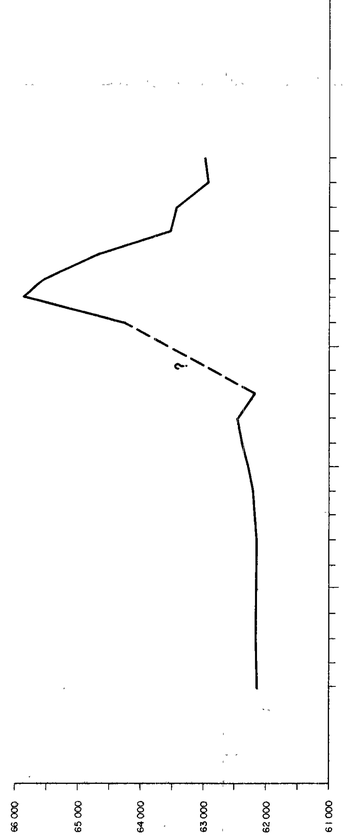
RAMSAY GRID - CAF (S)

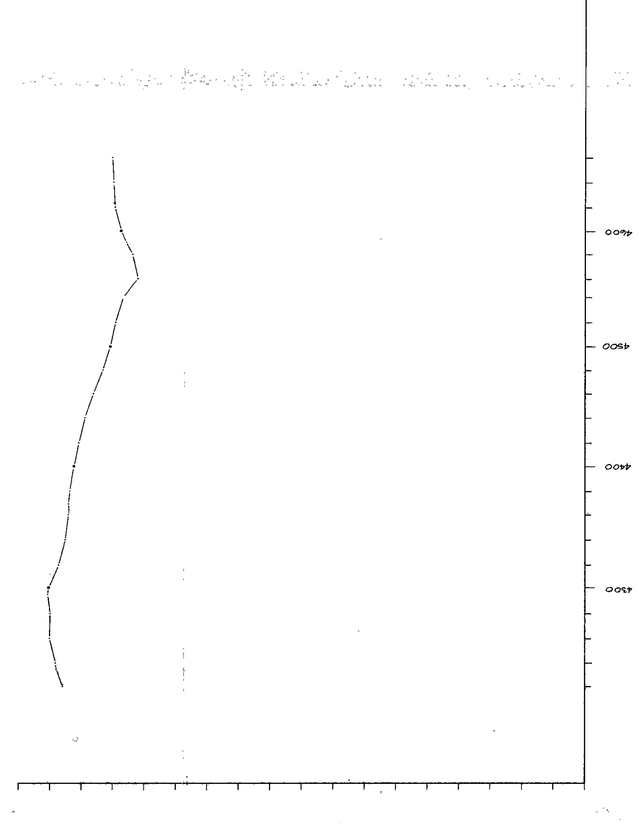
L 4460 N PROFILES

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

COMPILED	GEODRAFT & GFP
DRAWN	DATE 21/3/81
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/2470







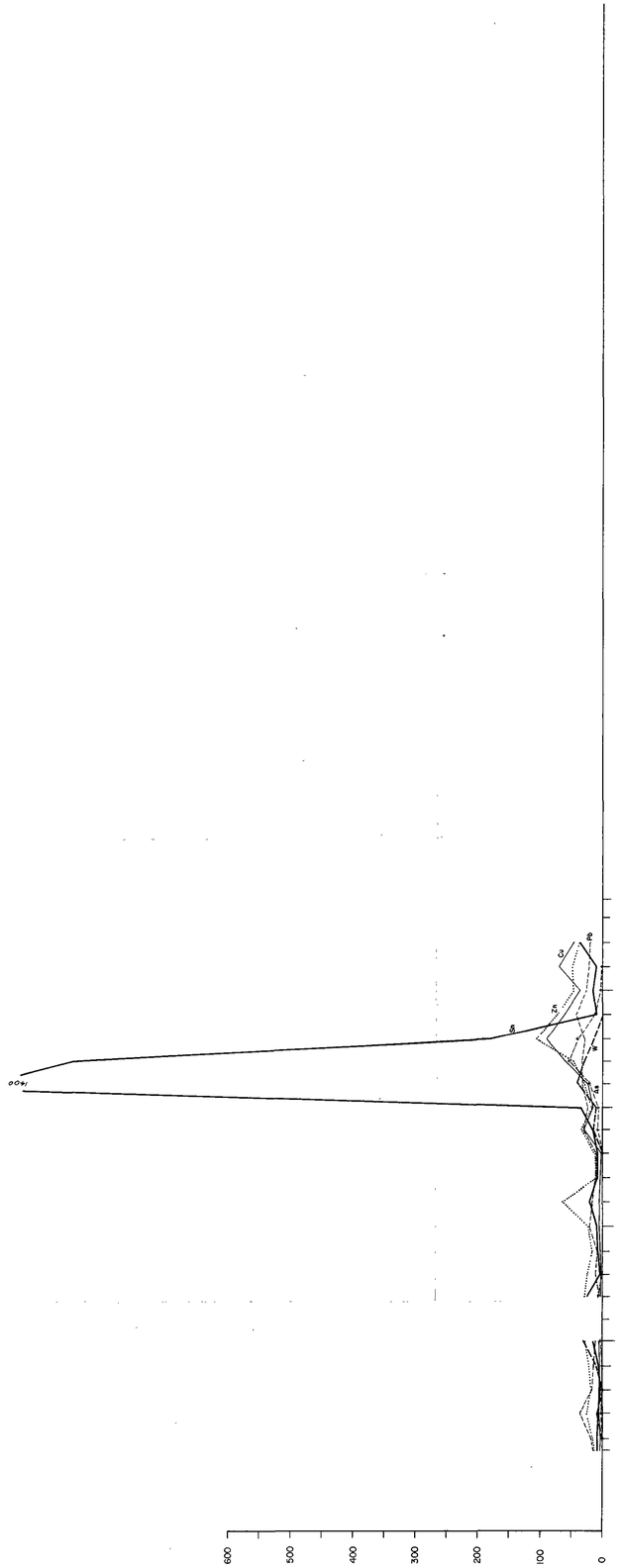
5 cm

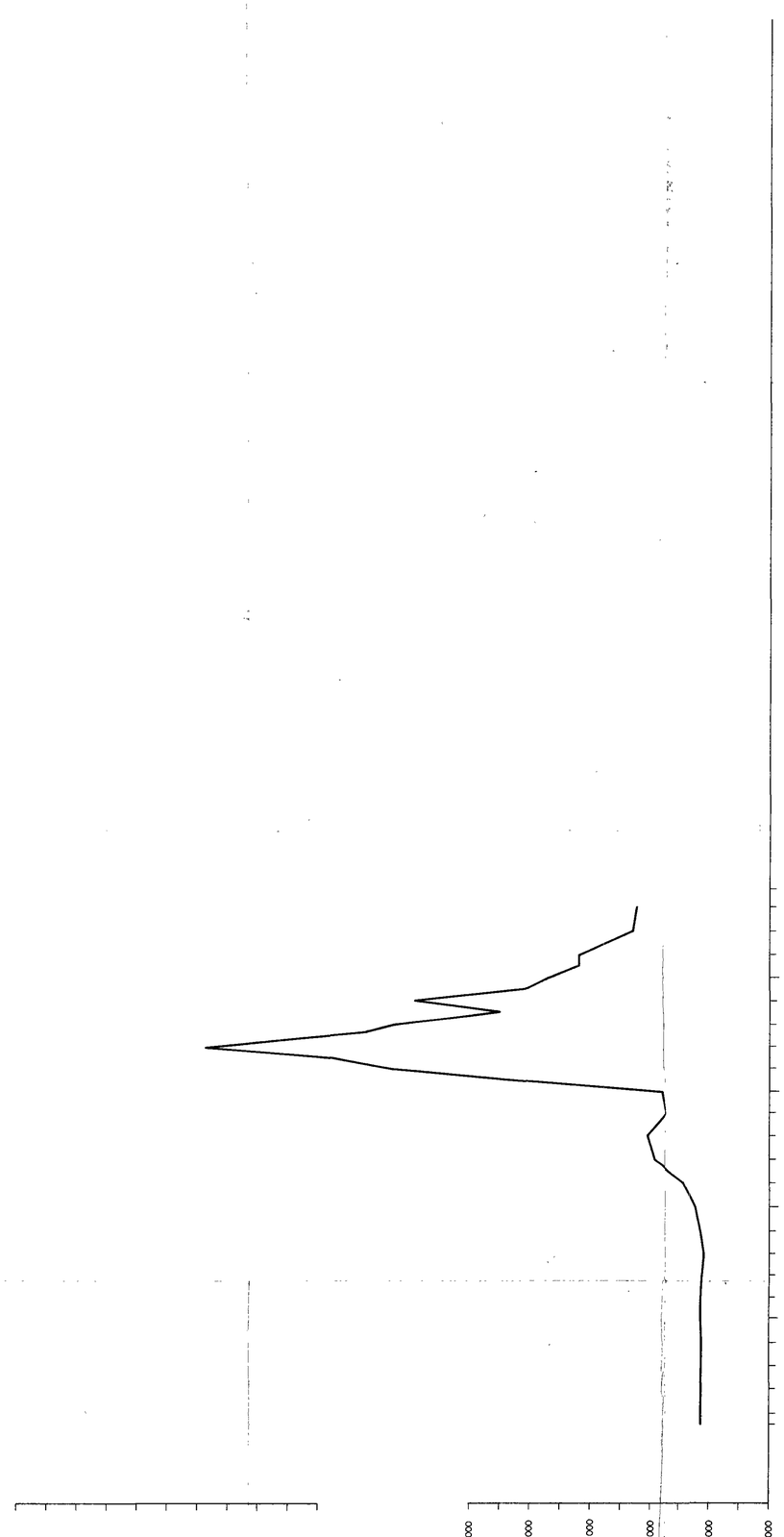
920102 61-1604, Vol 2/14. 3756

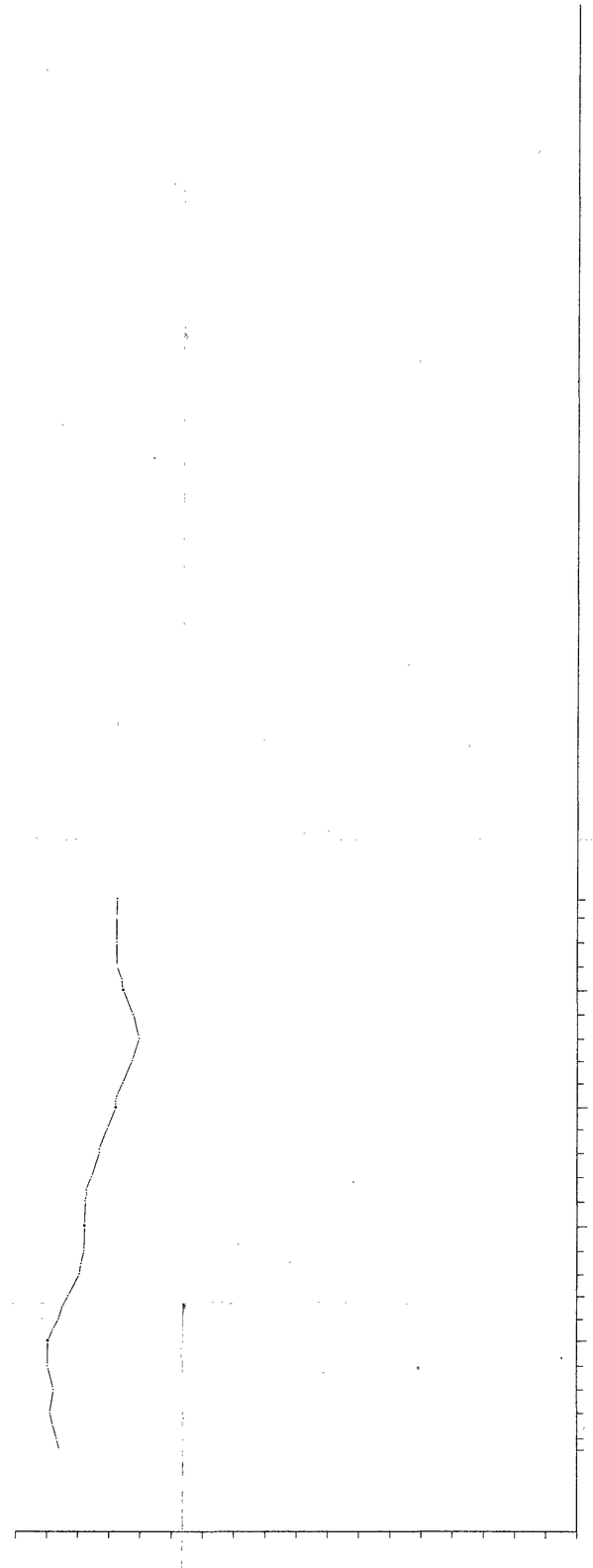
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF (S)
L 4400 N PROFILES
TOPO, MAG, E.M., GEOCHEMISTRY, GEOLOGY

COMPILED: GEODRAFT & G.E.P
DRAWN: DATE 21/3/81
AMENDED:
SCALE 1 : 2500
PLAN No TAS/2/2469







920103 81-1604. Vol 2/14. 3757

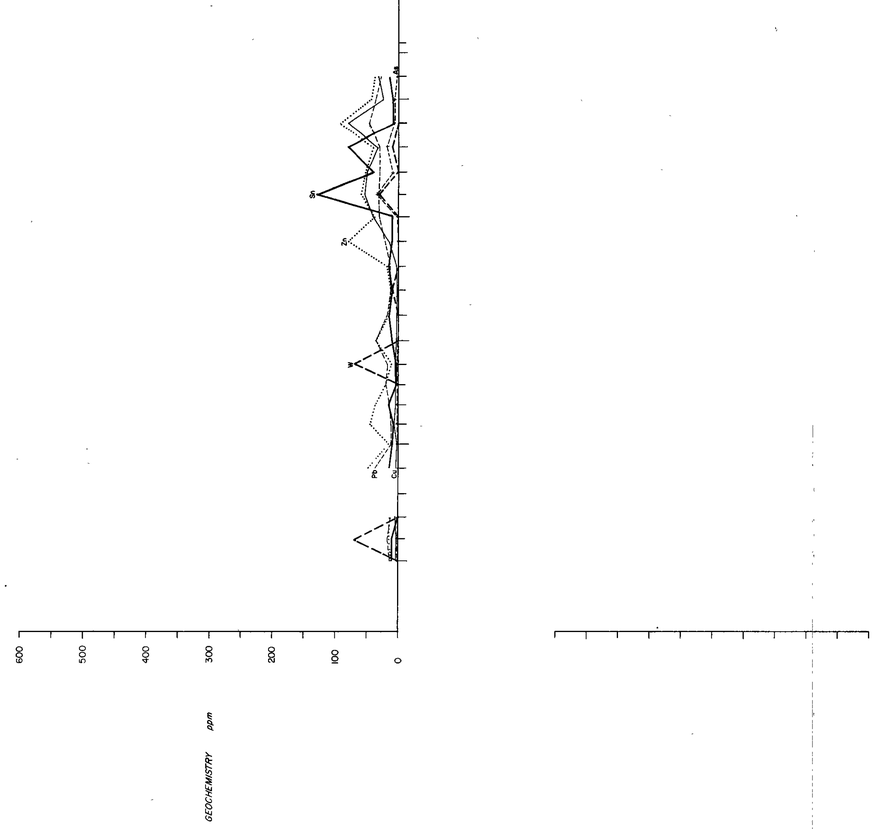
COMSTAFF PROPRIETARY LIMITED

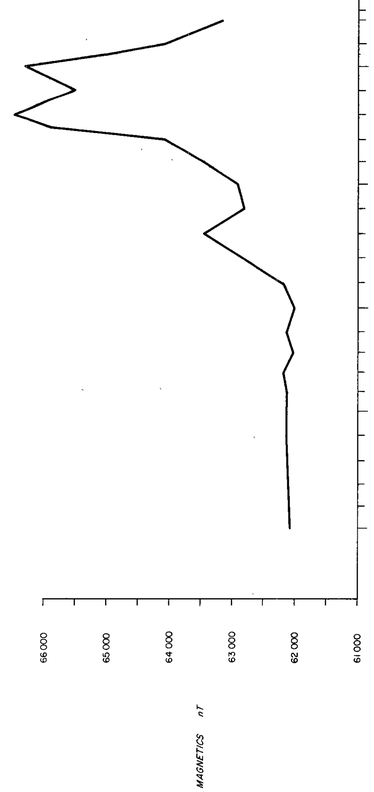
RAMSAY GRID - CAF (S)

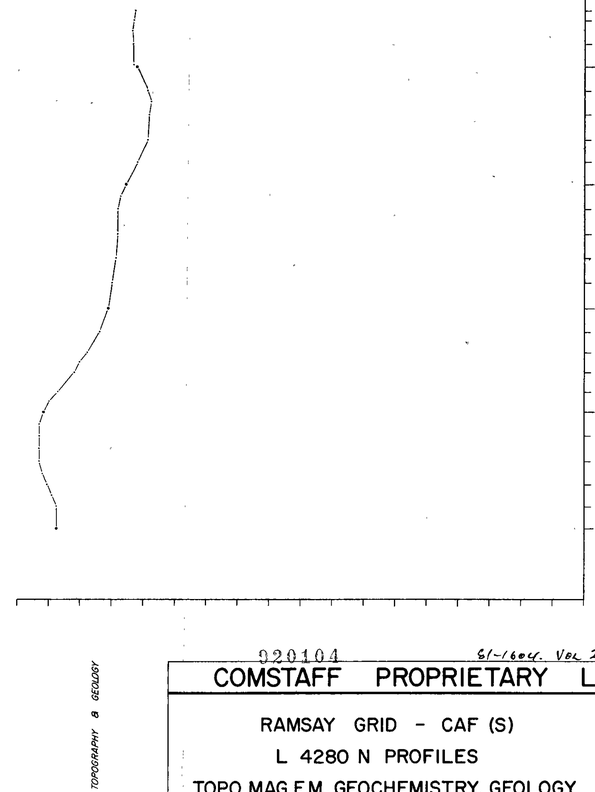
L 4340 N PROFILES

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

COMPILED: GEODRAFT & GFP
DRAWN: DATE 21/3/81
AMENDED:
SCALE: 1 2500
PLAN No TAS/2/2468







5cm

920104 81-1604. Vol 2/14. 3758

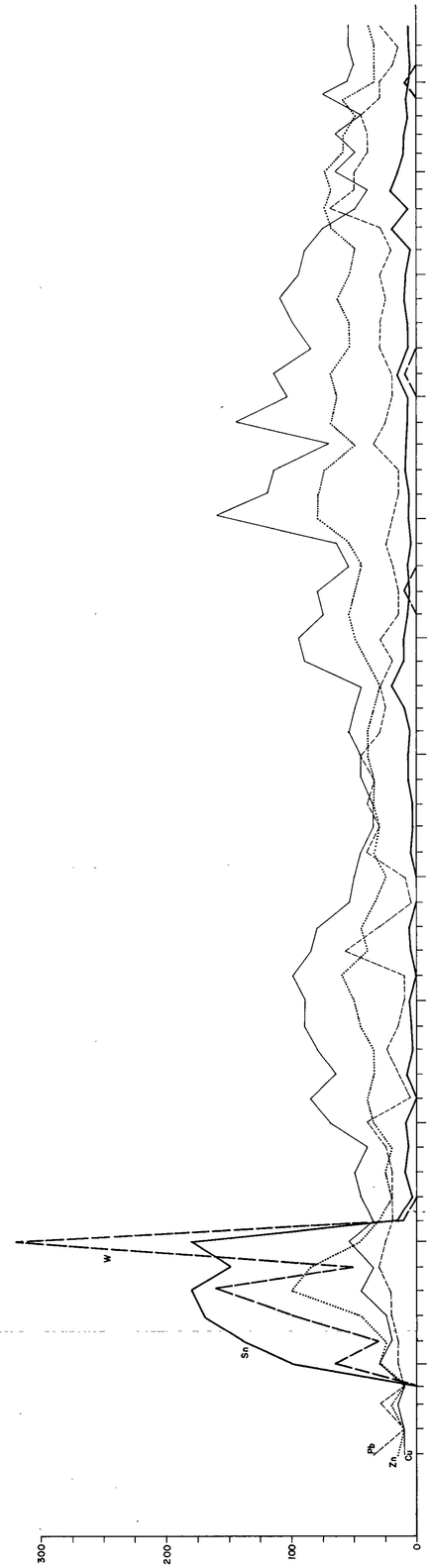
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF (S)

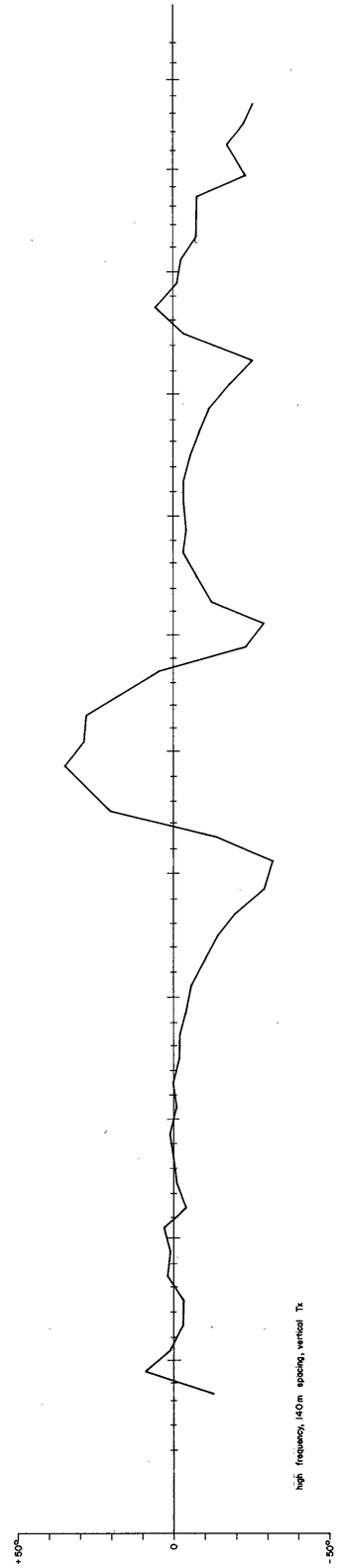
L 4280 N PROFILES

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

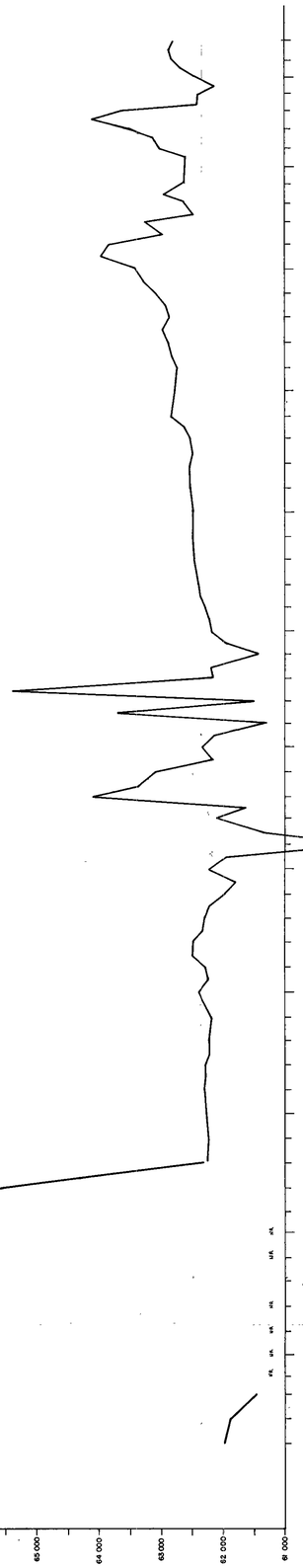
COMPILED	GEODRAFT & GFP
DRAWN	DATE 21/3/81
AMENDED	
SCALE	1 : 2500
PLAN No	TAS / 2 / 2467



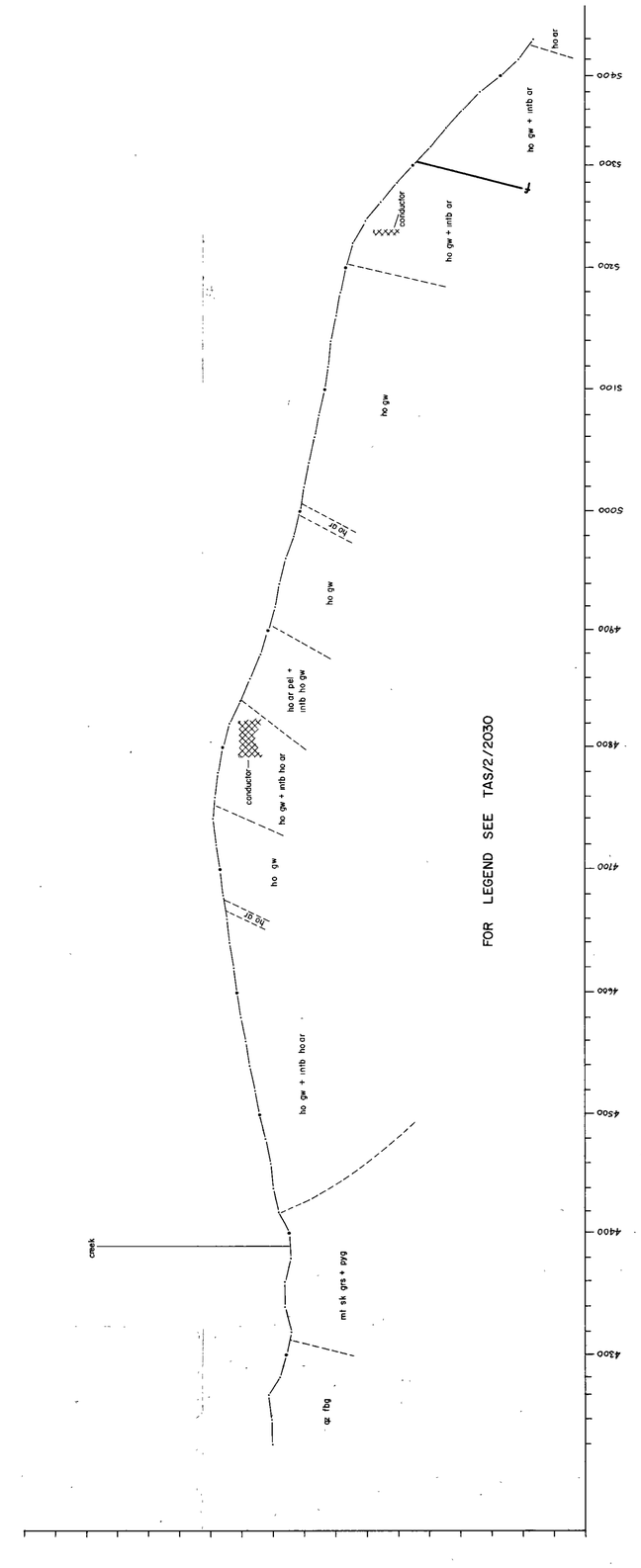
GEOCHEMISTRY



CRONE E M



MAGNETICS



LEGEND SEE TAS/2/2030 FOR LEGEND

TOPOGRAPHY

920105 91-1604. Vol 2/14. 3759

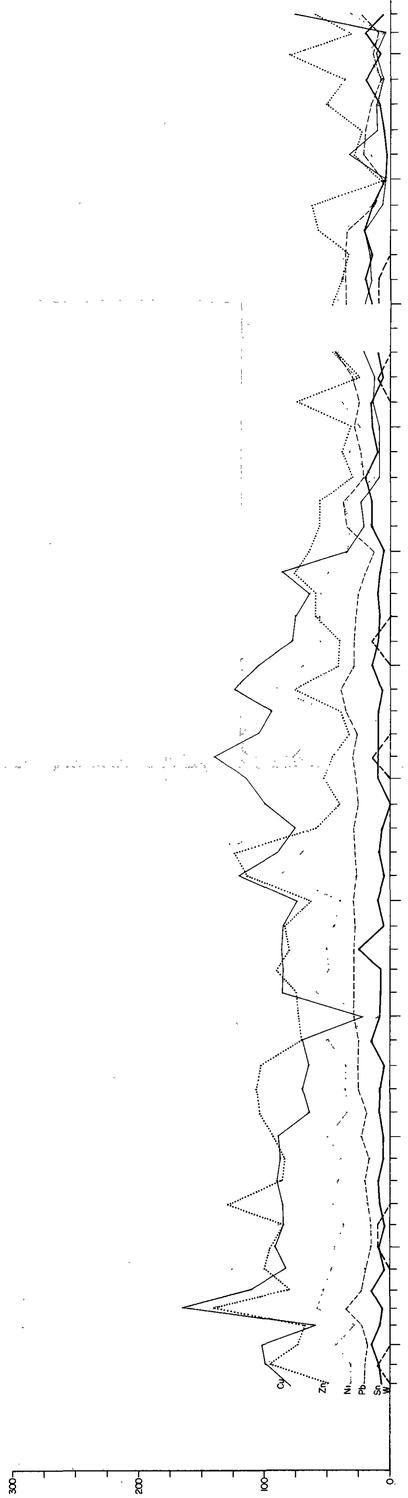
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

L 4880 N PROFILES

TOPO, MAG, CRONE, GEOCHEM

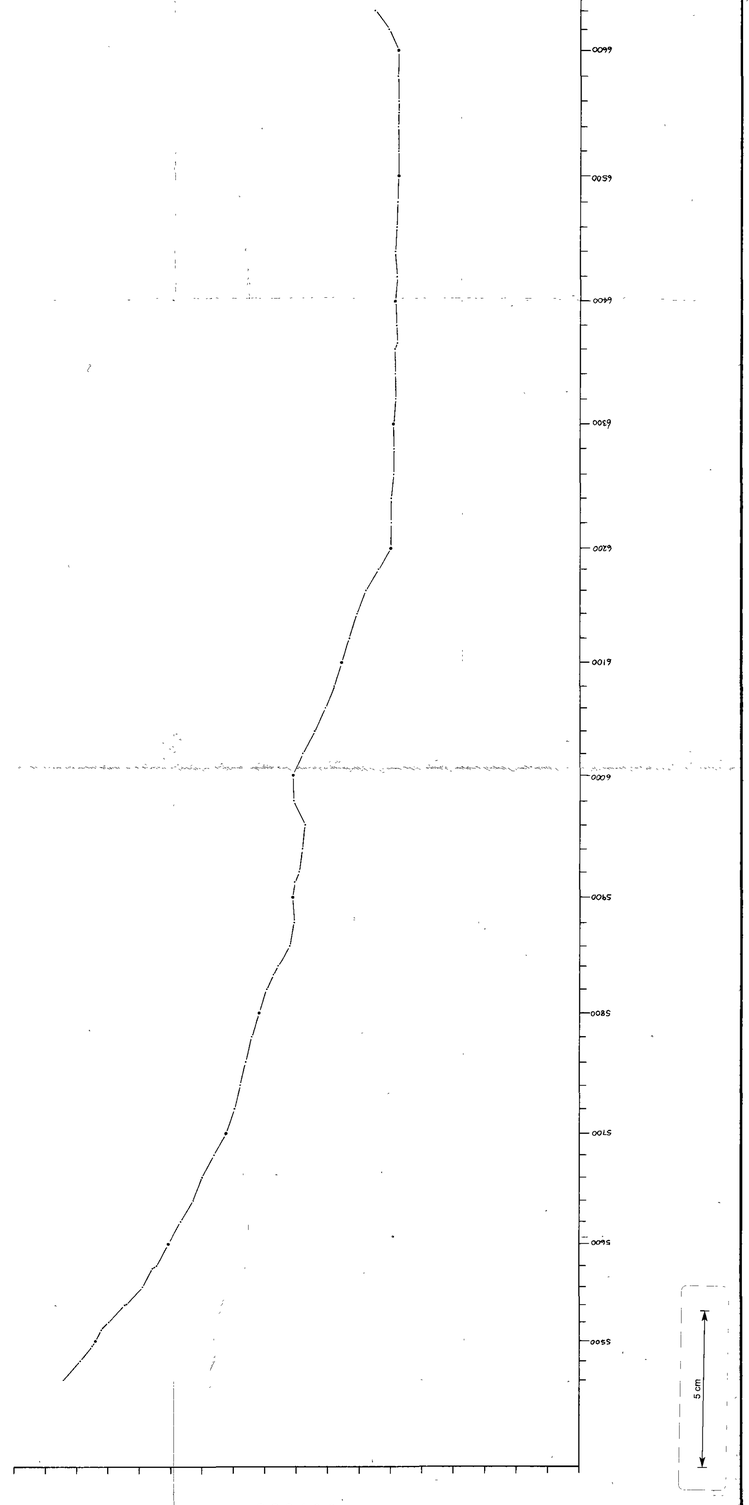
COMPILED	G F P
DRAWN G F P	DATE 5/79
AMENDED	
SCALE	1 : 2500
PLAN No.	TAS/2/1852



GEOCHEMISTRY ppm

CRONE

GROUND MAGNETICS nT



TOPOGRAPHY & GEOLOGY

920106

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3760

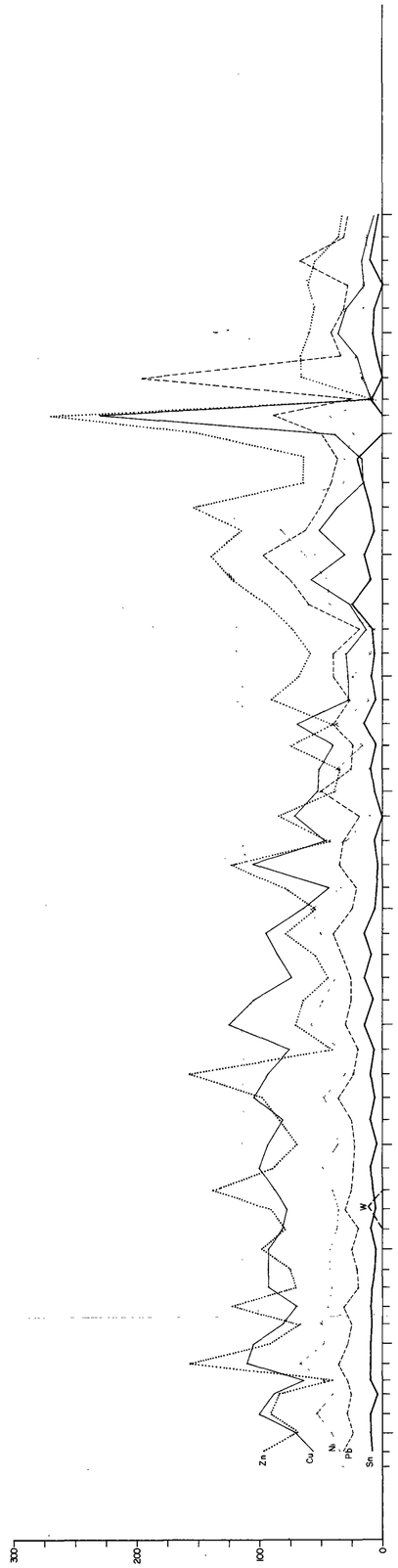
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

PROFILES OF (E) EXTENSIONS OF L 4760 N

TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

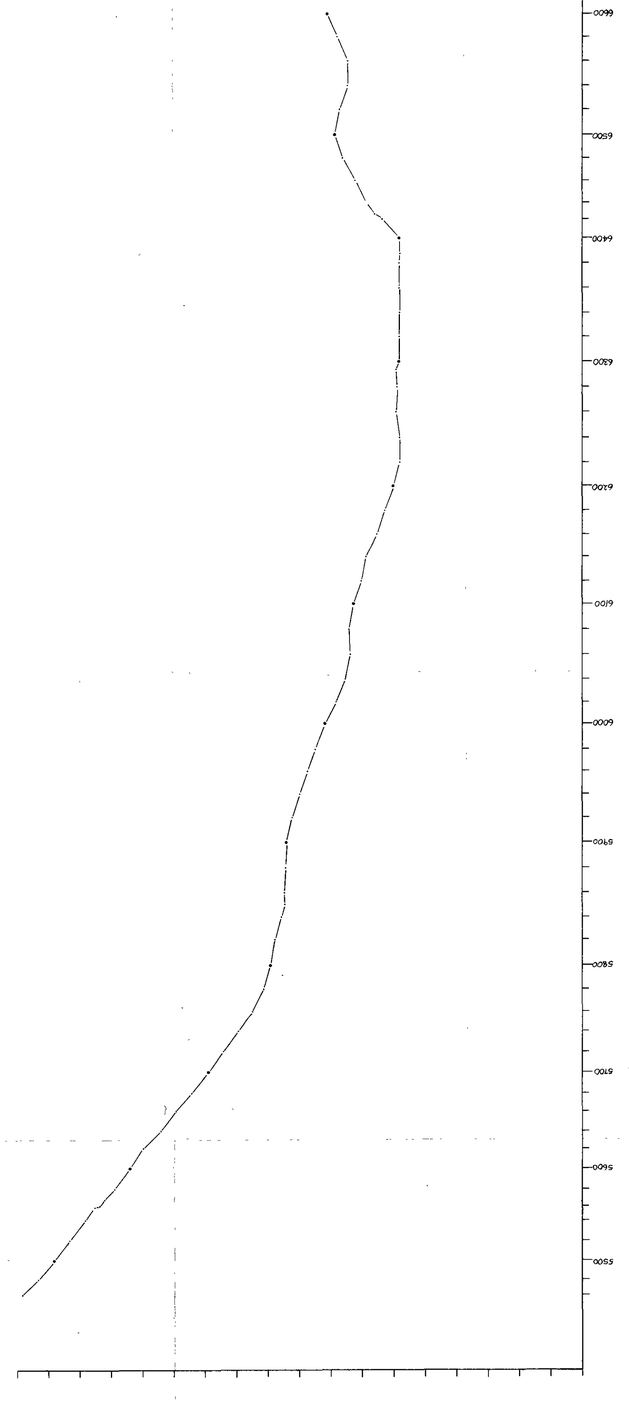
COMPILED	GEODRAFT & G.E.P.
DRAWN	GEODRAFT
DATE	25/8/80
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2256



GEOCHEMISTRY ppm

CRONE

GROUND MAGNETICS nT



TOPOGRAPHY & GEOLOGY

920107 91-1604. Vol 2/14. 3761

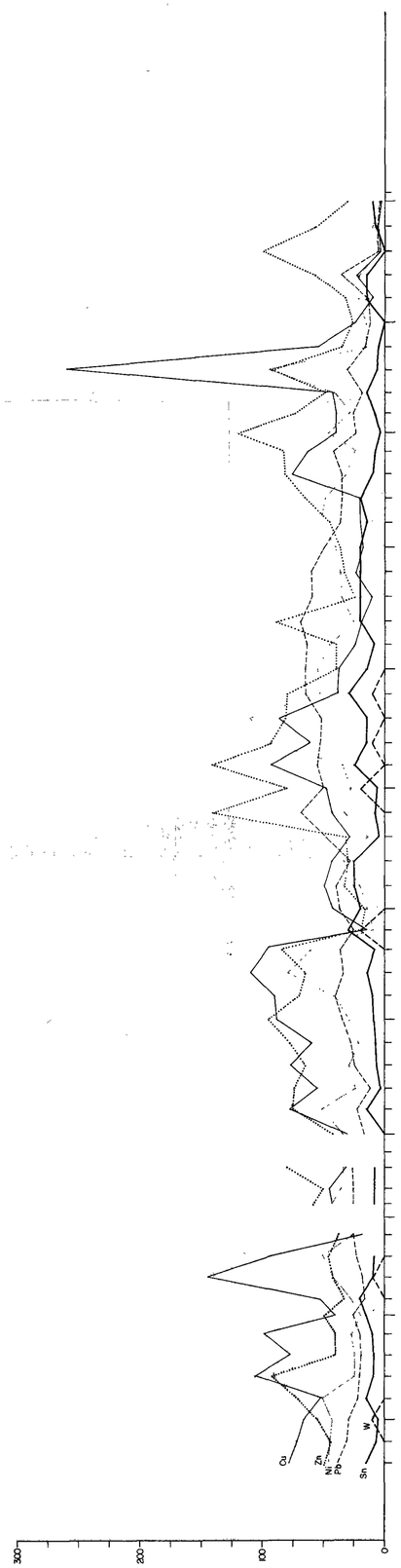
COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

PROFILES OF (E) EXTENSIONS OF L5000 N

TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

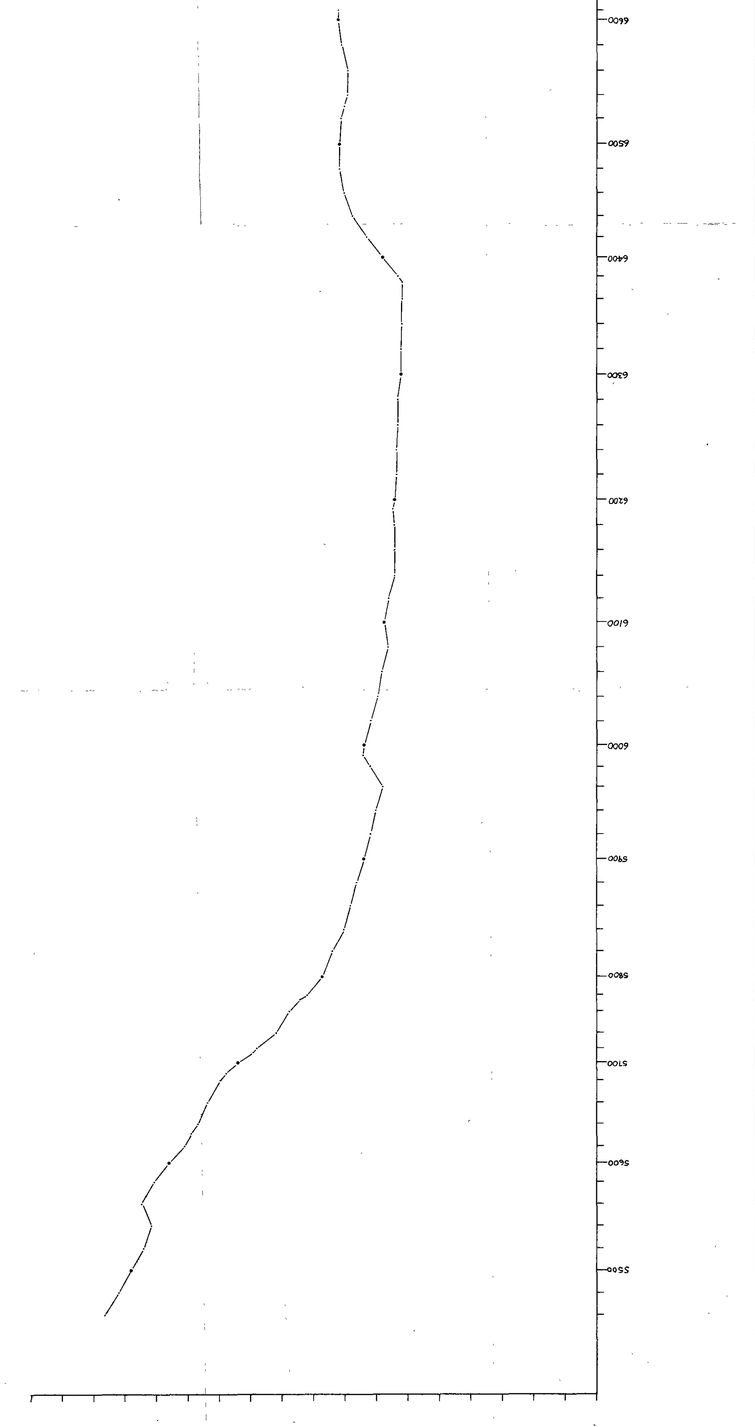
COMPILED	GEODRAFT & G.E.P.
DRAWN	GEODRAFT
DATE	25/8/80
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2255



GEOCHEMISTRY ppm

CRONE

GROUND MAGNETICS nT



TOPOGRAPHY & GEOLOGY

920108 61-1604. Vol 2/14. 3762

COMSTAFF PROPRIETARY LIMITED

RAMSAY GRID - CAF

PROFILES OF (E) EXTENSIONS OF L 5240 N

TOPO, MAG, CRONE, GEOCHEM, GEOLOGY

COMPILED	GEODRAFT & G.F.P
DRAWN	GEODRAFT
DATE	25/8/80
AMENDED	
SCALE	1 : 2500
PLAN No	TAS/2/2254

APPENDIX 4

A Compilation of results from work carried out

in the East Chester Area EL 5 / 63 Part 4

920110

Appendix 4: A compilation of results from work carried out in the East Chester area E.L. 5/63 Part 4.

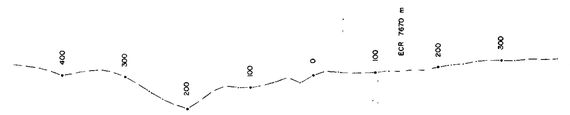
			East Chester Grid EAB
			Geology and A° and C geochemical results for Cu, Pb, Zn, Ba, Mn
2537	1	1:5000	Line 3950S section
2536			3750
2535			3550
2534			3350
2533			3150
2532			2950
2531			2750
2530			2540
2529	2		2340
2528			2130
2527			1930
2526			1730
2525			1530
2511		1:2500	L 2340S profiles Section of proposed drillhole 'A'
2512			L 2950S profiles Section of proposed drillhole 'B'
2429		1:5000	Contoured resistivity plan of N=2 showing distinctive anomalies.
2428			Contoured chargeability plan of N=2 showing distinctive anomalies.
			East Chester grid geophysical results
			Topo profile with I.P., SP., Mag, Crone
2299	3		L 3950S
2298			3750
2297			3550
2296			3350
2295			3150
2294			2950
2293			2750

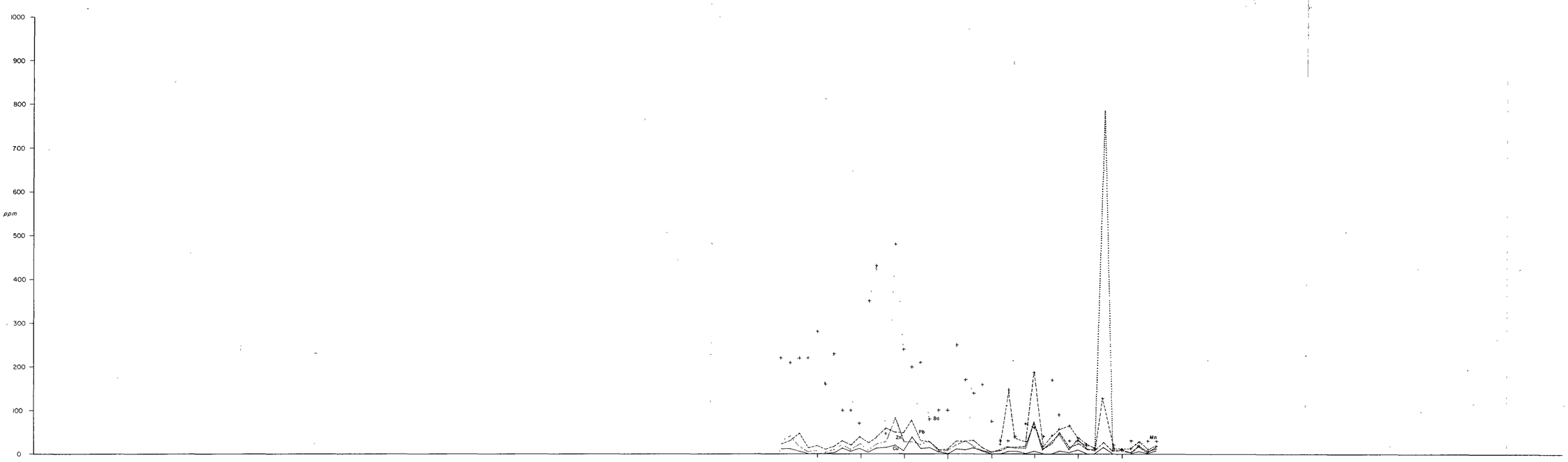
2292	4	1:5000	2540
2291			2340
2290			2130
2289			1930
2288			1730
2287			1530
			Geochemical Grid Auger Sampling
2324			Mn ppm
2323			Ba
2320	5		Cu
2321			Pb
2322			Zn
1565			Detailed Geological Plan

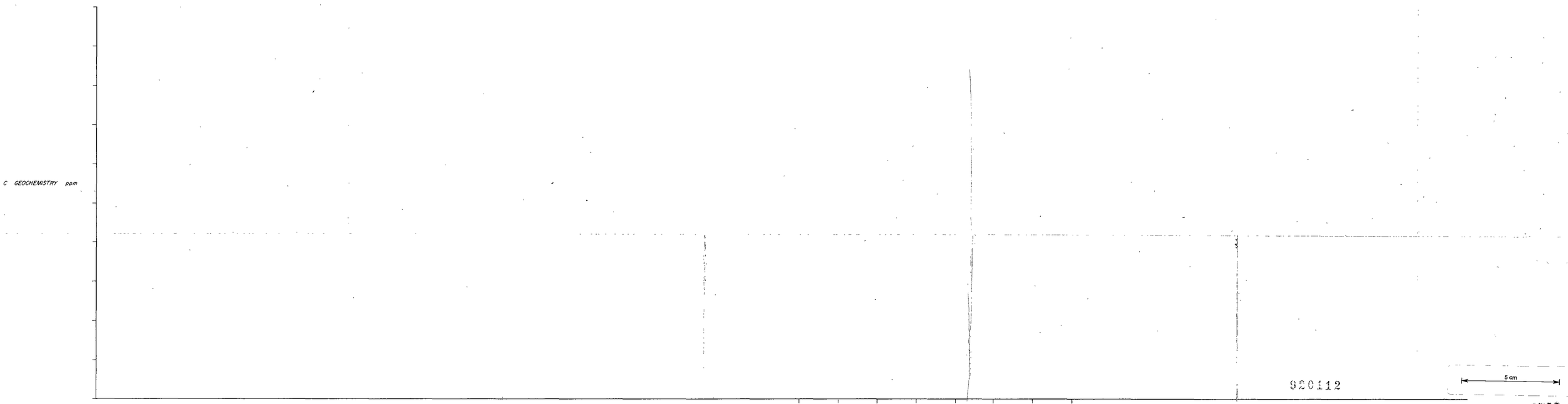
W

E

Dept of Mines A.O. | C.C. | E.O. | B.M.E.
Received = 1 JUN 1981
Answered
DEPT OF MINES
REF No. 45091 81







820112

5 cm

81-1604. Vol 3-14

3763

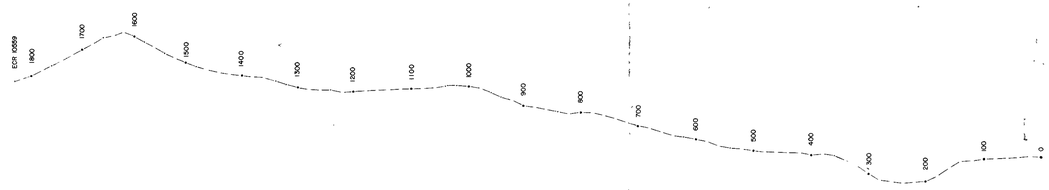
COMSTAFF PROPRIETARY LIMITED

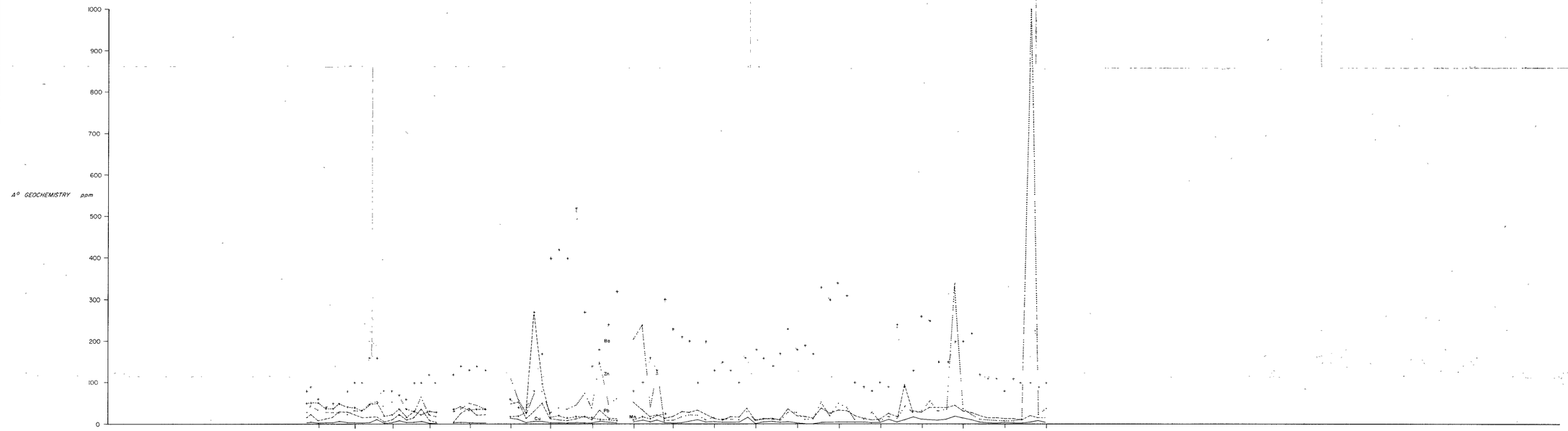
EAST CHESTER GRID – EAB
LINE 3950 S SECTION
GEOLOGY & A° + C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2537

W

E





C GEOCHEMISTRY ppm

320113

5 cm

51-1604 :Nov 3/14. 3764

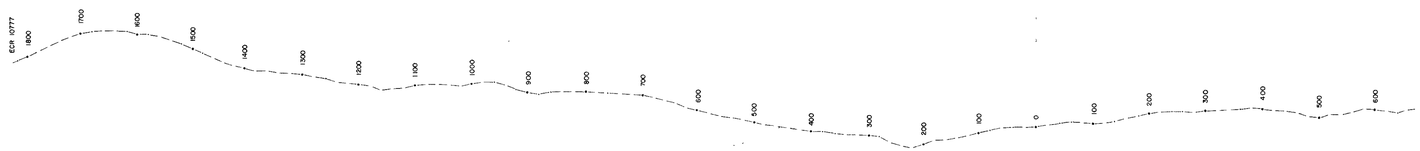
COMSTAFF PROPRIETARY LIMITED

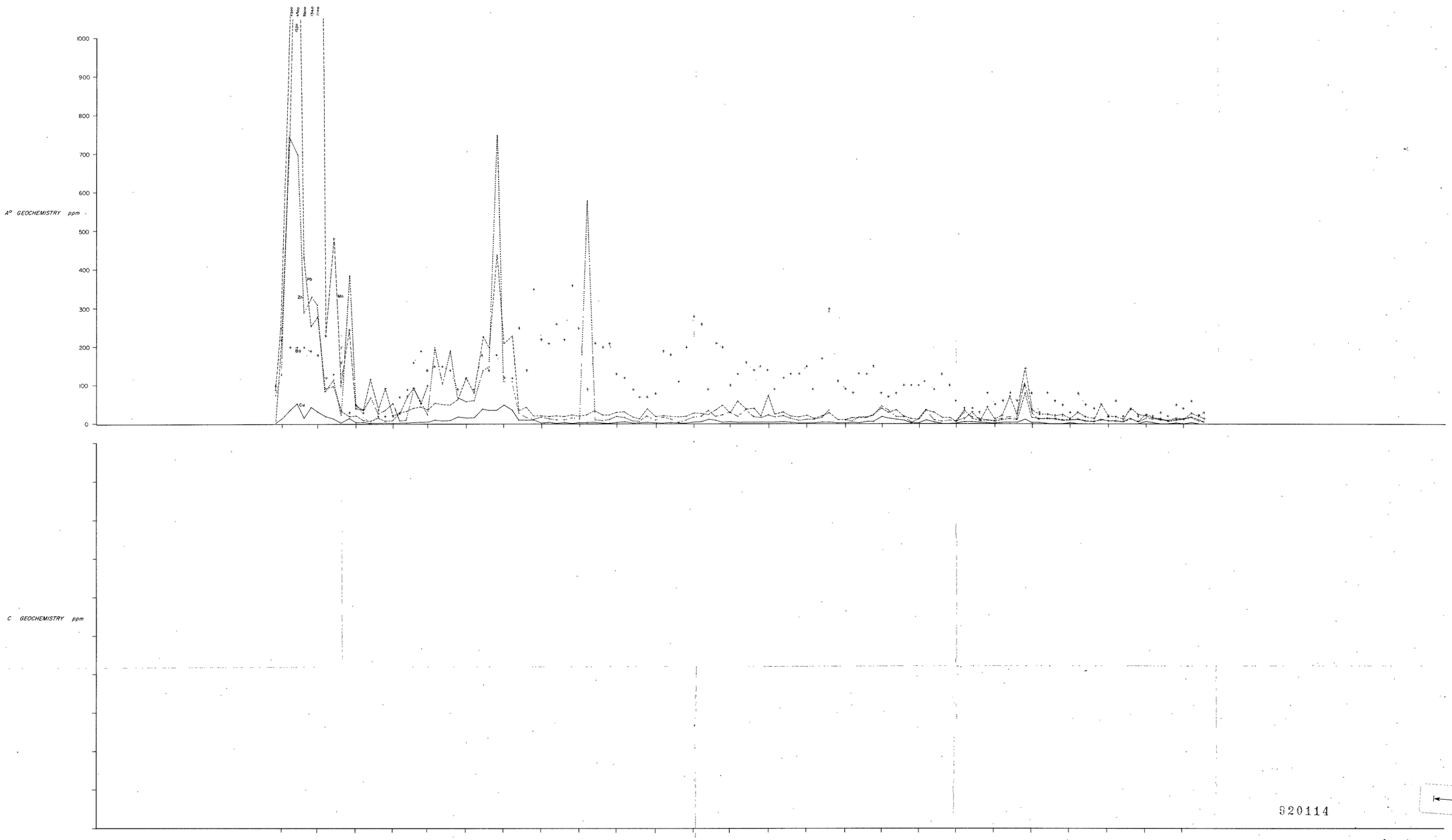
EAST CHESTER GRID - EAB
LINE 3750 S SECTION
GEOLOGY & A°+C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2536

W

E





020114

5 cm

3705

61-1604. Vol 3/14.

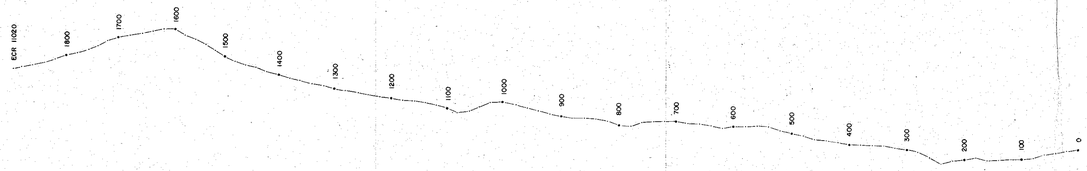
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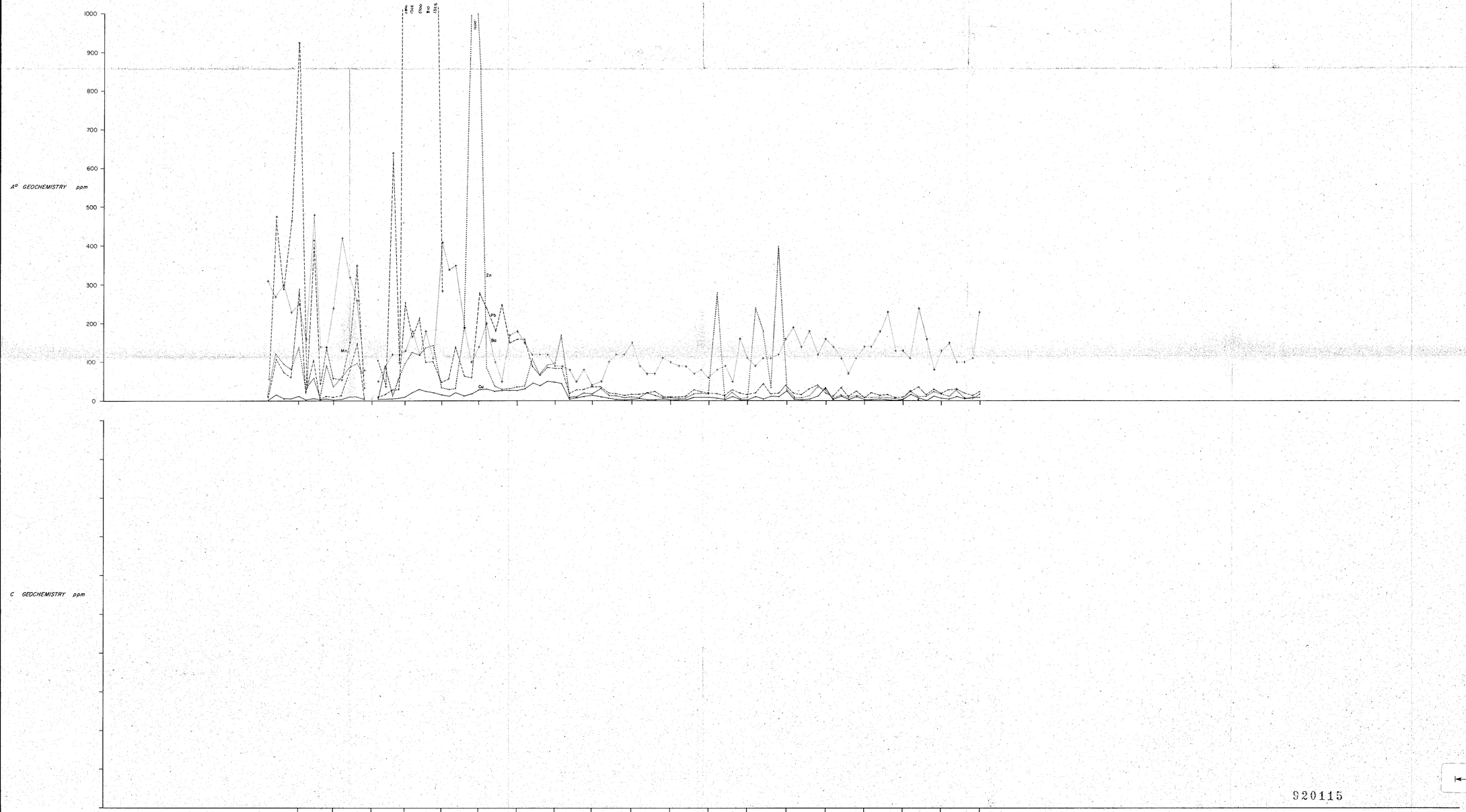
EAST CHESTER GRID - EAB
LINE 3550 S SECTION
GEOLOGY & A° + C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 5000
PLAN No	TAS/2/2535

W

E





5 cm

920115

91-160g. Vol 3/14. 3766

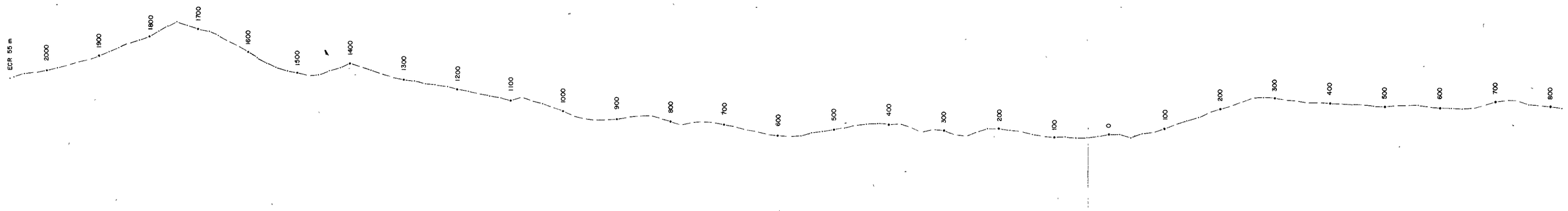
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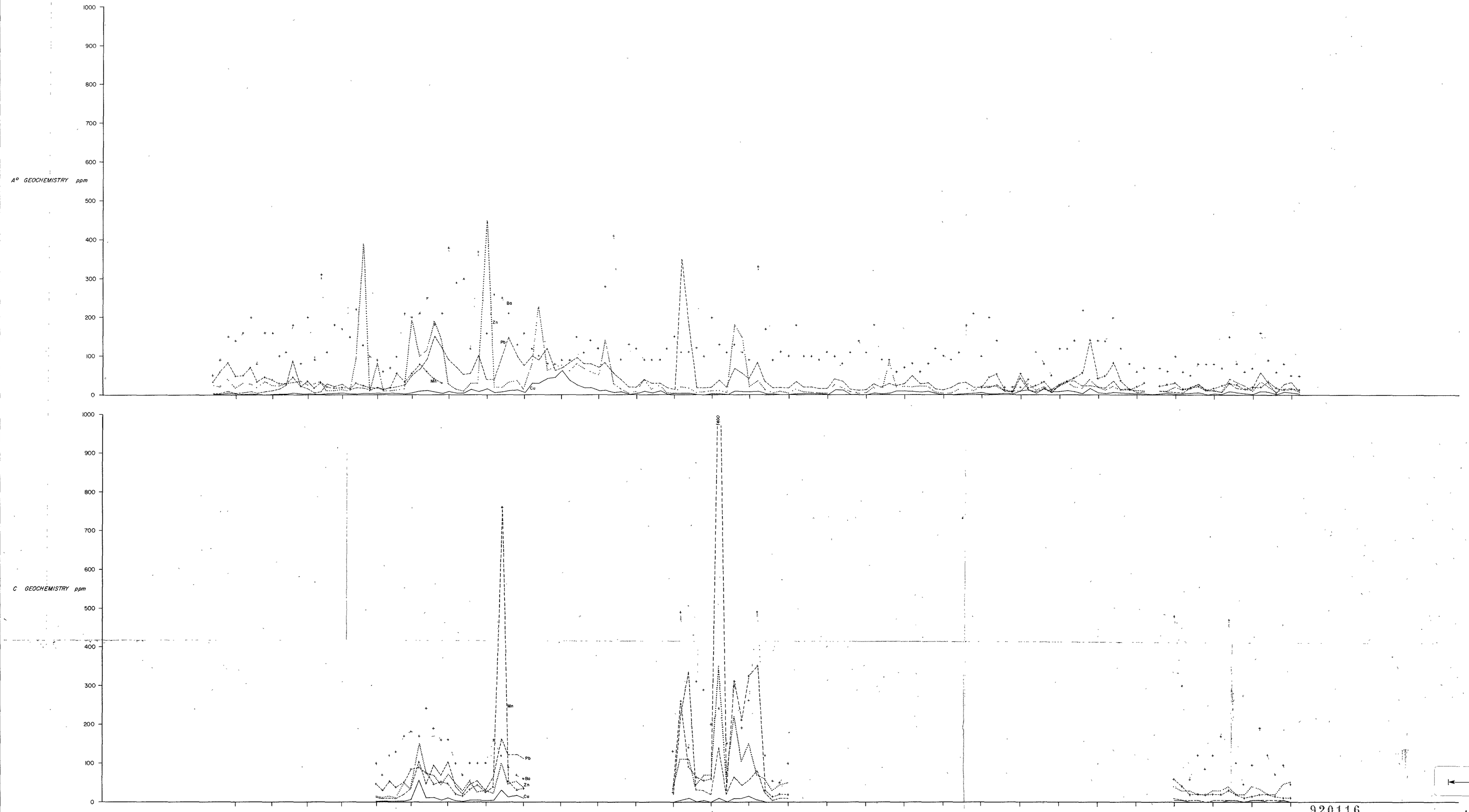
EAST CHESTER GRID - EAB
LINE 3350 S SECTION
GEOLOGY & A° + C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2534

W

E





920116 SI-1604. Vol 3/14. 3767

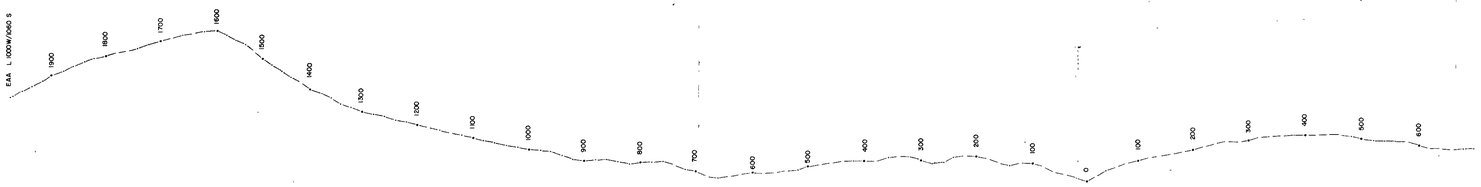
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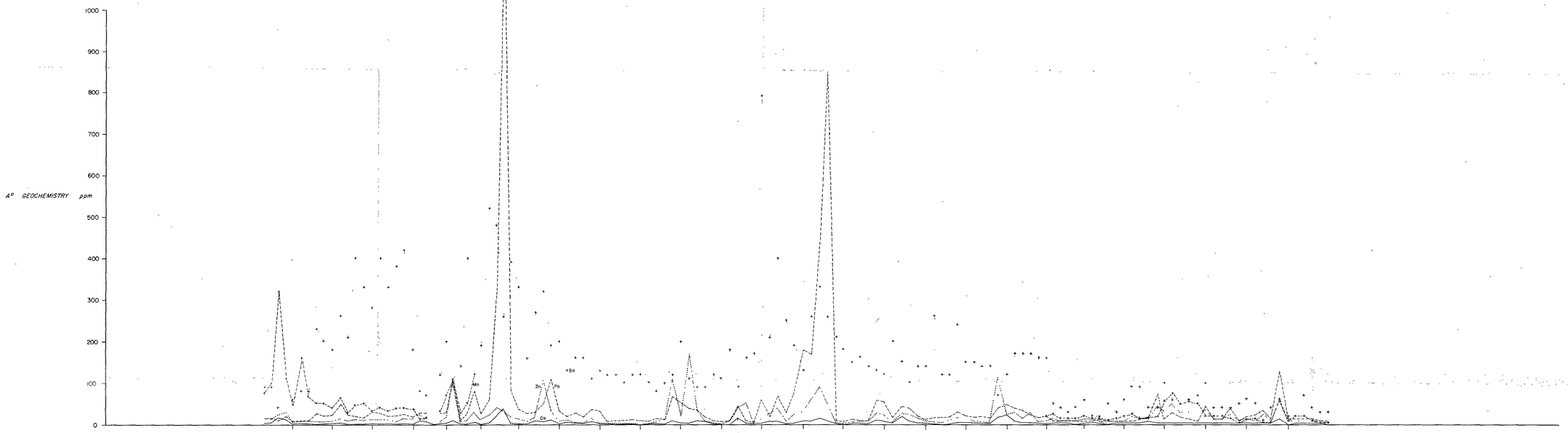
EAST CHESTER GRID - EAB
LINE 3150 S SECTION
GEOLOGY & A°+C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

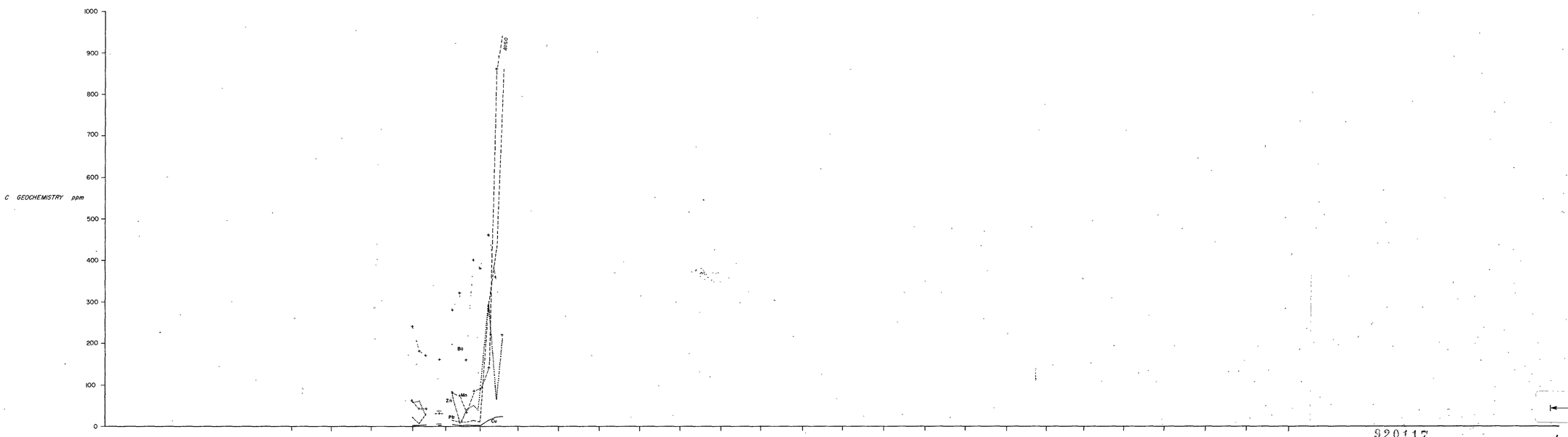
COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2533

W

E







5 cm

920117

81-1604. Von 3/14-

3768

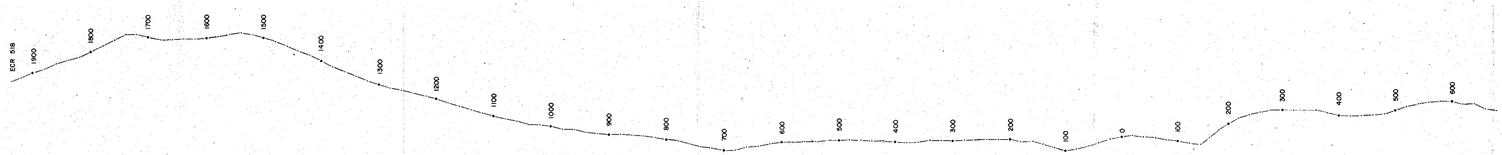
COMSTAFF PROPRIETARY LIMITED

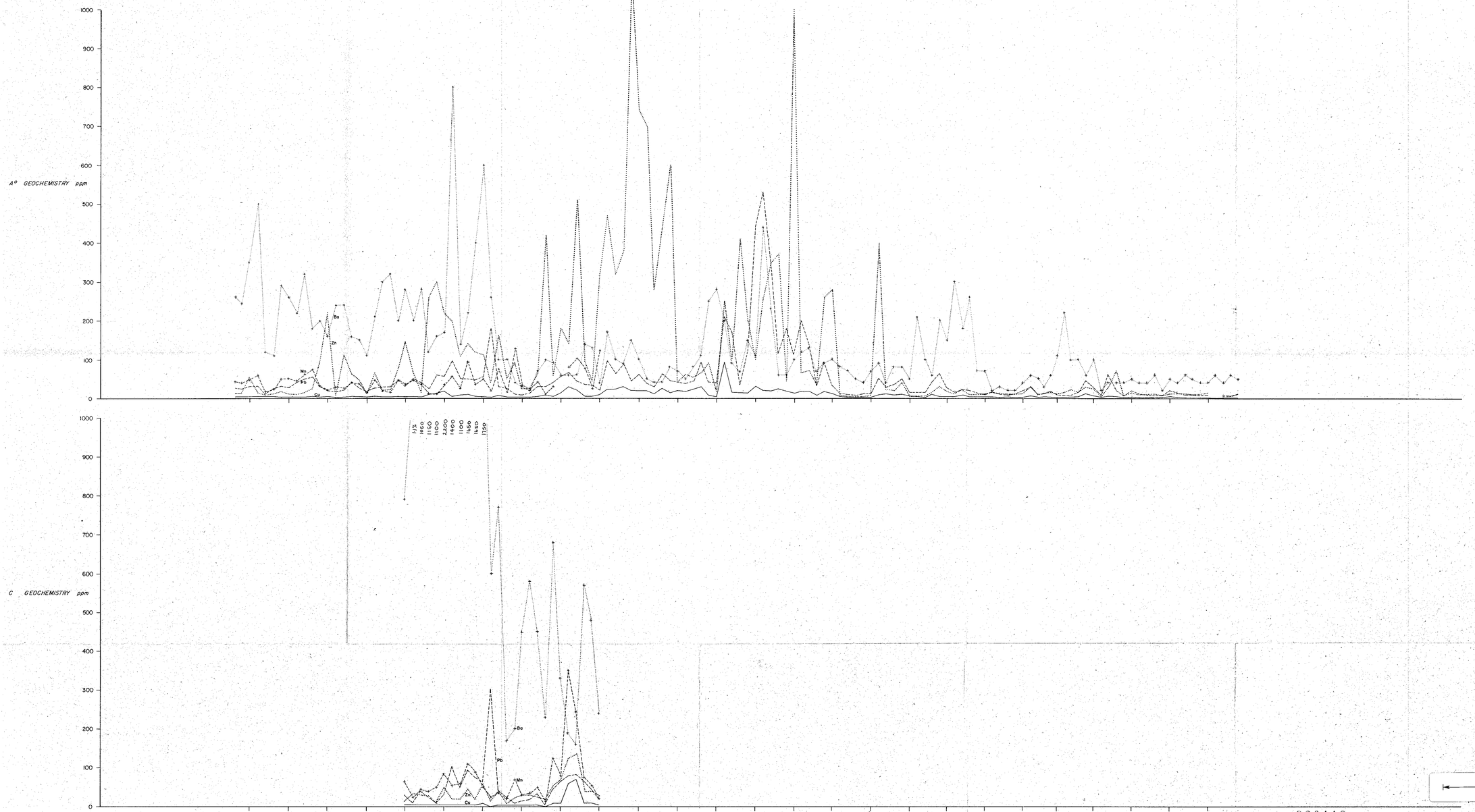
EAST CHESTER GRID - EAB
LINE 2950 S SECTION
GEOLOGY & A°+C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 · 5000
PLAN No	TAS/2/2532

W

E





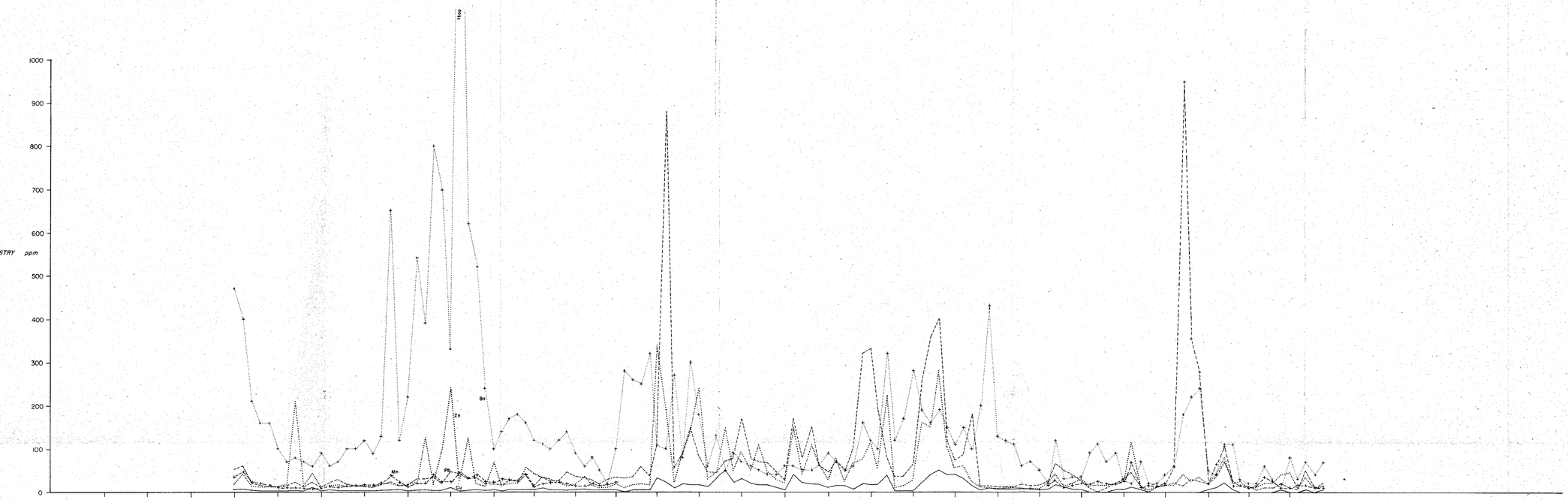
5 cm

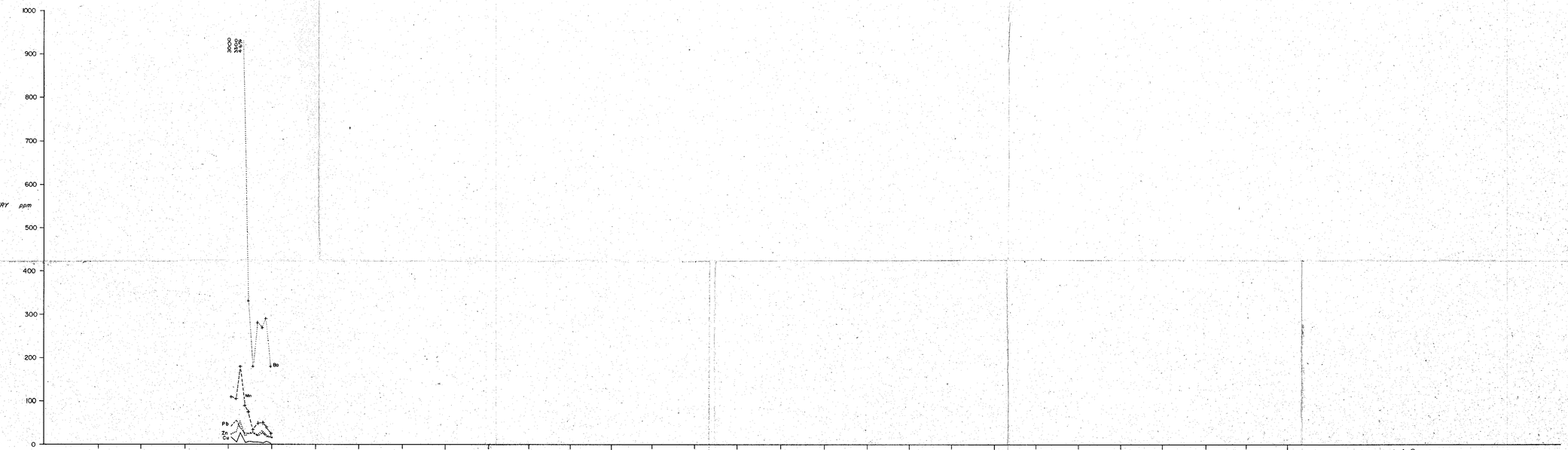
020118 81-1604. Vol 3/14. 3769

COMSTAFF PROPRIETARY LIMITED		
EAST CHESTER GRID - EAB LINE 2750 S SECTION GEOLOGY & A°+C GEOCHEMICAL RESULTS FOR Cu. Pb. Zn. Ba. Mn.	COMPILED GEODRAFT DRAWN GEODRAFT DATE 3/4/81 AMENDED SCALE 1 : 5000 PLAN No TAS/2/2531	

W

E





920119

81-1604. Vol 3/14.

3770

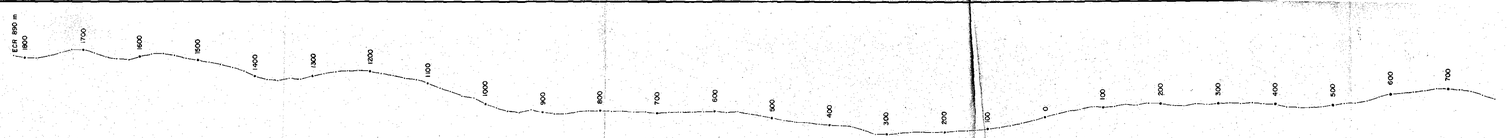
COMSTAFF PROPRIETARY LIMITED

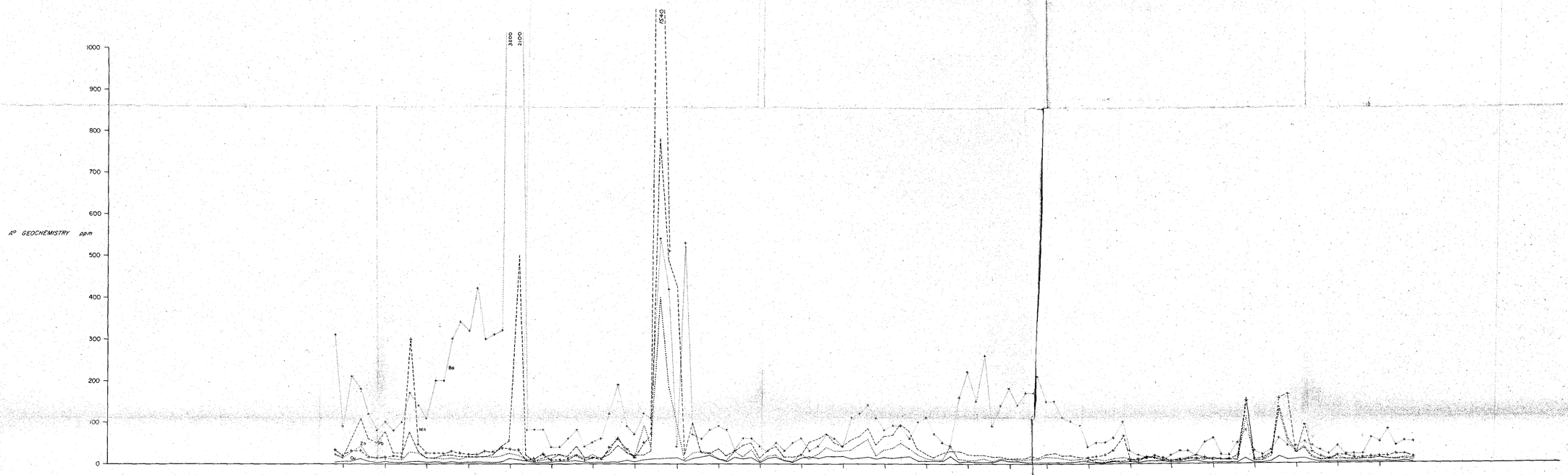
EAST CHESTER GRID - EAB
LINE 2540 S SECTION
GEOLOGY & A°+C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

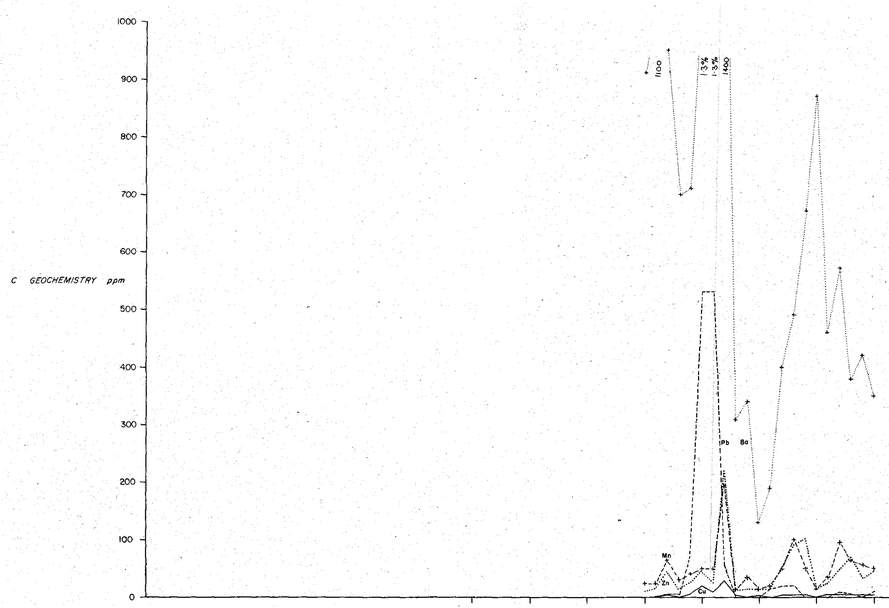
COMPILED	GEODRAFT
DRAWN: GEODRAFT	DATE 3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2530

W

E







920120

5 cm

3771

81-1604, Vol 3/14.

COMSTAFF PROPRIETARY LIMITED

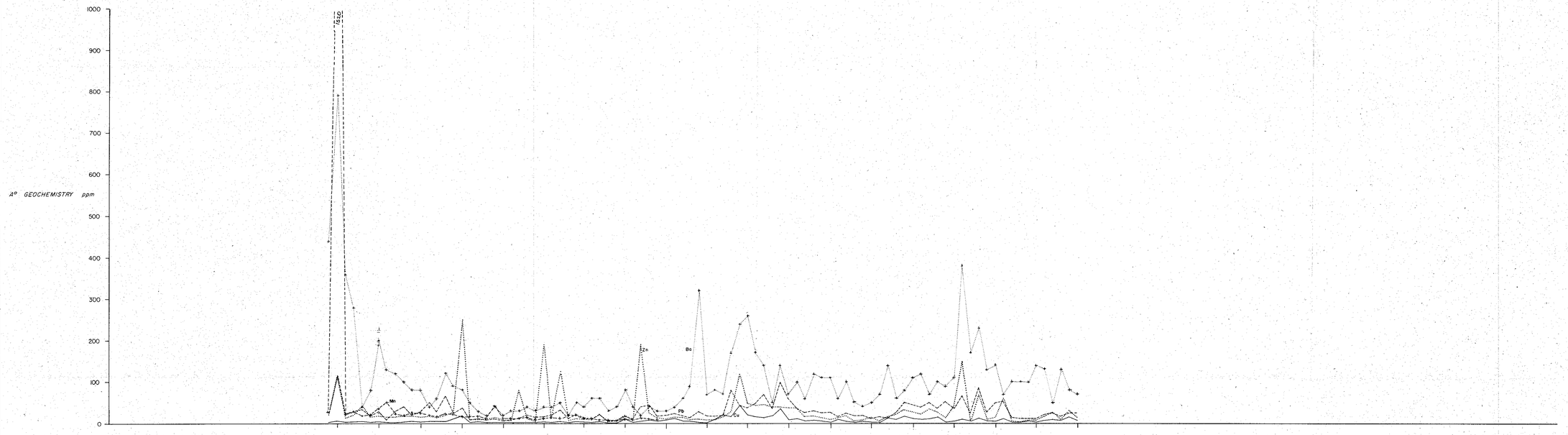
EAST CHESTER GRID - EAB
LINE 2340 S SECTION
GEOLOGY & A°+ C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

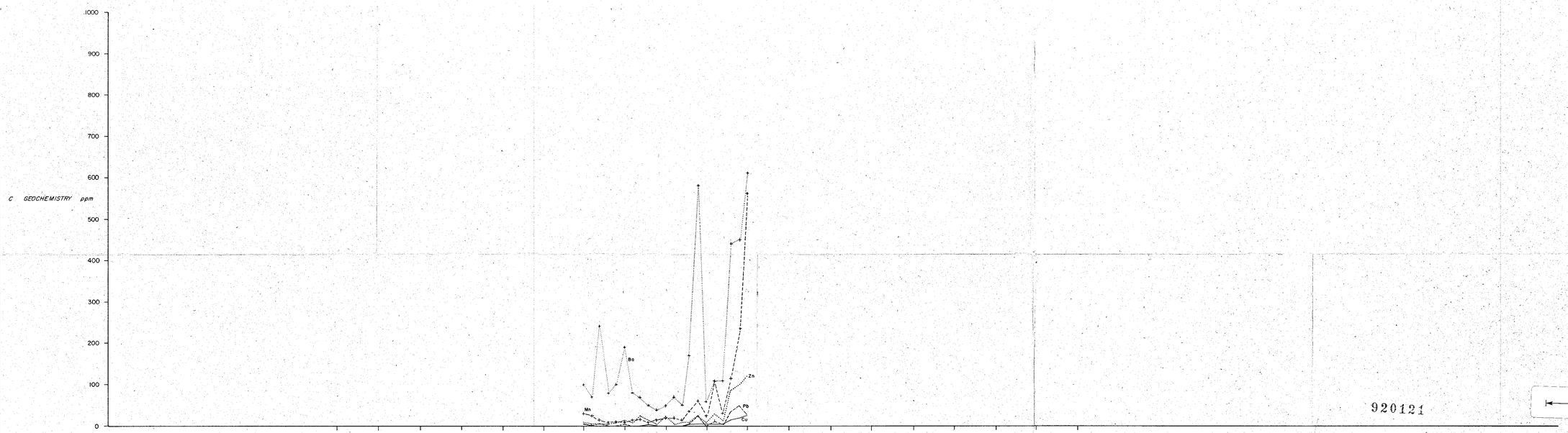
COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2529

W

E







920121

5 cm

3772

61-1604. Vol 8/14

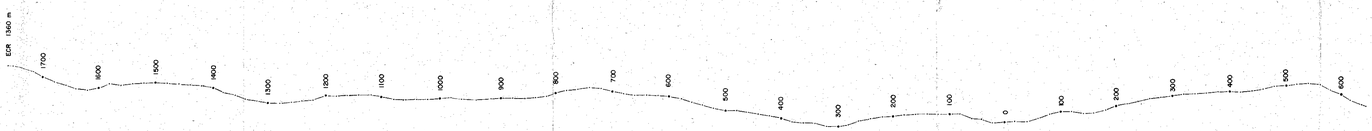
COMSTAFF PROPRIETARY LIMITED

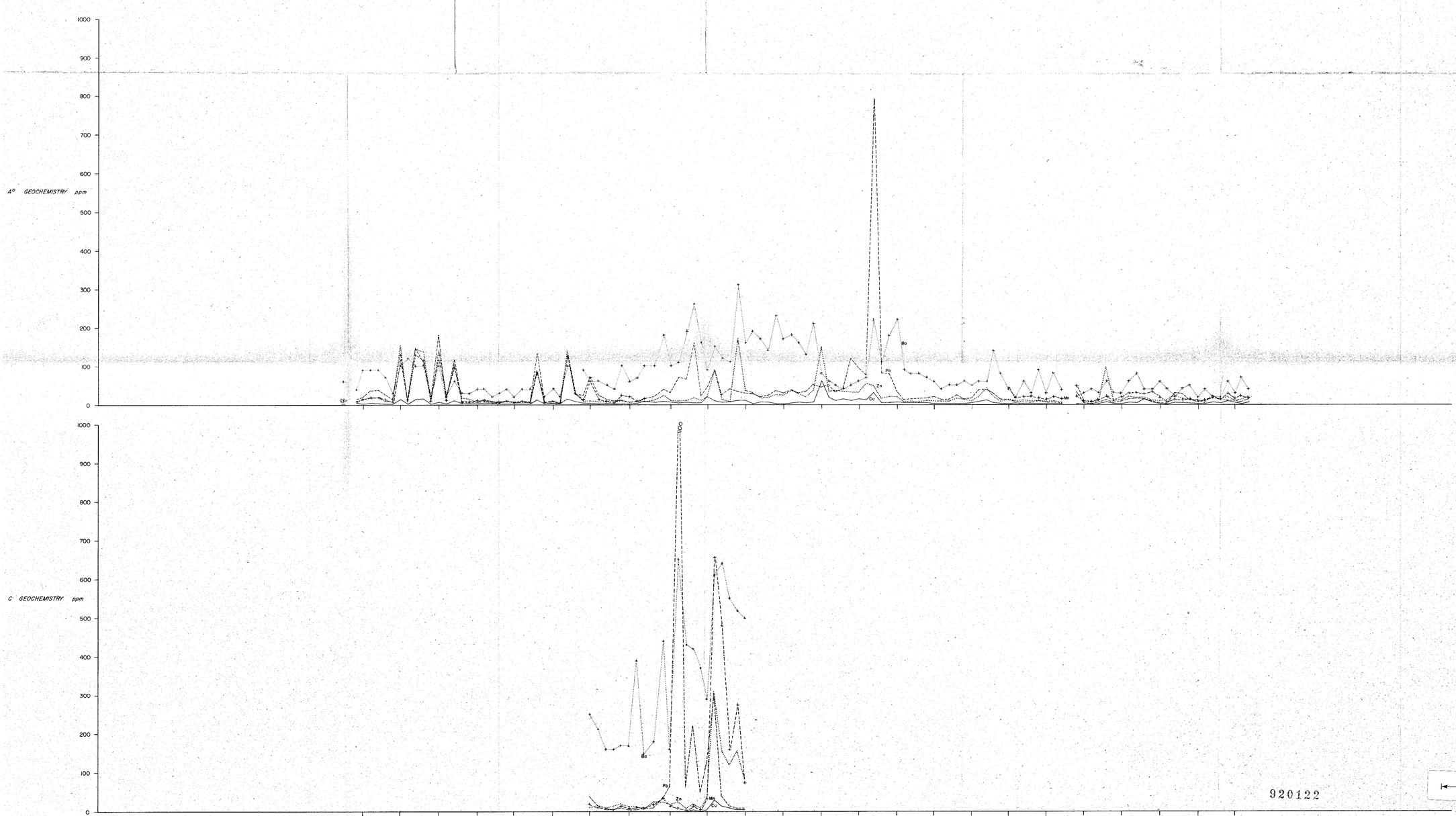
EAST CHESTER GRID - EAB
LINE 2130 S SECTION
GEOLOGY & A°+C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2528

W

E





920122

5 cm

3773

81-1604 Vol 3/14.

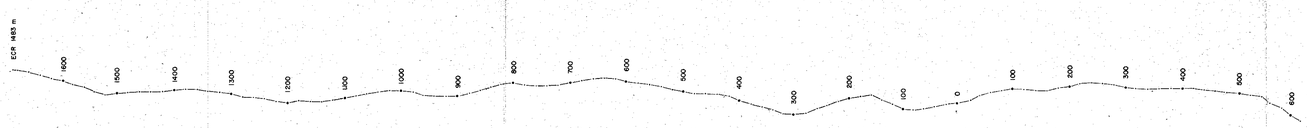
COMSTAFF PROPRIETARY LIMITED

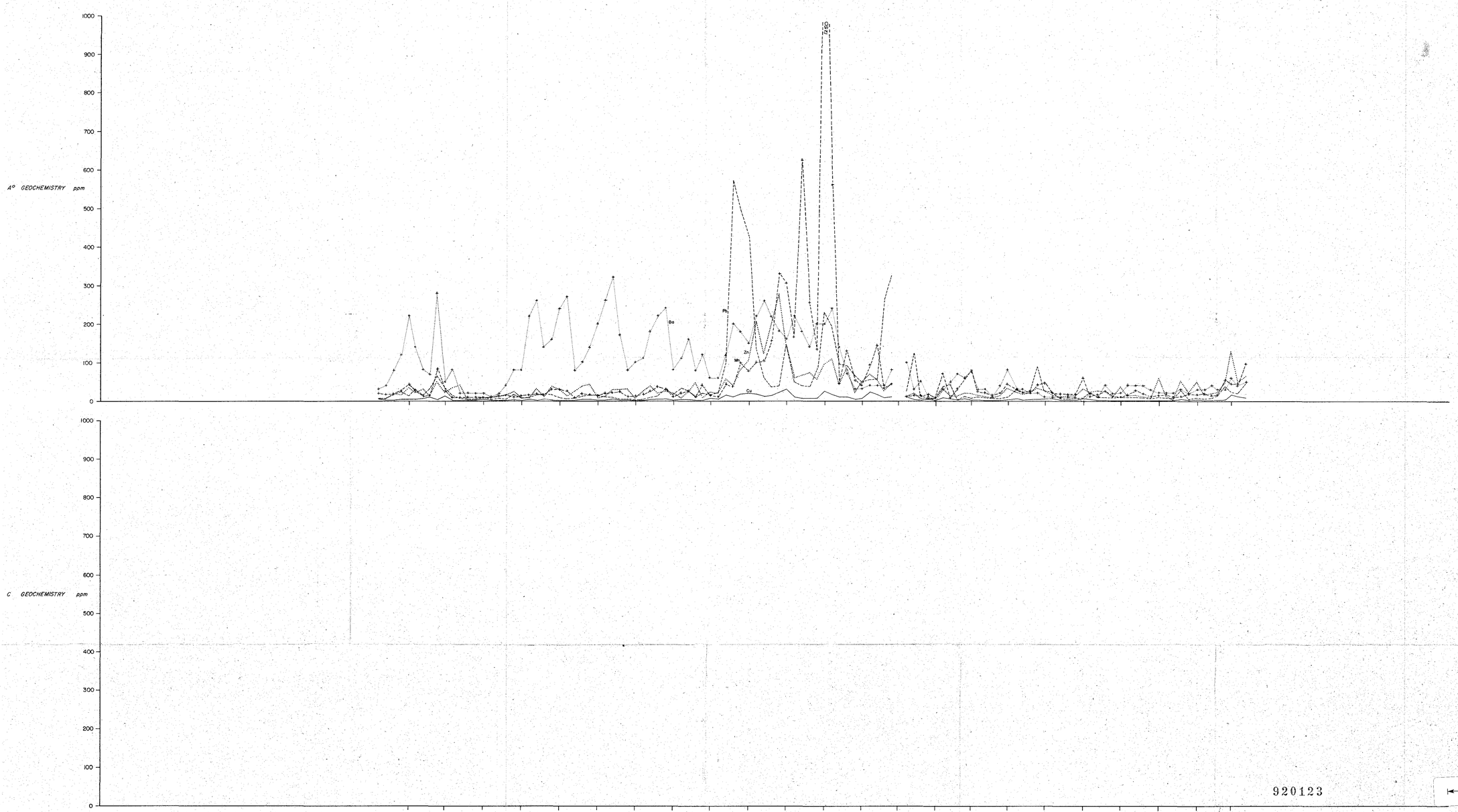
EAST CHESTER GRID - EAB
LINE 1930 S SECTION
GEOLOGY & A°+C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2527

W

E





920123

5 cm

81-1604. Vol 3/14.

3774

COMSTAFF PROPRIETARY LIMITED

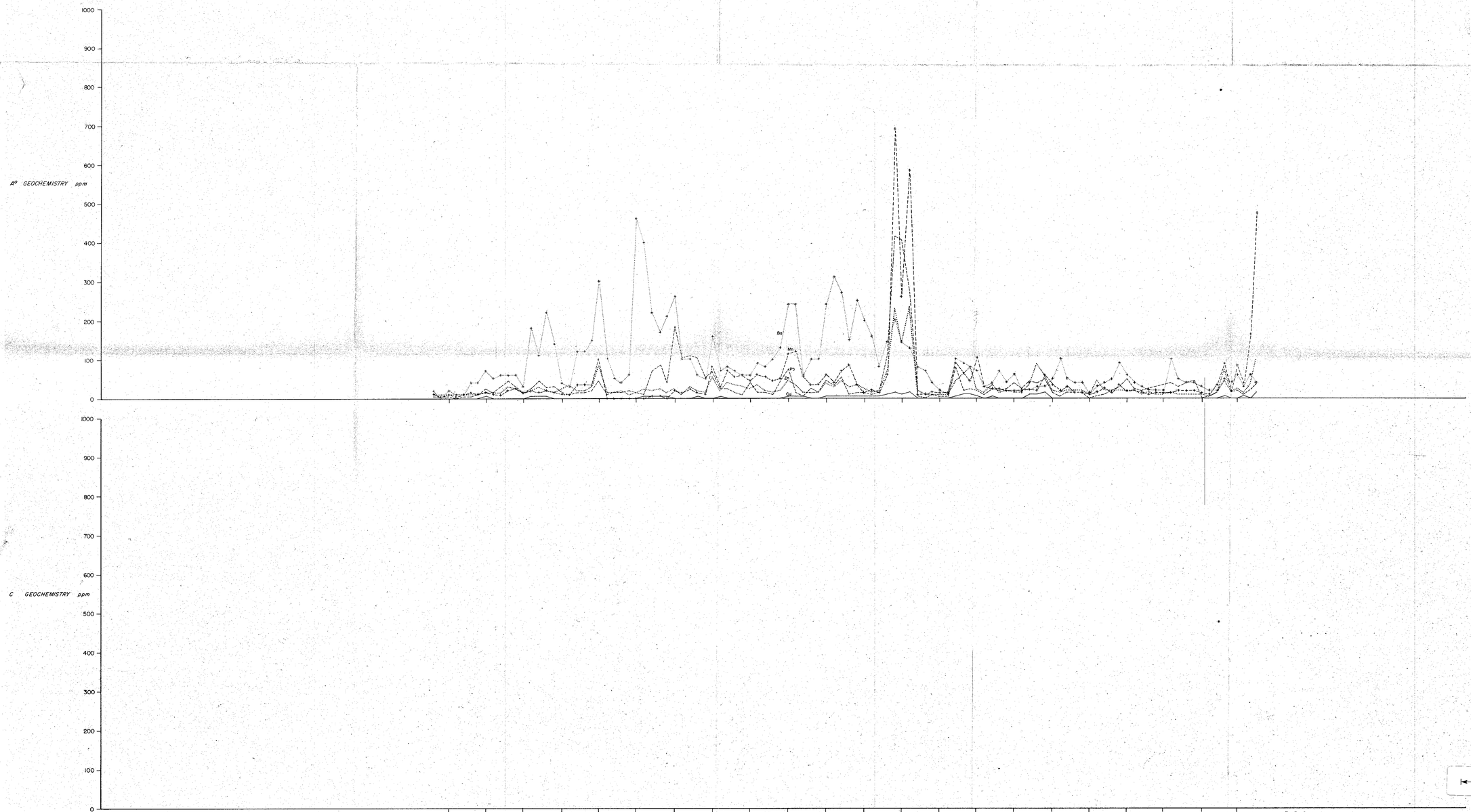
EAST CHESTER GRID - EAB
LINE 1730S SECTION
GEOLOGY & A°+C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	3/4/81
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2526

W

E





5 cm

920124 81-1604. Rec 3/14. 3775

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 1530 S SECTION
GEOLOGY & A°+C GEOCHEMICAL RESULTS
FOR Cu. Pb. Zn. Ba. Mn.

COMPILED: GEODRAFT
DRAWN: GEODRAFT | DATE: 3/4/81
AMENDED:
SCALE: 1 : 5000
PLAN No. TAS/2/2525

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB

L 2340 S PROFILES

SECTION OF PROPOSED DRILLHOLE 'A'

DRAWN	COMPILED	SCALE	
GEODRAFT 3/81	G.F.P.	1 : 2500	TAS/2/2511

3776

61-1604. Vol 8/14.

920125

TOPOGRAPHY

- GEOLOGY

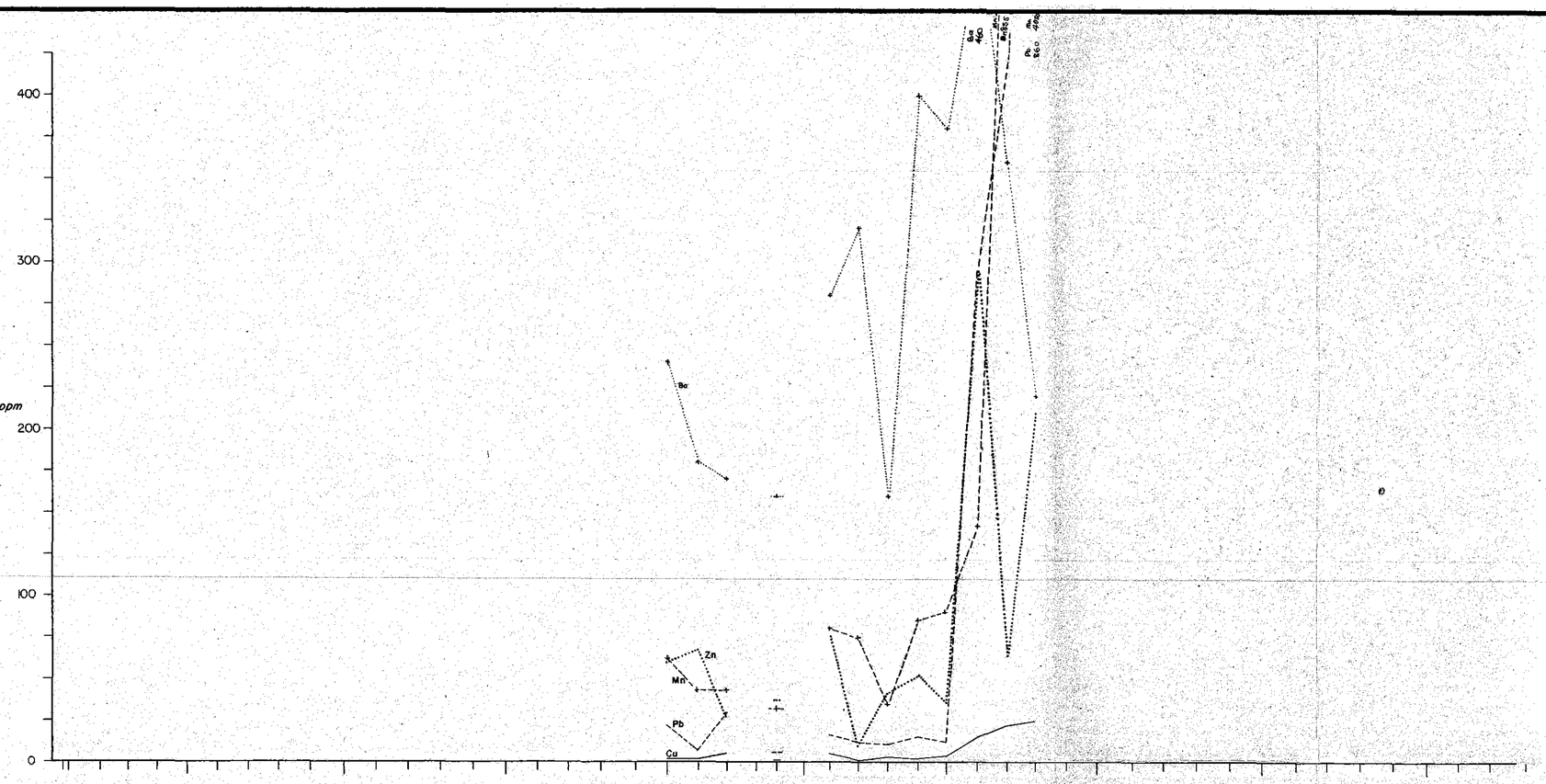
- DRILLHOLE LOCATION

5 cm

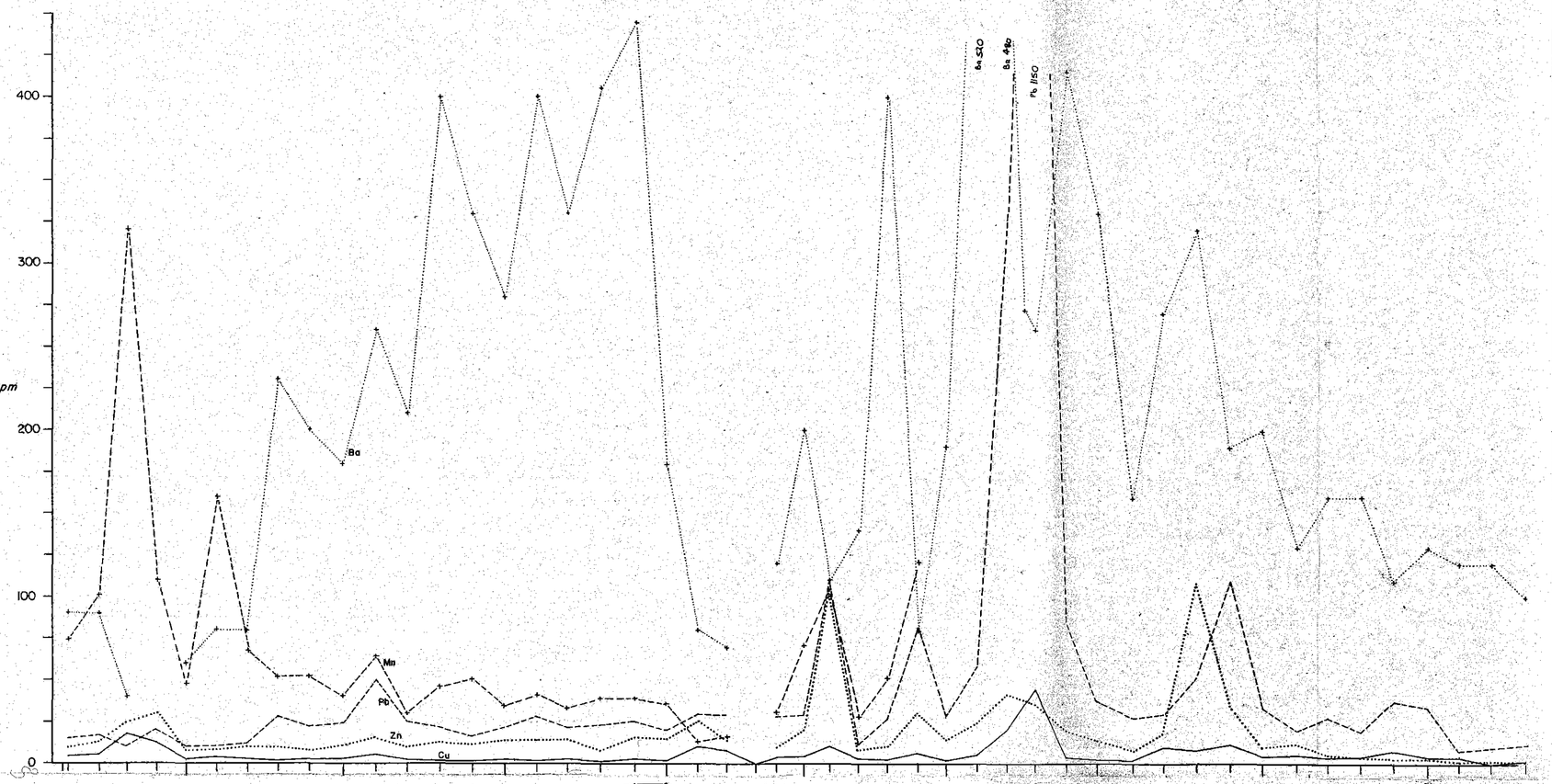
'A' GEOCHEMISTRY ppm

'C' GEOCHEMISTRY ppm

'C' GEOCHEMISTRY ppm



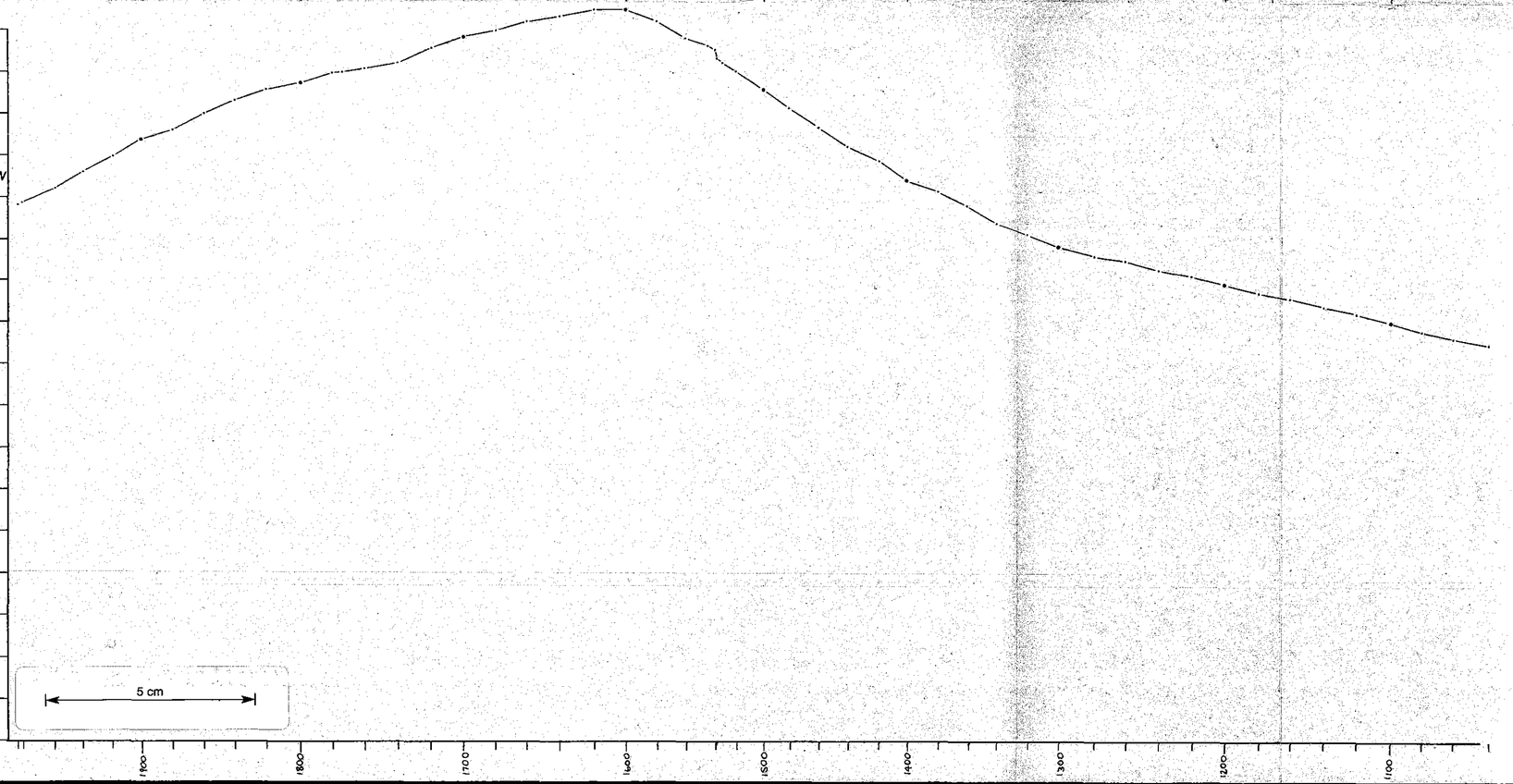
'A0' GEOCHEMISTRY ppm



TOPOGRAPHY

– GEOLOGY

– DRILLHOLE LOCATION



92126

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB

L 2950 S PROFILES

SECTION OF PROPOSED DRILLHOLE 'B'

DRAWN	COMPILED	SCALE	
GEODRAFT 3/81	G.F.P.	1:2500	TAS/2/2512



81-1604, Vol 3/14

3778

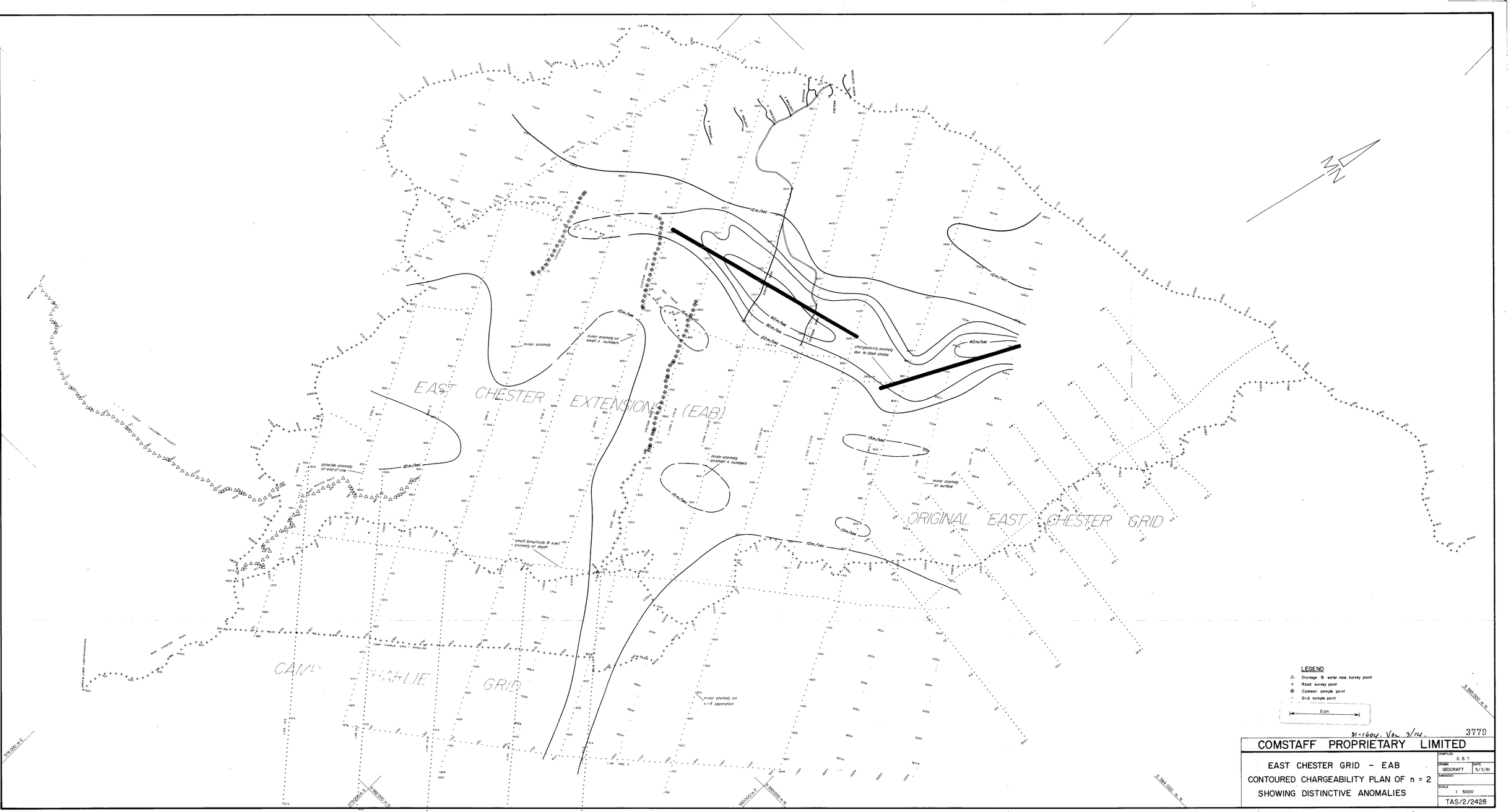
COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
CONTOURED RESISTIVITY PLAN OF n=2
SHOWING DISTINCTIVE ANOMALIES

COMPILED	D B T
DRAWN	GEODRAFT
DATE	5/3/81
CHECKED	
SCALE	1 : 5000

TAS/2/2429

920127



81-1604. Vol 3/14. 3779

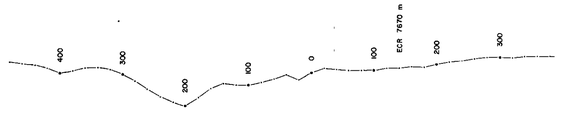
COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
CONTOURED CHARGEABILITY PLAN OF n = 2
SHOWING DISTINCTIVE ANOMALIES

COMPILED	D B T
ORIGIN GEODRAFT	DATE 5/3/81
AMENDED	
SCALE	1 5000
	TAS/2/2428

92128

W



E



5 cm

920129 81-1604. Jan 3/14. 3780

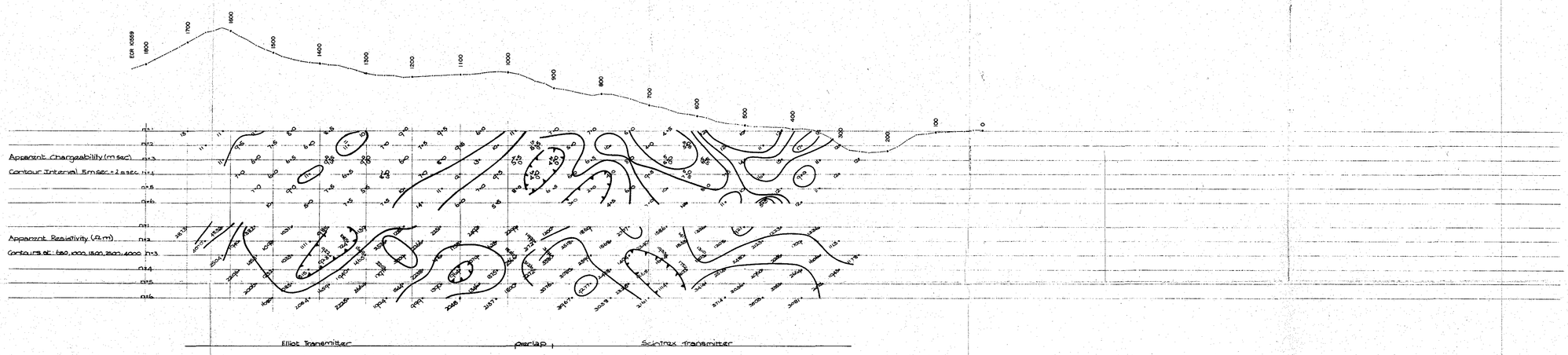
COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 3950 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P, S.P, MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2299

W

E



IP data compiled by:
Geoterrex Pty Ltd.
Transmitters: Elliot 15A, 15 kw/Scintrex IPC-7, 2.5kva
Timing: 2sec on/2sec off
Receiver: Scintrex IPR-7
Integration Time: 450 msec - 1100 msec
Dipole-dipole array.
Dipole Length: 50m
December 1980. HNF/January 1981 HNF

5 cm

920130

81-1604. Vol 3/14.

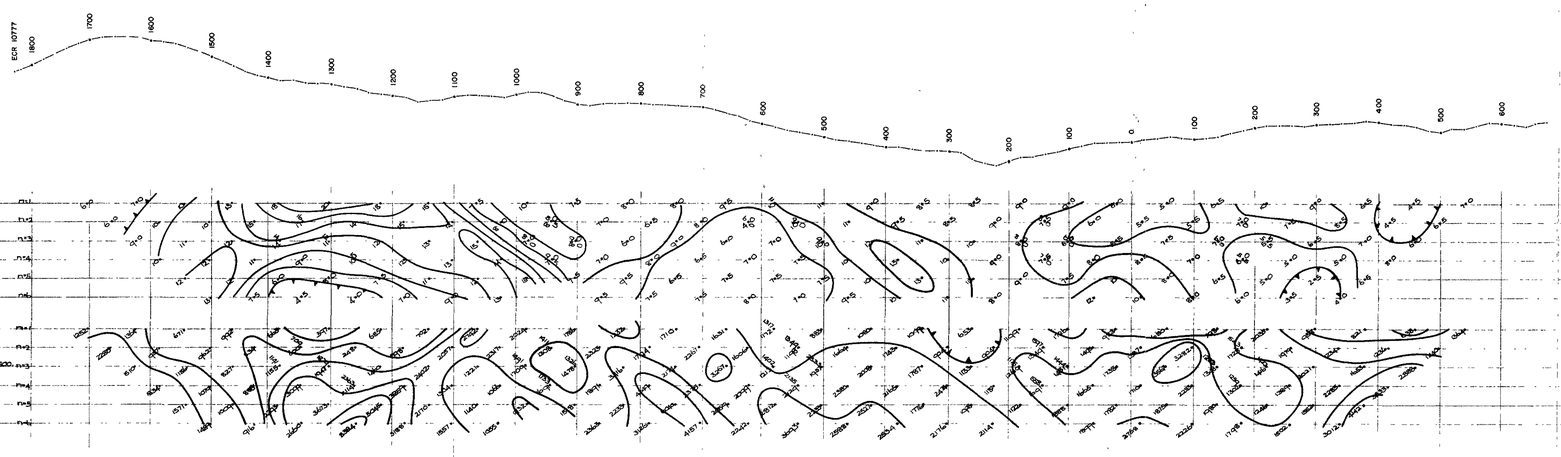
3781

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 3750 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P., S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2298

W



E

I P data compiled by:
Geoterrex Pty Ltd Job 85-12b4
December 1980 - January 1981
Transmitter: Scintrex IPC-7, 2.5KW
Timing 2sec on/2 sec off
Receiver: Scintrex IPR-7
Integration Time - 450 to 1100 msec
Dipole-Dipole Array.
Dipole Length 80 m
H N F

5 cm

920131

81-1604. Vol 3/14.

3702

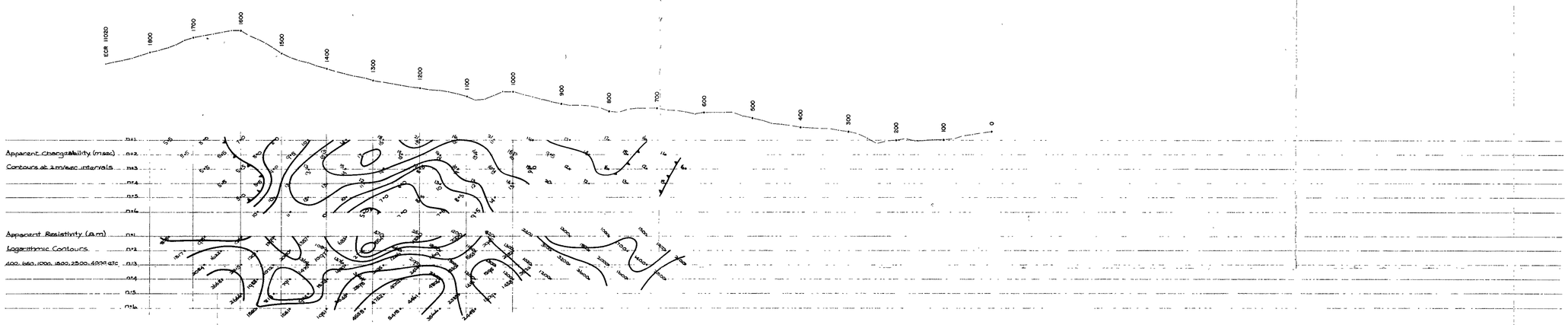
COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 3550 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P, S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10 / 80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS / 2 / 2297

W

E



IP data compiled by
Geoterrex Pty Ltd, Job 80-1364
Transmitter Scintrex IPC-7 2.5kw
Timing 2 sec on/2 sec off
Receiver IPR-7 (Scintrex)
Integration Time 450 m secs-1100 m secs
Dipole-dipole array
Dipole length - 80m
January 1981 HNF

5 cm

920132

81-1604. Vol 3/14.

3783

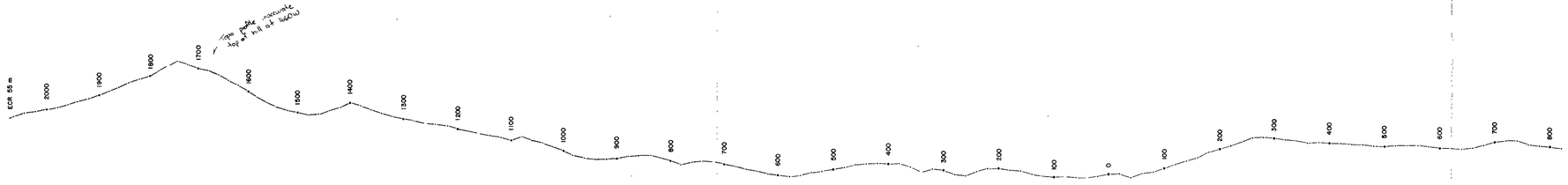
COMSTAFF PROPRIETARY LIMITED

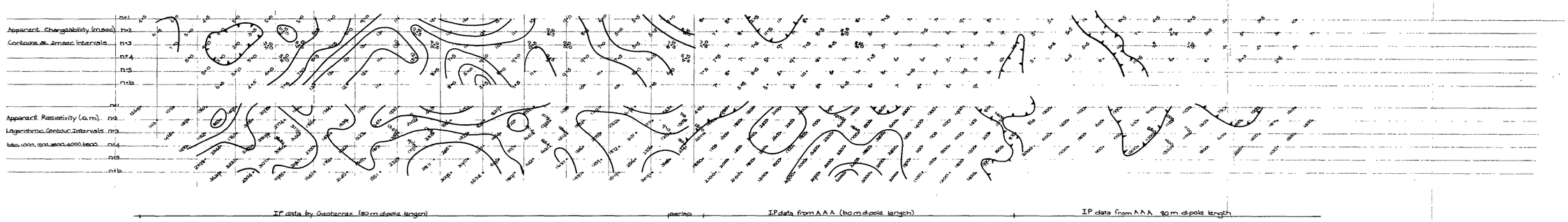
EAST CHESTER GRID - EAB
LINE 3350 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P., S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 5000
PLAN No	TAS/2/2296

W

E





IP data compiled by
Geotecnex Pty Ltd, Job 55-12b4
Transmitter Scintrex IPC-7, 2.5 kW
Timing 2sec on/2sec off
Receiver. Scintrex IPR-7
Integration time. 450 to 1100 msecs
Dipole-dipole array
Dipole length 80m
January 1981 HNF

Also from AAA
Dipole-dipole array
Dipole length 60 × 80 m

5 cm

020133

51-1604: Vol 3/14.

3784

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 3150 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P., S.P., MAG., CRONE

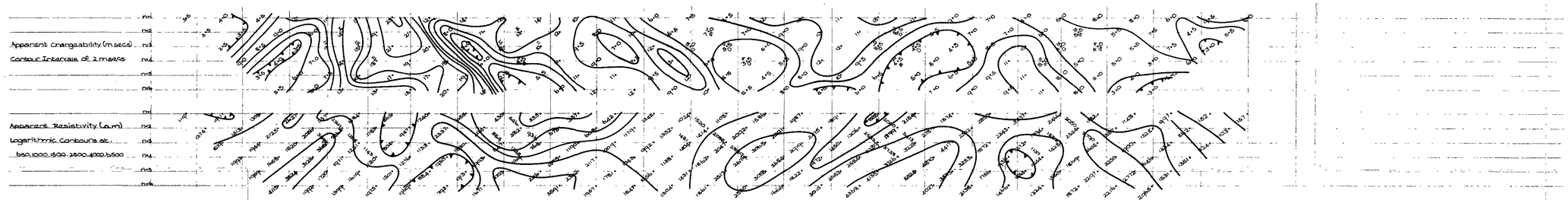
COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2295

W

E

EAA L1000W/1060 S

1900 1800 1700 1600 1500 1400 1300 1200 1100 1000 900 800 700 600 500 400 300 200 100 0 100 200 300 400 500 600



IP data compiled by
Geoterrex Pty Ltd,
Transmitter: Scintrex IPC-7
Timing: 2 sec on/2 sec off
Receiver: Scintrex IPR-7
Integration time: 450 to 1100 m sec
Dipole-dipole array:
Dipole length: 60m
January 1981 HNF

Apparent Chargeability (m secs)
Contour Intervals of 2 m secs

Apparent Resistivity (ohm m)
Logarithmic Contours at:
650, 1000, 1500, 2500, 4000, 6500

5 cm

920134 81-1604. Vol 3/14. 3785

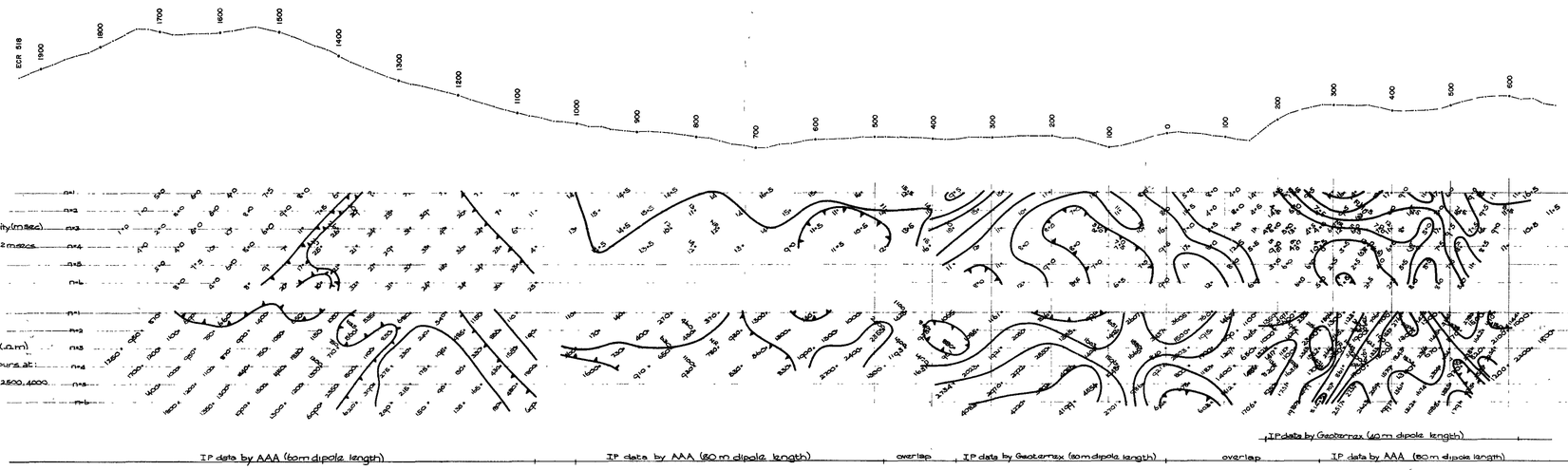
COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 2950 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P., S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2294

W

E



IP data by Geoterrex Pty Ltd
Transmitter Scintrex IPC-7
Timing 2 sec on/2 sec off.
Receiver Scintrex IPR-7
Integration Time 450 to 1100 m sec
Dipole-dipole array
Dipole lengths. 50 m + 40 m
January 1981

AAA
Dipole-dipole array
Dipole lengths - 50 + 50 m
January 1980.

5 cm

920135

81-1604. Vol 2/14.

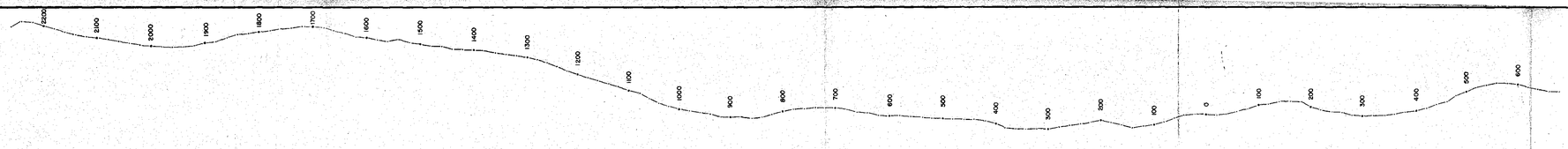
3786

COMSTAFF PROPRIETARY LIMITED

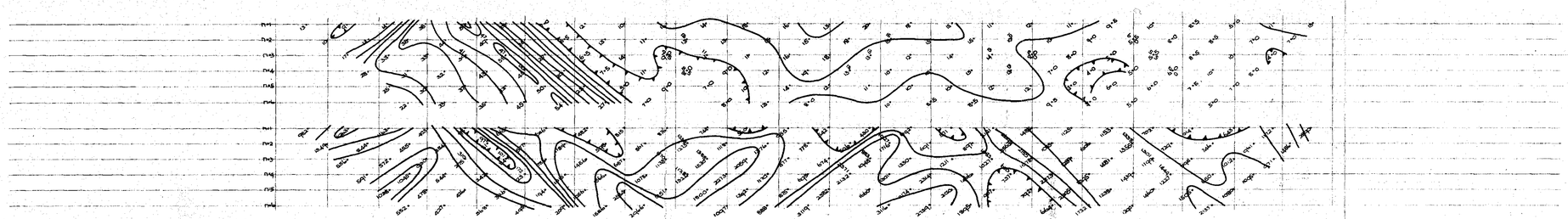
EAST CHESTER GRID - EAB
LINE 2750 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P., S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2293

W



E



IP data compiled by:
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Transmitter: Elliot 15A, 15kw
Timing: 2sec on/2 sec off
Receiver: Scintrex IPR-7
Integration Time: 480 m.sec-1100 m-sec
Dipole-dipole array
Dipole-length: 80 m
November-December 1980 HNF.

5 cm

920136 81-1604. Vol 3/14. 3787

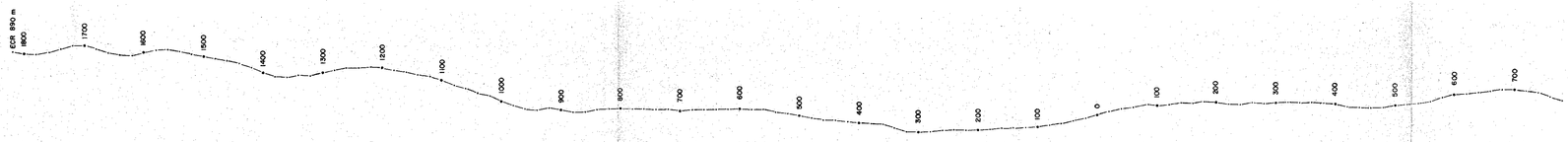
COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 2540 S SECTION
GEOPHYSICAL DETAILS
TOPO PROFILE WITH I.P, S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2292

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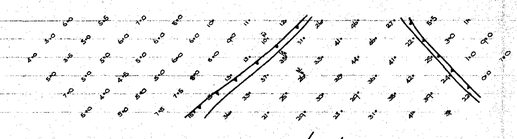
E

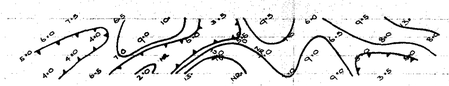


IP data compiled by: A.A.A. , 15/1/80

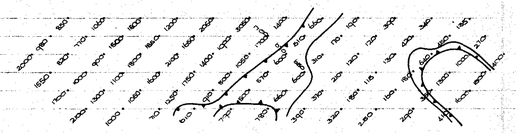
Dipole - dipole array ; dipole length : 50 m

Apparent Chargeability





Apparent Resistivity





5 cm

020137 81-1604. Vol 3/14. 3788.

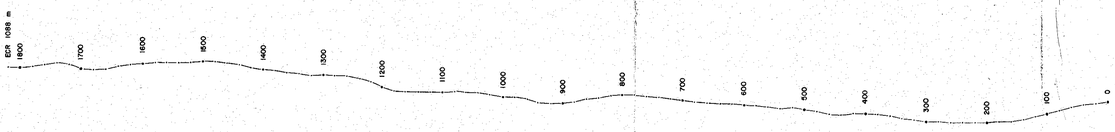
COMSTAFF PROPRIETARY LIMITED

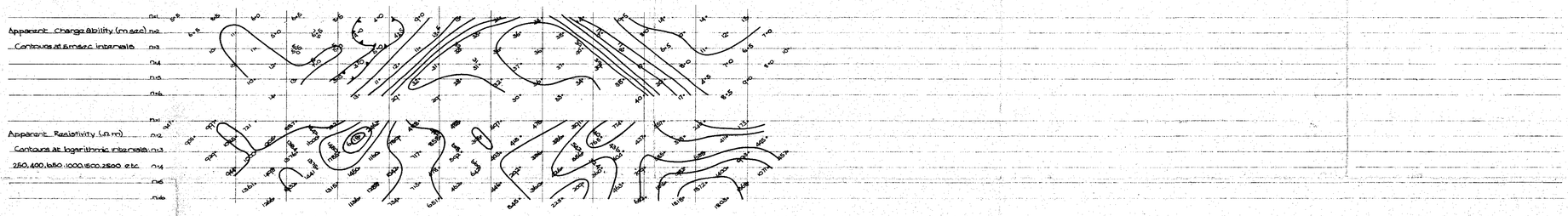
EAST CHESTER GRID - EAB
LINE 2340 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P., S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2291

W

E





IP data compiled by:
Geoterrex Pty Ltd: Job 85-1264
Transmitter: Elliot 15A, 1.5 KW
Timing: 2 sec on/2 sec off
Receiver: IPR-7 (Scintrex)
Integration Time: 450-1100 m-sec
November-December 1980. HNF
Dipole-Dipole Array
Dipole Length: 80m

5 cm

20138 61-1604. Ue & 3/14. 3789

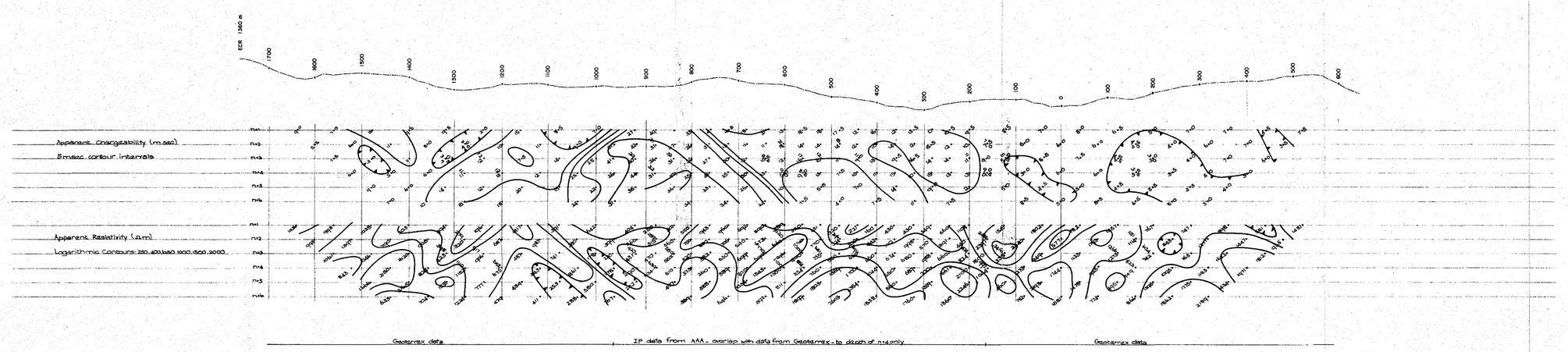
COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 2130 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P., S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2290

W

E



I.P. Data compiled by :
GEOTERREX Pty LTD : Job 85-1264
Transmitter: Elliot 15A : 1.5KW
Timing: 2 sec on/2 sec off.
Receiver: IPR-7 (Scintrex)
Integration Time : 450-1100 msec
November - December, 1980 INF
Dipole-dipole array
Dipole length : 80 m
Extra I.P. data from AAA, 1980 on 80m dipole lengths.

5 cm

520139 S/- 1604 Vol 3/14. 3790

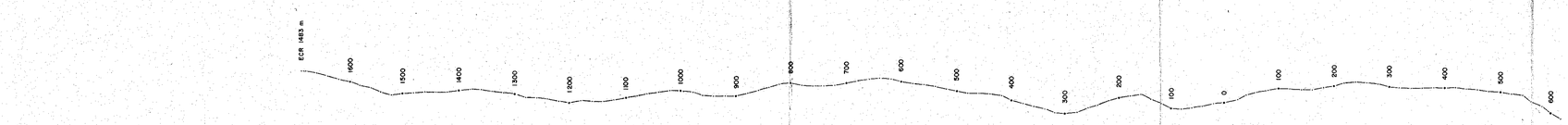
COMSTAFF PROPRIETARY LIMITED

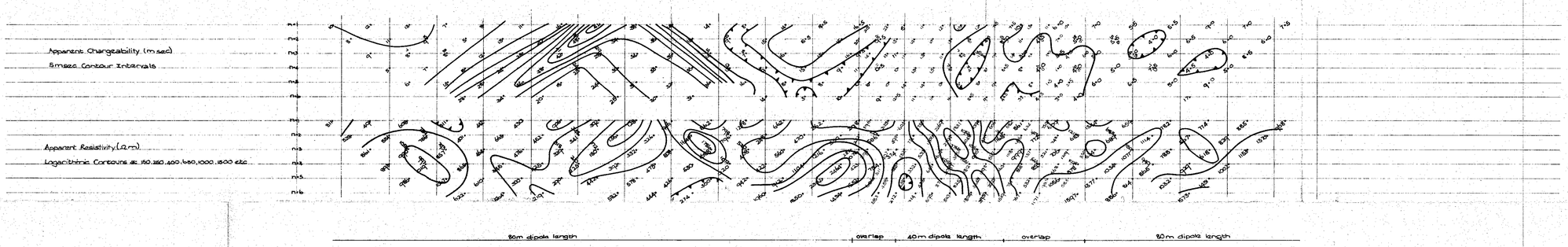
EAST CHESTER GRID - EAB
LINE 1930 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P., S.P., MAG., CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2289

W

E





IP data compiled by:
Geoterrex Pty Ltd : Job 85-1164
Transmitter: Elliot 15A, 2.5kw
Timing: 2sec on/2 sec off
Receiver: Scintrex IPR-7
Integration time: 450-1100 msec
November - December 1980; MNF
Dipole-dipole array.
Dipole lengths: 40 and 80 m

5 cm

920140 81-1604 Vol 3/14. 3791

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 1730 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P, S.P, MAG., CRONE

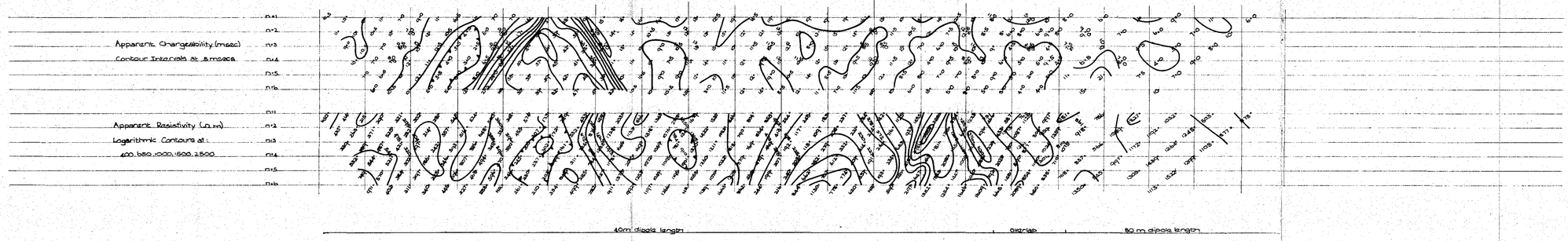
COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2288

W

E



I.P. data compiled by:
Geoterrex Pty Ltd, Job 85-1264
Transmitter: Elliot 15A, 1.5Kw
Timing: 2 sec on/2 sec off
Receiver: Scintrex IPR-7
Integration Time: 480 msec-1100 msec
November-December 1980; HNF
Dipole-dipole array
Dipole lengths: 40 & 80 m



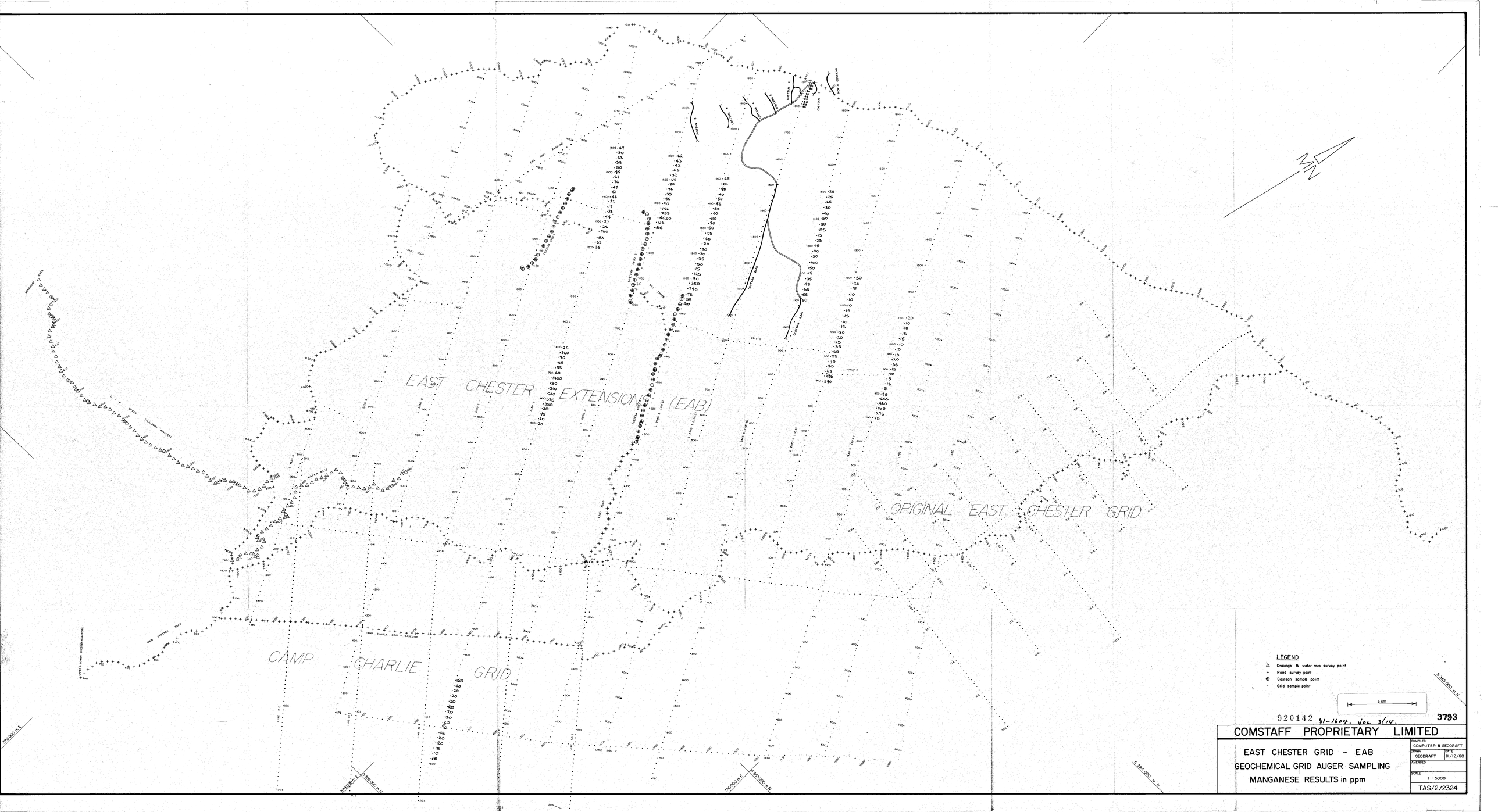
5 cm

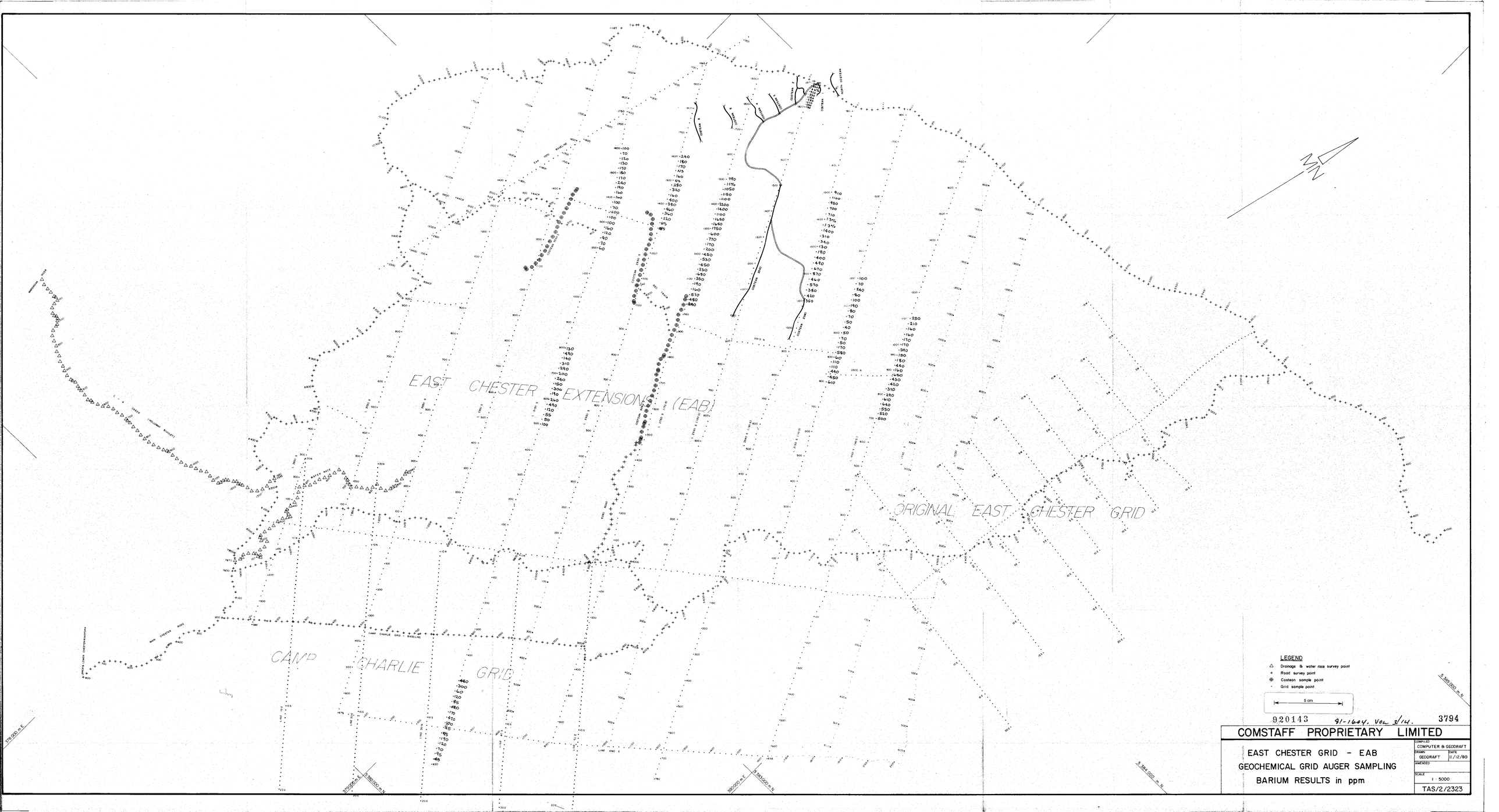
920141 81-1604. Vol 3/14. 3792

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
LINE 1530 S SECTION
GEOPHYSICAL RESULTS
TOPO PROFILE WITH I.P, S.P, MAG, CRONE

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	10/80
AMENDED	
SCALE	1 : 5000
PLAN No.	TAS/2/2287


EAST CHESTER EXTENSION (EAB)
ORIGINAL EAST CHESTER GRID
CAMP CHARLIE GRID
LEGEND
Drainage & water race survey point
Road survey point
Costean sample point
Grid sample point
5 cm
3793
920142 81-1604. Vol 3/14.
COMSTAFF PROPRIETARY LIMITED
EAST CHESTER GRID - EAB
GEOCHEMICAL GRID AUGER SAMPLING
MANGANESE RESULTS in ppm
COMPILED COMPUTER & GEODRAFT
DRAWN GEODRAFT
DATE 11/12/80
AMENDED
SCALE 1 : 5000
TAS/2/2324



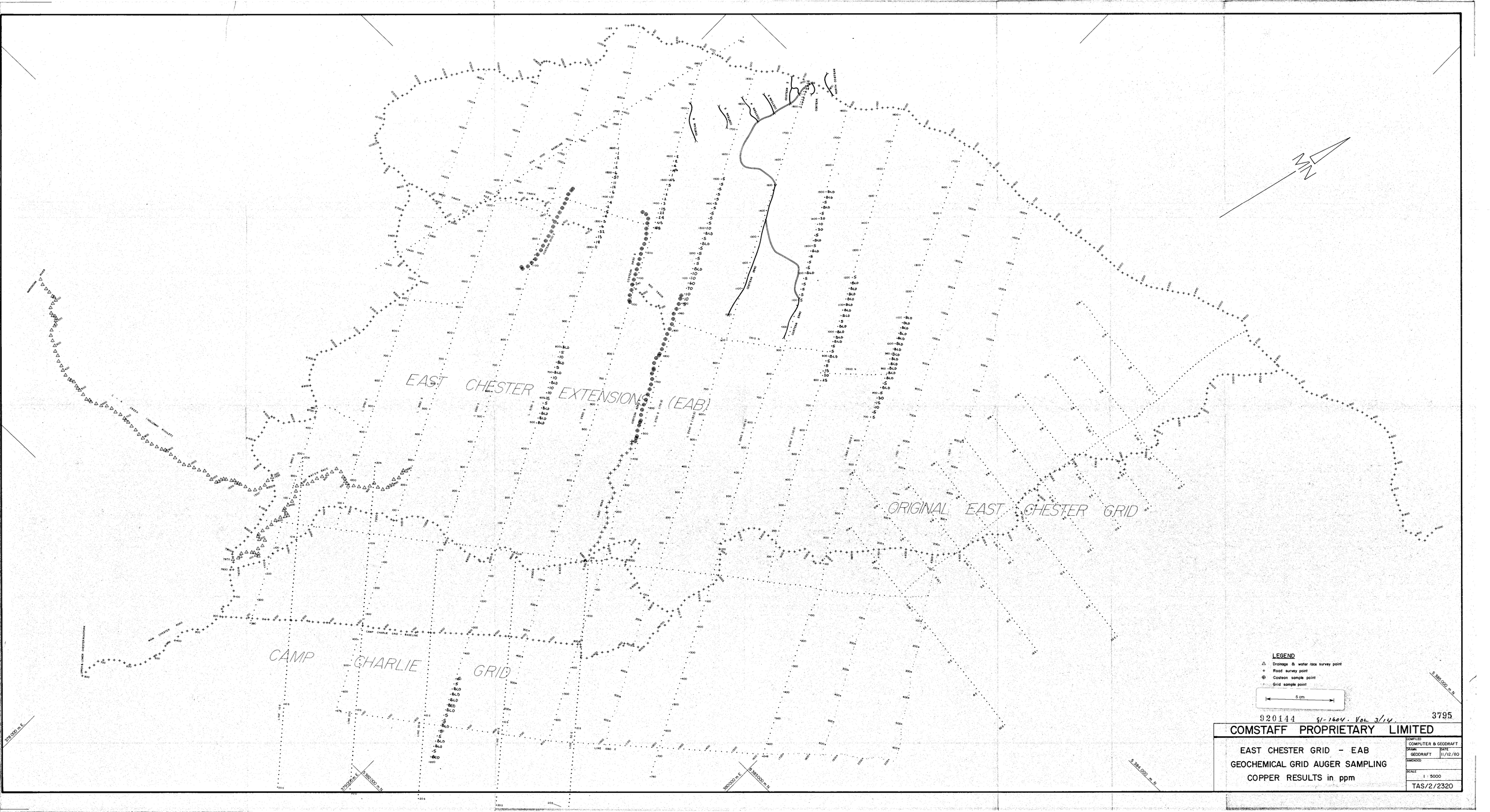
920143 91-1604. Vol 3/14. 3794

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
GEOCHEMICAL GRID AUGER SAMPLING
BARIUM RESULTS in ppm

COMPILED	COMPUTER & GEODRAFT
DRAWN	GEODRAFT
DATE	11/12/80
AMENDED	
SCALE	1 : 5000

TAS/2/2323

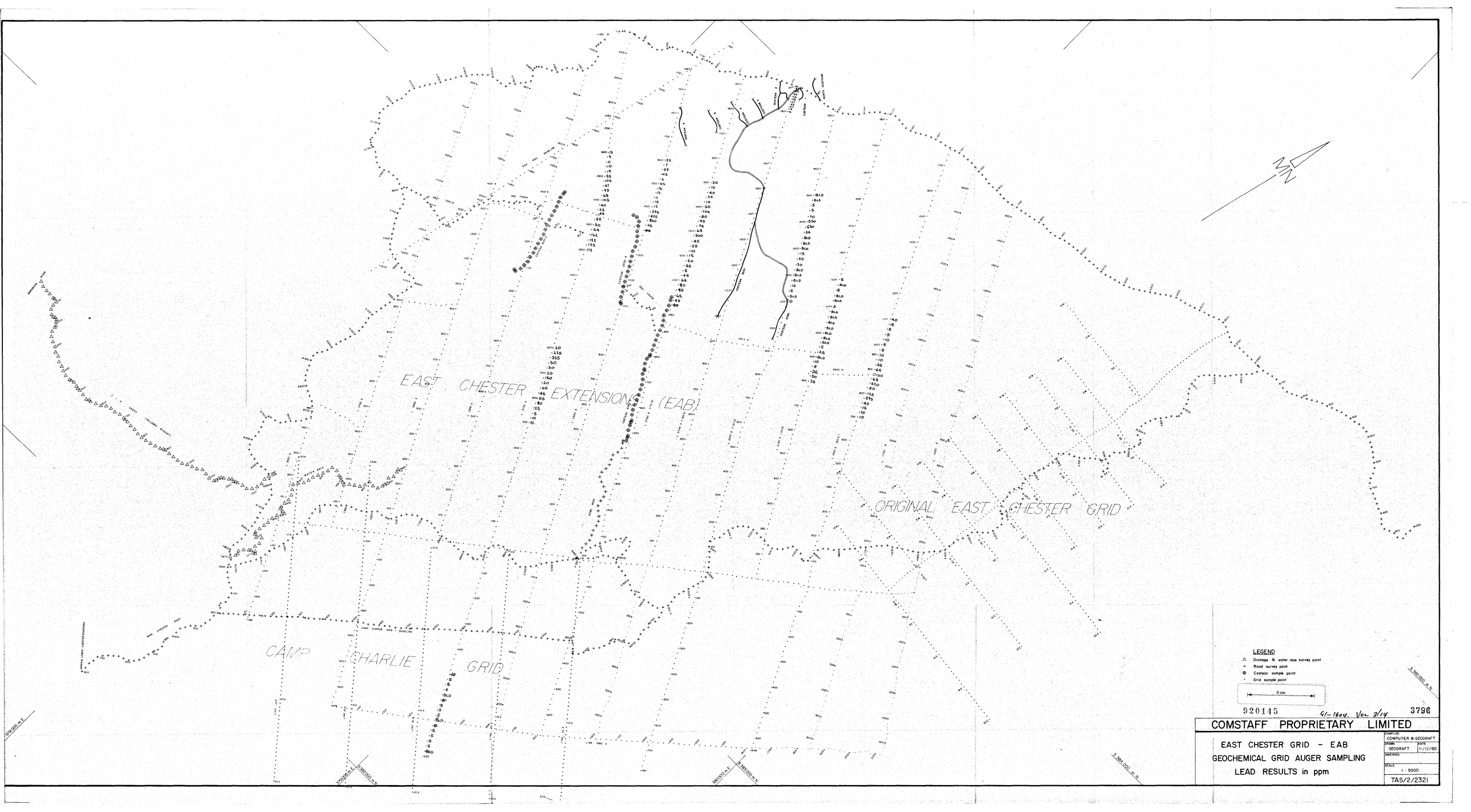


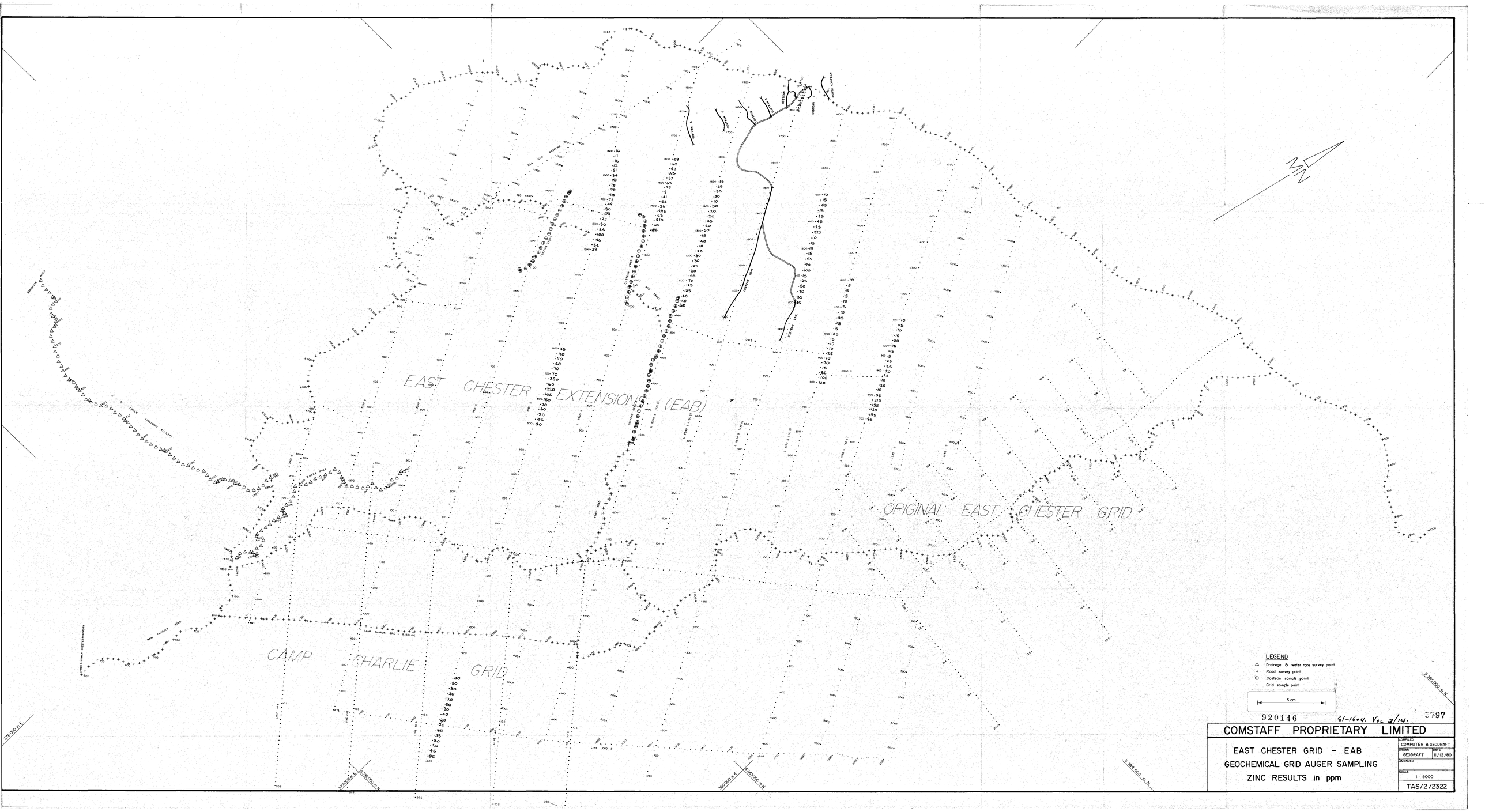
920144 SI-1604. Vol 3/4. 3795

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
GEOCHEMICAL GRID AUGER SAMPLING
COPPER RESULTS in ppm

COMPILED: COMPUTER & GEODRAFT
DRAWN: GEODRAFT
DATE: 11/12/80
AMENDED:
SCALE: 1 : 5000
TAS/2/2320


EAST CHESTER EXTENSION (EAB)
ORIGINAL EAST CHESTER GRID
CAMP CHARLIE GRID
LEGEND
Drainage & water race survey point
Road survey point
Costean sample point
Grid sample point
5 cm
920115
61-1604, Vol 3/14
3796
COMSTAFF PROPRIETARY LIMITED
EAST CHESTER GRID - EAB
GEOCHEMICAL GRID AUGER SAMPLING
LEAD RESULTS in ppm
COMPILED COMPUTER & GEODRAFT
DRAWN GEODRAFT
DATE 11/12/80
AMENDED
SCALE 1 : 5000
TAS/2/2321



LEGEND

- Drainage & water race survey point
- Road survey point
- Casteon sample point
- Grid sample point

5 cm

920146

41-1604. Vol 3/14.

3797

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER GRID - EAB
GEOCHEMICAL GRID AUGER SAMPLING
ZINC RESULTS in ppm

COMPILED	COMPUTER & GEOGRAFT
DRAWN	DATE
GEODRAFT	11/12/80
AMENDED	
SCALE	1 : 5000
	TAS/2/2322



81-1604. Vol 3/14. 3798

COMSTAFF PROPRIETARY LIMITED

EAST CHESTER - EAB

DETAILED GEOLOGICAL PLAN

920147

DRAWN	GEODRAFT
COMPILED	P.D.H.
DATE	JUNE 1979
SCALE	1 : 5000
	TAS/2/1565

000

920148

OPEN FILE
MICROFILMED

Dept. of Mines | A.O. | C.G. | E.O. | D.S.M.E
Received / Answered - 1 JUN 1981 | E & IL
DEPT. OF MINES
REF. NR: 4509181

APPENDIX 5

Preliminary Mineralogical and Metallurgical Evaluation of Two Samples of Lead-Zinc Ore

For

Comstaff Pty. Ltd.

An Amdel Service Report

001

920149

The Australian
Mineral Development
Laboratories

Flemington Street, Frewville,
South Australia 5063
Phone Adelaide 79 1662
Telex AA 82520

Please address all
correspondence to
P.O. Box 114 Eastwood
SA 5063
In reply quote:

amdel

18 March 1981

GS 3/244/1/0

Australian Anglo American Limited,
581 Collins Street,
MELBOURNE. VIC. 3000.

Attention: Dr I.G.P. Wilding
Chief Divisional Geologist, East

REPORT GS 1830/81 - PART II (FINAL)

YOUR REFERENCE:	Letters of 3 October and 10 November 1980
MATERIAL:	Lead-zinc ore samples
LOCALITY:	Tasmania
IDENTIFICATION:	RBE5; RBE10A
DATE RECEIVED:	3 October 1980
WORK REQUIRED:	Ore-dressing mineralogy and metallurgical testing.

Investigation and Report by: Dr Keith J. Henley and Ray Doherty

Manager, Geological Services Division: Dr Keith J. Henley

Keith Henley

for Norton Jackson
Managing Director.

bs/8:7:6

Pilot Plant: Osman Place
Thebarton S.A.
Telephone 43 8053
Branch Laboratories:
Perth W.A.
Telephone 325 7311
Melbourne Vic.
Telephone 645 3093

002

920150

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APPENDICES 1-17

PRELIMINARY MINERALOGICAL AND METALLURGICAL EVALUATION OF TWO SAMPLES OF LEAD-ZINC ORE

Details of the equipment used are given to facilitate understanding of the work described in this report, and such details do not imply endoresement or recommendation of this equipment in preference to other brands.

The results presented in this report apply only to the samples submitted by the Client and described in the text. No guarantee either express or implied is given as to the applicability of the results to other samples.

SUMMARY

Two samples of a Pb-Zn ore from Tasmania have been investigated mineralogically and a composite of the two samples has been tested metallurgically (flotation).

Head analyses of the two samples are as follows:

	RBE5	RBE10A
Pb, %	20.3	15.4
Zn, %	3.54	3.59
Ag, ppm	543	406
Cu, %	0.18	0.19
As, %	0.58	0.48
Sn, ppm	441	524

Mineralogical analyses of the two samples are as follows:

Mineral	RBE5	RBE10A
Quartz, %	35-40	30
Siderite-Rhodochroisite, %	25-30	35
Dolomite, %	5	2
Chlorite, %	-	2
Galena, %	23	18
Sphalerite, %	6	6
Chalcopyrite, %	0.5	0.5
Arsenopyrite, %	1.3	1.0
Pyrite*, %	1.5-2.0	1.0-1.5
Pyrrhotite	-	4-5
Tetrahedrite	Trace	Trace

* includes some marcasite

The samples consist predominantly of quartz, an Fe-Mn carbonate (siderite-rhodochroisite) and galena, together with minor to trace proportions of other minerals. RBE10A differs from RBE5 in containing minor chlorite and pyrrhotite, which are not present in RBE5. In both samples lead is present as galena and zinc is present as sphalerite. The Fe content of the sphalerite is 5-6% in both samples, indicating that the maximum grade of zinc concentrate obtainable is 61-62% Zn. Tetrahedrite occurs mainly as minute inclusions in galena and contains 28-30% Ag. However, most of the silver is probably in solid solution in galena, although this needs to be confirmed by further work. Copper is present as chalcopyrite (with a minor proportion in tetrahedrite) and arsenic is present as arsenopyrite. Tin is present as very small grains of stannite and cassiterite, closely associated with sphalerite and chalcopyrite.

In ground material of both samples liberation of galena is excellent at particle sizes below 0.42 mm and unliberated galena is mainly locked with sphalerite or quartz/carbonates. Sphalerite is not as well liberated as galena, the liberation increasing from 45-50% in the -0.42+0.21 mm fraction to 75-80% in the -0.075+0.053 mm fraction; unliberated sphalerite is mainly locked with galena or quartz/carbonates. Liberation of chalcopyrite is poor throughout the -0.42+0.053 mm size range but liberation of pyrite, arsenopyrite and pyrrhotite is the range 70-90% at particle sizes finer than 0.105 mm. Grinding to pass about 0.105 mm should be adequate for effective liberation of most minerals.

Flotation testing (lead flotation followed by zinc flotation) indicates that it is possible to obtain extremely high lead and silver recoveries into an extremely high-grade lead concentrate. The best result (Test 2) was 98.4% of the lead and 95.0% the silver recovered into a lead concentrate assaying 77.9% Pb, 1.93% Zn and 2050 ppm Ag. Lead and silver flotation results were found to be relatively insensitive to feed size over the range tested (80% passing 92 μm to 80% passing 48 μm). Although it is possible to achieve a relatively high recovery of zinc from the tailings of the lead flotation stage, it is difficult to produce a high-grade zinc concentrate because of dilution with liberated pyrite and arsenopyrite. The best zinc flotation recovery achieved was 79.7% (90.4% zinc recovery from lead flotation tailings) into a concentrate containing 43.7% Zn and 4.45% As. Much of the tin tends to report into the zinc concentrate.

Further mineralogical work should be directed to determining more precisely how the silver and tin occur in the ore. Further metallurgical work should mainly be directed to improving zinc flotation and the following test work is suggested:

1) Tests on conventional zinc flotation, to examine the use of other collectors and the effects of pH and copper sulphate additions.

2) Tests to see if much higher zinc concentrate grades are possible at lower zinc recoveries.

There is little room for improving lead and silver flotation results. However, further testing would be warranted to examine the effect of feed size in more detail, and to determine optimum depressant additions and pH. Tests to try alternative lead collectors and the use of lime instead of (the more expensive) soda ash for pH modification would also be of value.

1. INTRODUCTION

Following discussions between I.G.P. Wilding of Australian Anglo American Limited (AAAL) and K.J. Henley of AMDEL, a proposal (dated 23 October 1980) was submitted to AAAL covering the ore-dressing mineralogy and preliminary metallurgical (flotation) testing of two samples of drill-core from a lead-zinc prospect in Tasmania. This proposal was accepted with some modifications on 10 November 1980. The main changes were that flotation testing was to be carried out on one bulk sample composited from the two samples submitted and that the distributions of Cu, Sn and As were to be monitored in addition to Pb, Zn and Ag.

2. ORE-DRESSING MINERALOGY PROCEDURE

The drill core samples were examined visually and then crushed to pass 1.7 mm (10 mesh BS). The crushed material was stored under refrigeration to reduce oxidation.

A 1 kg portion of each sample was dry screened at 0.85, 0.42, 0.21 and 0.105 mm and polished sections prepared of the -0.85+0.42, -0.42+0.21 and -0.21+0.105 mm fractions (PS 29153-29158). These were examined microscopically.

A further 1 kg portion of each sample was wet rod-milled to pass 0.15 mm and wet screened at 0.105, 0.075 and 0.053 mm.

Portions of the -0.42+0.21 and -0.21+0.105 mm fractions from the -1.7 mm sample and the -0.15+0.105, -0.105+0.075 and -0.075+0.053 mm fractions from the -0.15 mm sample were separated in heavy liquids at specific gravities of 2.96, 3.9 and 4.3, the coarsest two fractions statically and the other fractions centrifugally. Portions of the separation products, and the -0.053 mm fractions, were analysed for Pb, Zn, Ag, Cu, As and Sn and polished sections (PS 29312-29323) were prepared of all the 3.9-4.3 sp.gr. products (containing any liberated sphalerite), all the >4.3 sp.gr. products (containing any liberated galena, pyrite, arsenopyrite and pyrrhotite) and selected <2.96 and 2.96-3.9 sp.gr. products (containing locked sulphides). The polished sections of the 3.9-4.3 and >4.3 sp.gr. products were assessed using a combination of point-counting and area-counting to quantify the proportions of various minerals (particularly sulphides) and their liberation and locking characteristics. The main gangue minerals in the samples were identified by X-ray diffraction analysis. Electron-robe microanalysis was used to confirm optical and X-ray diffraction identifications, to determine the average Fe content of the sphalerite and to determine the silver contents of various minerals.

3. HEAD ANALYSIS AND MINERALOGY

The head analyses of the two samples, as calculated from the heavy liquid separation data (Appendices 1-12), are as follows.

Element	RBE5	RBE10A
Pb, %	20.3	15.4
Zn, %	3.54	3.59
Ag, ppm	543	406
Cu, %	0.18	0.19
As, %	0.58	0.48
Sn, ppm	441	524

The mineralogical compositions of the two samples as calculated from the chemical analyses, heavy liquid separation results and microscopic examinations, are as follows.

Mineral	RBE5	RBE10A
Quartz, %	35-40	30
Siderite-Rhodochroisite, %	25-30	35
Dolomite, %	5	2
Chlorite, %	-	2
Galena, %	23	18
Sphalerite, %	6	6
Chalcopyrite, %	0.5	0.5
Arsenopyrite, %	1.3	1.0
Pyrite*, %	1.5-2.0	1.0-1.5
Pyrrhotite	-	4-5
Tetrahedrite	Trace	Trace

* includes some marcasite

As can be seen from the above tabulation, the two samples are fairly similar chemically and mineralogically. The main mineralogical difference between the samples is that RBE10A contains significant pyrrhotite and chlorite, which are not present in RBE5.

Electron-probe microanalysis of the siderite-rhodochroisite showed that the Fe/Mn ration varied significantly in RBE5 but was more uniform in RBE10A. Analyses of selected grains for FeO, MnO and CaO gave the following results:

Grain	RBE5			Grain	RBE10A		
	FeO, %	MnO, %	CaO, %		FeO, %	MnO, %	CaO, %
1	50	16	0.2	1	40	19	1.5
2	45	18	1.5	2	41	20	0.3
3	36	23	0.5	3	38	23	0.8
4	30	36	0.5				
5	26	34	3.0				

No Pb or Zn was detected in any of the carbonate grains analysed.

Electron-probe point analyses for Fe of 20 randomly selected sphalerite grains in the two samples gave the following values.

RBE5: % Fe= 2.1, 2.1, 3.0, 3.2, 3.2, 3.5, 4.3, 4.3, 5.3, 5.4, 5.5, 5.7, 5.7, 5.8, 5.9, 6.0, 6.6, 6.7, 7.2, 7.8
Average: 5.0% Fe.

RBE10A:% Fe= 3.6, 3.6, 3.6, 3.9, 4.0, 4.0, 4.1, 4.1, 4.1, 4.3, 4.8, 5.1, 5.4, 5.9, 7.2, 7.9, 8.5, 9.8, 11.4, 11.9
Average: 5.9% Fe.

The Zn contents of sphalerite in the two samples are therefore about 62 and 61% respectively and these values set upper limits for the grade of zinc concentrate that could be produced from the samples. Much of the sphalerite contains minute (<5 μm) exsolution blebs of chalcopyrite. Consistent with its low iron content, the sphalerite is largely non-magnetic, as indicated by magnetic separation tests on a Frantz Isodynamic magnetic separator. However, the Fe-Mn carbonate is very magnetic.

Tetrahedrite was identified as small rounded and irregular inclusions in galena. Its identity was confirmed by electron-probe microanalysis. The size of the tetrahedrite grains was mainly 15-150 μm. The silver contents of a number of tetrahedrite inclusions were measured. In RBE5 the silver content of 14 tetrahedrite grains was found to range between 25.3% and 33.1% with an average of 30.3%. In RBE10A the silver content of 8 tetrahedrite grains was found to range between 24.6% and 31.6% with an average of 27.8%. No silver was detected in galena at a detection limit of about 0.1% but one grain of pyrargyrite ($3Ag_2S.Sb_2S_3$; approx. 60% Ag) was observed as an inclusion in tetrahedrite in RBE10A.

Traces of stannite and cassiterite were observed in some of the specific gravity products. The stannite tended to occur as very small (<30 μm) inclusions or veins in sphalerite whereas the cassiterite tended to occur as very small grains (2-30 μm) in carbonate or in chalcopyrite. Further work would be required to define more accurately the mode of occurrence of tin in the samples.

4. LOCATION OF SILVER

As noted in Section 3 silver was detected in all tetrahedrite grains analysed at levels of about 28-30% Ag. A single grain of pyrargyrite was detected but silver was not detected in galena at a detection limit of about 0.1% (1000 ppm). In order to assess the possible contribution of tetrahedrite to the total silver content, the volume of tetrahedrite in a polished section of the >4.3 sp.gr. product of the -0.105+0.075 mm fraction of RBE10A was measured by area-counting. This product assayed 1510 ppm Ag, 62.5% Pb and 0.39% Cu. The volume % of tetrahedrite in this product was 0.046% which converts to 0.064% by weight. This is equivalent to about 185 ppm Ag and suggests that most of the silver is present in minerals other than tetrahedrite. The most likely mineral is galena, which is known to accommodate significant silver in its lattice, but the presence of other silver-bearing minerals cannot be ruled out (Pyrargyrite was detected in one polished section). It is worth noting that the >4.3 sp.gr. products of both samples have a virtually constant ratio of Ag/Pb of 24.5. If all the silver were present in galena this would be equivalent to 2120 ppm Ag in galena and this therefore sets a maximum possible value for Ag in galena. If the Ag equivalent to galena in the 3.9-4.3 sp.gr. products is subtracted from the Ag contents of these products, it is possible to calculate that the maximum possible Ag content of sphalerite in RBE5 is about 490 ppm and the analogous value for sphalerite in RBE10A is about 160 ppm. These calculations are given as indications only, and further work would be needed to determine the native and location of silver accurately.

5. ELEMENT DISTRIBUTIONS WITH SPECIFIC GRAVITY AND PARTICLE SIZE

The distributions of Pb, Zn, Ag, Cu, As and Sn among the various specific gravity products of size fractions from the -1.7 mm grind and the -0.15 mm rod-mill grind are given in Tables 1 and 2. In addition, the distribution of these elements in the total -0.15 mm rod-mill grinds are given in Appendices 1-12.

The data in Tables 1 and 2 provide information on the proportions of the valuable elements locked with other minerals. Thus, the proportions of Pb, Zn, Ag, Cu, As and Sn reporting in the <2.96 and 2.96-3.90 sp.gr. products represent the proportions of galena, sphalerite, chalcopyrite, arsenopyrite and Ag- and Sn- bearing minerals locked with low-density gangue minerals (mainly quartz and carbonates). Because sphalerite has a specific gravity between 3.9 and 4.3, liberated sphalerite should report into the 3.9-4.3 sp.gr. products, together with sphalerite in composite particles (e.g., sphalerite-galena-quartz composites) with this specific gravity range. All the other sulphides have specific gravities greater than 4.3 and will report in the >4.3 sp.gr. products as liberated particles or high-density composite particles.

Examination of Tables 1 and 2 shows the following points of significance.

1) Throughout the size range -0.42+0.053 mm 97-99% of the lead in both samples reports in the >4.3 sp.gr. products, indicating that locking of galena with light gangue and sphalerite is almost negligible. This is a reflection of the coarse nature of the galena in the samples, as indicated by examination of the original drill-core.

2) The proportion of zinc reporting in the 3.9-4.3 sp.gr. product (which contains liberated sphalerite) increases with decreasing particle size in both samples from 65%±3% in the -0.42+0.21 mm fraction to 85%±1% in the -0.075+0.053 mm fraction. Significant zinc reports in the 2.96-3.9 and >4.3 sp.gr. products, suggesting that unliberated sphalerite is locked with Fe-Mn carbonates and probably with galena (or other dense sulphides).

3) In both samples the proportion of silver reporting in the >4.3 sp.gr. products is 91-96% throughout the -0.42+0.053 mm size range, indicating that locking with light gangue and sphalerite is very small. In this respect it resembles the distribution of lead (galena) and is consistent with the view that most of the silver is either in solid solution in galena or in small tetrahedrite inclusion in galena.

4) In both samples there is a progressive increase in the proportion of copper reporting in the 3.9-4.3 sp.gr. product (which contains liberated chalcopyrite) with decreasing particle size but even in the -0.075+0.053 mm fraction only about 42% of the Cu reports in this sp.gr. product, while about 51% reports in the >4.3 sp.gr. product, indicating that much of the chalcopyrite is locked with dense sulphides, probably galena.

5) In sample RBE5 the proportion of arsenic reporting in the >4.3 sp.gr. product increases from 86.6% in the -0.42+0.21 mm fraction to 94.8% in the -0.075 +0.053 mm fraction, indicating that the bulk of the arsenopyrite is not locked with light gangue or with sphalerite. However, in sample RBE10A the corresponding figures are 38.9% in the -0.42+0.21 mm fraction and 84.8% in the -0.075+0.053 mm fraction, indicating somewhat more locking of arsenopyrite with light gangue and sphalerite than in RBE5.

6) In sample RBE5 there is a slight increase in the proportion of tin reporting in the >4.3 sp.gr. product (which would contain liberated stannite and cassiterite) with decreasing particle size (from 20.7% in the -0.42+0.21 mm fraction to 44.4% in the -0.075+0.053 mm fraction) whereas the proportion of Sn reporting in the 3.9-4.3 sp.gr. product remains relatively constant. In sample RBE10A there is no increase in the proportion of tin reporting in the >4.3 sp.gr. product with decreasing particle size but there is a slight increase in the proportion of tin reporting in the 3.9-4.3 sp.gr. product, from 52.4% in the -0.42+0.21 mm fraction to 69.2% in the -0.075+0.053 mm fraction. This suggests that much of the tin is present as stannite and cassiterite which are so finely dispersed as to be virtually unliberated throughout the -0.42+0.053 mm size range - and locked with sphalerite or chalcopyrite.

6. MINERALOGY OF THE HEAVY LIQUID SEPARATION PRODUCTS

In many respects the mineralogies of the separation products of samples RBE5 and RBE10A are similar.

The <2.96 sp.gr. products consisted predominately of quartz with minor dolomite, chlorite (in RBE10A) and locked grains of Fe-Mn carbonate and sulphides.

The 2.96-3.9 sp.gr. products consisted predominantly of Fe-Mn carbonate, and locked quartz and sulphides.

The 3.9-4.3 sp.gr. products consisted predominantly of:

Sphalerite (liberated and locked)	70-90%
Chalcopyrite (liberated and locked)	2-3%
Galena (locked)	1-5%
Pyrite (locked)	0.5-3%
Arsenopyrite (locked)	0.2-2%
Quartz/carbonates (locked)	5-15%

together with traces of stannite and locked pyrrhotite (RBE10A).

Locking analyses for sphalerite and chalcopyrite are given in Tables 3-6, from which it can be seen that unliberated sphalerite was mainly locked with galena or quartz/carbonates, and unliberated chalcopyrite was mainly locked with sphalerite or quartz/carbonates (or in ternary composites). Galena was locked mainly with quartz/carbonates or sphalerite (or in ternary composites). Arsenopyrite and pyrite were mainly locked with quartz/carbonates rather than sphalerite.

The >4.3 sp.gr. products consisted predominantly of:

	RBE5	RBE10A
Galena (liberated and locked)	88-94%	65-80%
Pyrite (liberated and locked)	1-5%	2-5%
Arsenopyrite (liberated and locked)	1-5%	2-5%
Pyrrhotite (liberated and locked)	-	6-12%
Sphalerite (locked)	2-3%	1-2%
Chalcopyrite (locked)	0.2-1%	0.2-1%
Quartz/carbonates (locked)	<1%	<1%

Locking analyses for galena, pyrite, arsenopyrite and pyrrhotite (RBE10A only) in the >4.3 sp.gr. products are given in Table 7-13. Sphalerite, chalcopyrite and quartz/carbonates were mainly locked with galena. Galena liberation was over 90% throughout the size range, the main locking being with sphalerite. Pyrite liberation ranged from <40% to about 80% throughout the size range, the main locking in RBE5 being with galena and quartz/carbonates and in RBE10A being with pyrrhotite and quartz/carbonates. Arsenopyrite was moderately well-liberated throughout the size range, the main locking being with quartz/carbonates. Pyrrhotite in RBE10A was over 90% liberated at particle sizes less than 0.21 mm.

Most of the composite particles consist of relatively simple intergrowths of the component minerals. However, some galena/carbonate composites consist of finely disseminated inclusions of galena up to 15 µm in size in carbonate. Some galena occurs as narrow veins in sphalerite and some arsenopyrite forms aggregates of small euhedral crystals in quartz/carbonates. As mentioned above, sphalerite usually contains abundant, minute exsolution blebs of chalcopyrite.

7. OVERALL LIBERATION AND LOCKING

The overall liberation and locking of galena (calculated from Tables 1-13) is given in Table 14, from which it can be seen that in both samples liberation increases from about 90% in the -0.42+0.21 mm fraction to 96% in the -0.075+0.053 mm fraction. Unliberated galena is mainly locked with sphalerite or quartz/carbonates.

The overall liberation and locking of sphalerite is given in Table 15, from which it can be seen that sphalerite liberation is significantly less than galena liberation throughout the size range - increasing in both samples from 45-50% in the -0.42+0.21 mm fraction to 75-80% in the -0.075+0.053 mm fraction. Unliberated sphalerite is mainly locked with galena or quartz/carbonates.

The overall liberation of chalcopyrite and arsenopyrite is given in Table 16, from which it can be seen that in both samples chalcopyrite is poorly liberated whereas arsenopyrite is moderately liberated in RBE5 and well-liberated in RBE10A. Overall liberation of pyrite is probably similar to that of arsenopyrite. Overall liberation of pyrrhotite in RBE10A is probably excellent throughout most of the size range investigated.

8. METALLURGICAL IMPLICATIONS OF THE ORE-DRESSING MINERALOGICAL INVESTIGATION

On the basis of these mineralogical results it may be concluded that samples RBE5 and RBE10A are generally similar in mineralogy and liberation/locking characteristics. Galena is much better liberated than any of the other sulphides and is virtually completely liberated at 0.42 mm. Sphalerite liberation only reaches 70-80% at particle sizes below 0.105 mm. A grind size of about 0.105 mm is therefore indicated on the basis of the liberation results. At such a grind size arsenopyrite, pyrite and pyrrhotite will be well liberated but much of the chalcopyrite will still be locked.

It may be predicted that most of the silver will report in a lead flotation concentrate and much of the tin will result in a zinc flotation concentrate. The maximum grade of zinc concentrate which can be produced is about 61% Zn.

9. FLOTATION TESTING PROCEDURE

Equal weights of RBE5 and RBE10A were crushed and subjected to a series of 5 flotation tests. Flotation tests were conducted on 500 g ore charges ground in a stainless steel rod mill. Rougher flotation was performed in a 1.25 litre flotation cell, while cleaner flotation stages were carried out in a 0.5 litre cell. The flotation machine used was an Agitair model LA500. Adelaide tap water was used in all tests. Details of test procedures and results are provided in Appendices 13-17.

Each test comprised grinding a 500 g sample of -1.70 mm ore in a laboratory rod mill followed by a lead flotation stage and then a zinc flotation stage. In the first test, the ore was ground to 100% -0.15 mm and subjected to conventional lead and zinc flotation procedures. This test gave very good lead and silver results but a relatively low grade zinc concentrate. Subsequent tests were conducted to examine the following:

(i) The effects of a coarser and a finer feed size than in the initial test.

(ii) The use of different zinc collectors.

(iii) The use of a higher pH in zinc flotation.

(iv) The use of a reverse flotation procedure on conventionally produced zinc concentrate to remove pyrite and arsenopyrite.

10. DISCUSSION OF FLOTATION RESULTS

10.1 Test 1

The first test (Appendix 13) was carried out to try conventional lead and zinc flotation procedures at a grind size indicated by preliminary mineralogical studies to give a high degree of liberation.

Very high lead and silver recoveries were achieved into a very high grade lead concentrate. The zinc concentrate grade was relatively low (42.5% Zn), although zinc recovery from lead rougher tailings was high (90.3%).

10.2 Test 2

In the second test (Appendix 14), the procedure of Test 1 was modified as follows:

(i) For convenience, a single grinding stage was used.

(ii) Lead flotation times were longer.

(iii) A higher degree of agitation was provided in cleaning to prevent settling.

(iv) Adjustments to pH were made in cleaning.

(v) Lead first and second cleaner tailings were combined with rougher tailings prior to zinc flotation.

(vi) The zinc collector was Z200.

(vii) An additional zinc cleaner flotation stage was used.

Lead and silver results were significantly better than in Test 1. A slight improvement in zinc concentrate grade (to 43.7% Zn) was attained, while the recovery of zinc from lead flotation tailings remained high (90.5%)

10.3 Tests 3 and 4

Tests 3 and 4 (Appendices 15 and 16) were carried out to investigate the effect of grind size on lead and zinc flotation. The 80% passing sizes for Tests 3 and 4 are compared below with those for Tests 1 and 2.

Test 1 - 70 µm (0.070 mm)
Test 2 - 62 µm (0.062 mm)
Test 3 - 92 µm (0.092 mm)
Test 4 - 48 µm (0.048 mm)

The flotation procedure for Tests 3 and 4 was the same as for Test 2 except:

(i) Lead rougher tailings only was used for the zinc flotation stage.

(ii) The zinc collector was sodium isopropyl xanthate.

(iii) There were only two zinc cleaner flotation stages.

Comparison of data for Tests 2, 3 and 4 indicate that lead and silver results change very little over the tested range of feed size. Similarly, comparison of Test 3 and 4 results indicate that zinc flotation behaviour is fairly insensitive to feed size. Zinc results are slightly better however at the finer feed size, probably reflecting increased liberation of sphalerite.

10.4 Test 5

Mineralogical studies of zinc concentrate indicate that the main diluents in the zinc concentrate produced in Test 2 were free pyrite and free arsenopyrite. In Test 5 (Appendix 17), an attempt was made to reduce the quantities of these minerals in zinc concentrate by modifying Test 2 procedure as follows:

(i) Use of the zinc collector Aerofloat 211.

(ii) Use of a high flotation pH, 11.5.

(iii) Reverse flotation on the conventionally produced zinc second cleaner concentrate.

All of the measures taken failed to improve the grade of zinc concentrate on that obtained in Test 2. The combination of Aerofloat 211 and high flotation pH was less effective than Z200 at pH 9.0 in conventional zinc flotation. The reverse flotation procedure failed to give a clean separation of the pyrite and arsenopyrite from the zinc mineral.

It is of note that in the first stage of the reverse flotation test, following conditioning, no minerals appeared to be floatable. Following a small addition of potassium amyl xanthate, all minerals tended to float. It may be possible to improve reverse flotation results by the more careful addition of collector after conditioning.

Copper tends to report to the lead concentrate and to a lesser extent to the zinc concentrate. Arsenic tends to follow zinc, although clearly it floats less readily than zinc. It is expected that the arsenic content of zinc concentrate would be lower at lower zinc recoveries. Tin also tends to report to the zinc concentrate, as suggested by the mineralogical investigation (Section 8).

11. METALLURGICAL CONCLUSIONS AND RECOMMENDATIONS

11.1 Lead and Silver Flotation

It is possible to attain extremely high lead and silver recoveries into an extremely high-grade lead concentrate using a conventional lead flotation procedure. The best results were achieved in Test 2, in which 98.4% of the lead and 95.0% of the silver were recovered into a concentrate containing 77.9% Pb, 1.93% Zn and 2050 ppm Ag. Zinc recovery into the lead concentrate was 11.9%. Conditions for Test 2 were:

Feed size	- 80% passing 62 µm
Flotation pH	- 9.0 with soda ash
Depressants	- 60 g/tonne sodium cyanide 60 g/tonne zinc sulphate
Collector	- 100 g/tonne sodium isopropyl xanthate
Flotation stages	- 3 (rougher, cleaner, recleaner).

Lead and silver flotation results were found to be relatively insensitive to feed size over the range tested (80% passing size for feed ranged from 92 µm to 48 µm).

There is little room for improving lead and silver flotation results. However, further testing would be warranted to examine the effect of feed size in more detail, and to determine optimum depressant additions and pH. Tests to try alternative lead collectors and the use of lime instead of (the more expensive) soda ash for pH modification would also be of value.

11.2 Zinc Flotation

Although it is possible to achieve a relatively high recovery of zinc from the tailings of the lead flotation stage, it is difficult to produce a high-grade zinc concentrate. The main zinc concentrate diluents are pyrite and arsenopyrite.

Conventional zinc flotation procedure with different zinc collectors, flotation pH and feed size failed to produce a high grade zinc concentrate. Furthermore, a reverse flotation procedure tried on conventionally produced zinc concentrate proved ineffectual. The best zinc flotation result achieved was 79.7% zinc recovery (90.4% zinc recovery from lead tailings) into a concentrate containing 43.7% Zn and 4.45% As (Test 2). Conditions used in achieving these results were:

Feed size	- 80% passing 62 µm
Flotation pH	- 9.0 with lime
Activator	- 400 g/tonne copper sulphate
Collector	- 23 g/tonne Z200
Flotation stages	- 4.

It seems unlikely that concentrate of the composition referred to above could be marketed. The following test work is suggested to improve zinc concentrate grade:

(i) Tests on conventional zinc flotation, to examine the use of other collectors and the effects of pH and copper sulphate addition

(ii) Tests to see if much higher zinc concentrate grades are possible at lower zinc recoveries

(iii) Tests using arsenopyrite depressants in conventional zinc flotation.

(iv) Tests on reverse flotation of conventionally-produced zinc concentrate.

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TABLE 1: SAMPLE RB25: ELEMENT DISTRIBUTIONS WITH SPECIFIC GRAVITY AND PARTICLE SIZE

Size Fraction (mm)	Specific Gravity	Wt, %	Assay						Distribution, %					
			Pb, %	Zn, %	Ag, ppm	Cu, %	As, %	Sn, ppm	Pb	Zn	Ag	Cu	As	Sn
-0.42+0.21	<2.96	36.3	0.19	0.21	8	0.008	0.13	<40	0.2	2.3	0.4	1.4	13.4	3.5
	2.96-3.90	24.2	1.13	2.41	70	0.057	0.50	380	0.9	17.7	2.3	7.2	34.4	22.2
	3.90-4.30	4.8	4.37	42.8	500	0.973	0.98	4500	0.7	62.6	3.2	23.7	13.2	52.4
	>4.30	34.8	81.2	1.64	2015	0.385	0.40	260	98.1	17.4	94.1	67.7	38.9	21.9
	Total	100.0	(28.78)	(3.29)	(744)	(0.20)	(0.35)	(413)	100.0	100.0	100.0	100.0	100.0	100.0
-0.21+0.105	<2.96	31.2	0.20	0.15	7	0.007	0.07	40	0.2	1.3	0.3	1.0	5.9	3.5
	2.96-3.90	22.1	0.92	1.55	55	0.044	0.28	240	0.6	9.8	1.5	4.3	16.5	15.0
	3.90-4.30	5.1	2.30	50.0	480	1.070	0.47	5000	0.3	72.8	3.0	24.3	6.4	72.1
	>4.30	41.6	80.4	1.36	1880	0.380	0.64	80	98.9	16.1	95.3	70.4	71.2	9.4
	Total	100.0	(33.85)	(3.51)	(821)	(0.22)	(0.38)	(334)	100.0	100.0	100.0	100.0	100.0	100.0
-0.15+0.105*	<2.96	45.1	0.17	0.15	5	0.007	0.07	40	0.4	2.2	0.5	1.9	7.6	4.6
	2.96-3.90	26.4	0.86	1.48	50	0.044	0.31	280	1.2	13.0	2.7	7.5	19.6	18.9
	3.90-4.30	4.5	2.22	48.5	470	1.126	0.58	5000	0.5	73.3	4.3	32.9	6.1	58.1
	>4.30	23.9	78.0	1.43	1915	0.373	1.22	300	97.9	11.4	92.6	57.7	67.3	18.4
	Total	100.0	(19.08)	(3.01)	(495)	(0.16)	(0.43)	(391)	100.0	100.0	100.0	100.0	100.0	100.0
-0.105+0.075*	<2.96	49.3	0.13	0.12	4	0.004	0.05	60	0.4	1.9	0.5	1.4	6.1	6.1
	2.96-3.90	27.8	0.50	0.97	32	0.030	0.22	140	1.6	8.8	2.3	6.1	14.5	13.2
	3.90-4.30	4.6	1.54	52.5	470	1.198	0.38	5300	0.5	79.8	5.7	40.5	4.2	67.6
	>4.30	18.3	77.4	1.57	1905	0.391	1.69	240	97.1	9.4	91.4	52.0	75.1	12.1
	Total	100.0	(14.42)	(3.05)	(381)	(0.147)	(0.41)	(345)	100.0	100.0	100.0	100.0	100.0	100.0
-0.075+0.053*	<2.96	47.3	0.11	0.09	3	0.004	0.04	40	0.3	1.2	0.3	1.2	3.8	6.9
	2.96-3.90	27.0	0.40	0.83	27	0.025	0.16	140	6.7	6.4	1.7	4.9	8.7	9.1
	3.90-4.30	5.4	1.30	54.1	430	1.210	0.25	3300	0.4	84.0	5.1	42.9	2.7	69.2
	>4.30	20.3	76.5	1.43	1890	0.386	2.11	330	92.6	8.4	91.9	51.5	84.8	14.8
	Total	100.0	(15.77)	(3.47)	(418)	(0.135)	(0.51)	(370)	100.0	100.0	100.0	100.0	100.0	100.0
-0.053*	Total	100.0	23.3	3.82	630	0.204	0.68	480						
Head	Total	100.0	(20.27)	(3.54)	(543)	(0.18)	(0.58)	(441)						

* From wet rod-milling

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TABLE 2: SAMPLE RBE1QA: ELEMENT DISTRIBUTIONS WITH SPECIFIC GRAVITY AND PARTICLE SIZE

Size Fraction (mm)	Specific Gravity	Wt, %	Assay						Distribution, %					
			Pb, %	Zn, %	Ag, ppm	Cu, %	As, %	Sn, ppm	Pb	Zn	Ag	Cu	As	Sn
[illegible].42+0.21	<2.96	30.7	0.12	0.13	7	0.008	0.02	160	0.2	1.1	0.4	1.3	1.4	11.9
	2.96-3.90	34.9	0.72	2.47	39	0.086	0.11	480	1.3	23.8	2.7	16.2	8.4	40.5
	3.90-4.30	5.9	3.69	41.6	220	0.831	0.27	1900	1.1	67.2	2.6	26.2	3.6	26.9
	>4.30	28.5	67.1	1.01	1665	0.366	1.34	300	97.4	7.9	94.3	56.2	86.6	20.7
	Total	100.0	(19.64)	(3.63)	(504)	(0.19)	(0.44)	(414)	100.0	100.0	100.0	100.0	100.0	100.0
-0.21+0.105	<2.96	26.8	0.16	0.12	8	0.009	0.02	120	0.2	0.8	0.4	1.1	1.0	8.5
	2.96-3.90	33.2	0.53	1.49	30	0.057	0.06	260	0.8	12.3	1.8	8.7	5.0	22.8
	3.90-4.30	6.6	1.80	48.5	230	0.970	0.15	2100	0.5	79.8	2.7	29.9	2.3	36.9
	>4.30	33.4	69.1	0.87	1600	0.390	1.17	360	98.6	7.2	95.1	60.3	91.6	31.8
	Total	100.0	(23.40)	(4.04)	(561)	(0.22)	(0.43)	(378)	100.0	100.0	100.0	100.0	100.0	100.0
-0.15+0.105*	<2.96	37.1	0.13	0.13	6	0.009	0.01	130	0.4	1.5	0.7	2.1	1.0	12.7
	2.96-3.90	38.2	0.44	1.47	26	0.055	0.07	400	1.5	17.3	3.3	14.0	5.4	29.1
	3.90-4.30	5.2	1.83	47.3	255	1.047	0.23	2700	0.8	75.7	4.1	36.5	2.3	26.6
	>4.30	19.5	56.9	0.92	1405	0.361	2.43	850	97.3	5.5	91.8	47.4	91.3	31.6
	Total	100.0	(11.42)	(3.24)	(299)	(0.15)	(0.52)	(326)	100.0	100.0	100.0	100.0	100.0	100.0
-0.105+0.075*	<2.96	36.1	0.10	0.10	4	0.007	0.01	160	0.3	1.1	0.4	1.6	0.9	11.9
	2.96-3.90	36.4	0.36	1.17	22	0.044	0.05	340	0.9	12.4	2.3	9.8	4.1	25.6
	3.90-4.30	5.5	1.39	50.8	215	1.070	0.15	2500	0.5	80.9	3.3	36.1	1.8	28.4
	>4.30	22.0	62.5	0.88	1510	0.388	1.99	750	98.3	5.6	94.0	52.5	93.2	34.1
	Total	100.0	(14.01)	(3.43)	(354)	(0.16)	(0.47)	(400)	100.0	100.0	100.0	100.0	100.0	100.0
-0.075+0.053*	<2.96	34.8	0.09	0.08	3	0.006	0.01	80	0.2	0.8	0.3	1.3	0.7	6.5
	2.96-3.90	37.0	0.27	0.79	16	0.031	0.04	200	0.7	8.5	1.6	7.0	3.1	17.2
	3.90-4.30	5.7	1.09	51.2	160	1.162	0.10	2450	0.4	85.6	2.6	41.0	1.4	32.0
	>4.30	22.5	63.5	0.78	1525	0.367	1.84	850	98.7	5.1	95.5	50.7	94.8	44.4
	Total	100.0	(14.50)	(3.43)	(360)	(0.16)	(0.44)	(437)	100.0	100.0	100.0	100.0	100.0	100.0
[illegible].053*	Total	100.0	16.7	3.73	450	0.21	0.49	550						
Head	Total	100.0	(15.36)	(3.59)	(406)	(0.19)	(0.48)	(324)						

* From wet rod-milling

TABLE 3: LOCKING ANALYSIS OF SPHALERITE IN THE 3.9-4.3 SP.GR. PRODUCTS OF RBE5

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With*					% Locked in Ternary Particles
		Ga	Py	Cp	Asp	Q/C	
-0.42+0.21	71	7	2	2	<1	9	9
-0.21+0.105	81	5	<1	2	-	9	3
-0.15+0.105	84	5	3	1	1	4	2
-0.105+0.075	85	7	2	<1	-	1	4
-0.075+0.053	90	6	<1	2	-	1	1

TABLE 4: LOCKING ANALYSIS OF SPHALERITE IN THE 3.9-4.3 SP.GR. PRODUCTS OF RBE10A

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With*					% Locked in Ternary Particles
		Ga	Py	Cp	Asp	Q/C	
-0.42+0.21	78	3	1	-	-	14	4
-0.21+0.105	84	6	-	2	-	7	1
-0.15+0.105	80	5	-	-	-	12	3
-0.105+0.075	87	7	1	-	-	2	3
-0.075+0.053	93	1	-	1	-	4	2

TABLE 5: LOCKING ANALYSIS OF CHALCOPYRITE IN THE 3.9-4.3 SP.GR. PRODUCTS OF RBE5

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With					% Locked in Ternary Particles
		Ga	Sph	Py	Asp	Q/C	
-0.42+0.21	-	-	89	-	-	-	11
-0.21+0.105	24	-	32	-	-	19	24
-0.15+0.105	46	-	38	-	-	6	10
-0.105+0.075	31	-	37	15	-	5	12
-0.075+0.053	53	-	22	-	-	23	2

TABLE 6: LOCKING ANALYSIS OF CHALCOPYRITE IN THE 3.9-4.3 SP.GR. PRODUCTS OF RBE10A

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With					% Locked in Ternary Particles
		Ga	Sph	Py	Asp	Q/C	
-0.42+0.21	30	-	4	-	-	4	62
-0.21+0.105	56	-	21	-	-	13	10
-0.15+0.105	57	-	4	-	-	1	38
-0.105+0.075	53	9	8	-	-	17	13
-0.075+0.053	71	-	3	-	-	26	-

* Ga = Galena; Py = Pyrite; Sph = Sphalerite; Cp = Chalcopyrite; Asp = Arsenopyrite; Q/C = Quartz/Carbonates.

TABLE 7: LOCKING ANALYSIS OF GALENA IN THE >4.3 SP.GR. PRODUCTS OF RBE5

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With*						% Locked in Ternary Particles
		Sph	Py	Cp	Asp	Po	Q/C	
-0.42+0.21	91	3	1	-	-	-	4	1
-0.21+0.105	95	2	<1	-	2	-	-	1
-0.15+0.105	97	2	-	-	-	-	<1	1
-0.105+0.075	97	2	1	-	-	-	-	-
-0.075+0.053	97	2	<1	-	-	-	1	-

TABLE 8: LOCKING ANALYSIS OF GALENA IN THE >4.3 SP.GR. PRODUCTS OF RBE10A

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With						% Locked in Ternary Particles
		Sph	Py	Cp	Asp	Po	Q/C	
-0.42+0.21	92	5	<1	-	-	-	1	2
-0.21+0.105	96	2	<1	-	-	-	1	1
-0.15+0.105	98	1	-	-	-	-	-	1
-0.105+0.075	96	3	-	-	<1	-	-	1
-0.075+0.053	97	2	<1	-	-	-	1	-

TABLE 9: LOCKING ANALYSIS OF PYRITE IN THE >4.3 SP.GR. PRODUCTS OF RBE5

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With*						% Locked in Ternary Particles
		Ga	Sph	Cp	Asp	Po	Q/C	
-0.42+0.21	43	3	-	-	3	-	38	13
-0.21+0.105	46	26	-	-	13	-	-	15
-0.15+0.105	62	11	7	-	-	-	18	2
-0.105+0.075	78	9	5	-	2	-	2	4
-0.075+0.053	81	13	-	-	-	-	3	3

TABLE 10: LOCKING ANALYSIS OF PYRITE IN THE >4.3 SP.GR. PRODUCTS OF RBE10A

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With						% Locked in Ternary Particles
		Ga	Sph	Cp	Asp	Po	Q/C	
-0.42+0.21	65	-	1	-	-	1	24	9
-0.21+0.105	48	-	-	-	-	3	33	16
-0.15+0.105	22	-	7	-	-	7	30	34
-0.105+0.075	41	-	7	2	-	11	26	13
-0.075+0.053	59	11	2	-	-	4	20	4

* Ga = Galena; Py = Pyrite; Sph = Sphalerite; Cp = Chalcopyrite; Asp = Arsenopyrite; Q/C = Quartz/Carbonate; Po = Pyrrhotite.

TABLE 11: LOCKING ANALYSIS OF ARSENOPYRITE IN THE >4.3 SP.GR. PRODUCTS OF RBE5

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With						% Locked in Ternary Particles
		Ga	Sph	Cp	Py	Po	Q/C	
-0.42+0.21	61	-	-	-	-	-	21	18
-0.21+0.105	63	3	-	-	5	-	29	-
-0.15+0.105	43	-	13	-	-	-	44	-
-0.105+0.075	93	2	-	-	-	-	4	1
-0.075+0.053	95	3	2	-	-	-	-	-

TABLE 12: LOCKING ANALYSIS OF ARSENOPYRITE IN THE >4.3 SP.GR. PRODUCTS OF RBE10A

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With						% Locked in Ternary Particles
		Ga	Sph	Cp	Py	Po	Q/C	
-0.42+0.21	95	-	-	-	-	-	-	4
-0.21+0.105	72	-	-	-	-	-	28	-
-0.15+0.105	95	5	-	-	-	-	-	-
-0.105+0.075	73	-	-	-	-	-	23	4
-0.075+0.053	92	-	8	-	-	-	-	-

TABLE 13: LOCKING ANALYSIS OF PYRRHOTITE IN THE >4.3 SP.GR. PRODUCTS OF RBE10A

Size Fraction (mm)	% Liberated	% Locked in Binary Particles With						% Locked in Ternary Particles
		Ga	Sph	Cp	Py	Asp	Q/C	
-0.42+0.21	77	-	2	-	11	-	7	2
-0.21+0.105	94	-	-	-	6	-	-	-
-0.15+0.105	97	-	-	3	-	-	-	-
-0.105+0.075	98	-	-	-	-	-	2	-
-0.075+0.053	96	-	1	-	-	-	2	-

TABLE 14: OVERALL LIBERATION AND LOCKING OF GALENA

a) Sample RBE5

Size Fraction (mm)	% Liberated	% Locked With*		
		Sph	Other Sulphides	Q/C
-0.42+0.21	89	3	1	7
-0.21+0.105	94	2	2	2
-0.15+0.105	95	2	-	3
-0.105+0.075	95	2	1	2
-0.075+0.053	96	2	1	1

b) Sample RBE10A

Size Fraction (mm)	% Liberated	% Locked With*		
		Sph	Other Sulphides	Q/C
-0.42+0.21	90	5	1	4
-0.21+0.105	95	2	1	2
-0.15+0.105	95	1	<1	4
-0.105+0.075	94	3	<1	3
-0.075+0.053	96	2	1	1

* Sph = Sphalerite Q/C = Quartz/carbonate

TABLE 15: OVERALL LIBERATION AND LOCKING OF SPHALERITE

a) Sample RBE5

Size Fraction (mm)	% Liberated	% Locked With		
		Ga	Other Sulphides	Q/C
-0.42+0.21	44	18	12	26
-0.21+0.105	59	17	6	18
-0.15+0.105	62	13	7	18
-0.105+0.075	68	13	7	12
-0.075+0.053	76	12	4	8

b) Sample RBE10A

Size Fraction (mm)	% Liberated	% Locked With		
		Ga	Other Sulphides	Q/C
-0.42+0.21	52	8	6	34
-0.21+0.105	67	11	3	19
-0.15+0.105	61	8	3	28
-0.105+0.075	70	10	5	15
-0.075+0.053	80	5	2	13

TABLE 16: OVERALL LIBERATION OF CHALCOPYRITE AND ARSENOPYRITE

a) RBE5

Size Fraction (mm)	% Liberated Asp	Cp
-0.42+0.21	24	-
-0.21+0.105	45	6
-0.15+0.105	29	15
-0.105+0.075	70	13
-0.075+0.053	81	23

b) RBE10A

Size Fraction (mm)	% Liberated Asp	Cp
-0.42+0.21	82	8
-0.21+0.105	66	17
-0.15+0,105	87	21
-0.105+0.075	68	19
-0.075+0.053	87	29

026

APPENDIX 1. RBE 5. -0.15 MM GRIND. PB DISTRIBUTION.

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS WT %	PB ASSAY %	PB DISTN %	IN HEAD SAMPLE WT %	PB DISTN %	CUMULATIVE DATA WEIGHT %	PB ASSAY %	PB DISTN %
+ 0.105	< 2.96	45.1	0.17	0.4	6.06	0.05	6.06	0.17	0.05
	< 3.90	26.4	0.86	1.2	3.55	0.15	3.55	0.86	0.15
	< 4.30	4.5	2.22	0.5	0.61	0.07	0.61	2.22	0.07
	> 4.30	23.9	78.00	97.9	3.22	12.39	3.22	78.00	12.39
	TOTAL	100.0	(19.08)	100.0	13.44	12.65	13.44	19.08	12.65
- 0.105 + 0.075	< 2.96	49.3	0.13	0.4	7.29	0.05	13.35	0.15	0.10
	< 3.90	27.8	0.50	1.0	4.11	0.10	7.66	0.67	0.25
	< 4.30	4.6	1.54	0.5	0.69	0.05	1.30	1.86	0.12
	> 4.30	18.3	77.40	98.1	2.70	10.32	5.92	77.73	22.71
	TOTAL	100.0	(14.42)	100.0	14.79	10.52	28.23	16.64	23.18
- 0.075 + 0.053	< 2.96	47.3	0.11	0.3	7.23	0.04	20.58	0.13	0.14
	< 3.90	27.0	0.40	0.7	4.13	0.08	11.79	0.57	0.33
	< 4.30	5.4	1.30	0.4	0.82	0.05	2.12	1.64	0.17
	> 4.30	20.3	76.50	98.5	3.11	11.72	9.03	77.30	34.43
	TOTAL	100.0	(15.77)	100.0	15.29	11.90	43.52	16.33	35.07
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	47.3	(0.13)	0.4					
	< 3.90	27.1	(0.57)	1.0					
	< 4.30	4.9	(1.64)	0.5					
	> 4.30	20.7	(77.30)	98.2					
OVERALL TOTALS..	SANDS	43.5	(16.33)	35.1					
	SLIMES	56.5	23.30	64.9					
	TOTAL	100.0	(20.27)	100.0					

CALCULATED HEAD ASSAY= 20.27 %

027

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APPENDIX 2. RBE 5. -0.15 MM GRIND. ZN DISTRIBUTION.

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS WT %	ZN ASSAY %	ZN DISTN %	IN HEAD SAMPLE WT %	ZN DISTN %	CUMULATIVE DATA WEIGHT %	ASSAY %	DISTN %
+ 0.105	< 2.96	45.1	0.15	2.2	6.06	0.26	6.06	0.15	0.26
	< 3.90	26.4	1.48	13.0	3.55	1.48	3.55	1.48	1.48
	< 4.30	4.5	48.50	73.3	0.61	8.36	0.61	48.50	8.36
	> 4.30	23.9	1.43	11.4	3.22	1.30	3.22	1.43	1.30
	TOTAL	100.0	(3.01)	100.0	13.44	11.40	13.44	3.01	11.40
- 0.105 + 0.075	< 2.96	49.3	0.12	1.9	7.29	0.25	13.35	0.13	0.50
	< 3.90	27.8	0.97	8.8	4.11	1.12	7.66	1.21	2.61
	< 4.30	4.6	52.50	79.8	0.69	10.17	1.30	50.62	18.53
	> 4.30	18.3	1.57	9.4	2.70	1.20	5.92	1.49	2.50
	TOTAL	100.0	(3.05)	100.0	14.79	12.73	28.23	3.03	24.14
- 0.075 + 0.053	< 2.96	47.3	0.09	1.2	7.23	0.18	20.58	0.12	0.69
	< 3.90	27.0	0.83	6.4	4.13	0.97	11.79	1.07	3.57
	< 4.30	5.4	54.10	84.0	0.82	12.59	2.12	51.97	31.12
	> 4.30	20.3	1.43	8.4	3.11	1.25	9.03	1.47	3.75
	TOTAL	100.0	(3.47)	100.0	15.29	14.99	43.52	3.19	39.13
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	47.3	(0.12)	1.8					
	< 3.90	27.1	(1.07)	9.1					
	< 4.30	4.9	(51.97)	79.5					
	> 4.30	20.7	(1.47)	9.6					
OVERALL TOTALS..	SANDS	43.5	(3.19)	39.1					
	SLIMES	56.5	3.82	60.9					
	TOTAL	100.0	(3.54)	100.0					

CALCULATED HEAD ASSAY= 3.54 %

APPENDIX 3. RBE 5. -0.15 MM GRIND. AG DISTRIBUTION.

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS --- WT %	--- ASSAY PPM	AG DISTN %	IN HEAD SAMPLE WT %	AG DISTN %	CUMULATIVE DATA WEIGHT %	ASSAY PPM	DISTN %
+ 0.105	< 2.96	45.1	5.00	0.5	6.06	0.06	6.06	5.00	0.06
	< 3.90	26.4	50.00	2.7	3.55	0.33	3.55	50.00	0.33
	< 4.30	4.5	470.00	4.3	0.61	0.53	0.61	470.00	0.53
	> 4.30	23.9	1915.00	92.6	3.22	11.36	3.22	1915.00	11.36
	TOTAL	100.0	(495.37)	100.0	13.44	12.27	13.44	495.37	12.27
- 0.105 + 0.075	< 2.96	49.3	4.00	0.5	7.29	0.05	13.35	4.45	0.11
	< 3.90	27.8	32.00	2.3	4.11	0.24	7.66	40.35	0.57
	< 4.30	4.6	470.00	5.7	0.69	0.59	1.30	470.00	1.12
	> 4.30	18.3	1905.00	91.4	2.70	9.49	5.92	1910.44	20.85
	TOTAL	100.0	(380.75)	100.0	14.79	10.38	28.23	435.32	22.65
- 0.075 + 0.053	< 2.96	47.3	3.00	0.3	7.23	0.04	20.58	3.94	0.15
	< 3.90	27.0	27.00	1.7	4.13	0.21	11.79	35.68	0.78
	< 4.30	5.4	470.00	6.1	0.82	0.71	2.12	470.00	1.84
	> 4.30	20.3	1890.00	91.9	3.11	10.82	9.03	1903.40	31.66
	TOTAL	100.0	(417.95)	100.0	15.29	11.78	43.52	429.22	34.43
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	47.3	(3.94)	0.4					
	< 3.90	27.1	(35.68)	2.3					
	< 4.30	4.9	(470.00)	5.3					
	> 4.30	20.7	(1903.40)	92.0					
OVERALL TOTALS..	SANDS	43.5	(429.22)	34.4					
	SLIMES	56.5	630.00	65.6					
	TOTAL	100.0	(542.61)	100.0					

CALCULATED HEAD ASSAY= 542.61 PPM

APPENDIX 4. RBE 5. -0.15 MM GRIND. CU DISTRIBUTION.

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS WT %	CU ASSAY %	CU DISTN %	IN HEAD SAMPLE WT %	CU DISTN %	CUMULATIVE DATA WEIGHT %	CU ASSAY %	CU DISTN %
+ 0.105	< 2.96	45.1	0.01	1.9	6.06	0.22	6.06	0.01	0.22
	< 3.90	26.4	0.04	7.5	3.55	0.87	3.55	0.04	0.87
	< 4.30	4.5	1.13	32.9	0.61	3.83	0.61	1.13	3.83
	> 4.30	23.9	0.38	57.7	3.22	6.72	3.22	0.38	6.72
	TOTAL	100.0	(0.16)	100.0	13.44	11.64	13.44	0.16	11.64
- 0.105 + 0.075	< 2.96	49.3	0.00	1.4	7.29	0.16	13.35	0.01	0.38
	< 3.90	27.8	0.03	6.1	4.11	0.69	7.66	0.04	1.56
	< 4.30	4.6	1.20	40.5	0.69	4.58	1.30	1.16	8.40
	> 4.30	18.3	0.39	52.0	2.70	5.88	5.92	0.38	12.60
	TOTAL	100.0	(0.14)	100.0	14.79	11.30	28.23	0.15	22.94
- 0.075 + 0.053	< 2.96	47.3	0.00	1.2	7.23	0.16	20.58	0.00	0.54
	< 3.90	27.0	0.02	4.3	4.13	0.56	11.79	0.03	2.12
	< 4.30	5.4	1.21	42.9	0.82	5.55	2.12	1.18	13.96
	> 4.30	20.3	0.39	51.5	3.11	6.67	9.03	0.38	19.27
	TOTAL	100.0	(0.15)	100.0	15.29	12.95	43.52	0.15	35.89
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	47.3	(0.00)	1.5					
	< 3.90	27.1	(0.03)	5.9					
	< 4.30	4.9	(1.18)	38.9					
	> 4.30	20.7	(0.38)	53.7					
OVERALL TOTALS..	SANDS	43.5	(0.15)	35.9					
	SLIMES	56.5	0.20	64.1					
	TOTAL	100.0	(0.18)	100.0					

CALCULATED HEAD ASSAY= 0.18 %

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APPENDIX 5. RBE 5. -0.15 MM GRIND. AS DISTRIBUTION.

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS WT %	AS ASSAY %	AS DISTN %	IN HEAD SAMPLE WT %	AS DISTN %	CUMULATIVE DATA WEIGHT %	AS ASSAY %	AS DISTN %
+ 0.105	< 2.96	45.1	0.07	7.6	6.06	0.76	6.06	0.07	0.76
	< 3.90	26.4	0.31	19.0	3.55	1.92	3.55	0.31	1.92
	< 4.30	4.5	0.58	6.1	0.61	0.61	0.61	0.58	0.61
	> 4.30	23.9	1.22	67.3	3.22	6.78	3.22	1.22	6.78
	TOTAL	100.0	(0.43)	100.0	13.44	10.07	13.44	0.43	10.07
- 0.105 + 0.075	< 2.96	49.3	0.05	6.1	7.29	0.64	13.35	0.06	1.41
	< 3.90	27.8	0.22	14.5	4.11	1.53	7.66	0.26	3.44
	< 4.30	4.6	0.38	4.2	0.69	0.45	1.30	0.47	1.06
	> 4.30	18.3	1.69	75.1	2.70	7.91	5.92	1.44	14.68
	TOTAL	100.0	(0.41)	100.0	14.79	10.52	28.23	0.42	20.59
- 0.075 + 0.053	< 2.96	47.3	0.04	3.8	7.23	0.51	20.58	0.05	1.91
	< 3.90	27.0	0.16	8.7	4.13	1.16	11.79	0.23	4.60
	< 4.30	5.4	0.25	2.7	0.82	0.36	2.12	0.39	1.42
	> 4.30	20.3	2.11	84.8	3.11	11.31	9.03	1.67	25.99
	TOTAL	100.0	(0.51)	100.0	15.29	13.34	43.52	0.45	33.93
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	47.3	(0.05)	5.6					
	< 3.90	27.1	(0.23)	13.6					
	< 4.30	4.9	(0.39)	4.2					
	> 4.30	20.7	(1.67)	76.6					
OVERALL TOTALS..	SANDS	43.5	(0.45)	33.9					
	SLIMES	56.5	0.68	66.1					
	TOTAL	100.0	(0.58)	100.0					

CALCULATED HEAD ASSAY= 0.58 %

APPENDIX 6. RBE 5. -0.15 MM GRIND. SN DISTRIBUTION.

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS WT %	IN SIZE FRACTIONS SN ASSAY PPM	IN SIZE FRACTIONS SN DISTN %	IN HEAD SAMPLE WT %	IN HEAD SAMPLE SN DISTN %	CUMULATIVE DATA WEIGHT %	CUMULATIVE DATA ASSAY PPM	CUMULATIVE DATA DISTN %
+ 0.105	< 2.96	45.1	40.00	4.6	6.06	0.55	6.06	40.00	0.55
	< 3.90	26.4	280.00	18.9	3.55	2.26	3.55	280.00	2.26
	< 4.30	4.5	5000.00	58.1	0.61	6.93	0.61	5000.00	6.93
	> 4.30	23.9	300.00	18.4	3.22	2.19	3.22	300.00	2.19
	TOTAL	100.0	(391.24)	100.0	13.44	11.93	13.44	391.24	11.93
- 0.105 + 0.075	< 2.96	49.3	60.00	8.1	7.29	0.99	13.35	50.93	1.54
	< 3.90	27.8	160.00	12.2	4.11	1.49	7.66	215.66	3.75
	< 4.30	4.6	5300.00	67.6	0.69	8.25	1.30	5158.69	15.19
	> 4.30	18.3	240.00	12.1	2.70	1.47	5.92	272.61	3.66
	TOTAL	100.0	(363.80)	100.0	14.79	12.21	28.23	376.86	24.15
- 0.075 + 0.053	< 2.96	47.3	60.00	6.9	7.23	0.99	20.58	54.12	2.53
	< 3.90	27.0	140.00	9.1	4.13	1.31	11.79	189.18	5.06
	< 4.30	5.4	5300.00	69.2	0.82	9.92	2.12	5213.61	25.11
	> 4.30	20.3	300.00	14.8	3.11	2.11	9.03	282.04	5.78
	TOTAL	100.0	(412.96)	100.0	15.29	14.33	43.52	389.55	38.48
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	47.3	(54.12)	6.6					
	< 3.90	27.1	(189.18)	13.2					
	< 4.30	4.9	(5213.61)	65.3					
	> 4.30	20.7	(282.04)	15.0					
OVERALL TOTALS..	SANDS	43.5	(389.55)	38.5					
	SLIMES	56.5	480.00	61.5					
	TOTAL	100.0	(440.63)	100.0					

CALCULATED HEAD ASSAY= 440.63 PPM

APPENDIX 7. RBE 10A. -0.15 MM GRIND. PB DISTRIBUTION

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS --- WT %	--- PB ASSAY %	PB DISTN %	IN HEAD SAMPLE WT %	PB DISTN %	CUMULATIVE DATA WEIGHT %	ASSAY %	DISTN %
+ 0.105	< 2.96	37.1	0.13	0.4	5.18	0.04	5.18	0.13	0.04
	< 3.90	38.2	0.44	1.5	5.34	0.15	5.34	0.44	0.15
	< 4.30	5.2	1.83	0.8	0.72	0.09	0.72	1.83	0.09
	> 4.30	19.5	56.90	97.3	2.73	10.11	2.73	56.90	10.11
	TOTAL	100.0	(11.42)	100.0	13.97	10.39	13.97	11.42	10.39
- 0.105 + 0.075	< 2.96	36.1	0.10	0.3	4.45	0.03	9.63	0.12	0.07
	< 3.90	36.4	0.36	0.9	4.49	0.11	9.83	0.40	0.26
	< 4.30	5.5	1.39	0.5	0.68	0.06	1.40	1.62	0.15
	> 4.30	22.0	62.50	98.3	2.72	11.06	5.45	59.69	21.17
	TOTAL	100.0	(14.01)	100.0	12.34	11.26	26.32	12.63	21.65
- 0.075 + 0.053	< 2.96	34.8	0.09	0.2	4.27	0.02	13.90	0.11	0.10
	< 3.90	37.0	0.27	0.7	4.54	0.08	14.38	0.36	0.34
	< 4.30	5.7	1.09	0.4	0.70	0.05	2.11	1.44	0.20
	> 4.30	22.5	63.50	98.7	2.76	11.43	8.21	60.98	32.60
	TOTAL	100.0	(14.50)	100.0	12.28	11.59	38.59	13.23	33.23
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	36.0	(0.11)	0.3					
	< 3.90	37.2	(0.36)	1.0					
	< 4.30	5.5	(1.44)	0.6					
	> 4.30	21.3	(60.98)	98.1					
OVERALL TOTALS..	SANDS	38.6	(13.23)	33.2					
	SLIMES	61.4	16.70	66.8					
	TOTAL	100.0	(15.36)	100.0					

CALCULATED HEAD ASSAY= 15.36 %

033

APPENDIX 8. RBE 10A. -0.15 MM GRIND. ZN DISTRIBUTION

920175

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS WT %	ZN ASSAY %	ZN DISTN %	IN HEAD SAMPLE WT %	ZN DISTN %	CUMULATIVE DATA WEIGHT %	ASSAY %	DISTN %
+ 0.105	< 2.96	37.1	0.13	1.5	5.18	0.19	5.18	0.13	0.19
	< 3.90	38.2	1.47	17.3	5.34	2.19	5.34	1.47	2.19
	< 4.30	5.2	47.30	75.7	0.72	9.55	0.72	47.30	9.55
	> 4.30	19.5	0.92	5.5	2.73	0.70	2.73	0.92	0.70
	TOTAL	100.0	(3.24)	100.0	13.97	12.63	13.97	3.24	12.63
- 0.105 + 0.075	< 2.96	36.1	0.10	1.1	4.45	0.12	9.63	0.12	0.31
	< 3.90	36.4	1.17	12.4	4.49	1.46	9.83	1.33	3.65
	< 4.30	5.5	50.50	80.9	0.68	9.56	1.40	48.85	19.11
	> 4.30	22.0	0.88	5.6	2.72	0.67	5.45	0.90	1.37
	TOTAL	100.0	(3.43)	100.0	12.34	11.81	26.32	3.33	24.44
- 0.075 + 0.053	< 2.96	34.8	0.08	0.8	4.27	0.10	13.90	0.11	0.41
	< 3.90	37.0	0.79	8.5	4.54	1.00	14.38	1.16	4.65
	< 4.30	5.7	51.20	85.6	0.70	10.05	2.11	49.63	29.16
	> 4.30	22.5	0.78	5.1	2.76	0.60	8.21	0.86	1.97
	TOTAL	100.0	(3.43)	100.0	12.28	11.74	38.59	3.36	36.18
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	36.0	(0.11)	1.1					
	< 3.90	37.2	(1.16)	12.9					
	< 4.30	5.5	(49.63)	80.6					
	> 4.30	21.3	(0.86)	5.4					
OVERALL TOTALS..	SANDS	38.6	(3.36)	36.2					
	SLIMES	61.4	3.73	63.8					
	TOTAL	100.0	(3.59)	100.0					

CALCULATED HEAD ASSAY= 3.59 %

034

APPENDIX 9. RBE 10A. -0.15 MM GRIND. AG DISTRIBUTION

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS WT %	AG ASSAY PPM	AG DISTN %	IN HEAD SAMPLE WT %	AG DISTN %	CUMULATIVE DATA WEIGHT %	ASSAY PPM	DISTN %
+ 0.105	< 2.96	37.1	6.00	0.7	5.18	0.08	5.18	6.00	0.08
	< 3.90	38.2	26.00	3.3	5.34	0.34	5.34	26.00	0.34
	< 4.30	5.2	235.00	4.1	0.72	0.42	0.72	235.00	0.42
	> 4.30	19.5	1405.00	91.8	2.73	9.45	2.73	1405.00	9.45
	TOTAL	100.0	(298.72)	100.0	13.97	10.28	13.97	298.72	10.28
- 0.105 + 0.075	< 2.96	36.1	4.00	0.4	4.45	0.04	9.63	5.08	0.12
	< 3.90	36.4	22.00	2.3	4.49	0.24	9.83	24.17	0.59
	< 4.30	5.5	215.00	3.3	0.68	0.36	1.40	225.33	0.78
	> 4.30	22.0	1510.00	94.0	2.72	10.11	5.45	1457.40	19.56
	TOTAL	100.0	(353.80)	100.0	12.34	10.76	26.32	324.55	21.04
- 0.075 + 0.053	< 2.96	34.8	3.00	0.3	4.27	0.03	13.90	4.44	0.15
	< 3.90	37.0	16.00	1.6	4.54	0.18	14.38	21.59	0.76
	< 4.30	5.7	160.00	2.6	0.70	0.28	2.11	203.50	1.06
	> 4.30	22.5	1525.00	95.5	2.76	10.39	8.21	1480.16	29.95
	TOTAL	100.0	(359.61)	100.0	12.28	10.88	38.59	335.70	31.92
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	36.0	(4.44)	0.5					
	< 3.90	37.2	(21.59)	2.4					
	< 4.30	5.5	(203.50)	3.3					
	> 4.30	21.3	(1480.16)	93.8					
OVERALL TOTALS..	SANDS	38.6	(335.70)	31.9					
	SLIMES	61.4	450.00	68.1					
	TOTAL	100.0	(405.89)	100.0					

CALCULATED HEAD ASSAY= 405.89 PPM

035

920177

APPENDIX 10. RBE 10A. -0.15 MM GRIND. CU DISTRIBUTION

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS --- WT %	ASSAY %	CU DISTN %	IN HEAD SAMPLE WT %	CU DISTN %	CUMULATIVE DATA WEIGHT %	ASSAY %	DISTN %
+ 0.105	< 2.96	37.1	0.01	2.1	5.18	0.23	5.18	0.01	0.23
	< 3.90	38.2	0.05	14.0	5.34	1.55	5.34	0.05	1.55
	< 4.30	5.2	1.05	36.5	0.72	4.04	0.72	1.05	4.04
	> 4.30	19.5	0.36	47.4	2.73	5.24	2.73	0.36	5.24
	TOTAL	100.0	(0.15)	100.0	13.97	11.06	13.97	0.15	11.06
- 0.105 + 0.075	< 2.96	36.1	0.01	1.6	4.45	0.17	9.63	0.01	0.40
	< 3.90	36.4	0.04	9.8	4.49	1.05	9.83	0.05	2.60
	< 4.30	5.5	1.07	36.1	0.68	3.87	1.40	1.06	7.90
	> 4.30	22.0	0.39	52.5	2.72	5.61	5.45	0.37	10.85
	TOTAL	100.0	(0.16)	100.0	12.34	10.69	26.32	0.16	21.75
- 0.075 + 0.053	< 2.96	34.8	0.01	1.3	4.27	0.14	13.90	0.01	0.54
	< 3.90	37.0	0.03	7.0	4.54	0.75	14.38	0.04	3.35
	< 4.30	5.7	1.16	41.0	0.70	4.35	2.11	1.09	12.26
	> 4.30	22.5	0.37	50.7	2.76	5.39	8.21	0.37	16.24
	TOTAL	100.0	(0.16)	100.0	12.28	10.63	38.59	0.16	32.38
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	36.0	(0.01)	1.7					
	< 3.90	37.2	(0.04)	10.3					
	< 4.30	5.5	(1.09)	37.8					
	> 4.30	21.3	(0.37)	50.2					
OVERALL TOTALS..	SANDS	38.6	(0.16)	32.4					
	SLIMES	61.4	0.21	67.6					
	TOTAL	100.0	(0.19)	100.0					

CALCULATED HEAD ASSAY= 0.19 %

APPENDIX 11. RBE 10A. -0.15 MM GRIND. AS DISTRIBUTION

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS --- WT %	--- AS ASSAY %	-- AS DISTN %	IN HEAD SAMPLE WT %	AS DISTN %	CUMULATIVE DATA WEIGHT %	ASSAY %	DISTN %
+ 0.105	< 2.96	37.1	0.01	1.0	5.18	0.16	5.18	0.01	0.16
	< 3.90	38.2	0.07	5.4	5.34	0.81	5.34	0.07	0.81
	< 4.30	5.2	0.23	2.3	0.72	0.34	0.72	0.23	0.34
	> 4.30	19.5	2.43	91.3	2.73	13.79	2.73	2.44	13.79
	TOTAL	100.0	(0.52)	100.0	13.97	15.09	13.97	0.52	15.09
- 0.105 + 0.075	< 2.96	36.1	0.01	0.9	4.45	0.11	9.63	0.01	0.26
	< 3.90	36.4	0.05	4.1	4.49	0.49	9.83	0.06	1.30
	< 4.30	5.5	0.15	1.8	0.68	0.21	1.40	0.19	0.55
	> 4.30	22.0	1.99	93.2	2.72	11.19	5.45	2.21	24.98
	TOTAL	100.0	(0.47)	100.0	12.34	12.00	26.32	0.50	27.10
- 0.075 + 0.053	< 2.96	34.8	0.01	0.7	4.27	0.08	13.90	0.01	0.34
	< 3.90	37.0	0.04	3.1	4.54	0.35	14.38	0.06	1.65
	< 4.30	5.7	0.10	1.4	0.70	0.15	2.11	0.16	0.71
	> 4.30	22.5	1.84	94.8	2.76	10.54	8.21	2.08	35.52
	TOTAL	100.0	(0.44)	100.0	12.28	11.11	38.59	0.48	38.21
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	36.0	(0.01)	0.9					
	< 3.90	37.2	(0.06)	4.3					
	< 4.30	5.5	(0.16)	1.9					
	> 4.30	21.3	(2.08)	92.9					
OVERALL TOTALS..	SANDS	38.6	(0.48)	38.2					
	SLIMES	61.4	0.49	61.8					
	TOTAL	100.0	(0.48)	100.0					

CALCULATED HEAD ASSAY= 0.48 %

APPENDIX 12. RBE 10A. -0.15 MM GRIND. SN DISTRIBUTION

SIZE FRACTION (MILLIMETRES)	SPEC GRAV FRACTION	IN SIZE FRACTIONS WT %	IN SIZE FRACTIONS ASSAY PPM	IN SIZE FRACTIONS SN DISTN %	IN HEAD SAMPLE WT %	IN HEAD SAMPLE SN DISTN %	CUMULATIVE DATA WEIGHT %	CUMULATIVE DATA ASSAY PPM	CUMULATIVE DATA DISTN %
+ 0.105	< 2.96	37.1	180.00	12.7	5.18	1.78	5.18	180.00	1.78
	< 3.90	38.2	400.00	29.1	5.34	4.08	5.34	400.00	4.08
	< 4.30	5.2	2700.00	26.6	0.72	3.74	0.72	2700.00	3.74
	> 4.30	19.5	850.00	31.6	2.73	4.43	2.73	850.00	4.43
	TOTAL	100.0	(525.64)	100.0	13.97	14.02	13.97	525.64	14.02
- 0.105 + 0.075	< 2.96	36.1	160.00	11.9	4.45	1.36	9.63	170.75	3.14
	< 3.90	36.4	340.00	25.6	4.49	2.92	9.83	372.59	6.99
	< 4.30	5.5	2500.00	28.4	0.68	3.24	1.40	2603.26	6.98
	> 4.30	22.0	750.00	34.1	2.72	3.89	5.45	800.10	8.32
	TOTAL	100.0	(484.20)	100.0	12.34	11.41	26.32	506.20	25.43
- 0.075 + 0.053	< 2.96	34.8	80.00	6.5	4.27	0.65	13.90	142.90	3.79
	< 3.90	37.0	200.00	17.2	4.54	1.73	14.38	318.07	8.73
	< 4.30	5.7	2400.00	32.0	0.70	3.23	2.11	2535.36	10.20
	> 4.30	22.5	850.00	44.4	2.76	4.49	8.21	816.90	12.81
	TOTAL	100.0	(430.90)	100.0	12.28	10.10	38.59	482.25	35.53
TOTALS FOR ABOVE SIZE FRACTIONS	< 2.96	36.0	(142.90)	10.7					
	< 3.90	37.2	(318.07)	24.6					
	< 4.30	5.5	(2535.36)	28.7					
	> 4.30	21.3	(816.90)	36.0					
OVERALL TOTALS..	SANDS	38.6	(482.25)	35.5					
	SLIMES	61.4	550.00	64.5					
	TOTAL	100.0	(523.85)	100.0					

CALCULATED HEAD ASSAY= 523.85 PPM

APPENDIX 13 - FLOTATION TEST 1

a) Grinding

500 g charge (-1.7 mm) ground in rod mill in two stages to 100% -150 µm. First stage grind 3 minutes, second stage 3½ minutes. Pulp density in rod mill 60% solids.

b) Flotation

(i) Lead Flotation

Stage	Time (mins)	pH	Reagent Additions (g/tonne) Na_2CO_3	NaCN	$ZnSO_4$	SIPX	MIBC
Conditioning	5	9.0	220	60	60	50	-
Rougher Fltn. 1	2½	-	-	-	-	-	5
Rougher Fltn. 2	2	-	-	-	-	30	5
Rougher Fltn. 3	2	-	-	-	-	20	3
1st Clnr Fltn.	3	-	-	-	-	-	-
2nd Clnr Fltn.	2	-	-	-	-	-	-

(ii) Zinc Flotation (on Rougher Tailings from Lead Flotation)

Stage	Time (mins)	pH	Reagent Additions (g/tonne) $CuSO_4$	$Ca(OH)_2$	SIPX	MIBC
Conditioning	5	9.0	400	220	10	-
Rougher Fltn. 1	2	-	-	-	-	5
Rougher Fltn. 2	2	-	-	-	8	5
Rougher Fltn. 3	1	-	-	-	5	5
1st Clnr Fltn.	2	-	-	-	-	-
2nd Clnr Fltn.	2	-	-	-	-	-

c) Results

Product	Weight %	Assay, % or ppm* Pb	Zn	Ag*	Cu	As	Sn*	Distribution, % Pb	Zn	Ag	Cu	As	Sn
Pb 2nd Clnr Conc	19.566	76.8	2.5	1870	0.60	0.38	420	95.8	14.6	91.1	71.7	13.5	17.4
Pb 2nd Clnr Tail	1.033	22.7	8.8	630	0.28	2.80	800	1.5	2.7	1.6	1.8	5.2	1.7
Pb 1st Clnr Tail	1.116	9.6	6.9	280	0.16	2.45	1350	0.7	2.3	0.8	1.1	5.0	3.2
Zn 2nd Clnr Conc	5.723	2.4	42.5	275	0.52	3.7	3080	0.9	72.7	3.9	18.2	38.4	37.2
Zn 2nd Clnr Tail	1.136	1.8	9.4	125	0.22	6.1	1720	0.1	3.2	0.4	1.5	12.6	4.1
Zn 1st Clnr Tail	2.500	1.27	3.3	75	0.10	3.1	1090	0.2	2.5	0.5	1.5	14.1	5.8
Zn Rougher Tail	68.926	0.18	0.10	10	0.01	0.09	210	0.8	2.1	1.7	4.2	11.2	30.6
Calculated Head	100.000	15.7	3.35	401	0.16	0.55	470	100.0	100.0	100.0	100.0	100.0	100.0

d) Objective of Test

To try a conventional procedure for treating a lead-zinc ore, at a grind size (indicated by mineralogical studies) to give a high degree of liberation.

e) Comments on Results

1. Very high lead and silver recoveries into a very high-grade lead concentrate.

2. Relatively low zinc concentrate grade, although high zinc recovery from lead rougher flotation.

APPENDIX 14 - FLOTATION TEST 2

a) Grinding

500 g charge (-1.7 mm) ground in rod mill for 6.5 minutes, at 60% solids.

b) Flotation

(i) Lead Flotation

Stage	Time (mins)	pH	Reagent Additions g/tonne Na_2CO_3	NaCN	$ZnSO_4$	SIPX	MIBC
Conditioning	5	9.0	280	60	60	50	-
Rougher Fltn. 1	2½	9.0	-	-	-	-	5
Rougher Fltn. 2	3	9.0	-	-	-	30	5
Rougher Fltn. 3	3	9.0	-	-	-	20	3
1st Clnr Fltn.	4	9.0	40	-	-	-	-
2nd Clnr Fltn.	2½	9.0	40	-	-	-	-

(iii) Zinc Flotation (on combined Lead Rougher and Lead 1st and 2nd Cleaner Flotation Tailings)

Stage	Time (mins)	pH	Reagent Additions g/tonne $CuSO_4$	$Ca(OH)_2$	Z200	MIBC
Conditioning	5	9.0	400	240	10	-
Rougher Fltn. 1	2	9.0	-	-	-	5
Rougher Fltn. 2	2	9.0	-	-	8	5
Rougher Fltn. 3	1	9.0	-	-	5	-
1st Clnr Fltn.	2	9.0	-	20	-	-
2nd Clnr Fltn.	2	9.0	-	20	-	-
3rd Clnr Fltn.	2	9.0	-	10	-	-

c) Results

Product	Weight %	Assay, % or ppm* Pb	Zn	Ag*	Cu	As	Sn*	Distribution, % Pb	Zn	Ag	Cu	As	Sn
Pb 2nd Clnr Conc	20.303	77.9	1.93	2050	0.64	0.43	400	98.4	11.9	95.0	70.3	15.9	19.0
Zn 3rd Clnr Conc	6.003	1.01	43.7	230	0.54	4.45	2850	0.4	79.7	3.1	17.5	48.6	40.0
Zn 3rd Clnr Tail	0.778	1.92	9.73	145	0.29	8.50	1700	0.1	2.3	0.3	1.2	12.0	3.1
Zn 2nd Clnr Tail	0.818	3.59	8.73	160	0.31	4.15	1650	0.2	2.2	0.3	1.4	6.2	3.2
Zn 1st Clnr Tail	1.895	3.10	3.50	105	0.20	2.45	1150	0.4	2.0	0.5	2.0	8.4	5.1
Zn Rougher Tail	70.203	0.14	0.09	5	0.02	0.07	180	0.6	1.9	0.8	7.6	8.9	29.6
Calculated Head	100.000	16.1	3.29	438	0.18	0.55	430	100.0	100.0	100.0	100.0	100.0	100.0

d) Objectives of Test

1. To try longer lead flotation times
2. To try a different zinc collector
3. To try an extra zinc flotation stage

e) Comments on Results

1. Extremely high lead and silver recoveries into a very high-grade lead concentrate.
2. The collector Z-200 is no more effective than sodium isopropyl xanthate.
3. Only a small zinc grade increase is achieved by the additional cleaning stage.

APPENDIX 15 - FLOTATION TEST 3

a) Grinding

500 g charge (-1.7 mm) ground in rod mill for 4.5 minutes at 60% solids.

b) Flotation

(i) Lead Flotation

Stage	Time (mins)	pH	Reagent Additions (g/tonne) Na_2CO_3	NaCN	$ZnSO_4$	SIPX	MIBC
Conditioning	5	9.0	240	60	60	50	-
Rougher Fltn. 1	2½	9.0	-	-	-	-	5
Rougher Fltn. 2	3	9.0	-	-	-	30	5
Rougher Fltn. 3	3	9.0	-	-	-	20	3
1st Clnr Fltn.	4	9.0	40	-	-	-	-
2nd Clnr Fltn.	2½	9.0	40	-	-	-	-

(ii) Zinc Flotation (on Lead Rougher Tailings)

Stage	Time	pH	Reagent Additions (g/tonne) $CuSO_4$	$Ca(OH)_2$	SIPX	MIBC
Conditioning	5	9.0	400	260	10	-
Rougher Fltn. 1	2	9.0	-	-	-	5
Rougher Fltn. 2	2	9.0	-	-	8	5
Rougher Fltn. 3	1	9.0	-	-	5	5
1st Clnr Fltn.	2	9.0	-	20	-	-
2nd Clnr Fltn.	2	9.0	-	20	-	-

c) Results

Product	Weight %	Assay, % or ppm* Pb	Zn	Ag*	Cu	As	Sn*	Distribution, % Pb	Zn	Ag	Cu	As	Sn
Pb 2nd Clnr Conc	21.411	78.7	2.07	1955	0.61	0.28	295	98.0	13.6	94.4	68.1	11.5	13.7
Pb 2nd Clnr Tail	0.498	10.8	6.09	345	0.27	3.20	1240	0.3	0.9	0.4	0.7	3.0	1.3
Pb 1st Clnr Tail	1.224	6.97	5.34	240	0.18	1.90	920	0.5	2.0	0.6	1.1	4.5	2.4
Zn 2nd Clnr Conc	6.079	1.53	40.6	245	0.53	5.08	2710	0.5	75.0	3.3	16.8	59.1	35.8
Zn 2nd Clnr Tail	0.954	1.02	10.7	125	0.29	4.60	1630	0.1	3.1	0.3	1.4	8.4	3.4
Zn 1st Clnr Tail	1.037	1.20	4.29	75	0.20	1.51	1043	0.1	1.4	0.2	1.1	3.0	2.3
Zn Rougher Tail	68.797	0.13	0.14	50	0.03	0.08	275	0.5	3.0	0.8	10.8	10.5	41.1
Calculated Head	100.000	17.19	3.25	444	0.19	0.52	461	100.0	100.0	100.0	100.0	100.0	100.0

d) Objective of Test

To try a coarser grind.

e) Comments on Results

The coarser grind has a very slight effect on results.

APPENDIX 16 - FLOTATION TEST 4

a) Grinding

500 g charge (-1.7 mm) ground in rod mill for 8.5 minutes at 60% solids.

b) Flotation

(i) Lead Flotation

Stage	Time (mins)	pH	Reagent Additions (g/tonne) Na_2CO_3	NACN	$ZnSO_4$	SIPX	MIBC
Conditioning	5	9.0	280	60	60	50	-
Rougher Fltn. 1	2½	9.0	-	-	-	-	5
Rougher Fltn. 2	3	9.0	-	-	-	30	5
Rougher Fltn. 3	3	9.0	-	-	-	20	3
1st Clnr Fltn.	4	9.0	40	-	-	-	-
2nd Clnr Fltn.	2½	9.0	40	-	-	-	-

(ii) Zinc Flotation (on Lead Rougher Tailings)

Stage	Time (mins)	pH	Reagent Additions (g/tonne) $CuSO_4$	$Ca(OH)_2$	SIPX	MIBC
Conditioning	5	9.0	400	220	10	-
Rougher Fltn. 1	2	9.0	-	-	-	5
Rougher Fltn. 2	2	9.0	-	-	8	5
Rougher Fltn. 3	1	9.0	-	-	5	5
1st Clnr Fltn.	2	9.0	-	30	-	-
2nd Clnr Fltn.	2	9.0	-	20	-	-

c) Results

Product	Weight %	Assay, % or g/t* Pb	Zn	Ag*	Cu	As	Sn*	Distribution, % Pb	Zn	Ag	Cu	As	Sn
Pb 2nd Clnr Conc	20.858	76.0	2.30	1950	0.66	0.23	450	98.6	15.0	95.2	72.5	9.4	21.4
Pb 2nd Clnr Tail	0.483	11.7	5.33	340	0.23	1.36	1070	0.3	0.8	0.4	0.6	1.3	1.2
Pb 1st Clnr Tail	1.711	3.18	5.73	130	0.13	1.22	980	0.3	3.1	0.5	1.2	4.1	2.7
Zn 2nd Clnr Conc	6.040	0.48	40.8	220	0.50	5.66	2510	0.2	77.2	3.1	15.9	67.1	34.0
Zn 2nd Clnr Tail	0.966	0.70	5.91	85	0.22	3.20	1510	0.1	1.8	0.2	1.1	6.1	3.2
Zn 1st Clnr Tail	1.792	0.67	1.89	65	0.16	1.51	980	0.1	1.0	0.3	1.5	5.3	2.3
Zn Rougher Tail	68.150	0.09	0.05	2	0.02	0.05	230	0.4	1.1	0.3	7.2	6.7	35.2
Calculated Head	100.000	16.07	3.19	427	0.19	0.51	449	100.0	100.0	100.0	100.0	100.0	100.0

d) Objectives of Test

To try a finer grind.

e) Comments on Results

The effect of a finer grind is again slight. In particular, zinc concentrate grade is not improved by the finer grind.

APPENDIX 17 - FLOTATION TEST 5

a) Grinding

500 g charge (-1.7 mm) ground in rod mill for 6.5 minutes at 60% solids.

b) Flotation

(i) Lead Flotation

Stage	Time (mins)	pH	Reagent Additions (g/tonne) Na_2CO_3	NaCN	$ZnSO_4$	SIPX	MIBC
Conditioning	5	9.0	200	60	60	50	-
Rougher Fltn. 1	2½	9.0	-	-	-	-	5
Rougher Fltn. 2	3	9.0	-	-	-	30	5
Rougher Fltn. 3	3	9.0	-	-	-	20	5
1st Clnr Fltn.	4	9.0	30	-	-	-	-
2nd Clnr Fltn.	2½	9.0	40	-	-	-	-

(ii) Zinc Flotation

Stage	Time (mins)	pH	Reagent Additions (g/tonne) $CuSO_4$	$Ca(OH)_2$	Aerofloat Z11	SIPX	MIBC
Conditioning	5	11.0	400	520	10	-	-
Rougher Fltn. 1	2	11.0	-	-	-	-	5
Rougher Fltn. 2	2	11.0	-	-	8	-	5
Rougher Fltn. 3	1	11.0	-	-	-	5	5
1st Clnr Fltn.	2	11.0	-	100	-	-	-
2nd Clnr Fltn.	2	11.0	-	60	-	-	-

(iii) Reverse Flotation of Concentrate from Zinc Flotation

Stage	Time (mins)	pH	Temp (°C)	Reagent Additions (g/tonne) SO_2	PAX
Conditioning	10	4.0-5.0	90	†	-
Rougher Fltn.	3	4.5			2.5
Conditioning of Rougher Froth Prod.	10	4.0-5.0	90	†	-
Flotation	2	4.5			-

† SO_2 added to maintain pH, but amount not measured

c) Results

Product	Weight %	Assay, % or g/t* Pb	Zn	Ag*	Cu	As	Sn*	Distribution, % Pb	Zn	Ag	Cu	As	Sn
Pb 2nd Clnr Conc	21.866	74.6	3.25	1900	0.64	0.54	600	98.95	21.8	95.7	74.2	23.1	28.2
R.F.†Rougher Tail	1.300	2.54	12.3	165	0.24	3.16	1550	0.20	4.9	0.5	1.7	8.0	4.3
R.F. Cleaner Tail	4.776	0.77	41.0	230	0.51	4.51	2500	0.22	60.1	2.5	12.9	42.1	25.6
R.F. Cleaner Conc	1.169	0.56	32.2	180	0.42	6.75	1750	0.04	11.6	0.5	2.6	15.4	4.4
Zn 2nd Clnr Tail	1.915	0.78	0.47	27	0.09	0.67	620	0.09	0.3	0.1	0.9	2.5	2.6
Zn 1st Clnr Tail	0.635	1.07	1.24	50	0.13	1.78	840	0.04	0.2	0.1	0.4	2.2	1.1
Zn Rougher Tail	68.339	0.11	0.05	4	0.02	0.05	230	0.46	1.1	0.6	7.3	6.7	33.8
	100.000	16.5	3.26	434	0.19	0.51	466	100.00	100.0	100.0	100.0	100.0	100.0

† Reverse flotation

d) Objectives of Test

1. To try a different zinc collector.
2. To try a higher zinc flotation pH.
3. To try reverse flotation of the zinc concentrate produced by a conventional procedure.

e) Comments on Test Results

The procedure is ineffective in improving zinc concentrate grade.

APPENDIX 7

A Compilation of results from work carried out

at GAR and GAT East Renison - EL 5 / 63 Part 6

Apendix 7: A compilation of results from work carried out at GAR and GAT East Renison - E.L. 5/63 Part 6.

2514	1	1:5000	Renison Grid	- GAT Base plan
2177		1:2500		- GAR Grid auger sampling W ppm
2130				As
2128				Sn
2126				Zn
2124	2.			Pb
2122				Ni
2120				Cu
2326			GAR magnetic intensity contours	
2325				

Dir. Mr. | A.O. | C.G. | E.O. | D.S.M.E. | Director
Received - 1 JUN 1981 | E & IL
DEPT. OF MINES
Reply No. 4509/81

371 000 m E
372 000 m E
373 000 m E
374 000 m E
5 374 000 m N
5 373 000 m N
5 372 000 m N

L 5600 N
L 5360 N
L 5120 N
L 4880 N
L 4640 N
L 4400 N
L 4160 N
L 3920 N

PIEMAN RIVER
EMU BAY RAILWAY
PERTH TRACK
RING RIVER
COLEPEKOY CREEK
MUNCHISON HIGHWAY
RENISON LIMITED PEG 14
RENISON LIMITED PEG 13

920188

5 cm

81/1604. Vol 5/14. 3799

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAT

BASE PLAN

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	18/12/80
AMENDED	
SCALE	1 : 5000
PLAN No	TAS/2/2514

5 372 000 m N

372 000 m E

373 000 m E

L 4340 N
L 4280 N
L 4220 N
L 4160 N
L 4100 N
L 4040 N
L 3980 N
L 3920 N
L 3860 N
L 3800 N
L 3740 N
L 3680 N
L 3620 N

L 4700 W

MURCHISON HIGHWAY

CAR PARK

PICNIC TABLES

EXE RIVER

EASTERN EXE LINE

L 1452 EXE RIVER

L 1607 EXE RIVER

L 1760 EXE RIVER

L 1980 EXE RIVER

P.M.G. ROAD

BLD

5 cm

920189

81-1604. Vol. 5/14

3800

TAS/2/2176

TAS/2/2177

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

GEOCHEMICAL GRID AUGER SAMPLING

TUNGSTEN RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 : 2500
PLAN No.	TAS/2/2177

5 372 000 m N

372 000 m E

373 000 m E

TAS/2/2129
TAS/2/2130
SHEET INDEX

TN

5 cm

920190

81-1604. Vol 6/4.

3801

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

°GEOCHEMICAL GRID AUGER SAMPLING

ARSENIC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	5/80
AMENDED (REDRAFTED 3/11/80)	11/3/81
SCALE	1 : 2500
PLAN No.	TAS/2/2130

5 372 000 m N

372 000 m E

373 000 m E

L 4340 N
L 4280 N
L 4220 N
L 4160 N
L 4100 N
L 4040 N
L 3980 N
L 3920 N
L 3860 N
L 3800 N
L 3740 N
L 3680 N
L 3620 N

MURCHISON HIGHWAY

EXE RIVER

EASTERN LINE

L 1452 EXE RIVER

L 1607 EXE RIVER

L 1760 EXE RIVER

L 1960 EXE RIVER

PMS ROAD

TRACK

CAIRN

5 cm

TAS/2/2127

TAS/2/2128

SHEET INDEX

TN

920191

81-1604. Vol 5/14

3802

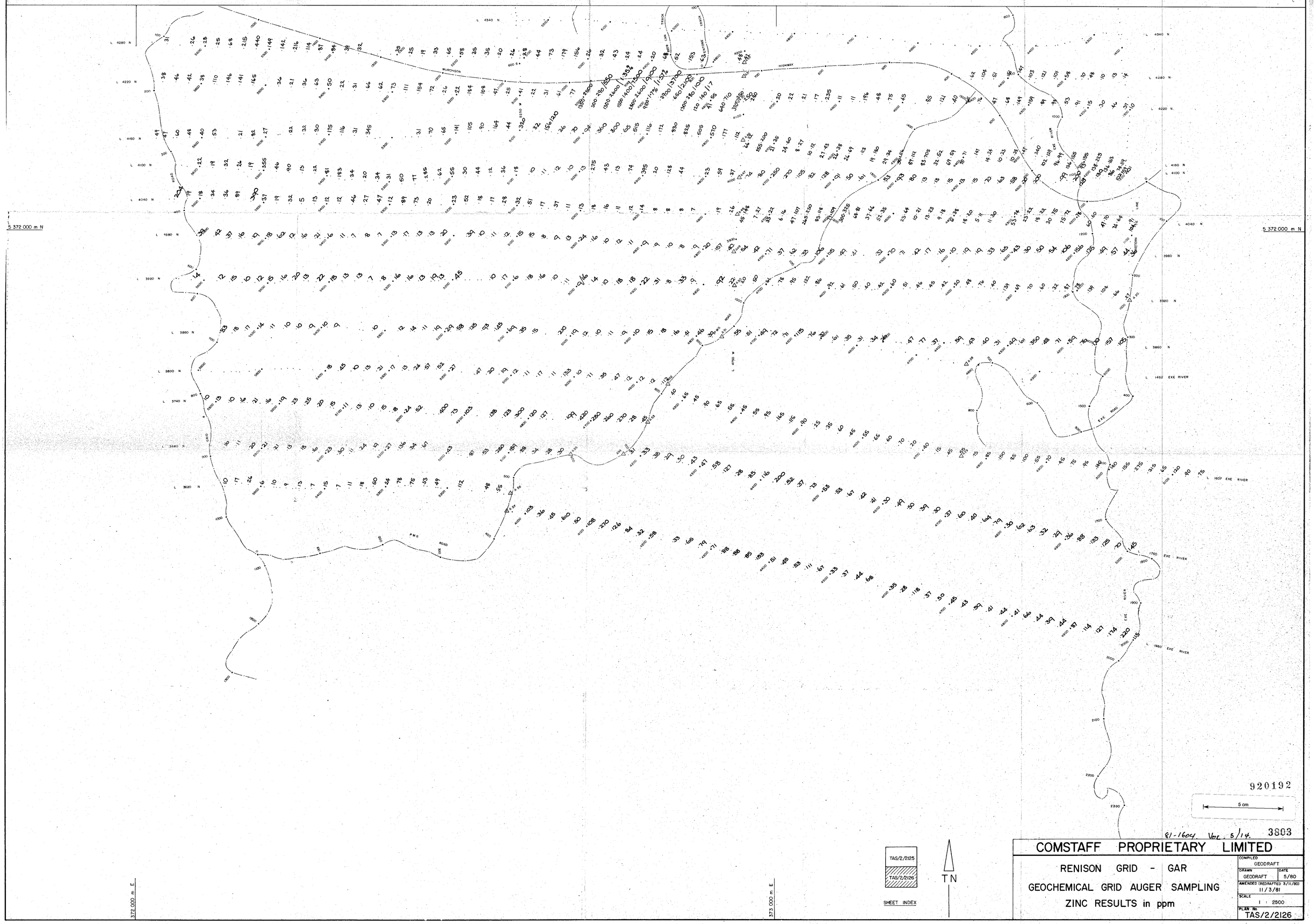
COMSTAFF PR[illegible]TARY LIMITED

RENISON GRID - [illegible]GAR

GEOCHEMICAL GRID AUGER SAMPLING

TIN RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	5/80
AMENDED (REDRAFTED 3/11/80)	11/3/81
SCALE	1 : 2500
PLAN No.	TAS/2/2128



920192

5 cm

81-1604 Vol. 5/14. 3803

TAS/2/2125
TAS/2/2126
SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

GEOCHEMICAL GRID AUGER SAMPLING

ZINC RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	5/80
AMENDED (REDRAFTED 3/11/80)	11/3/81
SCALE	1 : 2500
PLAN No	TAS/2/2126

5 372 000 m N

372 000 m E

373 000 m E

MURCHISON HIGHWAY

EXE RIVER

EASTERN LINE

PMG ROAD

TRACK

CAR PARK

TRACK

TELEPHONE

L 4340 N

L 4280 N

L 4220 N

L 4160 N

L 4100 N

L 4040 N

L 3980 N

L 3920 N

L 3860 N

L 3800 N

L 3740 N

L 3680 N

L 3620 N

L 1462 EXE RIVER

L 1607 EXE RIVER

L 1760 EXE RIVER

L 1960 EXE RIVER

5 cm

920193

81-1604 Vol 5/14

3804

TAS/2/2123

TAS/2/2124

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

GEOCHEMICAL GRID AUGER SAMPLING

LEAD RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	17/5/80
AMENDED (REDRAFTED 3/11/80)	11/3/81
SCALE	1 : 2500
PLAN No	TAS/2/2124

5 372 000 m N

372 000 m E

373 000 m E

MURCHISON HIGHWAY

ROAD

EXE RIVER

L 4340 N
L 4280 N
L 4220 N
L 4160 N
L 4100 N
L 4040 N
L 3980 N
L 3920 N
L 3860 N
L 3800 N
L 3740 N
L 3680 N
L 3620 N
L 1452 EXE RIVER
L 1607 EXE RIVER
L 1760 EXE RIVER
L 1860 EXE RIVER

5 cm

920194

81-1604 5/14. 3805

TAS/2/2121
TAS/2/2122

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

GEOCHEMICAL GRID AUGER SAMPLING

NICKEL RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	. 5/80
AMENDED (REDRAFTED 3/11/80)	10/3/81
SCALE	1 : 2500
PLAN No	TAS/2/2122

5 372 000 m N

5 372 000 m N

372 000 m E

373 000 m E

TAS/2/2119

TAS/2/2120

SHEET INDEX

TN

5 cm

920195

81-1604. WC 6/14

3806

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

GEOCHEMICAL GRID AUGER SAMPLING

COPPER RESULTS in ppm

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	17/5/80
AMENDED (REDRAFTED 3/11/80)	10/3/81
SCALE	1 : 2500
PLAN No.	TAS/2/2120

DDH RBE 19
DDH RBE 18
DDH RBE 21
DDH RBE 13
DDH RBE-1
TRACK
F
F
E
2500
2000
3000
5 372 000 m N
372 000 m E
373 000 m E
EXE RIVER
5 cm
Contour interval 100 nT
TAS/2/2325
TAS/2/2326
SHEET INDEX
TN
920196
81-1604 Vol 5/14. 3807
COMSTAFF PROPRIETARY LIMITED
RENISON GRID - GAR
MAGNETIC INTENSITY CONTOURS
COMPILED Dr. DICKSON
DRAWN GEOCRAFT DATE 13/12/80
AMENDED (REDRAFTED 3/11/80) 7/5/81
SCALE 1 : 2500
PLAN No TAS/2/2326

372 000 m E

373 000 m E

5 373 000 m N

HIGHLY DISTURBED AREA

2000

ADIT 5180N/4750W

DDH XI

DDH RBE 8

ADIT 5030N/4900W

ADIT 4940N/4920W

HENTONS ADIT

DDH RBE 3

DDH RBE 20

DDH RBE 7

DDH RBE 5

ADIT 4827N/4750W

DDH RBE 6

DDH RBE 10/10A

DDH RBE 11

DDH RBE 12

DDH RBE 14

DDH RBE 15

DDH RBE 16

DDH RBE 17

TRACK

RIVER

Contour interval 100 nT

5 cm

81 - 1604. Vol 5/14. 3808

320197

TAS/2/2325

TAS/2/2326

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MAGNETIC INTENSITY CONTOURS

COMPILED	Dr. DICKSON
DRAWN	GEODRAFT
DATE	13/12/80
AMENDED (REDRAFTED 20/9/80)	7/5/81
SCALE	1 : 2500
PLAN No	TAS/2/2325

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

DDH : RBE 15

920199

000

AUSTRALIAN ANGLO AMERICAN LIMITED

MICROFILMED

DRILLHOLE LOG

Summary Sheet

PROJECT Renison	AREA Grid GAR			DRILLHOLE TYPE DDH
CO-ORDS E 372715·3 N 5372486·9	DEC^{LN} -45°	AZIMUTH 078° MN	RL 174·5m	DH No. RBE 15
DATE COMMENCED 23·9·80	DATE COMPLETED 2·10·80	DRILLED BY Longyear	DRILL RIG Longyear 38	
Non Coring to: 39·0m	HQ Core to:	NQ Core to: 95·8m	BQ Core to: 303·8	EOH 303·8

SURVEY DATA

Instrument:

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH
0m		-45°	078° MN	181m		-45·5°	079·5° MN
61m		-46·75°	076·5° MN	211m		-44°	080·5° MN
91m		-47°	075·5° MN	241m		-42·5°	080° MN
121m		-47°	075·5° MN	271m		-42°	087° MN
151m		-47°	075·5° MN	303m		-43·5°	086° MN

LOG SUMMARY

ROCK TYPE	MINERALIZATION Style	Grade	Intersection width (Corr)
0-39·0m Overburden, predominantly glacial.			
39·0-61·1m bk carb sh & intc m-f sa.	vein, disseminations	Py 10%	
61·1-91·6m irreg. intc bk-dk gy carb sh & gy f-m tuf lithic sa & dk gy lam ss.	vein, disseminations 'patchy'	Py 4%, Pb tr	
91·6-95·8m deformed bk carb sh & intb dk gy ss.	vein, disseminations, 'patchy'	Py 4%, Pb tr	
95·8-107·6m intc gy f-m tuf lithic sa, dk gy ss.	vein, disseminations, 'patchy'	Py 4%, Pb tr	
107·6-128·8m dk gy ss, minor intc & intb f gy tuf sa & bk carb sh	disseminations, replacement, fine veins, 'patches'	Py 8%, Pb 1%	
128·8-140·2m intb dk gy 'wispy' ss & gy f-m tuf sa.	dis, f vns, 'patches', replacement	Py 8%, Pb 1%	
140·2-173·9m deformed bk carb sh, minor intb ss, arg	dis, f vns, 'patchy'	Py 8%, Pb 3%	
173·9-192·1m intc gy f-m sa, carb sa & gy ss & bk carb sh	vn	Py 5%, Pb 1%	
192·1-196·0m frac gy m lithic tuf sa, minor dk gy ss.		Py 6%, Pb 6%	
196·0-198·0m cnt intb gy f-m carb sa 'wisps' bk sh & ss		Py 10%	
198·0-206·8m intbs intc gy f-m sa & gy ss.		Py 1%, Pb tr	
206·8-221·5m intb & intc bk carb sh, f-m tuf sa, gy ss		Py 15%, Pb 9%	
221·5-233·6m deformed alternating gy f-m tuf sa, intc & gy ss & intb & dk gy ss.		Py 5%, Pb 1%	
233·6-235·5m alt cnt bk carb sh & intc & gy tuf sa & dk gy ss	dis, small 'patches', f vns	Py 7%	
235·5-238·5m alt gy & gy-gr f-m tuf sa.	barren	-	
238·5-247·0m deformed & sed 'breccia' - gy-gr f tuf sa, dk gy ss, bk carb mtx, pale gy-br lam arc	small dis 'patches'	Py 2%	
247·0-249·7m intensely sbte & qz vnd, slightly mineralised ± Base Metal Zone (1).	vns, 'patches' & f dissemination	Sp 7%, Pb 2%, Gl & Py 1%, Cp tr	
249·7-260·1m talc-sbte mottled/fol alt ultramafic.	dis, 'patches', vein.	Sp 2%, As Py 1%, Py tr, Gl tr	
260·1-265·4m Base Metal Zone (2)	'patchy', vein & massive	Pb 25%, As Py 8%, Sp 8%, Cp 3%, Py 1%, Gl tr	
265·4-271·9m talc-sbte mottled/fol alt ultramafic	f vns, 'patches', dis.	Py 2%, Pb 1%	
271·9-293·6m intb f-m gy tuf sa & dk gy ss.	vns, minor 'patches'	Pb 2%, Py 2%, Sp tr, Gl tr	
293·6-303·8m intb dk gy ss & gy ss	vns, minor 'patches'	Py 3%, Pb 1%, Sp tr, Gl tr	

001

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					1–15	No core recovered.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N.P.Green FROM 0 TO 15 m DATE 29/9/80 PAGE 2 OF 22

002026

002

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	16					No core recovered.					
	17										
	18										
	19										
	20										
	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										
	29										
	30										

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N.P.Green FROM 15 TO 30m DATE 29/9/80 PAGE 3 OF 22

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003

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						No core recovered.					
	39·0	1·0	0·75	75%	39·0	Black carbonaceous shale with irregularly intercalated medium and fine grey-pale grey tuffaceous sandstone with grey lithic fragments of siltstone often aligned with bedding direction. Pyritic, common red-brown iron oxide weathering often concentrated along fractures and quartz veins.	Common q.v. sites, eroded & pitted, usually irregular & fine. Common eroded chlo vns, c.f. q.v's. Rare white-yellow clay alteration along fractures. 42·4 Pervasive chlo silt zone. 42·9 2mm calcite vn 43·0		Well laminated, often wispy with inclusions of dark grey shale. Minor mesofaulting. Both depositional deformation resulting in rip up clasts. 41·1 ∂ 40° slumping etc, and post-depositional deformation involving faulting & drawing out - shearing. 43·1 ∂ 10° 43·5 ∂ 40° downhole-graded bdg in thin sandstone intercalations.	Disseminated Pyrite, often as well formed cubes up to 2 mm. in both sandstone and shale. Few veins associated with quartz & carbonate	10%
	40·0	3·0	2·8	93·3%							
	43·0	2·7	2·53	93·6%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N. Green FROM 30 TO 45 m DATE 29/9/80 PAGE 4 OF 22

920202

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	45·7	0·8	0·6	100% 46							
	46·5	1·5	1·5	100% 47							
	48·0	0·5	0·5	100% 48	48·0	Carbonaceous shale - black and dark gray; moderately deformed; well laminated, carbonate and quartz veins pyritic, broken core.	Rare Mg-Fe cbte veins; very fine network of quartz veins.		Well laminated, often moderately deformed.		
	48·5	1·0	0·45	45% 49					49·4 B 50° mostly syndepositional.		
	49·5	1·3	1·23	94·6% 50			50·2 5mm vein of Ankerite crystals, up to 5mm, translucent, pale brown, rhomboidal.		50·5 B 35°		
	50·8	1·2	0·65	54% 51							
	52·0	1·2	1·1	91·7% 52					53·0 B 55° Base highly broken.		
	53·2	1·6	1·6	100% 53							
	54·8	1·6	1·6	100% 54	54·1	Intercalated, black dark grey carbonaceous shale and pale grey-grey, medium-fine, tuffaceous & lithics, sandstone.	Common fine white cbte veins; few cream irregular Mg-Fe-cbte veins: St?		Sharply intercalated units, often brecciated along contacts.		
	56·4	3·3	3·3	100% 55	56·3	Carbonaceous shale, black and dark grey. well laminated, moderately deformed.	55·5 3mm cream St vn: 60° 56·6 Cbte pervasive alteration zone.		B 35° 56·3 Moderately deformed with few contorted laminated beds.	55·8 24cm St, Ank, qz, calcite? vn & small vugs, diss Sp 2%; Gatr; Py 5%.	7%
				56			57·6		57·6 Shale is black, slightly weathered & porous, very soft & pitted. 58·5		
				57							
				58							
				59			59·1 Pervasive cbte alteration zone.		59·3 B 20°		
	59·7	1·2	1·2	100% 60							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N. Green FROM 45 TO 60m DATE 29/9/80 PAGE 5 OF 22

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005

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	60·9	1·2	1·2	100% b1
	61·5	0·3	0·3	100%
	61·8	1·2	0·3	25% b2
	63·0	0·5	0·5	100% b3
	63·5	0·9	0·9	100% b4
	64·4	2·6	0·9	34% b5 b6
	67·0	1·5	1·5	100% b7 b8
	68·5	1·5	1·5	100% b9
	70·0	3·0	3·0	100% 70 71 72
	73·0	3·0	2·9	96·6% 73 74 75

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
		60·3			60·1 30cm qz, St, Ank, calc.? vn at ~65° & To 20%, Py 10%, AsPy 2%, Cp 1%, Sp 1%, Ga tr	35%
61·1	Irregularly intercalated black-dark grey carbonaceous shale and grey, fine-medium tuffaceous-lithic sandstone and dark grey, finely bedded siltstone with common wisps of black carbonaceous shale.	Few weathered fine carbonate veins.		Upper part of unit often broken and relatively soft moderately deformed.		
				B 20°		
				Predominantly soft, broken black carbonaceous shale.		
		64·6 15mm St vn at 68°			64·6 15mm St vn & tr Sp, tr Ga.	
		66·8 Common irregular fine Mg-Fe-cbte veins		Moderately-highly deformed, both syn- & post depositional deformation; semi-brecciated in places :- ripped up clasts, common mesofaulting & associated alteration products.	66·0 St, qz, Ank + brec. sed vn at ~50° 15% Py, often vuggy; Ga-grains stringers, conc at base of vn 67·6 2% ; Sp<1%, To 3%, Cp=AsPy tr;	21%
		69·1: 25 mm coarse xaln vuggy Ankerite vn at 80°			qz+ brec sed+Py Py- vuggy Py- St, disGa Sp, minor Ank.	3%
		Fewer Mg-Fe-cbte veins; marjority white calcite veins and irregular patches, often associated with Py.		70·1 B 20° :- common depositional slumping.	Py-fine veins often associated & cbte veining. very finely disseminated in some sandstone intercalations. rarely disseminated in shale as before.	
				72·0 B 30°	qz, Ga, Sp, Cp, AsPy, brec. sed	
				73·4 B 25° downhole, graded coarse sandstone-siltstone		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N. Green FROM 60 TO 75m DATE 29/9/80 PAGE 6 OF 22

9202O4

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	76.0	3.0	3.0	100%
	79.0	3.0	3.0	100%
	82.0	3.0	3.0	100%
	85.0	3.0	3.0	100%
	88.0	3.0	3.0	100%

INTERVAL | DESCRIPTION | ALTERATION | GRAPHIC LOG | STRUCTURE | MINERALISATION | VISUAL PERCENTAGE MINERALISATION

ALTERATION:
- 77.9 25mm white calcite vn at 80°
- 82.5 Increase to common white-grey impure irregular patches up to 25 mm and irregular 'disseminated' veins and rare, more pure, white calcite veins.
- 87.3 30mm white calcite vein at 60°.

STRUCTURE:
- 75.3 B 30° downhole - graded bedding.
- 81.3 B 0°-10°
- 83.0 B 20°
- 85.8 B 25°
- 89.8 B 50°

MINERALISATION:
- 79.3 8 veins of Py, av 1mm, at 60°
- 79.9
- Py as disseminations - primary? In siltstone + shale fine, irregular spidery vns & tr Po; patches & irregular veins associated & clots. — 5%
- 84.6 26 mm white calcite, minor St vn at 90°, & 30% Sp, 2% Py, 1% Ga — 33%
- 85.1 65 mm qz, St vn at 80° & 20% Py, 15% Po + AsPy, 1% Sp, tr Ga — 51%

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N. Green FROM 75 TO 90 m DATE 1/10/80. PAGE 1 OF 22.

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	91.0	3.0	3.0	100%
	94.0	3.0	3.0	100%
	97.0	3.0	3.0	100%
	100.0	3.0	3.0	100%
	103.0	3.0	3.0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
91.6	Deformed black carbonaceous shale, interbedded dark grey siltstone with common fine wisps of shale, pyritic, common ay- white carbonate irregular patches and discontinuous irregular veins	No pure white calcite veins.		92.0 B 15° 92.8 B varies 0°-40°		
95.8	Irregularly intercalated grey fine-medium lithic tuff, dark grey siltstone, deformed black-dark grey carbonaceous shale as before 91.6 m. Common white irregular carbonate patches, veins.	101.4 17mm white calcite vein at 90° 104.6 60 mm white calcite vein at 30°.		99.2 B 40° 102.4 Finely wavy bedded. Varies 0°-40°. 103.3 B 10°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N.Green FROM 90 TO 105m DATE 1/10/80 PAGE 8 OF 22

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	106·0	3·0	3·0	100%					106·3 B 30°		
									107·0 breccia bed of aligned elongate clasts of lt. carb sh + pale gy arg mt in f-m lithic tuff ss		
					107·6	Dark grey siltstone, minor intercalated and interbedded fine grey tuffaceous sandstone, minor interbedded black carbonaceous shale, very common discontinuous calcite veining, pyritic.			107·8 B 35° Siltstone contains many elongate clasts, lenses wisps, stringers of carbonaceous material and sandstone.		
	109·0	3·0	3·0	100%					110·5 B 10° Finely bedded, moderately deformed, rarely contorted		
										111·0 Pyrite :- 5-7% 1) disseminated in pelitic sediments - primary? 2) disseminated - replacement in rare sandstone beds. 3) fine veins associated with calcite 4) patches associated with calcite. Po :- 1-3% as very fine 'spidery' veins and rare distinct fine veins commonly in shale and siltstone.	10%
	112·0	3·0	3·0	100%					112·2 B 30°		
									113·6 B 45°		
	115·0	3·0	3·0	100%					115·3 B 35°		
									117·4 40cm intensely + finely bracciated bed, clasts predominantly pale grey argillite - mudstone.		
	118·0	3·0	3·0	100%						Py > Po	
							119·0 25mm St, calcite vn at 60°			Intensely calcite alt zone 2 15% Po, 1% sp, tr ol associated & f. vns.	15%
										Py ≒ Po	

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N. Green FROM 105 TO 120m DATE 1/10/80 PAGE 9 OF 22

92026

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	121·0	3·0	3·0	100%
	124·0	3·0	3·0	100%
	127·0	3·0	3·0	100%
	130·0	3·0	3·0	100%
	133·0	3·0	2·9	96%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
		121·2 30mm white calcite vn at 65°		120·8 B 45°		
		123·7 10mm white calcite vn at 50°		123·4 B 65°		
				124·3 B varies 0°-30°	Py ≒ Po	
				125·4 B varies 0°-30°	125·0 Py ≫ Po	
128·8	Interbedded and intercalated dark grey 'wispy' siltstone, grey fine-medium tuffaceous sandstone. Common discontinuous & irregular calcite veining and pyrite as before	128·7 10mm white calcite vn at 85°		128·7 B 35° 128·8 129·3 B 25° 130·4 B 50° 130·8 B 50° core more finely bedded as opposed to sharply intercalated. 132·6 B 30°-40° 133·7 Wavy bedding 5°-30°		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 15

LOGGED BY N. Green FROM 120·0 TO 135 m DATE 1/10/80 PAGE 10 OF 22.

902028

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	136·0	3·0	3·0	100%
	139·0	3·0	3·0	100%
	142·0	3·0	3·0	100%
	145·0	3·0	3·0	100%
	148·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
140·2	Deformed black carbonaceous shale, minor fine gray tuffaceous sandstone interbedded towards top; interbedded dark gray siltstone decreases down hole. Common fine white calcite veining; Pyritic + Pyrrhotitic.	142·2 Disrupted 15 mm white calcite vn at 60°. 142·5 25 mm white calcite vn at 70° 144·0 Decrease in 'patchy' white calcite more fine, often disrupted white calcite veins, either parallel to bedding or at a 65°. 146·8 13mm grey-white impure calcite vn at 70°		136·1 B 25° 136·8 B 20°-40° 137·3 B 30° 138·0 B 50° 140·5 B 30° B 60° 142·2 143·5 B varies 10°-70°-fine wavy 144·4 B 55° Finely bedded-laminated shale; deformation increases down hole. 146·3 B 35°-55°-wavy 148·5 B 55° 149·5 B 60°	138·0 Primary? dis cubic Py appears elongated parallel with bedding. Py >> Po 140·2 Significant increase in Po content as rare patches up to 20 mm replacing calcite. More commonly as very fine and fine irregular, often 'spidery' veins. Py as before. Py 7% > Po 3% 5 cm	10%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 15

LOGGED BY N. Green FROM 135 TO 150 m DATE 3/10/80 PAGE 11 OF 22

020209

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	151·0	3·0	3·0	100%
	154·0	3·0	3·0	100%
	157·0	3·0	3·0	100%
	160·0	3·0	3·0	100%
	163·0	3·0	3·0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				150·5 B 45°		
				151·2 B 60°		
151·4	Contorted black carbonaceous shale, pyritic; very common contorted white discontinuous calcite veining; shale slightly phyllitic.	Common fine white calcite veins & comm' irregular 'patches' of calcite; veins random.		Shale more contorted.	Pyrite as random fine veins often associated with calcite; deformed disseminations often coalesce to form small irregular patches. Pb as very fine 'spidery' veins; rare replacement along fine sandstone beds irregular discontinuous veins.	12%
156·2	Deformed black carbonaceous shale with interbedded discontinuous dark grey siltstone, argillite.	– 156·9 20mm calcite vn. & fluorite, at 45° – 158·8 50mm disrupted white calcite vn at 30°. Common, fine, often discontinuous, white calcite veins; rare larger disrupted white calcite veins.		Shale is less contorted, common fine interbedded dark grey siltstone, sometimes intercalated. 157·9 B ≈45° 159·9 B varies 10°-45°- slightly wavy. 160·7 B 20° 161·7 B 60° 162·4 B 60° 164·0 B 40°-50°	Pyrite veins sometimes 'sheeted out'. Py 10%, Pb 2%	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 15

LOGGED BY N. Green FROM 150 TO 165m DATE 3/10/80 PAGE 12 OF 22

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
									165·2 B 75°		
	166·0	3·0	3·0	100%							
							168·1 Intensely calcite veined - irregular discontinuous fine vns + patches.		167·6 B 75°		
	169·0	3·0	3·0	100%							
									171·4 B 55°		
	172·0	3·0	3·0	100%					172·1 B 55°		
							173·3 disrupted 25mm qz-cc vn at 85°		173·3 B 65°	173·5 2% Sp + tr Gl in 60 mm vn	3%
							173·8 60mm Slt, calcite vn at 75°			173·7 several vns < 10mm wide ab 173·8 approx qz+Slt ± 30% Po + 15% Py.	15%
					173·9	Intercalated and interbedded grey, fine-medium grained sandstone; dark grey siltstone; minor black carbonaceous shale; very minor quartz and calcite with pyrrhotite.			Minor deformation in sandstone, to moderate in siltstone/sandstone.		
	175·0	3·0	3·0	100%			175·0 55mm qz-Slt vn at 90°			175·0 5% Gl + 2% Sp in 55mm vn	7%
										Py very common - 10%	
										Po very common veins - 10%	
							176·6 20mm qz-impure calcite vein at 75°			176·6 5% Gl, 10% Po, Py 1%, Sp % in vn	17%
										Gl + Sp - minor (< 2 vns - 1%)	
	178·0	3·0	3·0	100%							
							178·9 50 mm calcite vn at 90°			178·9 Po 1% in vn	1%
					179·8	Grey fine-medium sandstone with very			Massive with minor		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY N Green / J. Crimeen FROM 165 TO 180 m DATE /10/90 PAGE 13 OF 22

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						minor calcite.	180.9 5mm qz-calcite vn @ 20° 181.2 10mm calcite vn at 45°		deformation.	Py	tr
	181.0	3.0	3.0	100%	181.3	Contorted, interbedded & intercalated grey, fine-medium carbonaceous sandstone, dark grey siltstone and black carbonaceous shale. Very common calcite veins.	Calcite veins very common throughout.		discontinuous, highly deformed sections with minor deformations.	Py very common	10%
	184.0	3.0	3.0	100%							
	187.0	3.0	3.0	100%	187.6	Grey, medium grained, lithic sandstone and grey siltstone (intercalated).	189.9 150mm calcite vn: 60°		massive with minor deformation.	minor Py-3% very minor Po-1%	4%
	190.0	3.0	3.0	100%	190.1	Highly contorted, intercalated and interbedded (minor) grey fine to medium carbonaceous sandstone and dark grey siltstone. Very common calcite veining.				minor Py 5% & Po 2%	7%
	193.0	3.0	3.0	100%		Fractured, grey, medium grained-lithic, tuffaceous sandstone with minor dark grey siltstone and irregular calcite veining.			193.2 B 50° 193.7 B 60°	minor Py 6% & Po 6%	12%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY J. Crimeen FROM 180 TO 195m DATE /10/80 PAGE 14 OF 22

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
							–198.2 15mm calcite vn at 90°		195.3 B 40°		
	196.0	2.8	2.5	100%	196.0	Highly contorted, interbedded, gray, fine to medium grained carbonaceous sandstone with minor dark grey siltstone and wisps of black shale.	calcite veining very common.		197.5 B 55°	Common Py	10%
	198.5	2.7	2.7	100%	198.0	Interbedded and intercalated gray, fine to medium tuffaceous sandstone and gray siltstone.	Very minor calcite veins at 90°.		198.6 B 60° 199.1 B 65° 200.2 B 55° 200.6 B 55° 200.9 B 50° 201.4 B 45° 201.9 B 50° 204.0 B 30° 204.9 B 75° 205.3 B 45°	Very minor Py trace Po	1%
	204.8	3.1	3.1	100%			–206.6 20 mm calcite vn at 85°				
	207.9	3.1	3.1	100%	206.8	Interbedded and intercalated black shale with fine-medium grained tuffaceous sandstone and grey siltstone. Moderate, irregular contortion with discontinuous	Horizontal (90°) calcite veining very common throughout core.		206.9 B 75° 207.3 B 75° 208.2 B 85°	common Py-15% + Po 9%	24%

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY J. Crimeen FROM 195 TO 210m DATE /10/80 PAGE 15 OF 22

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	211·0	3·0	3·0	100%
	214·0	3·0	3·0	100%
	217·0	3·0	3·0	100%
	220·0	3·0	3·0	100%
	223·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
221·5	Tuffaceous sandstone, siltstone; alternating sections of slightly deformed gray, fine to medium grained, tuffaceous sandstone intercalated with gray siltstone and interbedded with dark gray siltstone.	221·0 4mm calcite, qz + st vn at 70° 223·2 80mm calcite, qz + st vn at 90° 224·0 vertical calcite vn at 0°:- 500mm long and 224·5 2mm wide.		210·6 B 60° 211·5 B 55° 212·2 B 70° 213·5 B 50° 215·1 B 65° 216·3 B 70° 217·4 B 75° 219·4 B 50° 219·8 B 65° 220·8 B 70° 221·8 B 70° 222·8 B 65° 224·4 B 60°	221·0 Gl 8%, Sp 12% in vn minor Py - 5% + very minor Po - 1% 223·2 Po 4% + Py 4% in vn 5 cm	20% 6% 8%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY J. Crimeen FROM 210 TO 225 m DATE 5/10/80 PAGE 16 OF 22

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	226·0	3·0	3·0	100%
	229·0	3·0	3·0	100%
	232·0	3·0	3·0	100%
	235·0	3·0	3·0	100%
	238·0	3·0	3·0	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
225·0	Highly contorted, interbedded and intercalated, gray, fine to medium tuffaceous sandstone and grey siltstone.	227·0 15mm white calcite vn at 55°.		225·0 B 45°-65° 225·7 Intense meso-isoclinal folding. 226·9 B 50° 228·2 B 50° 231·5 B 70° 233·4 B 65°	228·3 Py as disseminations and patches, up to 2mm; and fine veins mainly confined to pelitic sediments.	2%
233·6	Altered black carbonaceous shale with minor intercalated fine grey tuffaceous sandstone and dark grey siltstone; contorted, white-grey calcite 'patchy' combined & disseminated 'patchy' Py.	'spotted appearance'. very common irregular 'patches' of wh-gy calcite av. 3mm; few fine vns of wh. calcite; often discontinuous.		Contorted.	By disseminated as small average 1mm, patches throughout shale; and as discontinuous irregular veins, averaging 1mm.	7%
235·5	Altered fine-medium, tuffaceous sandstone gray & grey-green. Pervasive carbonate alteration gives 'cloudy' appearance, masking grain size and structure. Minor intercalated grey siltstone.	Pervasive cloudy chlorite & chlorite (?) alteration; very common, white, highly irregular, discontinuous, medium calcite vns & very irregular patchy calcite- often appearing to merge into altered sediment. 236·6 13mm white calcite vn at 75°.		Deformed when intercalated material present; otherwise massive, masked by cloudy alteration.	236·1 Barren	-
238·5	Highly deformed, intercalated 'jumble' soft sediment 'breccia', minor intercalated units of interbedded grey-green, fine, tuff sandstone and dark grey siltstone and	238·5 11mm calcite vn at 60° 239·0 40mm qz/calcite vn at 60° Common white calcite vns 239·8 bomm qv at 40° & small patches, av 2mm;		Intercalated zones of deformed interbedded sediments and soft sediment 'breccia' beds.	239·3 Py as rare, av 1mm, disseminated patches, few very fine veins &	2%

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY J.Conneen / N.Green FROM 225 TO 240m DATE 5/10/90 PAGE 17 OF 22

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						minor shale. Soft sediment 'breccia' contains ripped clasts and deformed, 'moved' intercalations of pale gy-brown laminated argillite; black carbonaceous shale, dark grey siltstone & altered grey fine, tuffaceous sandstone; pale brown laminated dolomitic pelite?; green-grey sandstone/altered sandstone. Cloudy alteration common.	Veins usually associated & common white translucent qz vns. Increase in qz. 241·0 10cm qz, minor St veined zone at 50°-60° 241·5 10mm qv at 50° rare St veins. 243·0 3cm zone of qz, clots veining at 60° 244·0 30cm qz & clots veined zone at 60°-85°			240·2 5mm qz. Po vn at 65° patches associated with calcite veins.	3%
241·0	3·0	3·0	100%						241·4 B 65°	241·0 zone carries Py 5%, Sp 2% Gl tr, AsPy tr.	8%
242										241·9 12mm qv & Po 5%, Py 20% at 65°.	25%
243											
244·0	3·0	3·0	100%							244·0 12mm Po vn at 65° at base of qv over 20cm & 3% dis AsPy	
					244·4	Talc carbonate: foliated, pale gy, white, pale green	Completely altered bed - talc clots		Foliated & sheared - talc clots, pale gy, white & pale green	Barren	0
245					244·6	Soft? sediment 'breccia' - clasts of altered grey fine? tuffaceous sandstone and 'matrix' of black carbonaceous shale and dark grey siltstone.	common fine, < 1mm, & medium, 2 mm; highly discontinuous white calcite veins · Few medium discontinuous qz vns 246·5 7mm qv at 75° associated & calcite vns.		'Breccia' bed - syndepositional as most clasts rounded & diffuse boundaries.	Barren	0
246											
247·0	3·0	3·0	100%		247·0	Intensely carbonate and quartz altered zone ± Base Metal zone? Slightly mineralised, dark green-dark gray foliated sediment - 20%, & minor intercalated foliated talc carbonate.	Veins up to 10 cm, multiple phases of veining, as veins are cut by others. St 50%, qz 25%. Quartz is often vuggy - good crystal development up to 3mm. Few coarsely xaln Ank vns		Intense veining produced slightly brecciated appearance in some places; sediment foliated.	247·8 Fine vein, rare patches up to 10mm, & fine disseminations Sp 7%. Some disseminations in rare veins Gl 1%, Po 1%, Py 2%, Cp tr	11%
248											
249											
250·0	3·0	3·0	100%		249·7	Talc-carbonate zone. Pale brown, white, pale green, green, pale grey. Mottled & foliated; disseminated black-brown mineral, often streaked.	Completely altered zone to talc and various carbonate phases.		Some minor diffuse foliation, mostly mottled, veined or massive.	Unit contains disseminated Py, dispersed patches of Sp, minor veins AsPy. Py - v. minor - tr Sp - minor - 2% AsPy - minor - 1% Gl - trace.	4%
251											
252									253·6 foliation 40°		
253·0	3·0	3·0	100%								
254							254·2 55mm vn of qz & St			254·2 vein contains minor Gl (1%) & Sp 1%	2%
255											

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 15.

LOGGED BY N.Green /J. Crimeen FROM 240 TO 255 m DATE 5/10/80 PAGE 18 OF 22

020216

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	256·0	3·0	3·0	100%					256·9 foliation at 65°		
	259·0	3·0	3·0	100%							
					260·1	Base metal mineralization, alteration products. Large vein containing quartz, siderite plus other carbonates? and brecciated sediments. vuggy quartz present (minor)	Major siderite + quartz with common ankerite and soft grey altered sediments.		sharp, but uneven contact Brecciation (fine to coarse) common in upper ⅔'s of unit, minor in base. Moderate contortion throughout. 263·4 200mm of foliated, soft, dark sediments + carbonates.	All mineralization is vein, patchy or massive. Assemblage of Po, AsPy + cp indicative of western margin of talc-chlorite zone. Po - very common - 25% AsPy, Sp - common - 8% + 8% cp, Py - minor - 3% + 1% Gl - trace	45%
	262·0	3·0	3·0	100%							
	265·0	3·0	3·0	100%							
					265·4	Talc carbonate contains green, grey, white and brown (plus pale derivatives of these colours) talcs, often mottled, foliated, 'blotchy' texture. Intercalated and intervened with siderite and minor quartz. Darker grey units predominate at top of section, grading down to a milky white (dolomitic?) unit with little foliation.	Completely altered zone with talc, quartz and carbonate.		sharp, uneven contact alternating sections of strong foliation; little foliation & coarse mottling; little foliation with fine mottling - usually associated between siderite and talc. 267·8 foliation at 45° — milky white & minor dissemination, little foliation.	Minor mineralization in thin veins, patches and disseminations. minor - Py 2% + Po 1%	3%
	268·0	1·1	1·1	100%							
	269·0	1·6	1·6	100%							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY J. Crimeen FROM 256 TO 270 m DATE 6/10/80 PAGE 19 OF 22

92021

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
									graduation over 150mm	15 mm vein of Po	
	270·7	2·9	2·9	100%	270·7	Quartz-siderite vein with bracciated bands of sediments and milky talc-carbonate, vuggy quartz present.	Clean qz over talc-ebbo over bracciated sediments qz + St to St + minor qz + Ankerite.		Highly contorted & fractured sediments.	Po 6%, Sp 6%, Py 4%	16%
									broken, but distinct contact.		
					271·9	Tuffaceous sandstone, siltstone, interbedded, tuffaceous, fine to medium grained, grey sandstone; with grey & dark grey siltstones. Minor intercalation occurs.	-272·4 15 mm qv at 85° -272·8 30 mm St vn at 30° -273·1 60 mm St, minor qz + broken sediments vn at 45°.		272·1 B55°	-272·4 qv & Po 23%, Cp 4%, Py 1%, Sp tr. -272·8 St vn & Sp 12%	-28% -12%
	273·6	3·0	3·0	100%					Sandstone massive; finer sediments highly fractured and contorted.	Minor patchy mineralization & veins. Common: Py 2%, B 3% Minor: Gl 1%, Sp 1%	8%
									273·7 B40°		
									274·6 B55°		
							-275·6 30 mm qv at 70° -275·9 30 mm qv & minor St at 60° -276·0 qz-St vn-20 mm at 55° -276·02 6 mm St vn at 50° -276·5 qz-St vn-30 mm at 45°			-276·3 } 200 mm vn & patchy mineralization: Py 20%, Po 20%, Sp 5%, Gl 2% -276·5 }	-47%
	276·6	0·4	0·4	100%							
	277·0	3·0	3·0	100%					276·9 B64°		
							Numerous distinct St veins, most > 4mm, & uniform dip 30°-60°. Very common patchy & contorted vein quartz < 8mm. No calcite? present.		278·1 B50°		
									278·2 B50°		
									279·6 B65°		
	280·0	3·0	3·0	100%					280·3 B60°		
							-281·1 qz-St vn & minor vuggy qz. norm at 80° -281·9 55 mm qv at 80° -282·1 150 mm qv at 80°			-282·1 150 mm q.v - Po 40%, Sp 5%, Gl 3%, AsPy 3%, Cp 1%, Py tr; & cross-cutting Sp vn.	-53%
						Very minor vuggy quartz associated with veins					
					282·3	Siltstone, with minor tuffaceous sandstone Dark grey siltstone interbedded with grey siltstone & grey, fine-grain sandstone with discontinuous carbonate.	Calcite is very common, mostly in fine patches and veins, appears to have infilled along bedding planes.		Moderate contortion. 282·9 B80°	Minor mineralization in veins: Py 2%, Sp 1%, Gl tr, Po tr	4%
	283·0	2·0	3·0	100%					283·5 B70°		
					284·5						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY J. Crimeen FROM 270m TO 285 DATE 6/10/80 PAGE 20 OF 22

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Tuffaceous sandstone, siltstone. Gray, dark gray & grey brown tuffaceous fine to medium grained sandstone; dark grey siltstone and very minor green-grey siltstone. All units interbedded, with very minor brecciation & minor intercalation. Discontinuous carbonate throughout core.	Calcite very common with siltstones as well as quartz and siderite.		Sandstone half massive and half fractured. Siltstones highly contorted. 286·9 B 40° 288·2 B 40° 289·2 B 55° 290·1 B 55° 291·1 B 50° 292·9 B 50°	Mineralization in patches and small veins (< 10 mm) common Pb, Py - 2% - 4% trace Sp - Gl. 289·6 qz-St vn 25 mm Pb 35% . Py 25%	7% 60%
286·0	3·0	3·0	100%								
289·0	3·0	3·0	100%								
292·0	3·0	3·0	100%		293·6	Siltstone - interbedded dark grey siltstone and grey interlaminated siltstone; minor intercalated & interbedded fine grained tuffaceous sandstone.	Calcite very common along bedding plane, with a few large patches and veins (> 10 mm) 295·2 } 2 - 8mm calcite vns 295·4 } at 10° 295·7 35 mm calcite vn at 55°		294·4 B 40° Moderate contortion throughout unit. 295·4 B 65° 296·3 B 65° 297·3 B 70° 298·3 B 75° 299·5 B 70°	Mineralization is in small veins (< 10 mm) and disseminated. Common Py - 3% Minor Pb - 1% trace Sp - Gl	5%
295·0	3·0	3·0	100%								
298·0	3·0	3·0	100%								

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY A. Crimeen FROM 285 TO 300m DATE 7/10/80 PAGE 21 OF 22

020219

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	301·0	2·8	2·8	100%	301				300·8 B 75° 301·7 B 75° 302·4 B 80°		
					302						
					303						
	303·8				304	End of Hole RBE 15 at 303·8m					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 15

LOGGED BY A Crimeen FROM 300 TO 303·8m DATE /10/80 PAGE 22 OF 22

020220

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
No core recovered until 39.0m.															Start of ground core	
39.0	6	125		80	200	0.5	42	85								
40.0	BLD	115		45	280	BLD	43	120								
43.0	3	100		25	305	0.5	25	140								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 39 TO 45m DATE 6+10/11/80 PAGE 1 OF 19

92022

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
45																
45·7	15	105		20	275	BLD	26	110								
46·5	6	110		35	670	0·5	21	115								
48·0	3	130		20	1400	BLD	7	125								
48·5	BLD	140		55	1200	BLD	2	120								
49·5	40	150		270	1250	0·5	80	100								
50·8	5	125		295	540	0·5	36	85								
52·0	5	130		265	450	0·5	31	95								
53·2	5	95		75	340	1·0	35	105								
54·8	35	115		475	4500	1·0	410	120								
56·4	15	115		300	1450	1·0	24	100								
59·7																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 45 TO 60m DATE 6+10/11/80 PAGE 2 OF 19

023

920222

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
60	15	305		460	2000	1·5	850	120								
60·9	35	485		700	7300	1·5	240	115								
61·5	8	60		60	310	BLD	37	105								
61·8	6	90		55	460	BLD	36	125								
63·0	5	55		40	375	BLD	35	125								
63·5	20	140		365	1850	BLD	39	145								
64·4	50	115		1350	5100	3·0	60	105								
67·0	170	700		1·65%	8900	25·0	150	270								
68·5	25	120		1300	2500	3·0	140	115								
70·0	5	95		180	780	BLD	27	115								
73·0	8	100		60	220	BLD	21	110								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 60 TO 75m DATE 6/11/80 PAGE 3 OF 19

025

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
76·0	4	130		35	200	0·5	18	115								
79·0	5	105		35	195	1·0	14	100								
82·0	7	90		130	900	1·0	23	100								
85·0	10	100		300	1700	2·0	1000	95								
88·0	10	90		70	320	0·5	25	90.								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 75 TO 90 m DATE 6/11/80 PAGE 4 OF 19

920224

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
90																
91	91·0															
92		7	145		185	340	0·5	12	90							
93																
94	94·0															
95		4	105		100	1200	1·0	10	80							
96																
97	97·0															
98		BLD	105		30	230	0·5	21	95							
99																
100	100·0															
101		8	130		25	205	1·0	21	110							
102																
103	103·0															
104		3	95		20	130	1·0	23	105							
105																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 90 TO 105 m DATE 6/11/80 PAGE 5 OF 19

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
105																
106																
106.0																
107	5	90		35	155	0.5	18	90								
108																
109																
109.0																
110	4	95		25	125	BLD	8	75								
111																
112																
112.0																
113	3	110		45	305	0.5	18	95								
114																
115																
115.0																
116	9	120		40	150	0.5	19	100								
117																
118																
118.0																
119	8	100		595	800	1.0	57	75								
120																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 105 TO 120 m DATE 6/11/80 PAGE 6 OF 19

920226

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
121·0	3	130		155	275	0·5	31	75								
124·0	BLD	100		45	120	0·5	13	75								
127·0	SAMPLE	LOST	BY	LABORATORY.	—	—	—	—								
130·0	8	100		50	150	0·5	24	125								
133·0	BLD	110		20	105	0·5	16	110.								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 120 TO 135 m DATE 6 / 11 / 80 PAGE 7 OF 19

028

9206227

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
136.0	BLD	125		20	150	0.5	8	110	
139.0	4	100		20	135	0.5	7	90	
142.0	5	85		90	140	1.0	3	60	
145.0	5	140		270	620	1.0	12	65	
148.0	5	105		75	260	0.5	5	60	

135 136 137 139 139 140 141 142 143 144 145 146 147 148 149 150

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 135 TO 150 m DATE 6/11/80 PAGE 8 OF 19

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
150																
151																
151·0																
152	8	95		25	200	BLD	5	50								
153																
154																
154·0																
155	5	95		20	135	BLD	35	60								
156																
157																
157·0																
158	BLD	135		40	195	0·5	17	70								
159																
160																
160·0																
161	BLD	120		20	110	0·5	15	55								
162																
163																
163·0																
164	8	120		30	280	BLD	10	70								
165																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 150 TO 165m DATE 6/11/80 PAGE 9 OF 19

9203239

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
165																
166																
166.0	15	105		20	180	0.5	17	60								
167																
168																
169																
169.0	6	105		30	280	0.5	24	60								
170																
171																
172																
172.0	20	190		320	2000	1.0	150	95								
173																
174																
175																
175.0	45	115		615	1750	2.0	270	110								
176																
177																
178																
178.0	BLD	95		35	195	0.5	6	90								
179																
180																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 165 TO 180m DATE 6/11/80 PAGE 10 OF 19

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
181·0	7	90		20	135	0·6	4	75								
184·0	4	75		40	130	BLD	2	80								
187·0	5	100		15	165	BLD	21	135								
190·0	7	100		20	115	BLD	6	75								
193·0	4	75		15	170	BLD	13	90								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 180 TO 195 m DATE 6/11/80 PAGE 11 OF 19

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
195																
196																
196.0	BLD	90		20	105	BLD	7	65								
197																
198																
198.0	9	80		10	240	BLD	24	140								
199																
200																
201																
201.2	10	180		10	150	BLD	50	120								
202																
203																
204																
204.8	15	70		15	130	BLD	38	120								
205																
206																
207																
207.9	15	120		25	120	BLD	7	105								
208																
209																
210																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 195 TO 210m DATE 6/11/80 PAGE 12 OF 19

033

020233

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
210																
211																
211.0	15	90		15	80	0.5	12	100								
212																
213																
214																
214.0	9	120		25	170	0.5	4	90								
215																
216																
217																
217.0	8	100		20	110	0.5	2	100								
218																
219																
220																
220.0	30	95		1700	2100		500	115								
221																
222																
223																
224																
225																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 210 TO 225 m DATE 6/11/80 PAGE 13 OF 19

035

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
225																
226	226.0															
227		10	80		40	125	1·0	33	100							
228																
229	229·0															
230		10	60		15	125	0·5	17	120							
231																
232	232·0															
233		10	110		15	120	1·0	17	110							
234																
235	235·0															
236		8	85		20	140	BLD	30	145							
237																
238	238·0															
239		15	55		40	200	0·5	600	170							
240																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 225 TO 240m DATE 6/11/80 PAGE 14 OF 19

920234

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au							SAMPLE NUMBER
→241·0													End Ground Core			
240·4	10	60	BLD	75	250	BLD	270	170					Split Core Commences			Tq204
240·8	20	120	BLD	290	820	1·0	1000	190								Tq205
241·35	7	195	BLD	30	100	0·5	350	140								Tq206
242·4	30	55	BLD	105	305	0·5	150	135								Tq207
243·8	240	145	BLD	1500	1600	2·5	2800	295								Tq208
244·35	10	85	BLD	120	360	0·5	1300	1250								Tq209
244·8	9	10	BLD	35	180	BLD	170	280								Tq210
246·0	9	5	BLD	55	280	BLD	70	200								Tq211
247·0	BLD	20	BLD	30	210	1·5	450	1000	BLD							Tq212
247·6	60	89	BLD	1050	5300	2·5	1450	595	BLD							Tq213
248·2	45	140	BLD	1850	5050	6·0	1600	1450	BLD							Tq214
248·8	540	2350	BLD	4·1%	8·3%	175·0	680	105	BLD							Tq215
249·0	230	1100	BLD	3·3%	5100	200·0	3100	95	0·052							Tq216
249·2	220	690	BLD	7700	2·05%	85·5	2300	110	BLD							Tq217
249·55	80	95	BLD	640	1·8%	5·5	2150	415	BLD							Tq218
249·8	35	25	BLD	1100	4850	3·0	2100	950	BLD							Tq219
250·0	7	10	BLD	370	735	2·5	7500	1400	BLD							Tq220
250·8	BLD	5	BLD	405	600	2·0	1150	1200	BLD							Tq221
251·6	BLD	5	BLD	55	150	2·0	1000	1200	BLD							Tq222
252·25	20	10	BLD	495	1500	3·0	1600	1350	BLD							Tq223
253·0	15	65	BLD	220	900	2·5	2400	1350	BLD							Tq224
253·8	45	30	BLD	1900	5700	3·5	2700	1100	BLD							Tq225
254·3	15	10	BLD	1000	1700	3·0	1300	1200	BLD							Tq226

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 240 TO 255 m DATE 20/11/80 PAGE 15 OF 19

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au	SAMPLE NUMBER
255										
255.5	10	5	BLD	190	330	1·5	500	1250	BLD	Tq227
256·2	150	220	BLD	420	1250	1·5	650	1050	BLD	Tq228
257·0	540	95	BLD	1850	2350	3·0	1500	1400	BLD	Tq229
257·35	8	5	BLD	130	240	1·0	450	1150	BLD	Tq230
257·8	5	BLD	BLD	10	90	BLD	35	1000	BLD	Tq231
258·6	10	25	BLD	100	205	0·5	230	1450	BLD	Tq300
259·0	8	20	BLD	1100	1900	1·5	3100	1700	BLD	Tq232
259·5	10	380	BLD	850	1850	10·5	2500	1900	0·040	Tq233
260·0	1200	1650	BLD	900	1950	11·0	2200	325	BLD	Tq234
260·4	2100	3250	BLD	7200	4·25%	42·0	7000	225	BLD	Tq235
260·9	1500	595	BLD	1200	3250	7·5	1700	175	BLD	Tq236
261·3	950	160	BLD	1850	2·1%	7·5	1·8%	130	0·168	Tq237
262·0	280	480	BLD	2400	1·4%	11·0	4000	305	0·080	Tq238
262·25	520	900	BLD	2150	2·3%	11·5	3800	740	BLD	Tq239
262·75	120	40	BLD	900	3350	3·0	2300	1450	0·040	Tq240
263·05	120	105	BLD	3050	2·6%	25·0	2400	70	BLD	Tq241
263·75	2600	560	BLD	2900	1·55%	29·5	3400	1250	BLD	Tq242
263·9	250	5500	BLD	625	6000	16·0	8500	575	0·016	Tq243
264·2	240	3400	BLD	1·0%	3·25%	67·0	2·4%	565	0·064	Tq244
264·5	350	1·65%	BLD	1200	4500	45·0	3·0%	795	0·096	Tq245
265·0	800	7350	BLD	4150	1·5%	89·0	7500	950	0·188	Tq246
265·5	45	85	BLD	2950	7200	3·0	2600	1600	BLD	Tq247
265·85	4	40	BLD	345	650	1·5	1100	2100	BLD	Tq248
266·45	450	80	BLD	1900	3050	3·5	2200	1650	0·032	Tq249
267·25	10	15	BLD	220	510	1·0	1600	1650	0·016	Tq250
268·0	50	10	BLD	140	300	BLD	900	2000	0·008	Tq251
268·85	5	10	BLD	540	690	6·5	1100	2150	0·008	Tq252
269·1	6	5	BLD	225	900	1·0	1500	2000	BLD	Tq253
269·7	BLD	5	BLD	90	195	0·5	400	1900	0·024	Tq254
270										

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 255 TO 270m DATE 20/11/80 PAGE 16 OF 19

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au							SAMPLE NUMBER
270·20	5	10	BLD	660	1450	2·5	1300	1950	0·016							TQ255
270·7	70	230	BLD	105	1050	3·0	1400	460	0·008							TQ256
271·3	6300	360	BLD	580	1·35%	5·0	2600	140	BLD							TQ257
272·0	110	205	BLD	650	2600	1·5	1400	170	BLD							TQ258
272·55	70	125	BLD	720	5500	3·5	220	120	BLD							TQ259
273·8	40	25	BLD	410	1750	1·0	230	130								TQ260
274·2	55	15	BLD	760	1000	1·5	60	110								TQ261
274·55	30	85	BLD	800	2350	2·0	55	130								TQ262
275·15	90	105	BLD	1050	2850	2·5	95	135								TQ263
276·35	5500	475	BLD	5400	1·7%	9·0	300	125							(30cm↕)	TQ264
276·6	150	145	BLD	1000	2350	2·5	210	130								TQ265
277·35	15	60	BLD	330	800	1·5	59	140								TQ266
278·2	30	50	BLD	565	1200	2·0	70	130								TQ267
279·0	15	70	BLD	655	680	2·0	39	130								TQ268
279·5	BLD	70	BLD	280	500	1·0	37	130								TQ269
280·35	30	40	BLD	495	1500	2·0	110	140								TQ270
281·5	900	110	th	515	2300	6·5	170	140								TQ271
282·1	220	1650	BLD	3950	2·0%	31·0	2100	175							Split ↑	TQ272
282·5 (from 280·0)	270	640	-	2850	1·0%	10·5	160	110							Ground ↓	
283·0	85	270		800	1550	2·5	100	115								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 270m TO 285m DATE 12/11/90 PAGE 17 OF 19

038

9202317

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
285																
286																
286.0																
287	100	100		250	1300	1.0	130	140								
288																
289																
289.0																
290	15	110		125	365	1.0	45	150								
291																
292																
292.0																
293	3	95		565	1400	1.0	36	105								
294																
295																
295.0																
296	BLD	85		305	600	0.5	32	85								
297																
298																
298.0																
299	7	65		135	350	0.5	47	70								
300																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 285 TO 300 m DATE 6/11/80 PAGE 18 OF 19

040

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
301·0	BLD	80		75	140	BLD	55	75								
	End of Hole :	RBE 15	at 303·8m.													

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 15

ASSAYED BY Analabs FROM 300 TO 303·8m. DATE 6/11/80 PAGE 19 OF 19

9202239

920240

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

DDH : RBE 16

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MICROFILMED

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG

SUMMARY SHEET

PROJECT Renison AREA Grid GAR DRILLHOLE TYPE DDH NQ RBE 16

CO-ORDS E372706·6 N5372426·8 DEC LN -45° AZIMUTH 78° MN RL 159·4 m

DATE COMMENCED 9/10/80 DATE COMPLETED 28/10/80 DRILLED BY Longyear DRILL RIG Longyear 38

GEOLOGIST(S) J Crimeen; S.R. Yardley Non-core to: 30m; NQ core to: 90m ISO CORE: EOH: 364·0m

SURVEY DATA INSTRUMENT downhole camera

DEPTH	CORRECT DEC LN	AZIMUTH	DEPTH	CORRECT DEC LN	AZIMUTH
61 m	-46·75°	79° MN	301 m	-40°	90° MN
90 m	-47°	80° MN	331 m	-39°	79° MN
121 m	-45·75°	81° MN	361 m	-37°	85° MN
151 m	-44·25°	79·5° MN			
181 m	-43°	84·5° MN			
211 m	-41·25°	88° MN			
241 m	-41°	86° MN			
271 m	-41·5°	85° MN			

LOG SUMMARY

DEPTH	ROCK TYPE	MINERALISATION	GRADE
0-30 m	Tricone'd		
30-246·1 m	mixed tuf sandstone & carb shale	dis & vn Py	1-2%
246·1-247·0 m	Base Metal Zone 1. (0·9 m)	qz-cbte vn mixed Sp, Gl, Pb	2-4%
247·0-265·4 m	Talc carbonate	barren	0
265·4-265·6 m	Pyrrhotite vein	Po	80%
265·6-267·8 m	Talc carbonate	barren	0
267·8-273·35 m	Pyrrhotite veined talc carbonate	nine Po vns, each 5-10 cm	5-10%
273·35-273·6 m	Base Metal Zone 2. (0·25 m)	qz-cbte vn, brec margin Sp/Gl	2-5%
273·6-275·65 m	Talc carbonate	stringers & aggregates Po	5-10%
At 275·0 m	Base Metal Zone 3 (0·05 m)	qz-cbte & Sp, Gl	2-4%
275·65-277·25 m	Massive qz vein & Po	mas Po; blebs Cp	Po 40-50%; Cp 1-2%
277·25-277·8 m	Base Metal Zone 4 (0·55 m) - cockscomb vn	qz-cbte vn, brec at margin Sp/Gl	3-6%
277·8-278·05 m	sheared metasediments	barren	0
278·05-280·4 m	Banded metasediments	two qz-cbte vns & Sp, each 1-2 cm	tr
280·4-287·0 m	Black pyritic shales	dis & vn Py	1-3%
287·0-300·0 m	Hornfelsed metasediments	Frac actino-tremolite	Po tr; sp tr
300·0-301·45 m	Po & Py banded & veined dolomite?	sulphide replacement?	Py 2-3%, Cp 1-2%
301·45-307·5 m	Hornfelsed metasediments	sporadic vns of Po, Cp, Py	1-3%
307·5-322·9 m	Hornfelsed metasediments	sporadic qz/cbte vns; Mag, Py, Po, Sp	tr
322·9-323·6 m	Dislocated qz vn & frac. infilling of Po & cbte	brec/dislocated vn Po & cbte in frac	1-3%
323·6-326·1 m	Hornfelsed metasediments	frac & aggregate Po	1-2%
326·1-331·0 m	Metasediments & diffuse qz-cbte vn zone	frac & vein Po	5% (locally 20-30%)
331·0-335·4 m	Hornfelsed metasediments	frac selvage actino-tremolite	0
335·4-335·85 m	Massive qz vn & Po.	Po & minor Cp, cbte	80-90%
335·85-364·0 m	Hornfelsed metasediments	hare qz veinlets & Po	tr

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						No core recovered					

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY John Crimeen FROM 0 TO 15 m DATE 11/10/80 PAGE 2 OF 26

002

920243

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					16	No core recovered					
					17						
					18						
					19						
					20						
					21						
					22						
					23						
					24						
					25						
					26						
					27						
					28						
					29						
					30	core recovery commences at 30m depth.					

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C FROM 15 TO 30m DATE 11/10/80 PAGE 3 OF 26

003

9202414

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	30.0	1.0	0.6	60%	30.0	black shale + tuffaceous sandstone intercalated black shale + grey, fine grained tuffaceous sandstone.	V. minor (1 mm) calcite vein.			numerous small (1-2mm) Py veins in shale disseminated fine grain Py in sandstone	6%
	31.0	3.0	2.8	93.3%						32.0 numerous small (1-2 mm) Py veins in shale.	4%
	34.0	1.5	1.05	70%	34.0	black shale, siltstone, tuffaceous sandstone very porous intercalated dark grey siltstone + minor grey fine grained tuf. sandstone + very minor black shale.				medium to coarse grained primary Py disseminations + minor vein (2-4 mm) Py.	5%
	35.5	1.5	1.5	100%	35.5	tuffaceous sandstone + black shale. intercalated + interbedded (laminated 1-2 mm) f.g. grey tuf sandstone + black shale.	common small (<5 mm) q.v.		35.8 B 55°	medium to coarse grained disseminations + common vein (1-3 mm) Py.	4%
	37.0	0.9	0.8	88.9%	36.7	tuffaceous sandstone, siltstone, shale. intercalated, medium grained, grey tuf. sandstone with dark grey siltstone + black shale.			core broken	medium to coarse grained primary Py disseminated throughout unit.	5%
	37.9	0.4	0.3	75%							
	38.3	1.5	1.5	100%							
	39.8	2.4	2.4	100%	39.7	tuffaceous sandstone. grey, fine to medium grained tuf. sandstone with minor lithic fragments.	common st & honeycomb form. most has dissolved causing vugs & minor st.		massive	barren.	
	42.2	1.4	1.4	100%							
	43.6	2.2	2.2	100%	43.3	tuffaceous sandstone. grey f.g. tuf sandstone with finely dispersed black shale.	some frac. + vugs contain st.		common fractures, vugs	barren	
					44.3	tuffaceous sandstone. grey fine to m.g tuf sandstone with			44.6 B 25°	barren	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

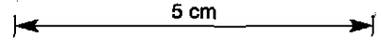
LOGGED BY JC FROM 30 TO 45 m DATE 11/10/80 PAGE 4 OF 26

004

920245

DRILL ADVANCE / LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						finely dispersed · interbedded black shale.					
	45·8	1·4	1·4	100%	46		–46·2 several q.v.				
					46·4	tuffaceous (lithic) sandstone grey coarse-grained tuf sandstone & minor small (2mm) clasts of gy siltstone	minor cavities with honeycombed siderite		massive	trace dis Py	tr
	47·2	0·6	0·6	100%	47						
	47·8	1·1	1·1	100%	48						
	48·9	1·6	1·6	100%	49						
					48·8	tuffaceous sandstone, black shale, quartz gy fg. tuf sandstone & minor lithic black shale & extensive, large quartz veins.	minor st –49·3 several q.v (5-15mm) part vuggy			–49·2 st/sp vn (3mm) Py	tr–1%
					50						
					49·8	siltstone, black shale interbedded & intercalated grey siltstone with minor tuf. sandstone & black shale.	siderite vns			minor vn Py	1%
	50·5	1·5	1·5	100%	51						
					51·2	siltstone, tuffaceous sandstone. intercalated grey, fine to m.g tuf. sandstone & dark gy siltstone.	common qz & st in veins & cavities.		numerous fractures & cavities	fine vns (< 1mm) & v. fine disseminated Py	1%
	52·0	2·7	2·7	100%	52						
					52·5	siltstone, black shale dark gray siltstone, black shale & minor clasts of tuf. sandstone.				minor vein Py	1%
					53						
					54						
	54·7	3·1	2·7	87·1%	54·7	black shale black shale with discontinous carbonate, with very minor intercalated & interbedded grey tuffaceous sandstone	minor calcite veining			v. common small (<3mm) vns of Py & dispersed medium disseminated Py	1%
					56						
					57						
	57·8	3·2	3·2	100%	58						
					59						
					59·8	tuf ss, ss. at top clasts of gy f.g tuf ss in dk gy ss	minor calcite veining			dis Py in clasts & ss. generally	1%
					60						



SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 45 TO 60 m DATE 12/10/80 PAGE 5 OF 26

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	61.0	4.6	4.6	100%
	66.6	1.4	1.4	100%
	67.0	3.0	3.0	100%
	70.0	3.0	3.0	100%
	73.0	3.0	3.0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	laminated ss. sa + v. minor black shale					
60.2	black shale carbonaceous black shale with carbonate. Further down hole minor intercalated grey siltstone.	common small (1-3mm) calcite vns. minor qz patches 63.9 50mm calcite vn at 50°		contorted, uniform 65.0 highly broken core	small (1-2mm) vns of minor Py dispersed m.g dis primary Py.	1%
66.3	tuffaceous sandstone, black shale interbedded + intercalated grey fine to medium grained tuffaceous sandstone + black shale.	common (1-4mm) cal. vns 67.0 50mm calcite vn common mcr. gashes		microfaulting 67.0 B varies at 65°	dis Py in sa. minor in bk sh, minor vns	1%
67.5	black shale carbonaceous black shale with carbonate.	v. common mcr. gashes (<1mm wide, <10mm long) infilled & calcite minor (2mm) cal vns.		67.6 B 30° 68.1 B 23° calcite mcr. vns along bd. moderate deformation	68.1 Py along bd. plane minor Py in small vns + dis. 69.5 3mm vn & Py 1%, Pb tr at 60°	1%
70.5	black shale, tuffaceous sandstone, siltstone. interbedded + intercalated carbonaceous black shale, dark grey siltstone + grey fine grained tuffaceous sandstone. carbonate throughout.	common calcite veining 71.6 80mm Cal vn at 60° 74.8 400mm Cal/St vn @ 50°		highly deformed. 72.8 B 30° 74.4 calcite vns along bd @ 31°	minor Py replacing carbonate in vns 74.5 – 74.8 Cal/St vn & Py 10% · mas Pb 25% at top of vns	1% 35%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 16

LOGGED BY J.C. FROM 60 TO 75 m DATE 15/10/80 PAGE 6 OF 26

005

920246

5 cm

92047

LITHOLOGY

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	76·0	3·0	3·0	100%
	79·0	3·0	3·0	100%
	82·0	3·0	3·0	100%
	85·0	3·0	3·0	100%
	88·0	2·0	2·0	100%

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

DESCRIPTION

black shale, siltstone, tuffaceous sandstone. (continued) with v. isolated clasts of sandstone. alternating units of dark grey siltstone & black carbonaceous shale - the boundaries between these two are hard to detect (gradual?)

ALTERATION

- 75·6 60mm Cal vn at 60°
- 76·2 20mm Cal/St vn at 75°
- 76·7 90mm Cal vn at 70°

Cal veining varies in width dip mineralisation & frequency

- 83·0 20mm Cal/St vn @ 60°
- 84·0 – 86·0 v. minor calcite vns
- 86·1 8mm qz/cal vn at 60°
- 86·9 40mm qz/Cal vn at 55°

Cal along faults & fracs in sediments minor linear vns

GRAPHIC LOG

STRUCTURE

deformation varies through unit (as does bedding) microfaulting common

- 77·5 B varies at 63°
- 79·5 B 25°
- 80·6 B 27°
- 81·6 B varies at 10°
- 83·8 B 20°
- 84·7 B 16° – 85·7 B 13° minor deformation, mcr. F
- 86·3 B 15°

MINERALISATION

Sp 7%/Gl 4% vns (1-3 mm) common through nest of Cal/St vns.

Pb 5%, Py 5%, Ga 0·5%, Sp 1%

dis Py v. common. vn Py common. Py along bd v. common

- 83·0 vn contains Sp 10%
- 83·1 vn & dis Py along & across bedding plane
- 86·7 86·9 vn contains Sp 4%, Pb 9%, Py 6%

vn & dis Py along & across bedding plane

VISUAL PERCENTAGE MINERALISATION

11½% | 16% | 10% | 14% | 19½% | 15%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C FROM 75 TO 90 m DATE 16/10/80 PAGE 7 OF 26

007 92024S

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	90·0	1·0	1·0	100%
	91·0	3·0	3·0	100%
	94·0	3·0	3·0	100%
	97·0	3·0	3·0	100%
	100·0	3·0	3·0	100%
	103·0	3·0	3·0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
90–91	black shale, siltstone carbonaceous black shale interbedded with (carbonaceous?) dark grey siltstone. Both rocks are continuously carbonated.	small (<2mm) Cal vns cutting across & along bd in linear vns & irregular patches (v. common) 92·3 5mm Cal/St vn at 72° 92·6 15mm Cal/St vn at 67°		moderate contortion microfaulting common 92·0 B 70°	v. common dis & vn Py 8% & minor Po 2%	10%
91–92					91·0	
92–93					92·3 } vns contain Py 8%. 92·6 } Po 3%, Sp 2%, Gl 0·5%	13½%
93–94				93·9 B 32°	93·0 common vn & dis Py, sometimes Py follows bedding planes (both dis & vn)	10%
94–95				94·6 B 49°		
95–96				95·3 B varies 16°–23°		
96–97				96·2 B 46°		
97–98				97·6 B 59°		
98–99				98·6 B varies 40°–65°		
99–100		99·6 Cal vn & v. thin vns trailing off base forming v.f "fishnet" type pattern		100·2 B 65°		
100–101				101·6 slickenside at 50°		
101–102				102·0 B 80°		
102–103				102·7 B 40°		
103–104				103·1 B 59°		
104–105				103·8 B 52°		
				104·7 B 55°		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C FROM 90 TO 105 m DATE 17/10/80 PAGE 8 OF 26

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						carbonaceous black shale				v. common dis & vn Py 9% & tr vn Pb at section base	9%
	106·0	3·0	3·0	100%					106·2 B 52°		
							106·7 45 mm Cal vn at 50° separated by several laminae of sediment.				
							107·5 Cal vns & varying dip (top 45°, base 32°) & 170 mm width, & sed bands, patches, lam.		← from 107·5 : increase in amount of calcite vns & in deformity. Cal. is v. contorted, patchy	107·5 v. common dis & vn Py 8% & common vn Po 2%	10%
	109·0	3·0	3·0	100%			108·8 60 mm Cal vn at 50° & sed laminations				
									109·8 B 46°		
							110·1 70 mm Cal vn at 33° patches, bands, lam of seds.		110·6 B 46°		
					111·0	tuffaceous sandstone, siltstone, black shale. intercalated & interbedded grey, fine grained tuffaceous sandstone dark grey siltstone & carbonaceous black shale. sandstone contains carbonate.	minor calcite patches and small veins		highly contorted	v. common dis & vn Py 3% & common vn Pb 1%	4%
	112·0	2·9	2·9	100%							
					113·8	carbonaceous black shale, siltstone intercalated and minor interbedded carbonaceous black shale with dark grey siltstone and very minor grey medium tuffaceous sandstone.	decrease in amount of calcite to minor veining.		sharp contact at 13° decrease in deformation moderate deformation & contortion microfaulting v. common	moderate Py associated & Cal vns & also dis Py-3% minor Pb & Cal vns	3%
	114·9	3·1	3·1	100%							
									116·9 B? 53°		
	118·0	3·0	3·0	100%							
						118·9 300 mm of calcareous grey medium grained tuffaceous sandstone			119·2 B 44° (tuf sa/bk sh)		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 105 TO 120m DATE 17/10/80 PAGE 9 OF 26

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					121	black shale, sandstone, siltstone, carbonaceous black shale, interbedded & intercalated with minor grey fine to medium grained calcareous tuffaceous sandstone & rare grey & minor dark grey calcareous siltstone.	moderate calcite veining		moderate deformation minor contortion 121.0 B 40° (tuf sa/bk sh) common microfaulting 122.2 B 34° (bk sh/ss)	common dis Py 4% & associated & Cal vns. minor Pb 1% associated & Cal vns	5%
121.0	3.0	3.0	100%		122						
					123				123.6 B 50° (bk sh/ss)		
124.0	3.0	3.0	100%		124						
					125				125.4 B 62° (tuf sa/bk sh)		
					126						
127.0	3.0	3.0	100%		127				moderate contortion common down unit.		
					128						
					129		128.8 60mm qz/st/cal vn at 68°		128.9 B? 48° (bk sh)	128.8 vn contains Gl 20%, Pb 4%, Py 5%, Asfy 3%	32%
130.0	3.0	3.0	100%		130						
					131				131.2 B? 56° (bk sh)		
					132						
133.0	3.0	3.0	100%		133						
					134				134.5 B 62° (bk sh)		
					135						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 120 TO 135 m DATE 18/1/81 PAGE 10 OF 26

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					136	shale, siltstone, sandstone interbedded & intercalated carbonaceous black shale, dark grey & grey siltstone and gray fine to medium grained, calcareous, tuffaceous sandstone.	minor calcite veining		minor to moderate deformation minor contortion 136.3 B 73° (bk sh/ss) common microfaulting 137.7 B 62° (ss/tuf sa)	minor mineralisation associated & Cal vns Pb 1%, Fy 0.5% minor dis Py 2%.	3.5%
	136.0	3.0	3.0	100%	137						
					138						
	139.0	3.0	3.0	100%	139						
					140				140.4 B 58° (bk sh/tuf sa)		
					141						
	142.0	3.0	3.0	100%	142				141.9 B 55° (bk sh)		
					143				142.9 B 67° (bk sh)		
					144						
	145.0	3.0	3.0	100%	145				144.6 B 62° (bk sh)		
					146				145.3 B 40° (bk sh/tuf sa)		
					147				146.3 B 65° (bk sh/tuf sa)		
	148.0	3.0	3.0	100%	148						
					149				148.9 B 50° (tuf sa)		
					150						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C FROM 135 TO 150 m DATE 18/1/81 PAGE 11 OF 26

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5 cm

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Siltstone, sandstone interealated ± interbedded dark grey siltstone with minor grey siltstone and fine to medium grained, grey calcareous tuffaceous sandstone ± very minor carbonaceous black shale (has steadily decreased down hole)	minor calcite veining		moderate deformation 150·7 B36° (tuf ss/bk sh)	minor mineralisation associated ± Cal vns Pb 2%, Py 1% minor dis Py 2%	5%
	151·0	3·0	3·0	100%					152·2 B25° (bk sh)		
	154·0	3·0	3·0	100%					154·5 B58° (bk sh) 155·7 B63° (ss/bk sh)		
	157·0	3·0	3·0	100%					157·5 B51° (tuf ss/bk sh) 158·7 B80° (bk sh/tuf ss)	159·7 30mm Cal vn ± Py 40%, Py 10% at 68°	50%
	160·0	3·0	3·0	100%					160·5 B72° (bk sh/tuf ss) 161·7 B45° (bk sh)		
	163·0	3·0	3·0	100%			163·0 100mm Cal/St vn at 72° 163·2 75mm Cal/qz/St vn at 66° 164·5 50mm Cal/St vn at 75°		162·9 B32° (bk sh/ss) 163·7 B70° (ss/tuf ss)	163·0 } vns contain minor Asty 163·2 } mineralisation; sp, Py, Po	3%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 16

LOGGED BY J.C FROM 150 TO 165 m DATE 15/1/81 PAGE 12 OF 26

011 920252

6 cm

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					166	shale, siltstone, sandstone roughly equal amounts of intercalated & interbedded carbonaceous black shale, dark grey siltstone & grey medium to coarse calcareous tuffaceous sandstone	several large calcite veins. 167.0 300mm patchy Cal vn 167.4 over 500mm Cal vn, base at 54° 168.0 moderate calcite veining		slight to moderate deformation. minor contortion common microfaulting 167.3 B55° (bk sh/tuf sa) 169.0 B30° (bk sh/ss) 170.2 B?50° (ss/sh) 171.8 graded bd f to c down-hole - B 68° (ss/bk sh) sharp contact 173.3 graded bd f to c downhole B66°, (ss/bk sh) sharp contact 174.9 B 76° (bk sh/ss) 176.4 B53° (bk sh) 178.7 B66° (bk sh)	minor Py 1% + Pb 2% mineralisation associated & Cal vns minor dis Py 2%	5%
166.0	3.0	3.0	100%	166							
				167							
				168							
169.0	3.0	3.0	100%	169							
				170							
				171							
172.0	3.0	3.0	100%	172							
				173							
				174							
175.0	3.0	3.0	100%	175							
				176							
				177							
178.0	3.0	3.0	100%	178							
				179							
				180							

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 165 TO 180 m DATE 19/1/81 PAGE 13 OF 26

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					181	Shale, siltstone interbedded = intercalated black carbonaceous shale = dark grey siltstone with minor amount of medium grained, grey, calcareous tuffaceous sandstone.	moderate cal vns		moderate deformation minor contortion common microfaulting	minor Pb 3%, Py 2% associated & cal vaining minor dis Py 2%	7%
	181·0	3·0	3·0	100%	182				182·3 B 55° (ss/bk sh)		
					183				183·4 B 49° (ss)		
	184·0	3·0	3·0	100%	184		bd planes				
					185				185·5 B 34° (bk sh/ss)		
					186				186·7 B 38° (bk sh/ss)		
	187·0	3·0	3·0	100%	187				188·2 B 57° (bk sh/ss)	←188·5 cal vn (15mm) at 65° & Po-Py 90% = Py 5%	95%
					188						
					189		189·5 Cal vn 200mm wide top 50°, base 65°		189·7 B 57° (bk sh)		
	190·0	3·0	3·0	100%	190						
					191		191·6 70mm cal/fluorite vning at 52°.		191·3 B 60° (bk sh)		
					192				192·7 B 59° (bk sh)		
	193·0	3·0	3·0	100%	193						
					194				194·1 B 41° (bk sh)		
					195						

SCALE 1:100 (1cm = 1 m)

5 cm

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COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C FROM 180 TO 195m DATE 19/1/81 PAGE 14 OF 26

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DRILL ADVANCE / LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Shale, siltstone, sandstone interbedded & intercalated carbonaceous black shale, dark grey siltstone & medium to coarse grained tuffaceous grey sandstone.	moderate calcite veining		moderate deformation minor contortion common microfaulting 197.4 B 66° (bk sh/ss) bedding contorted 200.8 B 76° (bk sh/ss) 202.4 B 61° (bk sh/tuf ss) 204.0 B 63° (ss)	minor Py 2% & Pb 1% associated & calcite veining. minor dis Py 3%	6%
196.0	3.0	3.0	100%								
199.0	3.0	3.0	100%								
202.0	3.0	3.0	100%				203.5 10mm shallow thin Cal vn at 12° (late phase)				
					204.6	Tuffaceous sandstone, siltstone. interealated & interbedded minor green-grey & buff, fine to medium grained tuffaceous sandstone with green-grey & buff siltstone. Units slightly altered.	minor calcite veining		minor deformation minor contortion 206.4 B 40° (ss/tuf ss) 208.7 B 66° (ss/tuf ss)	barren	
205.0	3.0	3.0	100%								
208.0	3.0	3.0	100%				208.3 180mm Cal vn at 41°				
					209.0						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 195 TO 210 m DATE 19/1/81 PAGE 15 OF 26

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						shale, siltstone interbedded & interbedded black carbonaceous shale & dark grey siltstone with minor grey, fine to medium grained tuffaceous sandstone & isolated units of green-grey, fine to medium grained tuffaceous sandstone.	moderate to strong calcite veining		slight to moderate deformation moderate contortion common microfaulting 212.0 B 74° (bk sh) 213.2 B 71° (bk sh) 214.3 B 71° (bk sh/ss) 215.9 B at 71° (bk sh) 216.9 B 87° (tuf ss/bk sh)	minor Py 2% & Pb 2%	
	211.0	3.0	3.0	100%							
	214.0	3.0	3.0	100%							
	217.0	3.0	3.0	100%		218.8 800 mm of grey-green tuf. sandstone	217.4 300m Cal/qz/St vn & minor mixed sed, top at 76°, base 75° strong Cal veining to unit base. 219.7 35mm Cal vn at 45°		219.7 B? 45° (bk sh) 221.6 B? 74° (bk sh)	217.4 vn contains AsPy 25%, Gl 5%, Pb 2%, Py 2%	3%
	220.0	3.0	3.0	100%							
	223.0	3.0	3.0	100%	221.9	altered sandstone, siltstone. intercalated & interbedded (minor) grey & brown, medium to coarse grained tuffaceous sandstone & brown & grey (all units slightly altered)	219 qz/cal vn (6mm) at 62° moderate to strong quartz veining		moderate to strong deformation moderate contortion. 223.5 B? 59° (tuf ss)	minor Py 1% & Pb 1% associated & qz veining	2%

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 16

LOGGED BY J.C. FROM 210 TO 225 m DATE 19/1/81 PAGE 16 OF 26

015

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					226	intercalated + interbedded sandstone + siltstone. brown + grey, fine to coarse (mainly coarser units) grained tuffaceous sandstone & grey + brown siltstone. (All units altered)	minor to moderate quartz veining V. minor Cal veining		moderate to strong deformation + contortion common microfaulting. 226.4 B? 34° (tuf ss)	minor Py 1%, Pb 1%, Sp 1% associated & qz/cal veining	3%
	226.0	3.0	3.0	100%	227						
					228						
	229.0	3.0	3.0	100%	229						
					230				230.2 B 24° (ss)		
					231						
	232.0	3.0	3.0	100%	232				232.4 B? 32° (tuf ss)		
					233						
					234						
	235.0	3.0	3.0	100%	235				235.1 B 38° (ss)		
					236						
					237				237.9 B? 60° (tuf ss)		
	238.0	3.0	3.0	100%	238				239.0 B? 28° (ss/tuf ss)		
					239						
					240						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 16

LOGGED BY JC FROM 225 TO 240m DATE 19/1/81 PAGE 17 OF 26

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						sandstone & siltstone. intercalated & interbedded (minor) green, grey & brown medium to coarse grained tuffaceous sandstone and grey, brown & green siltstone (all units hornfelsed ?)	minor to moderate quartz veining minor calcite veining 242·4 40mm qv at 78° 242·6 30mm qv at 81° 244·0 30 mm qv. at 76°		moderate to strong deformation moderate contortion common microfaulting 242·3 B? 75° (ss) 243·4 B? 23° (ss) 245·0 B 26° (ss)	minor mineralisation associated c qz & Cal veining. Po 3%, Py 2%, Sp 1% Cp tr.	6%
241·0	3·0	3·0	100%								
244·0	3·0	3·0	100%								
					246·1	base metal zone, altered sediments & carbonates. qz vns interbanded & alt. dk gr seds	alt dk green sediments qz, st, Ankerite		contact at 65° brecciated at base contact at 64°	mineralisation vn, dis (minor) Carbaire Sp 3% in vn & brec zone: Gl 4% in gash in centre of zone: Fr patches of ") larger uniform vns Po 6% } interwoven Py 4% } early Py & Cp } Po	17%
247·0	3·0	3·0	100%		246·9	talc-carbonate zone dk gr seds, talc, milky wh & pale grey carbonates	alt dk green sediment 247·5 fol. light & dk cbte bands		247·3 fol at 65° intensely cbte veined fol at 62° (slight)	barren	
					247·9	carbonates Approximately 50% each of milky white & grey carbonates with minor fine black specks. f. mottling in grey cbte.	mottled dark & light section. f. mottling at top to coarser at base minor & slight foliation carbonate patches & vns		248·4 fol at 50°		
250·0	3·0	3·0	100%		249·7	carbonates grey and milky white carbonates with minor amounts of pale brown cbte in the grey.	milky cbte in a few c. mottled bands sl fol. increases fractionally to base of section. minor cross-cutting wh cbte		249·8 fol at 69° 250·4 fol at 51° 251·4 fol at 61° 252·1 fol at 62°	barren	
253·0	3·0	3·0	100%		252·8	carbonates milky white & pale (translucent) green (talc) milky green & grey & minor pale br. cbtes (in vns?) different types are in patches/bands	252·9 wh cbte vn V.minor qz veining clear q.v.		foliated slightly 253·8 fol. at 42°	trace specks of Py?	tr
					254·1	carbonates grey & milky green & white carbonates.	c. mottling between light & dk cbtes, f. mottling within these units 254·9 3mm clear q.v at 75°		254·5 fol? at 53°		

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 16

LOGGED BY J.C FROM 240 TO 255 m DATE 22/10/80 PAGE 18 OF 26

017

92025

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					255·2	carbonates predominantly grey unit & milky wh ⇒ green cbtes. c. mottling between light ⇒ dk cbtes; f. mottling within the units	cbtes & numerous clear quartz veins		255·6 fol at 88° slightly foliated	trace amounts Py	tr
256·0	3·0	3·0	100%		256·3	carbonates milky wh cbte & black specks ⇒ minor pale gy cbte. 1mm vn of green cbte.	256·4 vn? of milky wh cbte & little to no black specks 257·2 vn? of wh cbte & little to no black specks.		moderately foliated 257·0 fol at 68°	minor Py in thin vns (<1 mm)	2%
					257·5	carbonates milky white-green ⇒ pale grey cbtes & black streaks ⇒ specks (blebs) predominantly light cbtes.	black streaks along foliation		257·9 fol at 67° moderately foliated 258·7 fol at 62° minor foliation	trace specks Py	tr
259·0	3·0	3·0	100%			even proportion of dark ⇒ white cbtes			259·6 fol at 67° moderate foliation 260·5 fol at 52°		
							261·2 band of wh ⇒ gr cbte		261·2 undercbte band contion of cbte, then shallowing of 261·6 fol 15° foliation dip		
262·0	3·0	3·0	100%		262·2	carbonates wh ⇒ gy cbte intimately mixed & fine mottled texture. several wh. cbte vns across ⇒ along foliation	262·5 band of dk gy ⇒ dk gr cbte (vein?)		v. slight foliation 262·9 fol at 47°		
					263·3	carbonates white, pale green ⇒ pale grey cbtes. darker unit	263·5 band of dk gy ⇒ dk gr (in centre) cbte & wh cbte vns at 35° fine white mottling through all cbtes.		263·6 fol at 63° slight foliation (varies) 264·4 fol at 46° moderate fol (varies)	263·5 band contains patches Po 1%	1%
265·0	3·0	3·0	100%			predominantly white ⇒ green cbtes	coarse white mottling wh cbte vns		fol 265·3 fol at 56°		
					265·5	quartz vein & mineralisation ⇒ talc	qz, cbtes		contact at 55° contact at 55°	Po 70%, Py 5%, Cp 2% in vn	7%
					265·8	carbonates wh, pale gr, pale br ⇒ pale gy cbtes, minor black blebs	common cross-cutting veins of wh. cbte		foliation minor ⇒ slight. unit highly deformed	trace specks Py	tr
					267·1	carbonate pale gy & minor pale gr cbte. f. wh mottling through-out	wh ⇒ dk cbtes along fractures		unit cut by several wh. cbte veins. contact 42°		
268·0	3·0	3·0	100%		267·7	quartz-carbonate vein gy, gr, br, wh ⇒ yellow-wh cbtes	qz, siderite, talc		two? phases of vn inclusion contact at 45°	Po 17%, Py 5%, Cp 0·5% vn. mineralisation is very patchy	22·5%
					268·5	carbonate pale gy cbte & minor f. wh. mottling ⇒ br. streaks.	common wh cbte vns		slight ⇒ minor foliation	cbte vns & Po 1%, Py tr	1%
					269·5					269·8 talc/qv & Po at 30°?	

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 16

LOGGED BY J.C. FROM 255 TO 270 m DATE 22/10/80 PAGE 19 OF 26

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920259

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						talc-carbonate pale gy. pale gr + milky wh cbtes & mineralised talc bands. minor black blebs	minor qz in mineralised bands. (v minor St) minor wh. cbte vns		slight + minor foliation 270·7 fol at 53°	270·1 5mm talc/St/q·v & Py 5% + tr of Py, Cp.	5%
271·0	3·0	3·0	100%	271	271·4	carbonate/talc/St/quartz pale milky white + off-white carbonates with mineralised talc/siderite/quartz bands. minor black blebs + grey cbte	larger qz + St vns in mineralised bands fine mottled texture between talc + St.		contact grades over 50mm at 78° 271·8 fol at 50° 272·0 vn at 50° 272·3 vn at 10° 273·0 fol at 40°	271·5 talc/St/q·v's common in unit + strongly mineralised & Po 10%, Py 5%, Cp 1%, AsPy 1%, Sp 1%	16%
274·0	3·0	3·0	100%	274	273·4	quartz, pyrrhotite, siderite zone quartz + carbonate vns, qz veining is commonly & massive Po. St + Ankerite vns often show coxcomb texture. In some places St appears to retain the relief foliation + veining of talc-cbte zone. There are small amounts of mixed seds.	multi phase system last stage? 60° St & Sp, Gl vns middle stage? massive qz + Po first stage? cbtes & coxcomb texture.		100 mm zone of brecciation (sediment, qz + cbte) contact sharp (with vn) at 25° appears to be two sets of vn dips, with same dip direction as each other at 30° + at 60° shallow dip more prominent 271·3 500 mm brec zone (as above) contact sharp at 30° sharp contact at 40°	Several large vns of mas. Po 30%, Py 3% Common patchy + selvage mineralisation usually associated & mixed vns: Po 6%, Sp 2%, Py 1%, Gl 1%	35% 10%
277·0	3·0	3·0	100%	277	277·8	tuffaceous sandstone + siltstone. altered, intercalated + interbedded green-grey fine to medium grained tuf. sandstone & green-grey + minor brown siltstone.	veining goes from small numerous St vnlets to isolated q.v. qv + vnlets along bd at 5° minor crosscutting at 40° down to 278·1 m		slight to moderate deformat" slight contortion common fracturing bedding at top of unit common + consistant at 50°; cyclic thin beds, more massive at base.	minor selvage mineralisat" associated & minor St in q.v.: Sp 2%	2%
280·0	3·0	3·0	100%	280	280·4	carbonaceous shale, siltstone. interbedded + intercalated (minor) carbonaceous black shale, with dk gy siltstone + minor gy-br medium grained tuffaceous sandstone.	moderate to strong Cal veining, mostly along bd planes.		moderate to strong deformation. strong contortion - s sed deformation? 282·5 B 57° (bk sh) 283·8 B 64° (bk sh) 284·9 B 68° (bk sh)	Py dis + associated & Cal vns	5%
283·0	3·0	3·0	100%	283							
				284							
				285							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 270 TO 285 m DATE 23/10/80 PAGE 20 OF 26

019 920260

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	286.0	3.0	2.75	91.7%
	289.0	0.4	0.4	100%
	289.0	2.6	2.6	100%
	292.0	3.0	3.0	100%
	295.0	3.0	3.0	100%
	298.0	3.0	3.0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	shale, siltstone, sandstone. interbedded carbonaceous black shale, dk gy siltstone + light gy medium grained tuffaceous sandstone.	Calcite veining strong to moderate minor st veining		moderate to strong deformation. moderate contortion thin beds of cyclic bedding 286.9 B 60°	disseminated Py	4%
287.4	altered tuffaceous sandstone. dark brown, gy + gr. fine to coarse (mainly c) grained tuf sandstone, with minor intercalated br + gr siltstone.	common cal + qz veining; usually small irregular veins minor actinolite/ tremolite vns towards section base.		core highly broken; moderate deformation sandstone usually mas. 290.9 B? at 42° (tuf sa) 292.3 B? at 36° (tuf sa/ss) 293.2 B? at 56° (tuf sa/ss) 294.3 B? at 67° (tuf sa/ss) 295.7 B 82° (ss/tuf sa) 298.1 B 60° (ss) 299.4 B 42° (tuf sa)	trace Pb, Py + Sp in calcite /qz veins	tr
					289.0 qz/cbte vns incorporated & seds contain patchy mineralisation: Po 5%, Py 15% Sp 2% Sp 2% Gl 1% 289.9	25%
						tr

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 285 TO 300m DATE 20/1/81 PAGE 21 OF 26

020

92026

5 cm

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					301	sandstone, siltstone, quartz, calcite hornfelsed? intercalated gr-gy & mainly brown, fine to coarse (mostly c) grained tuffaceous sandstone with minor gr.gy & buff siltstone. Quartz & calcite veins mixed throughout.	moderate to strong Cal & qz veining		moderate to strong deformation moderate contortion	banded Po	50%
	301·0	3·0	3·0	100%					301·3 B 52° (ss/Po)		(10%)
					302					301·5	
									302·7 B? 80° (ss)	common mineralisation associated & qz/cbte veining: Po 7%, Py 2%, Cp 1%	10%
					303						
	304·0	3·0	2·9	97·0%	304				304·6 B 70° (ss, tuf ss)		
					305					304·9 v. common Po 30%, Py 5%, & minor Cp 2% & qv.	37%
									contorted bedding	305·4	10%
					306					306·5 v. common Po 25%, Py 15% & minor Cp 2% & qz vns at 60°	40%
	307·0	3·0	3·0	100%	307						10%
										307·5	
					308				308·1 B? 65° (ss, tuf ss)		
					309		309·6 several Cal/St/qz/ Ankerite vns over 400mm at 62°			309·6 vn has minor Gl 1%, Py 2% & Asty 2%	5%
	310·0	1·7	1·7	100%	310						
					311		311·7 80mm qz/ankerite St vn at 61°				
	311·7	2·9	2·9	100%	312						
					313						
					314						
	314·6	3·1	3·1	100%	315						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 300 TO 315 m DATE 29/1/91 PAGE 2 OF 26

021

92026 2

5 cm

DRILL ADVANCE / LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	317·7	2·4	2·4	100%
	320·1	1·9	1·9	100%
	322·0	3·0	3·0	100%
	325·0	3·0	3·0	100%
	328·0	3·0	3·0	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	sandstone / siltstone hornfelsed, intercalated, grey+ mainly br, fine to coarse (usually c) grained, tuffaceous sandstone with minor gr + br siltstone	strongly veined by quartz, carbonate + tremolite / actinolite.		massive unit & bedding features masked by heavy veining. moderate to strong deformation. soft sediment deformat" + brecciation occur.	minor mineralisation associated with qz/cbte veining. Pb 5%, Py 2%, Cp 1%	8%
		323·0 (10 mm cbte vn, minor qz / cp + coarse texture 323·2 (± 83° 270 mm qtz & minor cbte + blue-gy tint at 60°		321·0 brecciation in varying degrees		
		324·5 qtz next to cbte vn & minor sed + mixing. 700 mm at 55°.			325·0 common mineralisation : Pb, Py, Cp	
		326·1 contact at 60° several qz-cbte vns, mixed with sed, has mottled or patchy appearance.			326·1 Pb 20%, Py 5% very common in qz/cbte vns. Cp 1%	26%
327·5	brecciated limestone?	numerous qz/cbte vns mixed & sediment		327·6 brec. section		
328·5					328·5	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C FROM 315 TO 330m DATE 20/1/81 PAGE 23 OF 26

022

920263

5 cm

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered sandstone, siltstone	moderate to strong		moderate to strong		
	331·0	3·0	3·0	100%	331	altered (hornfelsed) gr, gy-r br, fine to	actinolit/tremolite		deformation	331·0 q.v & Py 40% over 120mm	4%
					332	coarse grained tuf. sandstone & minor	+ quartz veining			minor mineralisation	
					333	gy + br siltstone.			333·5 Bat 64°? (ss)	associated & qz veining	4%
										: Pb 2%, Py 2%	
	334·0	3·0	3·0	100%	334						
					335		335·4 500mm qv at 51°			335·4 vn has Pb 75%, Py 4%, Cp 1%	80%
					336						
	337·0	3·0	3·0	100%	337						
					338						
					339		338·6 qp mm qv at 46°				
							quartz mixed &				
	340·0	3·0	3·0	100%	340		sediment very common				
					341		from here down.				
					342						
	343·0	3·0	3·0	100%	343						
					344						
					345						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C FROM 330 TO 345m DATE 22/1/81 PAGE 24 OF 26

023

9202664

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	346·0	3·0	3·0	100%
	349·0	3·0	3·0	100%
	352·0	3·0	3·0	100%
	356·0	3·0	3·0	100%
	359·0	2·8	2·75	98·2%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
346	altered sandstone hornfelsed gr-br, fine to coarse grained tuffaceous sandstone, minor gr-br siltstone + very minor gr-gy siliceous (chert) sediment.	moderate to heavy quartz + actinolite / tremolite veining		moderate deformation massive units intercalated	minor mineralisation associated & tremolite + qz veining: Po 1%, Py 1%	2%
347						
348		-348·7 qz vns over 100 mm		348·7 B? at 58° (ss/tuf ss)		
349		-349·2 45 mm qv at 70°				
350						
351						
352						
353				353·6 B at 62° (ss)		
354						
355				355·1 B at 60° (ss)		
356						
357						
358						
359						
360						

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C. FROM 345 TO 360m DATE 22/1/91 PAGE 25 OF 26

024

920265

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered sandstone hornfelsed gr-v br, fine to coarse grain tuf sandstone ± minor grabr siltstone ± gr-gy siliceous (chert?) sediment.	moderate to heavy actinolite/tremolite veining, mixed into sediments		moderate deformation 361·8 B? at 63° (SE)	minor mineralisation associated ± quartz/tremolite vns & patches within s.s units. Pan Py 1%	2%
360·8	1·4	1·4	100%	361							
				362							
362·2	1·8	1·8	100%								
				363							
				364		End of DDH RBE 16 at 364·0m					

SCALE 1:100 (1cm = 1 m)

5 cm

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 16

LOGGED BY J.C FROM 360 TO 364 m DATE 22/1/81 PAGE 26 OF 26

025 920266

026

92026

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
30·0	BLD	125	BLD	10	100	0·5	29	85	
31·0	BLD	135	BLD	45	290	1·0	18	90	
34·0	4	155	15	25	235	0·5	19	115	
35·5	5	125	10	20	1800	0·5	52	150	
37·0	3	175	20	20	1450	BLD	100	165	
38·3	4	175	15	15	270	0·5	9	140	
39·8	BLD	90	15	10	330	0·5	24	125	
42·2	4	100	20	5	860	BLD	18	155	
43·6	6	110	15	15	860	0·5	26	145	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 30 TO 45.7 DATE 7/11/80 PAGE 1 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
45																
45·8	BLD	85	BLD	10	360	0·5	17	130								
47·2	BLD	105	BLD	25	1450	BLD	25	185								
47·8	10	65	BLD	360	1100	1·0	35	110								
48·9	6	70	BLD	140	730	0·5	50	105								
50·5	BLD	150	15	85	950	1·0	30	125								
52·0	BLD	100	BLD	135	1350	0·5	60	120								
53·8	BLD	95	15	40	200	0·5	22	60								
54·7	BLD	105	BLD	65	280	1·0	14	65								
57·8	BLD	145	BLD	100	225	0·5	27	75								
59·1	BLD	100	BLD	40	120	1·0	10	55								
60																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 45 TO 60 m DATE 7/11/80 PAGE 2 OF 23

021 920268

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
60																
61	61.0															
62		6	90	10	25	205	0.5	4	60							
63																
64	63.9															
65		BLD	115	15	15	710	0.5	60	70							
66	65.6															
67		BLD	80	BLD	30	425	0.5	60	60							
68	67.0															
69		10	110	BLD	80	705	1.0	70	95							
70	70.0															
71		BLD	95	BLD	50	1300	0.5	15	50							
72																
73	73.0															
74		65	580	20	1300	7300	20.0	1300	100							
75																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 60 TO 75m DATE 7/11/80 PAGE 3 OF 23

028

920269

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
76.0	60	95	BLD	1650	4200	3.5	1900	65								
77.25	9	105	BLD	300	600	1.5	100	70								
79.0	5	130	10	70	300	0.5	24	80								
82.0	10	100	BLD	140	1600	0.5	31	60								
85.0	3	105	10	200	630	1.0	100	60								
88.0	BLD	120	15	90	170	0.5	40	65								
90.0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 75 TO 90 m DATE 7/11/80 PAGE 4 OF 23

029

9200270

030
92021

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
90.0	9	100	BLD	95	170	1.0	15	60								
91.0	15	120	BLD	450	2400	1.5	13	65								
94.0	BLD	125	15	170	220	0.5	16	75								
97.0	5	110	BLD	80	190	1.0	27	70								
100.0	5	95	BLD	185	400	1.0	27	60								
103.0	BLD	110	15	85	200	0.5	39	65								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 90 TO 105 m DATE 7/11/80 PAGE 5 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
105																
106	106.0															
107		BLD	115	15	185	580	1.0	20	70							
108																
109	109.0															
110		5	100	BLD	55	220	1.0	18	85							
111																
112	112.0															
113		BLD	140	15	30	130	0.5	7	140							
114																
115	114.9															
116		BLD	120	BLD	167	285	BLD	38	110							
117																
118	118.0															
119		6	105	15	85	290	1.0	9	100							
120																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 105 TO 120m DATE 7/11/80 PAGE 6 OF 23

031

9202272

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
121·0	3	110	BLD	35	165	0·5	27	90								
124·0	6	115	BLD	650	310	0·5	650	70								
127·0	BLD	140	BLD	2650	5000	4·0	700	80								
133·0	BLD	145	25	100	100	0·5	17	85								

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 16

ASSAYED BY Analabs FROM 120 TO 135 m DATE 7/11/80 PAGE 7 OF 28

032

920273

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
135																
136																
136.0																
137	8	130	10	70	175	0.5	17	140								
138																
139																
139.0																
140	BLD	120	20	35	115	0.5	13	95								
141																
142																
142.0																
143	BLD	120	10	35	175	0.5	20	165								
144																
145																
146.0																
146	6	185	20	20	180	BLD	16	190								
147																
148																
148.0																
149	6	120	10	35	950	0.5	350	125								
150																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 135 TO 150m DATE 7/11/80 PAGE 8 OF 23

033 920214

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
151·0	10	110	BLD	50	1700	1·0	1500	110								
154·0	6	165	BLD	25	110	0·5	27	125								
157·0	6	340	20	20	125	1·0	55	155								
160·0	40	215	BLD	315	820	1·0	40	95								
163·0	160	225	10	1650	6900	3·0	2800	75								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 150 TO 165m DATE 7/11/80 PAGE 9 OF 23

034 920215

035
9202276

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
165																
166																
166.0	20	160	35	275	1200	1.0	33	65								
167																
168																
169																
169.0	30	175	20	55	125	0.5	55	95								
170																
171																
172																
172.0	25	200	25	25	105	0.5	19	80								
173																
174																
175																
175.0	9	125	BLD	30	110	0.5	22	80								
176																
177																
178																
178.0	5	135	30	20	100	0.5	19	80								
179																
180																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 165 TO 180 m DATE 7/11/80 PAGE 10 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
180																
181	181·0															
182		15	100	10	25	55	0·5	6	65							
183																
184	184·0															
185		BLD	100	BLD	30	75	1·0	20	75							
186																
187	187·0															
188		7	190	15	25	70	0·5	42	60							
189																
190	190·0															
191		20	290	20	20	80	BLD	42	115							
192																
193	193·0															
194		15	150	10	20	1600	0·5	8	150							
195																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 180 TO 195m DATE 7/11/80 PAGE 11 OF 23

036 920277

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
196·0																
196·0	6	175	15	15	85	1·0	10	145								
199·0	7	195	20	15	55	BLD	11	75								
202·0	10	215	10	15	80	BLD	17	120								
205·0	3	50	15	5	125	0·5	20	150								
208·0	10	75	10	30	135	BLD	19	125								
210																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 195 TO 210 m DATE 7/11/80 PAGE 12 OF 23

037
920218

038

9202/79

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
210																
211																
211·0																
212	BLD	80	15	25	145	BLD	6	110								
213																
214																
214·0																
215	7	80	30	45	700	0·5	13	115								
216																
217																
217·0																
218	35	75	BLD	2·2%	820	47·5	3·0%	120								
219																
220																
220·0																
221	20	85	BLD	320	2200	5·0	850	115								
222																
223																
223·0																
224	30	90	25	185	3800	1·5	420	130								
225																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 210 TO 225m DATE 7/11/80 PAGE 13 OF 23

039 9202280

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
225																
226																
226·0																
227	30	50	10	45	220	BLD	250	135								
228																
229																
229·0																
230	10	110	20	35	130	0·5	200	145								
231																
232																
232·0																
233	40	130	10	60	200	BLD	120	115								
234																
235																
235·0																
236	50	75	15	25	145	0·5	150	140								
237																
238																
238·0																
239	75	180	40	75	580	1·0	350	160								
240																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 225 TO 240 m DATE 7/11/80 PAGE 14 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au	SAMPLE NUMBER
241·0	55	50	25	50	300	1·0	450	310		Ground↑
244·0	25	10	BLD	20	170	0·5	320	360	-	Split ↓ TQ273
245·0	20	5	BLD	10	130	0·5	600	280	-	TQ274
246·0	750	3200	BLD	1·25%	1·7%	59·0	5200	370	0·008	TQ275
247·0	4	20	BLD	105	160	1·0	1800	1400	BLD	TQ276
248·0	4	10	BLD	35	90	BLD	400	1500	BLD	TQ277 Split ↑
249·0 (From 241·0)	BLD	5	15	90	100	6·0	1200	1800		Ground↓
250·0	15	10	BLD	55	105	BLD	320	1750		
253·0	3	5	BLD	15	85	BLD	150	1100		

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 240 TO 255 m DATE 7/11/80 (11/12/80) PAGE 15 OF 23

010 920281

041

9202282

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au							SAMPLE NUMBER
255																
256	256·0															
257		5	5	BLD	20	40	0·5	500	1450							
258																
259	259·0															
260		6	BLD	BLD	10	50	BLD	1100	1150							
261																
262	262·0															
263		30	40	BLD	80	75	0·5	1400	1800							
264																
265	265·0 to 265·3	780	580	10	30	65	1·5	2100	1800						Ground ↑	
	265·3	1400	2850	BLD	40	95	6·5	4500	1800	-					Split →	Tq278
266	265·6															
267	(from 265·0 → 268·0)	780	580	10	30	65	1·5	2100	1800						Ground	
268	267·75	700	430	BLD	40	55	0·5	90	1500	BLD					split ↓	Tq279
269	268·6	7	5	BLD	20	40	BLD	1700	1700	BLD						Tq280
270	269·8															

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 255 TO 270 m DATE 7/11/80 11/12/80 PAGE 16 OF 23

042

9202283

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au							SAMPLE NUMBER
	500	640	BLD	20	60	0·5	2400	1400	BLD							Tq281
270·1	50	10	BLD	5	40	0·5	1900	1200	BLD							Tq282
271·0	1400	5	BLD	20	40	BLD	2100	1500.	BLD							Tq283
271·5	1400	30	BLD	25	60	BLD	3000	1300	BLD							Tq284
271·95	2·18%	305	BLD	40	110	0·5	6000	1800	BLD							Tq285
272·4	3·51%	715	BLD	45	100	1·5	4000	2400	BLD							Tq286
272·9	4600	480	BLD	2300	1·1%	5·5	2800	1650	BLD							Tq287
273·35	220	300	BLD	2750	4·45%	15·0	3100	740	BLD							Tq288
273·85	2700	2600	BLD	1·0%	4·05%	53·5	3500	1600	BLD							Tq289
274·5	40	175	BLD	2500	4650	5·0	3000	1500	BLD							Tq290
274·8	420	1350	BLD	4150	5·8%	38·5	1600	2000	BLD							Tq291
275·1	490	295	BLD	3500	2·65%	12·0	9000	630	0·025							Tq292
275·65	2600	1100	BLD	2800	1·65%	23·5	1400	390	BLD							Tq293
276·2	2100	2900	BLD	2300	5350	34·5	4000	280	BLD							Tq294
277·27	300	370	BLD	7450	2·85%	12·5	9000	140	0·025							Tq295
277·8	250	105	BLD	320	610	2·5	1200	105								Tq296
278·25	100	110	BLD	650	2950	1·5	230	140								Tq297
278·75	25	70	BLD	440	1100	0·5	60	150								Tq298
280·0	20	100	BLD	40	90	0·5	52	120								Tq299
280·4	20	150	BLD	180	350	0·5	230	105								Tq301
281·2	20	130	BLD	40	70	BLD	40	100								Tq302
282·0	3	80	BLD	35	70	BLD	14	85							Split ↑	Tq303
283·0	35	105	10	295	1400	1·5	130	100							Ground	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 270 TO 285 m DATE 7/11/80 11/12/80 PAGE 17 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au							SAMPLE NUMBER
285																
286	286·0															
287		140	205	20	110	320	1·0	220	125							
288																
289	289·0															
290		110	630	25	470	760	3·5	310	145							
291																
292	292·0															
293		85	45	35	90	295	1·5	120	145							
294																
295	295·0															
296		65	90	35	170	480	1·0	100	170							
297																
298	298·0 (→301·0)	45	275	20	35	150	1·0	1000	105						Ground	
299																
300	299·5	75	105	BLD	40	135	0·5	80	125						Split ¼	Tq304

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 285 TO 300 m DATE 7/11/80 PAGE 18 OF 23

043

9202841

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au							SAMPLE NUMBER
300·2	110	590	BLD	25	105	BLD	260	150								rq305
300·5	130	3000	BLD	195	105	6·5	9000	160								rq306
301·0	110	1300	BLD	280	670	3·5	1600	125								rq307
301·7	65	390	BLD	40	150	0·5	300	130								rq308
302·0	85	65	BLD	320	690	BLD	200	160								rq309
303·0	25	105	BLD	135	370	BLD	70	140								rq310
304·0	60	105	BLD	260	480	BLD	50	140								rq311
304·9	60	1900	BLD	140	390	1·5	300	140								rq312
305·4	70	145	BLD	25	90	BLD	19	90								rq313
306·0	65	330	BLD	95	220	BLD	24	150								rq314
306·65	45	1400	BLD	75	320	0·5	24	280								rq315
307·1	95	490	BLD	240	720	1·0	140	180							Split↑ Ground↓	rq316
307·45 (from 310)	85	70	25	525	2900	1·5	3200	110								
310·0	250	350	35	415	2350	3·5	3300	125								
313·0	85	60	35	185	330	1·0	200	125								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 300 TO 315 m DATE 7/11/80 11/12/80 PAGE 19 OF 23

044 920285

045
9202286

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
315																
316																
316·0																
317	35	50	20	55	140	0·5	180	130								
318																
319																
319·0 (→322·0)																
320	45	105	10	30	130	1·0	130	120								
321															Ground↑	
321·0	65	340	BLD	45	100	BLD	28	150							Split ↓	Tq317
321·8	50	145	BLD	15	80	BLD	15	130								Tq318
322																
322·8	65	80	BLD	685	4350	1·0	1400	95								Tq319
323																
323·1	50	515	BLD	180	540	1·0	190	120								Tq320
323·7	45	460	BLD	20	140	1·0	25	120								Tq321
324																
324·3	75	380	BLD	30	160	1·0	46	105								Tq322
325																
325·0	45	145	BLD	530	5450	1·5	370	120								Tq323
325·55	140	500	BLD	75	280	0·5	37	150								Tq324
326																
326·1	50	405	BLD	90	130	0·5	13	150								Tq325
326·7	30	1800	BLD	50	160	2·0	25	110								Tq326
327																
327·5	40	325	BLD	35	180	0·5	25	150								Tq327
328																
328·2	BLD	100	BLD	40	135	0·5	25	50								Tq328
328·5	180	240	BLD	85	580	1·0	24	120								Tq329
329																
329·15	110	2350	BLD	35	80	1·5	2300	145								Tq330
329·75																
330																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 315 TO 330 m DATE 7/11/80 11/12/80 PAGE 20 OF 23

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	140	330	BLD	5	30	BLD	70	50								Tq331
330·25	70	660	BLD	20	90	BLD	90	220								Tq332
331·15	110	40	BLD	15	100	BLD	90	120								Tq333
331·65	70	100	BLD	10	110	BLD	80	145								Tq334
332·65	60	320	BLD	10	140	BLD	30	145								Tq335
333·62	45	1050	BLD	5	110	BLD	1200	125								Tq336
334·1	75	50	BLD	10	105	BLD	45	70								Tq337
334·4	15	60	BLD	40	70	BLD	23	90								Tq338
334·9	50	10	BLD	35	155	BLD	45	90								Tq339
335·4	670	1300	BLD	685	1150	7·0	270	190								Tq340
335·9	110	20	BLD	40	320	BLD	70	150								Tq341
336·45	70	10	BLD	85	340	BLD	90	140							Split ↑	Tq342
337·0	75	65	20	55	180	1·0	150	125							Ground	
340·0	95	70	25	75	385	1·5	150	125								
343·0	80	80	30	40	145	1·0	120	135								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 330 TO 345 m DATE 7/11/80 11/12/80 PAGE 21 OF 23

046 92028/1

040
920288

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
345																
346																
346.0																
	75	75	40	60	225	0.5	70	110								
349																
349																
349.0																
	55	100	35	265	2200	0.5	60	110								
351																
352																
352.0																
	30	85	35	205	1550	1.0	45	125								
354																
355																
355.0																
	45	65	30	40	390	0.5	60	145								
357																
358																
358.0																
	60	205	20	50	210	0.5	100	180								
360																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 345 TO 360m DATE 7/11/80 PAGE 22 OF 23

048
920289

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
360																
361																
361·0																
362	95	60	30	30	200	1·0	450	205								
363																
364																
364·0	End	of	DDH :	RBE	16											

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 16

ASSAYED BY Analabs FROM 360 TO 364m DATE 7/11/80 PAGE 23 OF 23

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

DDH : RBE 17

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COMSTAFF PROPRIETARY LIMITED
DRILLHOLE LOG
SUMMARY SHEET

PROJECT Renison AREA Grid GAR DRILLHOLE TYPE DDH NQ RBE 17

CO-ORDS E 372722·8 N 5372366·9 DEC LN -45° AZIMUTH 78° MN RL 159·1

DATE COMMENCED 29/10/80 DATE COMPLETED 13/11/80 DRILLED BY Longyear DRILL RIG Longyear 38

GEOLOGIST(S) J. Crimeen. NON-CORE TO: 30m NQ CORE TO: 78m BQ CORE TO: 283·5m

SURVEY DATA

INSTRUMENT downhole camera

DEPTH	CORRECT DEC LN	AZIMUTH	DEPTH	CORRECT DEC LN	AZIMUTH
61m	-45°	079° MN			
91m	-44·75°	078·5° MN			
121m	-44·25°	080° MN			
151m	-44°	080° MN			
181m	-44·25°	080° MN			
211m	-43·5°	080·5° MN			
241m	-44·75°	078·5° MN			
282m	-42·25°	063·5° MN			

LOG SUMMARY

DEPTH	ROCK TYPE	MINERALISATION	GRADE
0-30m	Overburden, predominantly glacial		
30-34m	gy & red-br tuf sa, intc & gy ss.	vns, dis	Py 2%
34-36·4m	intc bk sh; dk gy ss & gy mt	patchy, dis	Py 5%
36·4-40·5m	gy ss & minor bk sh & gy mt	dis, vns	Py 7%
40·5-58·5m	intb & intc carb bk sh, gy ss & gy f. tuf sa.	vns, patches, dis	Py 5%
58·5-59·9m	q.v. & minor gy ss.	200mm vn	Py 45% Gl 5%
59·9-112·3m	intb ≤ intc gy f to m tuf sa & gy ≤ dk gy ss.	barren bedrock, minor vns	0
112·3-203·2m	intc ≤ intb gy f to m tuf sa, carb bk sh ≤ gy ss.	calcite vns ≤ minor qz-calcite vns	Py 5%, Po 2%
203·2-214·1m	alt sed (gy, gr-gy, f. tuf sa, & gy ≤ gr-gy ss)	calcite vns ≤ minor qz-calcite vns	Py 1% Po 1%
214·1-218·4m	talc cbte: f to m mottling cbte vns	small vns	Py tr
218·4-219·3m	talc, highly veined	barren	0
219·3-232·5m	alt sed (gy, gr-gy tuf sa ≤ ss) & q.v. alt. gabbro	calcite ≤ qz ≤ qz calcite ≤ cbte vns	Po, Py, AsPy 5% Sp 1% Gl tr
232·5-233·1m	qz-cbte vn & talc	vein	Gl, AsPy 4%, Po, Py 3%
233·1-233·5m	alt gabbro	veins	Gl, Sp 9%, Cp, AsPy tr
233·5-235·8m	qz-cbte vns intimately mixed & cbte.	vns & mas bands mineral	Po 30%, AsPy 10%, Cp 4%, Py 4%
235·8-238·1m	talc cbte	vns, dis.	Po 15%, Py 1%
238·1-245·5m	talc cbte	minor (tr) blebs; 0·7m qz-cbte vn	Po 60%, Sp, Cp 1%
245·5-247·5m	qz cbte vns & steatized seds.	vns	Py 7%, AsPy, Sp 2%
247·5-251·8m	intb ≤ intc f to m gy, gr-gy ≤ br tuf sa ≤ ss.	vns	Po, Py 5%, Sp 2%, AsPy 1%
251·8-255·4m	intb carb. bk sh ≤ dk gy ss.	dis, vns	Py 2%
255·4-279·1m	intc ≤ intb f ≤ m tuf sa, gy ≤ dk gy ss (minor) & minor	calcite vns	Py 2%, Sp tr
	carb bk sh down to dk br ≤ pale gy-gr of each.	minor calcite, qz vns	Sp, AsPy Gl
279·1-281·7m	f. lam bk sh ≤ gy, gr-gy, dk gy s.s.	banded, or & calcite vns	Po 7%, Py, AsPy
281·7-283·5m	dk ≤ pale br, pale gr, gy f ≤ c tuf sa.	mineralisation on calcite vns	Po 2%
283·5m	End of hole.		

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
0–15 m	No core recovered					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY JC FROM 0 TO 15 m DATE 5/11/90 PAGE 2 OF 20

002
920293

DRILL ADVANCE

LOST CORE | DEPTH | DRILL ADVANCE INTERVAL | CORE RECOVERY | PERCENT RECOVERY

LITHOLOGY

INTERVAL | DESCRIPTION | ALTERATION | GRAPHIC LOG | STRUCTURE | MINERALISATION | VISUAL PERCENTAGES MINERALISATION

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C FROM 15 TO 30 m DATE 5/11/80 PAGE 3 OF 20

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	30.0	1.5	1.27	85%	30.0	Tuffaceous sandstone and siltstone. Fine grained grey & pale red-brown tuffaceous sandstone and minor, medium grained tuffaceous sandstone with minor intercalated grey & buff siltstone.	Limonite staining on the fractures. Minor quartz in tension gashes.		Tension gashes throughout. Strong deformation in siltstone; minor deformity of sandstone. Core moderately to highly broken.	Minor pyrite in disseminated form & along tension gashes.	2%
	31.5	3.0	2.95	98%							
	34.5	2.5	2.5	100%	34.0	Black shale, siltstone and mudstone Intercalated carbonaceous black shale, dark grey siltstone and grey mudstone.	Limonite staining along fractures, mainly at the section base; associated with a quartz vein. 36.0 150mm vuggy qv & ↺	qv	Tension gashes throughout Strong deformation throughout.	Pyrite patchy and disseminated.	5%
	37.0	1.1	0.82	75%	36.4	Siltstone Grey siltstone with disseminated specks and small fragments of black shale. Minor, isolated clasts of light grey, porous mudstone.	Limonite staining along fractures 37.0 No alteration products evident.		Uniform unit with moderate deformation throughout. Band of black shale fragments runs down core axis (0°)	Primary pyrite along fractures faces (veins?) and disseminated.	1%
	38.1	2.4	1.66	69%							
	40.5	3.0	1.32	61%	40.5	Black shale, siltstone and tuffaceous sandstone. Interbedded & intercalated black carbonaceous shale and dark grey siltstone, intercalated with grey fine grained tuffaceous sandstone.	Minor quartz and siderite? in tension gashes and veins.		Highly deformed with microfaulting. Tension gashes and cavities common. 43.9 B? at 80°	Pyrite in veins & patches in tension gashes & disseminated in tuf sandstone.	5%
	43.5	2.3	2.51	90%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY A. Crimeen FROM 30 TO 45 m DATE 5/11/80 PAGE 4 OF 20

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				46		Minor intercalated & interbedded fine grained grey tuffaceous sandstone with intercalated & interbedded black carbonaceous shale and dark grey siltstone	Minor and discontinuous carbonate.		Highly deformed with microfaulting, tension gashes and cavities.	Py in veins & disseminated	4%
	46·3	1·6	1·54	96%			46·3 small calcite veins; continuing to 49·0 m				
	47·9	1·6	1·6	100%	47						
					48						
					49		49·0 end of calcite.				
	49·5	1·2	0·74	62%			quartz veins common			49·5 Pyrite in veins, disseminated & along bedding planes. Associated with calcite further down section	10%
	50·7	0·8	0·78	98%	50						
	51·5	0·5	0·5	100%	51				51·4 B 44°		
	52·0	1·8	1·8	100%	52				51·8 B 26°		
					53		52·7 Calcite vns re-appear 53·0 down to 53·8, & minor St + qz				
							53·8 calcite / St vn at 4°				
	53·8	1·4	1·28	92%	54				Core from 54·0 to 59·9 Highly broken	54·0 Py disseminated and in veins. Py	8%
					55						
	55·2	1·0	0·5	50%			Limonite staining on fractures and in tension gashes and cavities				
					56						
	56·2	0·7	0·61	78%							
	56·9	0·9	0·7	78%	57						
	57·8	0·7	0·31	58%	58						
	58·5	1·4	0·32	23%		Quartz-siltstone	Within this section quartz vein(s)? :		Core highly broken	~200 mm vein containing	
					59	58·5 Quartz vein (80% core loss) with minor dark gray siltstone	Minor limonite staining on fractures		Minor quartz vuggy & pitted	Py & Gl. Py	5%
										G	45%
	59·9	0·1	0·1	100%	60	59·9	23 mm St vn at 55°.				

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.Crimeen FROM 45 TO 60m DATE 6/11/80 PAGE 5 OF 20.

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	60.0	1.2	1.2	100%	60	tuffaceous sandstone and siltstone interbedded and intercalated (minor) grey fine to medium grained tuffaceous sandstone and grey to dark grey siltstone	minor, small (<3mm) veins of siderite down to 61.3 m Limonite staining along fractures & in tension gashes & cavities. Minor small q.v.		Uniform section & minor to no deformation Tension gashes & cavities, microfaulting common	trace Py along vns bedrock is barren	tr
	61.2	0.8	0.77	96.2%							
	62.0	0.7	0.7	100%	62				62.1 B 24°		
	62.7	1.5	1.5	100%	63				63.0 B 17°		
					64				63.9 B 24°		
	64.2	2.1	1.96	93.3%	65		numerous small q.v (2mm)				
					66				leak tension gashes 66.0 B 24°		
	66.3	1.2	1.19	99.1%	67				67.4 B 32° 67.8 B 30°		
	67.5	3.0	3.0	100%	68	fragments & clasts of dark grey siltstone with irregular and minor distribution throughout sandstone to 69.0 m.	68.4 calcite vn, patchy & irregular (1 to 3mm) @ 30°				
					69				69.4 B 32°		
					70		minor calcite vns (<3mm)				
	70.5	3.0	3.0	100%	71						
					72		71.4 calcite vn (100mm) at 60°		71.9 B 29°		
					73				73.3 B 48°		
	73.5	3.0	2.97	99%	74				73.9 B 48°		
					75		74.7 numerous calcite vns (<7mm) at 69°		highly fractured zone & calcite vns (150 mm)	5 cm	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C. FROM 60 TO 75 m DATE 6/11/80 PAGE 6 OF 20

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	76·5	1·5	1·5	100%
	78·0	1·5	1·32	88·0%
	79·5	3·0	2·85	95·0%
	82·5	3·0	3·0	100%
	85·5	3·0	3·0	100%
	88·5	3·0	3·0	100%

SCALE 1:100 (1cm = 1 m)

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intercalated and interbedded grey, fine to medium grained tuffaceous sandstone with grey to dark grey siltstone.	calcite, siderite, quartz + ankerite in small veins		moderate to minor deformation throughout microfaulting common deformation strongest in siltstone.	mineralisation associated with carbonate vns; bedrock barren.	
		77·3 qz, St, calcite, ankerite vn (30mm) at 82°.		77·1 B 42° 77·7 B 35°	77·3 mineralisation associated & qz- Py, 35%, AsPy ? tr; Cp 2%; Pb 2%	40%
				80·4 B 36°		
		82·0: 40mm qz, calcite, St + ankerite vn at 87° 82·6 calcite vn (100mm) at 65°		82·4 B 40° 82·6 brecciated edges to calcite vn.	82·0 vn contains Py 15%, Pb 3%; Sp tr; Cp tr	19%
				84·7 B 62°		
				87·2 B 35°		
				88·0 B 42°		
				89·2 B 44°		

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY JC. FROM 75 TO 90m DATE 7/11/80 PAGE 1 OF 20

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					91	Interbedded & intercalated grey fine to medium grained tuffaceous sandstone with grey to dark grey siltstone (predominantly sandstone)	minor small veins of calcite.		moderate to minor deformation throughout. microfaulting common. deformation greatest in siltstone.	minor mineralisation associated & qz/cbte vns. bedrock is barren	
	91·5	3·0	3·0	100%	92				92·0 B28°		
					93		92·4 qz.St. calcite vn of 100mm at ~90°		92·9 B29°	92·4 vn contains Py 6%, Pb 2%, Sp 2%	10%
					94				93·8 B44°		
	94·5	3·0	2·98	99·3%	95				95·0 B18°		
					96		95·4 20mm calcite vn top at 63°, base at 41°.		96·0 B28°		
					97				96·7 B24°		
	97·5	3·0	3·0	100%	98				97·7 B17°		
					99		98·3 230mm qz.calcite vn at 27°.				
					100		98·8 75mm calcite vn at 74°.		99·5 B42°		
							99·7 calcite/qz vn of 150mm; top at 30°, middle 40° & base 30°.				
	100·5	3·0	3·0	100%	101						
					102				102·6 B18°		
					103						
	103·5	3·0	2·97	99·0%	104						
					105		104·3 40mm calcite vn at 41°				

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY JC FROM 90 TO 105 m DATE 7/11/80 PAGE 8 OF 20

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				106		intercalated & interbedded, grey, fine to medium grained, tuffaceous sandstone with grey to dark grey siltstone.	minor small calcite vns down to 112.3		moderate to minor deformation throughout: Strongest in siltstone. microfaulting common	barren	
	106.5	3.0	3.0	100% 107							
				108							
				109		units have pale brown tint down to 112.3					
	109.5	2.8	2.79	99.6% 110							
				111							
				112							
	112.3	3.1	3.1	100% 113	112.3	black shale, siltstone & tuffaceous sandstone. Intercalated & interbedded grey fine to medium grained tuffaceous sandstone with carbonaceous black shale & grey to dark grey siltstone. (Pale equivalents of the siltstone & the sandstone also present; amount increasing downhole).	Calcite veins & patches common.		Strong to minor deformation; strongest in shale & siltstone with bands of uniform sa. with minor deformation. Microfaulting common. Units are intimately mixed in small lenses & bands & 115.0 B? varies 40° variable alignment (bedding)	Py: disseminated, patchy & in vns, v. common; less common in sa.	n
				114							
				115							
	118.4	3.1	3.1	100% 116					116.6 B? varies 30°		
				117					117.2 B? varies 42°		
				118					118.0 B? varies 26°		
	118.5	3.0	3.0	100% 119					118.7 B? varies 22°		
				120					119.3 B? varies 48°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY A.C. FROM 105 TO 120m DATE 8/11/80 PAGE 9 OF 20

808

9202299

920300

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					121	intercalated & interbedded grey to pale brown, fine grained tuffaceous sandstone with grey, dark grey & pale brown siltstone & black carbonaceous shale. Crase-cut by numerous very small vns (<0.5 mm) with altered pale green 3 mm wide zone into the country rock	Minor calcite in small vns, (mostly in large vns); minor qz/calcite vns.		Moderate to strong deformation; strongest in shale & siltstone Microfaulting common.	Py 4%. associated & calcite vns (& Po 1% & Cpy	5%
	121.5	3.0	3.0	100%	122		-121.5 175mm calcite vn at 51°.				
					123		-122.9 calcite, qz, St vn of 100mm at 43°		123.2 B 45°	-122.9 vn contains Py 3%, AsPy 5%. Sp 3%.	11%
					124				124.2 B 49°		
	124.5	3.0	3.0	100%	125				125.6 B 35°		
					126				126.4 B 55°	126.5 Py 7%, disseminated & in small vns	
					127				127.0 B 46°	Po 3%, associated & calcite vns.	10%
	127.5	3.0	3.0	100%	128				127.9 B 44°		
					129				129.5 B 44°		
					130						
	130.5	3.0	3.0	100%	131				131.3 B 46°		
					132					132.4 Py 3% & Po 2% in small vns. Minor Py disseminated in black shale.	5%
					133				133.0 B 58°		
	133.5	3.0	3.0	100%	134						
					135		several small qz/calcite vns				

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C. FROM 120 TO 135 m DATE 8/11/80 PAGE 10 OF 20

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					136	Intercalated + minor interbedded grey to pale brown, fine to medium grained tuffaceous sandstone with grey, dark grey + pale brown siltstone + black carbonaceous shale.	Calcite vns v. common to 144.5m, then less common; usually associated with black shale. V. minor q-v.		moderate to strong deformation, strongest in shale. Microfaulting common. Bedding highly variable due to deformation	Py 2%, Pb 2%, Cp tr, associated & calcite vns.	4%
136.5	3.0	3.0	100%	137					137.2 B varies at 47°		
				138					138.5 B varies 54°		
				139			138.8 calcite vns- 40 mm at 45°; 25mm 90°				
139.5	3.0	3.0	100%	140					139.7 B varies 71°		
				141					141.5 B varies 21°		
				142			142.1 10mm qz-calcite vn at 75°				
142.5	3.0	2.97	99.0%	143					142.8 B varies 48°		
				144					143.9 B varies 44°		
				145		predominantly tuffaceous sandstone + minor siltstone (with 0.5m of shale) down to 150.8m.					
145.5	3.0	3.0	100%	146			146.0 10mm qz-calcite vn at 36°.		146.4 B varies 16°		
				147							
				148					148.9 B varies 24°		
148.5	3.0	3.0	100%	149					149.8 B varies 16°		
				150							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C. FROM 135 TO 150m DATE 9/11/80 PAGE 11 OF 20.

010 620301

011 920302

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					151	intercalated + interbedded grey + minor pale brown, fine to medium grained tuffaceous sandstone with grey to dark grey siltstone + carbonaceous black shale.	calcite veining common throughout. minor q.v.		moderate to strong deformation. strongest in shale / siltstone. microfaulting common. bedding variable due to deformation	common Py 6% associated & calcite (as & Po 3%)	9%
	151.5	3.0	3.0	100%	152						
					153				153.3 B varies at 37°		
					154				154.1 B varies at 49°		
	154.5	3.0	3.0	100%	155		154.5 30 mm qz/calcite vn at 7°, at 53°			154.5 vn contains Py 20%, Po 3% + Cp tr.	55%
					156		155.0 60 mm qz/calcite vn		155.0 vn contains sediment breccia	155.2 vn & Po 3%, Py 3%	6%
							155.2 10 mm calcite vn at 25°			155.4 vn & As Py 25%, Po 3%, Py 1%	29%
							155.4 60 mm qz/calcite/st vn at 74°			155.9 zone & Po 20%, Py 20% + Cp tr	40%
							155.9 zone of patchy qz vn calcite (300 mm)			156.6 vns & Po 10%, Py 15%, Cp tr	25%
					157		156.6 130 mm qz/calcite vns at 56°		157.2 B 59°		
	157.5	3.0	3.0	100%	158				158.2 B 50°		
					159					V. minor Py 1% + Po 1% associated & calcite	2%
					160				159.6 B 40°		
	160.5	3.0	3.0	100%	161		160.6 40 mm calcite vn at 18°				
					162		161.4 200 mm calcite vn at 42°		161.7 B 52°		
					163						
	163.5	3.0	3.0	100%	164				164.1 B varies at 44°		
					165					5 cm	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C. FROM 150 TO 165m DATE 9/11/80 PAGE 12 OF 20

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	166.5	3.0	2.99	99.7%
	169.5	3.0	2.97	99%
	172.5	3.0	3.0	100%
	175.5	3.0	3.0	100%
	178.5	3.0	3.0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
166	intercalated = interbedded grey to pale brown, fine to medium grained tuffaceous sandstone; carbonaceous black shale and grey to dark grey = pale brown siltstone.	calcite veining varies in amount, usually small veins. minor quartz veining		moderate to strong deformation; strongest in ss = sh. microfaulting common. bedding variable due to deformation.	very minor amounts of Pb 1% + Py 1% associated with calcite.	2%
167		167.9 120mm qz/calcite vns at 41°		167.0 B varies at 57°		
168				167.9 B varies at 53°		
169		169.7 decrease in calcite veining; down to 172.5m very few vns		169.4 B varies at 48°		
170				171.0 B 48°		
171				172.0 B varies at 50°		
172		172.5 slight increase in number of calcite vns				
173				173.1 B varies at 26°		
174				174.0 B? 50°		
175				174.8 B 57°		
176				176.8 B 61°		
177				177.5 B 53°		
178				178.9 B 61°		
179						
180						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C FROM 165 TO 180 m DATE 10/11/80 PAGE 13 OF 20

012

92030303

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					181	intercalated & interbedded, grey, medium to fine grained tuffaceous sandstone & grey to dark grey siltstone & black shale	minor calcite in small veins with minor quartz. several larger veins contain milky green mineral (altered sediment?)		moderate to strong deformation with several bands of strongly deformed shale & calcite. Bands of uniform sandstone & siltstone with moderate to minor deformation. microfaulting common bedding is variable due to deformation	minor Py 2% & Po 1% associated with calcite veins	3%
181.5	3.0	2.99	99.7%		182				183.8 B? varies at 69°		
					183				184.4 B varies at 52°		
					184						
184.5	3.0	3.0	100%		185				185.2 B varies at 73°		
					186				186.9 B varies at 69°		
					187						
187.5	3.0	2.98	99.3%		188				187.4 B varies at 70°		
						188.2 predominantly sandstone interbedded with green & green-grey siltstone down to 190 m			188.8 B 70°		
					189						
					190				190.0 B 82°		
190.5	3.0	3.0	100%		191				191.4 B 64°		
					192						
					193				192.6 B 43°		
							193.5 110 mm qz/calcite vns at 80°			193.5 vns contain Py 20% Po 12%, AsPy 9% & Cp tr	4%
193.5	3.0	3.0	100%		194				193.9 B varies at 55°		
					195				195 B at 70°		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C FROM 180 TO 195 m DATE 10/11/80 PAGE 14 OF 20

013

920304

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						black shale intercalated ± interbedded carbonaceous black shale with minor grey fine grained tuffaceous sandstone and grey to dark grey siltstone.	small calcite veins very common.		moderate to strong deformation, makes bedding variable. microfaulting common.	Py disseminated ; ε calcite vns ± in vns : 6% Po ε calcite vns : 3%	9%
	196										
	196.5	3.0	3.0	100%					196.9 B 60°		
	197										
	198						198.4 qz, calcite, St vn 20 mm wide at ~75°		198.1 B 82°		
	199								199.2 B 42°		
	199.5	3.0	3.0	100%					200.1 B 71°		
	200								200.7 B 71°		
	201								201.3 B 78°		
	202								202.0 B 77°		
	202.8	3.0	3.0	100%					202.9 B 78°		
	203						203.1 qz, calcite St vn 40 mm at 78°			203.1 vn contains Py 6%, Sp 1% ± bafy 3%	10%
					203.2	altered sediments grey and green-grey fine grained tuffaceous sandstone and green-grey to dark grey siltstone. All appear slightly to moderately altered with a milky-cloudy appearance.	whole section appears to be altered; alteration increasing downhole. qz/calcite vns very common.		minor to moderate deformation (units intercalated ± interbedded (minor))	Py 1% ± Po 1% in calcite vns	2%
	204								204.9 B 50°		
	205										
	206.8	3.0	3.0	100%					206.1 B 53°		
	206										
	207										
							207.4 20 mm qz/calcite vn at 28°		207.6 B 74°		
	208										
	208.5	3.0	2.89	96.3%			208.8 100 mm qz/calcite /St vn at 65°			208.8 vn contains Py 7%, Sp 4% ± Cp 1%	12%
	209								209.2 B 75°		
	210										

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C. FROM 195 TO 210m DATE 11/11/80 PAGE 15 OF 20

014

920305

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
				211		altered sediments tuffaceous sandstone and siltstone : grey, pale brown, brown-grey, brown, green-grey & green units (green at base)	Whole section seems altered, increasing alteration down hole. calcite & quartz veining is common.		moderate to strong deformation ; bedding indistinct & variable possible foliation towards base of section. 211·8 B? at 88° 212·6 B? at 66°	minor Py associated with calcite	tr
211·5	3·0	3·0	100%	212							
				213							
				214	214·1	talc carbonate dark green (talc?), pale grey, grey, pale green-grey & milky white (in veins) carbonates; fine to medium mottling; very fine black specks throughout.	Highly veined with milky white carbonate.		structure masked by alteration, neither bedding nor foliation evident. veining is in all directions	trace Py in veins.	tr
214·5	3·0	3·0	100%	215							
				216							
				217							
217·5	3·0	3·0	100%	218							
				219	218·4	talc very dark green to black, fine-grained talc.	highly veined with milky white carbonate.		appears to be fairly uniform veining is in all directions	barren	
				220	219·3	altered sediments grey to dark grey fine grained tuffaceous sandstone and siltstone; very common quartz veins intimately mixed with sediments.	qz clste veining intimately mixed & dk gr rock at top to gy sed. rock at 220·0. brec?		moderate to strong deformation. veining is in all directions.	brec zone contains Sp 6%, Gn 1%, AsPy 1% in top 300mm & Po 20% & Py 20% (disseminated Cp?)	48%
220·5	2·9	2·9	100%	221			-220·8 500 mm qz & qz clste veining @ 77°		220·6 B 56°	-220·8 vns contain Py 1%, Cp 5% -221·0 AsPy 10% Po 10%	26%
				222			-221·8 15mm qv. at 77° -222·0 25mm qv at 90° -222·3 30 mm qv at 90°			-221·8 vn contains AsPy -222·0 vn contains AsPy	8% 9%
				223		-223·2 loosely consolidated, angular, medium to coarse quartz & sediment grains & fragments. fault breccia? cemented by fine quartz and clay.			223·2 core highly broken		
223·4	0·4	0·3	75%								
223·8	2·7	2·7	100%	224							
				225							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C. FROM 210 TO 225 m DATE 14/11/80 PAGE 16 OF 20

015 920306

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered sediments. Gabbro. Fine to medium grained tuffaceous sandstone with intercalated siltstone: grey, dark grey brown, green + dark green. Green predominates downhole. Some sections show gabbroic texture?	increasing alteration down to 232.5 m. moderate to minor veining?		moderate to strong deformation. bedding is indistinct at top to non-existent at base. veining is in all directions.	mineralisation associated with calcite/quartz veining Py 1%, Po 1%	2%
226.5	3.0	2.98	99.3%	226							
				227							
				228			228.4 120 mm qz-cbte vns at 80°			228.4 Sp 10%, Gl 7% along margins + in cavities around cbte vns	17%
				229							
229.5	3.0	3.0	100%	230							
				231							
				232		gabbro? in following sequence probably cut by several quartz-carbonate veins.	v.strong alteration (to talc?)				
232.5	3.0	3.0	100%	233	232.5	quartz carbonate. veins of quartz, siderite with minor altered country rock (to talc)				qz-cbte ± Gl, AsPy — 4% alt. (talc cbte) ± Po, Py — 3%	
					233.1	fine grained altered gabbro			breciated contact	gabbro ± veins Sp, Gl, CS tr, AsPy tr — 9%	
				234	233.5	quartz carbonate veins of quartz + siderite with bands of talc. quartz + siderite intimately mixed.	probably all the same phase of entering the fissure.			massive bands of Po 30% + AsPy 10%, (usually separate), cp 4% + minor Py 1% ± both. usually associated ± western margin of talc cbte	45%
				235							
235.5	3.0	2.98	99.3%	236	235.5	talc carbonate predominantly siderite; talc down to 238.1 m fine to medium mottling	contains several quartz, carbonate veins.		none to minor foliation usually of short duration.	disseminated Po + veins of qz-cbte with Po 15% + minor Py 1% + tr cp	16%
				237							
				238		- dark green talc (3 mm)				trace Mo, Mt 238.1 trace specks of Po?, Sp?, Py?	
238.5	3.0	2.98	99.3%	239		milky white, grey + pale green carbonates	238.9 700 mm quartz-carbonate vn, with talc.		238.7 fol at 62°	238.9 lge vn ± Po 60%, minor Sp 1% + Cp 1%	60%
				240							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C FROM 225 TO 240m DATE 15/11/80 PAGE 17 OF 20

016

92030

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						talc carbonate milky white, yellow-white, pale grey, brown opaque green and dark brown carbonate, fine white mottling + minor black blebs throughout.	all alteration products cross cut by several small (< 10 mm) white carbonate veins.		slight to moderate foliation. 241·2 fol at 50° 242·6 fol at 43° 243·7 fol at 67° 245·2 fol at 67°	minor blebs + veins (<1mm) of Py?	1%
241·5	3·0	3·0	100%		245·5	quartz carbonate zone of quartz carbonate veins separated by steatized sediments? shows minor coxcomb texture.	quartz, siderite and small, later phase, carbonate veins			veining contains Po 7%, Sp 2% AsPy 2%, Py 1%, Cp 1% 247·2 120 mm vn of Sp 40%, Gl 5%	13% 45%
244·5	3·0	3·0	100%						?brecciated contact moderate to strong deformation		
247·5	3·0	3·0	100%		247·5	tuffaceous sandstone + siltstone intercalated + interbedded (minor) fine to medium grained, grey, pale brown + green-grey tuffaceous sandstone + grey, pale brown + green-grey siltstone.	decreasing alteration of sediments down hole. moderately veined by qz, qz cbte + calcite towards unit base.			veins contain Po 3%, Py 2%, separate from Sp 2% + separate from AsPy 1%	8%
250·5	3·0	3·0	100%		251·8	black shale + siltstone interbedded carbonaceous black shale + dark grey siltstone.	V. common calcite veining along bedding and cutting across it.		minor to moderate deformation beds v. indistinct + thin. 253·5 B 74° 254·2 B 82° 254·8 B 69°	Py disseminated + in veins with calcite	2%
253·5	3·0	3·0	100%								

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY JC FROM 240 TO 255 m DATE 15/11/80 PAGE 18 OF 20

017

9203038

018
920309

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					255.4	tuffaceous sandstone, siltstone + black shale, intercalated + interbedded grey, fine to medium grained tuffaceous sandstone with minor grey to dark grey siltstone + minor carbonaceous black shale.	minor to common calcite veining, greatest in black shale 257.0 40mm qz/Sc vn at 65°		deformation slight to strong strongest in black shale microfaulting common cyclic bedding in several areas 256.9 B 70° 258.1 B 59° 259.3 B 56° 260.7 B 68° 261.8 B 69° 264.1 B 83° 265.2 B 46° 266.2 B ?63° 268.6 B 49° 269.4 B 62°	minor mineralisation associated with calcite veining. usually Sp. 257.0 vnC v.fine AsPy 5% + Py 5%	0.5% 10%
256.5	3.0	3.0	100%								
259.5	3.0	3.0	100%				261.0 10 mm qv at 70°				
262.5	3.0	3.0	100%								
265.5	3.0	3.0	100%				266.6 100mm calcite /st/ ankerite vn at 20°				
268.5	3.0	3.0	100%		268.5	pale green, pale brown + dark brown sediments predominate.				268.8 } Sp + Gl in calcite vns (minor Py) 269.0 }	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C FROM 255 TO 270 m DATE 17/11/80 PAGE 14 OF 20

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated ± interbedded fine to medium grained tuffaceous sandstone with siltstone ± carbonaceous black shale (minor). All units appear to be somewhat altered to pale greens, greys, pale ± chocolate browns.	moderate calcite through most of unit. -271.0 qpmm qv at 71° veining is in all directions.		slight to moderate deformation, microfaulting common. 271.6 B 43° 272.6 B 20° 274.2 B 20° 275.4 B? at 52°	-271.0 vn contains Gl 30%, Sp 5% — 4%	
	271.5	1.7	1.7	100%						minor Py associated with calcite vns.	1%
	273.2	3.1	3.1	100%							
	276.3	2.8	2.8	100%			tremolite? actinolite? associated ± qz/calcite vns. -278.2 qz (tremolite? actinolite?) calcite vns at 10°				
	279.1	1.3	1.3	100%	279.1	black shale, siltstone laminations of interbedded black shale and grey, dark grey and green-grey siltstone with carbonate.	moderately veined by calcite -280.1 calcite vn at 70° (10mm) -281.6 qz/calcite vn 6mm at 15°		minor deformation 279.9 B 74° 281.0 B 82°	-280.1 vn contains Py 1%, AsPy 3% — 4% banded Po along laminations and ± calcite vns — 7% -281.6 vn contains AsPy 25% — 25%	
	280.4	1.6	1.6	100%							
	282.0	1.5	1.5	100%	281.7	tuffaceous sandstone pale ± chocolate brown, pale green ± grey fine to coarse tuffaceous sandstone.	highly veined by calcite tremolite? actinolite? minor bleaching?		moderate to minor deformation	Po associated with calcite veining	2%
	283.5					End of DDH: RBE 17					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 17

LOGGED BY J.C FROM 270 TO 283.5 DATE 17/11/80 PAGE 20 OF 20

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
30·0	10	80	tr:	20	370	BLD	40	160								
31·5	9	110	BLD	15	370	0·5	35	210								
34·5	BLD	100	BLD	20	410	0·5	140	130								
37·5	8	125	BLD	15	220	BLD	44	900								
38·1	10	105	10	10	390	0·5	25	160								
40·5	8	120	BLD	40	400	0·5	20	220								
43·5	8	120	BLD	50	1250	0·5	15	120								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 30 TO 45m DATE 8-9/12/80 PAGE 1 OF 17

020

9203111

021
9203112

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
45																
46																
46·3	BLD	110	BLD	180	610	0·5	16	100								
47																
47·9	6	130	BLD	50	775	BLD	13	160								
48																
49																
49·5	15	120	BLD	425	950	1·0	15	140								
50																
50·7	10	155	BLD	225	390	2·0	80	140								
51																
51·5	7	150	BLD	160	270	0·5	43	120								
52																
52·0	5	150	BLD	85	280	0·5	13	120								
53																
53·8	8	130	10	200	520	0·5	8	100								
54																
55																
55·2	8	135	BLD	145	2000	0·5	20	130								
56																
56·2	5	175	BLD	125	2050	1·0	38	110								
57																
56·9	6	175	BLD	300	710	0·5	36	130								
58																
57·8	15	120	10	270	300	0·5	62	100								
58·5	1000	3450	40	7·34%	2600	66·0	350	80								
59																
60																
~~59·9~~ 60·0	95	130	10	4650	1500	4·5	100	100								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 45 TO 60 m DATE 8-9/12/80 PAGE 2 OF 17

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
60·0	80	320	10	1850	2150	2·5	150	140								
60·41	80	50	BLD	1150	2450	1·5	75	150								
61·2	15	85	BLD	235	1300	1·0	32	150								
62·0	9	120	BLD	140	460	1·0	10	160								
62·7	8	75	BLD	245	1100	1·0	25	155								
64·2	70	45	BLD	430	3800	0·5	70	140								
66·8	10	100	BLD	185	260	0·5	25	150								
67·5	10	110	10	80	180	1·0	12	150								
70·5	BLD	75	BLD	30	130	0·5	7	130								
73·5	5	80	BLD	40	165	BLD	6	150								

60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 60 TO 75m DATE 8-9/12/80 PAGE 3 OF 17

022 920313

920314

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
76·5	30	140	BLD	195	560	0·5	200	145								
78·05	15	100	BLD	45	170	0·5	28	145								
79·5	25	45	BLD	40	200	BLD	43	135								
82·5	BLD	60	BLD	15	160	BLD	36	130								
85·5	BLD	80	BLD	30	180	BLD	23	150								
88·5	BLD	90	BLD	15	155	BLD	20	140								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 75 TO 90 m DATE 8-9/12/80 PAGE 4 OF 17

024
920315

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
90																
91																
91·5																
92																
93	30	105	tr.	125	420	BLD	14	140								
94																
94·5																
95																
96	BLD	100	BLD	25	190	BLD	4	150								
97																
97·5																
98																
99	BLD	80	BLD	25	160	BLD	4	110								
100																
100·5																
101																
102	7	85	BLD	25	150	BLD	10	130								
103																
103·5																
104	6	85	15	10	220	0·5	11	140								
105																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 90 TO 105 m DATE 8-9/12/80 PAGE 5 OF 17

025
920316

Metres	Sn	Cu	N	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
106·5	15	90	BLD	35	280	BLD	17	120								
109·5	4	85	BLD	15	160	BLD	14	120								
112·3	6	110	BLD	20	150	BLD	5	120								
115·4	6	135	BLD	45	110	BLD	4	130								
118·5	6	60	BLD	25	150	BLD	28	110								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 105 TO 120 m DATE 8-9/12/80 PAGE 6 OF 17

026 920317

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
120																
121																
121·5																
122																
123	15	75	BLD	185	375	0·5	2100	65								
124																
124·5																
125																
126	6	50	10	20	145	BLD	60	90								
127																
127·5																
128																
129	4	140	15	50	155	BLD	46	110								
130																
130·5																
131																
132	4	190	10	225	640	BLD	46	115								
133																
133·5																
134																
135	9	50	BLD	55	265	BLD	42	120								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 120 TO 135m DATE 8-9/12/80 PAGE 1 OF 17

027 9203 18

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
135																
136																
136·5																
137																
138	8	185	BLD	545	1150	0·5	63	110								
139																
139·5																
140																
141	6	100	10	30	470	BLD	22	120								
142																
142·5																
143																
144	4	135	BLD	20	230	BLD	19	125								
145																
145·5																
146																
147	7	80	BLD	20	175	0·5	26	125								
148																
148·5																
149																
150	4	225	BLD	20	140	BLD	35	115								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 135 TO 150m DATE 8-9/12/80 PAGE 8 OF 17

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
150																
151																
151·5																
152	10	260	15	25	240	0·5	47	120								
153																
154																
154·5																
155	60	530	BLD	340	1350	2·5	2700	130								
156																
157																
157·5																
158	6	100	15	15	210	BLD	73	120								
159																
160																
160·5																
161	BLD	100	10	20	185	0·5	32	115								
162																
163																
163·5																
164	3	100	15	15	185	BLD	20	105								
165																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 150 TO 165 m DATE 8-9/12/80 PAGE 9 OF 17

028 9203119

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
165																
166																
166·5																
167																
168	10	95	20	10	165	0·5	26	110								
169																
169·5																
170																
171	8	65	10	10	150	BLD	41	105								
172																
172·5																
173																
174	10	110	15	5	140	BLD	32	100								
175																
175·5																
176																
177	6	65	BLD	10	140	BLD	26	115								
178																
179																
179·5	4	85	30	5	170	0·5	36	115								
180																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 165 TO 180.77 DATE 8-9/12/80 PAGE 10 OF 17

029

9203320

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
181·5	20	65	20	15	140	BLD	44	85								
184·5	4	65	BLD	10	180	BLD	15	100								
187·5	BLD	70	10	5	185	BLD	16	115								
190·5	6	100	BLD	10	280	1·0	12	115								
193·5	30	150	15	150	410	1·5	3100	100								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 180 TO 195 m DATE 8-9/12/80 PAGE 11 OF 17

030

9203211

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
195																
196																
196·5																
197	45	105	10	215	705	1·0	750	70								
198																
199																
199·5																
200	10	120	10	95	170	BLD	47	80								
201																
202																
202·5																
203	40	65	BLD	145	415	0·5	85	115								
204																
205																
205·5																
206	60	25	BLD	90	290	0·5	100	125								
207																
208																
208·5																
209	140	65	120	250	580	1·0	1600	100								
210																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 195 TO 210 m DATE 8-9/12/80 PAGE 12 OF 17

031

9203322

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
210																
211																
211·5																
212																
213	30	20	BLD	350	235	0·5	650	390								
214																
214·5																
215																
216	insufficient sample	10	insufficient sample.	365	230	1·0	3200	1200								
217																
217·5																
218																
219	60	180	BLD	1500	2950	4·5	2300	530								
220																
220·5																
221																
222	95	1050	25	445	1150	4·5	2·4%	150								
223																
223·4																
224																
224	50	130	15	195	590	1·0	2400	145								
225																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 210 TO 225 m DATE 8-9/12/80 PAGE 13 OF 17

032

920323

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au							SAMPLE NUMBER
225																
226																
226·5																
227																
228	75	100	10	450	1650	0·5	1000	160								
229																
229·6																
230																
231	35	30	BLD	90	280	0·5	700	140								
232																
232·5	400	160	BLD	2150	6800	8·0	3100	760	0·017						Ground Split ↓	19343
233																
233·05	600	270	BLD	6705	1·76%	26·0	7000	210	0·025							19344
233·4	840	515	BLD	1400	1·0%	10·0	2900	400	0·042							19345
233·95	1400	4900	BLD	720	950	11·0	5·0%	800	0·058							19346
234																
234·35	500	1950	BLD	180	250	4·5	1·2%	445	0·125							19347
234·7	350	2200	BLD	145	180	6·0	1·0%	640	0·072							19348
235																
235·15	1500	9500	BLD	230	640	18·0	4·8%	625	0·050							19349
235·8	250	165	BLD	245	3400	3·5	4500	1300	0·017							19350
236																
236·11	150	690	BLD	1950	9000	10·0	1900	1150	0·008							19351
236·41	60	290	BLD	1500	4300	8·0	2900	1850	0·017							19352
236·92	200	450	BLD	1550	4550	9·5	1800	1300	0·025							19353
237																
237·67	30	75	BLD	1100	3100	3·0	2000	1000	BLD							19354
238																
238·1	20	10	BLD	130	485	1·0	1200	1800	BLD							19355
238·9	60	3400	BLD	800	1·0%	26·0	1900	1700	0·017							19356
239																
239·6	15	35	BLD	720	1150	4·0	2000	1850	BLD							19357
240																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 225 TO 240m DATE 8-9/12/80 PAGE 14 OF 17

033

9203 24

034
9203325

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	Au							SAMPLE NUMBER
															Split ↑	
240·12 (from 2385)	25	655	BLD	395	2900	6·0	2500	1750							Ground ↓	
241·6	10	20	BLD	140	360	BLD	2000	1300							Ground ↑	
244·5	BLD	20	BLD	185	465	1·0	1900	1900	BLD						Split ↓	TQ358
245·0	BLD	5	BLD	120	200	1·0	1400	2050	BLD							TQ359
245·4	20	25	BLD	780	2100	2·0	3200	2150	0·008							TQ360
245·8	800	1500	BLD	1·15%	1·5%	34·0	3300	950	0·025							TQ361
246·1	330	1650	BLD	4950	2·3%	28·0	8000	165	0·067							TQ362
246·5	250	1550	BLD	5450	1·8%	29·5	7500	265	0·033							TQ363
246·9	220	735	BLD	1950	1·05%	17·0	9000	110	0·150							TQ364
247·2	600	680	BLD	7100	5·4%	36·0	2900	105	0·033							TQ365
247·5	130	60	BLD	245	2200	4·5	1700	135								TQ366
248·4	60	345	BLD	1800	3850	4·0	600	155								TQ367
248·7	20	135	10	40	190	1·0	150	165								TQ368
249·7	30	85	BLD	335	640	1·5	150	165								TQ369
250·0	70	85	BLD	1050	5650	3·5	1600	175								TQ370
250·5	80	150	10	800	6700	4·5	250	270								TQ371
251·0	50	165	BLD	1150	3450	4·5	150	175								TQ372
251·58	30	90	BLD	390	1250	2·0	70	130								TQ373
252·2	20	65	BLD	125	205	1·0	50	95								TQ374
252·9	20	100	BLD	605	2550	1·5	310	135							Split ↑	TQ375
253·5	20	105	10	360	740	0·5	400	105							Ground ↓	

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 240 TO 255 m DATE 8-9/12/80 PAGE 15 OF 17

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
255																
256																
256·5																
257																
258	30	50	BLD	205	450	0·5	1100	110								
259																
259·4																
260																
261	15	50	10	35	255	0·5	46	120								
262																
262·5																
263																
264	8	60	BLD	BLD	160	BLD	55	130								
265																
265·5																
266																
267	40	50	BLD	420	800	0·5	1050	130								
268																
268·5																
269																
269	140	300	BLD	4·0%	1·3%	68·5	2500	120								
270																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 255 TO 270 m. DATE 8-9/12/80 PAGE 16 OF 17

035

9203326

036
9203271

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
270																
271																
271·5	10	90	BLD	305	280	1·0	75	130								
272																
273																
273·2	60	60	15	185	220	1·0	80	125								
274																
275																
276																
276·3	90	185	15	140	230	0·5	400	110								
277																
278																
279																
280															Ground	
280·4	160	1800	BLD	65	165	3·0	1·0 %	95							Split ↓	19376
281																
281·0	1100	615	20	45	215	2·5	2·7 %	155								19377
281·75	80	65	BLD	25	125	0·5	1000	145							Split ↑	19378
282																
282·0	140	50	BLD	50	200	0·5	600	115							Ground	
283																
283·5		End	of	DDH:	RBE	17										
284																
285																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 17

ASSAYED BY Analabs FROM 270 TO 285 m DATE 8-9/12/80 PAGE 17 OF 17

920328

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

DDH : RBE 18

000

MICROFILMED

920329

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG

SUMMARY SHEET

PROJECT Renison AREA Grid GAR DRILLHOLE TYPE DDH NQ RBE 18

CO-ORDS E 372713·0 N 5372307·1 DEC LN -42° AZIMUTH 078° MN RL 147·9 m

DATE COMMENCED 14/11/80 DATE COMPLETED 15/12/80 DRILLED BY Longyear DRILL RIG Longyear 38

GEOLOGIST(S) J. Crimeen. NON-CORE TO: 18m NQ CORE TO: 60m BQ CORE: 313 m = EOH

SURVEY DATA

INSTRUMENT: Downhole camera

DEPTH	CORRECT DEC LN	AZIMUTH	DEPTH	CORRECT DEC LN	AZIMUTH
61 m	-44°	079·5° MN	301 m	-38·75°	078·5° MN
91 m	-43·75°	076·5° MN			
121 m	-42·75°	075·5° MN			
151 m	-42°	077·5° MN			
181 m	-40·75°	077·5° MN			
211 m	-39·25°	081·5° MN			
241 m	-39·25°	079·5° MN			
271 m	-40°	077·5° MN			

LOG SUMMARY

DEPTH	ROCK TYPE	MINERALISATION	GRADE
0 - 18 m	tricarried through wthd ss, sa, sh		
18 - 23 m	intc ◁ intb carb bk sh & dk gy ss	dis ◁ minor vn Py	2%
23 - 31·3m	intc gy f-m tuf sa & gy-dk gy ss ◁ carb bk sh & tension gashes ◁ q.v.	vn Py ◁ dis in bk sh	2%
31·3 - 90 m	intc ◁ intb gy f-m tuf sa & minor gy ss	dis Py	tr
90 - 120 m	intc ◁ intb gy ◁ dk gy ss & bk sh ◁ minor gy tuf sa	dis Py ◁ Py, Pb ◁ Sp & calcite vns	3%
120 - 135 m	intc ◁ intb gy ◁ dk gy ss (minor) & carb bk sh	dis Py ◁ Py, Pb associated & Cal.	6%
136 - 142 m	intc ◁ intb carb bk sh & minor gy ◁ dk gy ss	dis ◁ vn Py	5%
142 - 150 m	gy ss & f-m gy tuf sa clasts	dis ◁ vn Py	4%
150 - 165 m	intc ◁ intb carb bk sh & gy f-m tuf sa ◁ minor gy ◁ dk gy ss	dis ◁ vn Py	6%
165 - 184·3m	intc ◁ intb gy f-m tuf sa & gy ◁ dk gy ss ◁ minor carb bk sh	vns & Py, Sp, Gl, AsPy, Pb at 179m	3%
184·3 - 187·6m	qz cbte ◁ alt sed (// parallel to core axis)	Py, Sp, Gl, AsPy along margins	18%
187·6 - 188·4m	"dirty" cbte vn & minor alt (brec) seds	dis AsPy ◁ mas Sp, Gl	27%
188·4 - 193·4m	gy ◁ dk gy m tuf sa & minor gy ◁ dk gy ss.	vn Gl	tr
193·4 - 193·7m	"dirty" cbte vn (bustamite)	Sp ◁ Gl	11%
193·7 - 206·7m	intc ◁ intb gy f-m tuf sa & gy ◁ dk gy ss ◁ minor bk sh	qz-cbte vns & Pb, Py, Sp, AsPy	2%
206·7 - 212·7m	talc cbte zone (pale gy cbte ◁ wh cbte vns)	qz vns at top/base & Pb, Py, Sp	5%
212·7 - 219 m	alt (tuf sa ◁ ss)	q.v & Pb, Py, Sp	tr
219 - 220·1m	"dirty" q/z - cbte vns	Sp, Gl, Pb along margins, dis AsPy	35%
220·1 - 223·1m	alt (tuf sa ◁ ss)	cbte vns & Py, Sp, Gl	4%
223·1 - 230·2m	talc cbte (talc, wh gy, br cbte) zone	q.v at top/base & Py, Pb	5%
230·2 - 237·2m	q.v & minor talc cbte ◁ Pb	qz & Pb, Sp, Gl, AsPy, Cp, Py	4·1%
237·2 - 241·4m	intc gr gy f-m tuf sa & gr-gy ss	minor Py & qz-cbte vns	tr
241·4 - 250 m	talc cbte (pale gy ◁ wh cbte) zone	q.v at top/base & Pb, Py, Sp, AsPy, Cp	7%
250 - 285m	intc ◁ intb gy, gr-gy ◁ br f-m tuf sa & minor gy, gr-gy, br ss	qz-cbte vns & Pb, Sp, Cp, Py, Gl	2%
285 - 306·4m	gr-gy f-m gabbro/dolerite & actino-tremolite vns	qz-cbte vns & Pb, Py, Sp	2%
306·4 - 313 m	alt (intc ◁ intb gr-gy, gy ◁ br, f-m tuf sa & gr ◁ br/gr ss)	qz-cbte vns & Pb, Py (tr Sp, Gl)	5%

001

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					0–1	No core recovered.					
					1–15	Tricored through weathered and highly fractured tuffaceous sandstone, black shale, siltstone and minor mudstone.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.Crimeen FROM 0 TO 15 m DATE 18/11/80 PAGE 2 OF 22

920330

DRILL ADVANCE / LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						No core recovered					
	18.0	1.0	0.9	90.0%	18.0	black shale, siltstone intercalated + minor interbedded black carbonaceous shale with grey to dark grey siltstone + minor bands of very porous mudstone.	minor calcite veining honeycomb carbonate in some tension gashes.		18.5 B at 45° moderate to strong deformation tension gashes very common core highly broken.	disseminated + minor vein Py.	2%
	19.0	3.0	2.84	94.7%							
	22.0	2.4	1.7	70.8%							
					23.0	tuffaceous sandstone, siltstone + shale intercalated, grey, fine to medium grain tuffaceous sandstone, with grey to dark grey siltstone + carbonaceous black shale.	tension gashes with honeycomb calcite. quartz veining common		moderate to strong deformation tension gashes v. common core highly broken bedding variable	vein Py + dis Py associated with black shale	2%
	24.4	2.4	2.0	83.3%							
	26.8	0.9	0.7	77.7%							
	27.7	2.8	2.74	97.8%					27.8 B at 42°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.C FROM 15 TO 30m DATE 18/11/80 PAGE 3 OF 22

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	30.5	0.5	0.45	90.0%
	31.0	3.0	2.74	91.3%
	34.0	3.0	2.94	98.0%
	37.0	3.0	2.87	95.7%
	40.0	3.0	2.94	98.0%
	43.0	3.0	3.0	100%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
		30.6 zone of overall small q.v (<10mm) at 72°		30.5 B at 58°		
31.3	tuffaceous sandstone q siltstone intercalated = interbedded (minor) grey, fine to medium grained tuf. sandstone (predominates) with grey to dark grey siltstone	minor quartz q chlz? q calcite in veins q along fractures		slight to moderate deformation 32.3 B at 5° mostly uniform sandstone few bedding planes evident tension gashes q cavities v. common 39.3 B at 30° 41.9 B at 36° cyclic bedding	trace dis Py trace dis Py with siltstone	tr tr

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.C FROM 30 TO 45 m DATE 18/11/80 PAGE 4 OF 22

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	46·0	3·0	3·0	100%
	49·0	3·0	3·0	100%
	52·0	3·0	3·0	100%
	55·0	3·0	3·0	100%
	58·0	2·0	2·0	100%
	60·0			

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intercalated & minor interbedded grey, fine to medium grained tuffaceous sandstone with grey to dark grey siltstones (dk gy as increasing)	minor calcite veining except for large veins below.		slight deformation common microfaulting tension gashes finish at ~46m	trace patches Py throughout.	tr
46·9	150 mm bed of dark grey siltstone			46·8 B at 47°		
				48·3 B variable at 21°		
				50·0 B at 26°		
50·3	approximately 1·5 metres of dark grey siltstone.	50·7 50 mm Cal vn at 85°				
		51·9 60 mm Cal vn at 85°		52·2 B variable at 34°		
		52·5 45 mm Cal vn at 79° & bottom 110 mm Cal vn at 80°				
		53·7 35 mm Cal. St. qvat 66°		53·7 minor brec.	53·7 vn has Po 10%, Py 4%, Sp 2% & AsPy 2%	18%
				55·4 B at 33°		
					Py associated & calcite	1%
				57·3 B faulted at 18°		
				59·0 B at 45°		
		59·9 20 mm Cal vn at 72°		59·9 brec sed in vn & rectangular fragments		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.C FROM 45 TO 60m DATE 20/11/80 PAGE 5 OF 22

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	60·0	2·9	2·7	93·1		intercalated ≈ interbedded grey, fine to medium grained, tuffaceous sandstone (minor) ≈ gy ≈ dk gy siltstone	minor to common small vns (<5 mm) of calcite		moderate to strong deformation (contorted) microfaulting common	siltstones barren	0
	62·9	1·1	1·1	100%					variable bedding (faulted)		
	64·0	3·0	3·0	100%					64·8 B at 34° 65·5 B at 33° 66·7 B at 40°		
	67·0	·30	2·99	99·7%		predominantly tuffaceous sandstone				tr dis Py in sandstone	tr
							increasing Cal veining common vns (20-30mm)		68·9 faulted cyclic bd at 62°		
	70·0	3·0	3·0	100%		predominantly tuffaceous sandstone					
	73·0	3·0	3·0	100%			-73·3 cal. vns & minor sed between, top: 100 mm at 67° middle: 70 mm at 82° base: 90 mm at 74°		coarse brec. at base 1st vn c. brec throughout 2nd vn c. brec at top 3rd vn f. brec at base 3rd vn		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY JC FROM 60 TO 75m DATE 21/11/80 PAGE 6 OF 22

920334

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated & interbedded grey to dark grey, fine to medium grained tuf. sandstone, & gy to dk gy siltstone & minor black shale. some sandstones pale brown in colour	calcite veining very common q.v present, some & cbtz		moderate to strong deformation microfaulting v. common brec. often occuring & larger vns.	mineralisation associated & all types of vns. Py, Sp, Pb-1%	3%
76·0	3·0	3·0	100%	76							
				77					77·6 B at 55°		
				78			78·5 100mm qz/cbtz vn 78°			78·5 vn has Sp 4%, Py 1%, Pb 2%, Gl 2%	3%
							78·7 qw & minor cbtz; major 150 mm vn at 71°			78·7 vn has mostly vuggy Py 80%, Pb 9%, Sp 1%, Cp tr.	9%
79·0	3·0	2·63	94·3%	79							
				80		minor unit of black shale.			80·2 B at 57°		
				81					81·0 B at 55°		
82·0	3·0	3·0	100%	82							
				83			82·8 80 mm qz/cal vn 25°		82·9 B at 49°		
				84			84·0 300mm qz/cbtz vn (40 mm qz) at 58°		vn material broken.	84·0 vn contains Gl 7%, Sp 1%	8%
85·0	1·9	1·9	100%	85					85·1 B at 5°		
				86			Cal, cal/cbtz & Cal/qz veining v. common throughout.		86·6 B at 27°		
86·9	1·1	1·08	98·2%	87					87·5 B at 42°		
										88·0 small Cal/cbtz vns & Pb, Py or Sp	
88·0	3·0	3·0	100%	88							
				89			89·6 80 mm qz/cal/cbtz vn at 82°		89·5 B at 20°	89·6 vns have Pb 7%, Py 7%	14%
				90							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY JC FROM 75 TO 80m DATE 22/11/80 PAGE 7 OF 22

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					91	siltstone, black shale	highly veined with small Cal vns.		moderate to strong deformation	mineralisation associated & cal/cbtz vning. Py 0.5%	7%
	91.0	3.0	3.0	100%		intercalated & interbedded grey to dark grey siltstone with black shale & minor grey, fine to medium grained tuffaceous sandstone.	minor cbtz vns (Ankerite +Slt) all usually across core axis (~90°)		microfaulting common	Pb 1%, Sp tr	
					92				bedding mainly over short distance, variable & indistinct	dis Py 5%, associated & bk sh.	
									92.1 B at 49°		
					93		93.2 15mm Cal/cbtz vn				
	94.0	3.0	3.0	100%	94				94.3 B at 36°		
					95		95.2 25 mm Cal/cbtz vn				
							95.9 15 mm Cal/cbtz vn		95.6 B at 33°		
					96				highly contorted bk. shale.		
	97.0	3.0	3.0	100%	97						
					98	100 mm of pale br. tuf sandstone			98.5 B varies at 49°		
					99		99.5 10mm Cal/cbtz vn				
	100.0	3.0	2.99	99.7%	100						
					101		100.8 10 mm Cal/cbtz vn		101.7 B at 20°		
					102						
	103.0	3.0	3.0	100%	103				103.0 B at 25°		
					104	pale br tuf. siltstone.					
					105						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C. FROM 90 TO 105 m DATE 23/11/80 PAGE 8 OF 22

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						siltstone, shale, sandstone intercalated = interbedded gy to dk gy siltstone with bk shale (intimately mixed), intercalated with bands of gy, fine to medium grained tuffaceous sandstone.	105.6 70mm qz/cbte vn @ 74°		slight to strong deformation bk sh/ss highly contorted sa fairly uniform.	105.6 vn ć sp 1%, Pb 3% Py 1% + tr each of Cp, As Py, ?Gl, ?Cs, ?Ct	6%
106.0	3.0	3.0	100%	106			106.3 25mm Cal vn at 71° minor to moderate calcite veining, mostly in ss/sh			106.3 vn ć Pb 80%, Py 10%	90%
				107						Pb, Py + Sp are associated ć Cal veining, 1% Py dis in bk sh, 5%	6%
				108			108.5 numerous Cal vns (<20mm)				
109.0	3.0	2.98	99.3%	109			109.6 80mm Cal/qz/cbte vn at 63°			109.6 vn ć Pb 7%, Py 3%, Sp 1%, As Py tr	11%
				110							
				111					111.0 B at 36° (ss/sh)		
112.0	3.0	3.0	100%	112							
				113					112.7 B at 37° (ss/sh)		
				114					113.7 B at 57° (sa/ss/sh)		
						114.2 3 metres of uniform gy + pale br, f. to m.g. tuf sandstone intercalated ć minor pale br + gy siltstone.					
115.0	3.0	3.0	100%	115					115.4 B at 54° (sa)		
				116							
				117		117.2 predominantly contorted carbonaceous black shale to 119.5m					
118.0	3.0	3.0	100%	118					117.7 B at 56° (sh)		
				119					119.2 B at 48° (sh)		
				120						5 cm	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 18

LOGGED BY J.D.C FROM 105 TO 120m DATE 25/11/80 PAGE 9 OF 22

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
									moderate to strong deformation		
						black shale, siltstone	highly veined by		contortion of ss/sh strongest	Py 6% dis + in vns in bk sh.	
						intercalated + interbedded gy + dk gy	irregular, contorted,			minor (0.5%) Po → Py -	6.5%
	121.0	3.0	3.0	100%	121	siltstone (minor) with carbonaceous	mostly small (<3mm)			associated & Cal veining	
						black shale. amount ss decreases	calcite veins.		121.8 B at 80° (ss/sh)		
					122	down hole					
					123						
	124.0	3.0	3.0	100%	124				124.1 B at 62° (sh)		
					125						
					126						
	127.0	3.0	3.0	100%	127				126.9 B at 79° (ss/sh)		
						only v. minor ss from here down					
					128				128.7 B at 41° (sh)		
					129						
	130.0	3.0	3.0	100%	130				130.2 B at 62° (sh)		
					131						
					132				132.0 ?B at 60° (sh)		
							132.4 70mm qz/cal/chlz vn at 60°			132.4 vn & Po 6%, Py 2%, As Py 2%	11%
	133.0	3.0	3.0	100%	133				133.6 B at 63° (sh)		
					134						
					135						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C FROM 120 TO 135m DATE 25/11/80 PAGE 10 OF 22

92033

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					136	intercalated ± interbedded carbonaceous black shale with minor gray to dark gray siltstone.	highly veined by contorted, irregular, small (<3 mm), calcite veins.		moderate to strong deformation alternates between contorted & relatively uncontorted shales microfaulting common in siltstone / tuff	dis ± minor vn Py in bk sh	5%
	136·0	3·0	3·0	100%	137						
					138						
	139·0	2·7	2·7	100%	139				139·7 B at 60° (sh)		
					140						
					141				140·9 B at 55° (sh)		
	141·7	3·1	3·1	100%	142	gy ss ± fine to medium grained tuf sa clasts common from here down.					
					143				143·4 B at 62° (ss/tuf)		
					144						
	144·8	3·0	3·0	100%	145						
					146				146·1 B at 65° (ss/sh)		
					147						
	147·8	3·1	3·1	100%	148	148·3 2 metres of intb ± minor intc gy ± pale brown ss & fine tuff.	fewer but larger vns (3-5 mm), of calcite.		148·2 B at 70° (sh)		
					149				149·4 B at 62° (ss/tuf)		
					150						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C FROM 135 TO 150m DATE 25/11/80 PAGE 11 OF 22

92033

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated ≤ interbedded carbonaceous black shale with grey, fine to medium grained tuffaceous sandstone ≤ minor grey to dark grey siltstone.	calcite veining moderate to high (ptygmatic) highest in bk sh. minor irregular q.v.		moderate to high deformed bk sh highly contorted microfaulting common.	disc vn Py common in bk sh. vn Py usually associated ∠ cal vns	6%
150.9	3.0	3.0	100%								
					152.1	contorted carbonaceous black shale only	152.0 250mm clste/qv at 60°		152.4 B at 67° (sh/tuf)	152.0 vn contains 2% cp, tr Py + cp 2% + Sp 1%	15%
153.9	3.1	3.0	100%						154.1 B at 55° (sh/ss)		
									158.1 B at 46° (sh)		
									156.5 B at 35° (sh)		
157.0	3.0	3.0	100%								
					157.4	back to intc ≤ intb tuffaceous sandstone, black shale ≤ siltstone.	157.5 5mm clste vn at 78°		158.3 B at 17° (tuf)		
									159.7 B at 53° (sh/ss)		
160.0	2.3	2.3	100%								
							161.7 20mm Cal vn at 42°		161.5 B at 58° (tuf/ss)		
							162.2 40mm q.v at 40°		162.8 B at 36° (ss)		
162.3	3.1	3.1	100%								
									164.9 B varies 16°-45° (str. varies)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY JDC FROM 150 TO 165m DATE 27/11/80 PAGE 12 OF 22

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	168·4	3·1	3·1	100%
	168·5	3·0	3·0	100%
	171·5	2·6	2·6	100%
	174·1	3·1	3·1	100%
	177·2	3·1	3·1	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
166	intercalated = interbedded grey, fine to medium grained tuffaceous sandstone with gy = dk gy siltstone with black carbonaceous shale.	Highly veined & calcite vns = minor quartz = carbonate vns. (qz = cbte increase down hole).		moderate to strong deformation minor fine breccia in some places microfaulting common 167·2 B at 34° (tuf/ss) undeformed cyclic bedding 168·3 B at 22° (tuf/ss)	essentially barren, minor mineralisation associated & qz/cbte at mg m.	
169						
170	laq'b contorted bk sh			laq'b B variable at 60° (sh)		
171						
172				171·6 B at 58° (tuf/sh)		
173				173·3 B at 55° (ss)		
174						
175				175·0 B at 35° (ss) tuf/ss sh		
176						
177						
178		178·9 80mm qz/cbte vn @ 31°			small Cal/qz vns & Py	tr
179		179·3 55mm qz/Cal vn at 38°		179·1 B at 49° (ss)	178·9 minor Py 3%, Sp, Gn + As Py 1%	4%
180					179·3 minor Py, Po 3% + Sp, As Py 1%	4%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C. FROM 165 TO 180 m DATE 27/11/80 PAGE 13 OF 22

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	180·3	3·0	3·0	100%		tuffaceous sandstone. grey fine to medium grained, intercalated & interbedded with gy & dark gy siltstone.	minor quartz veining & very minor carbonate veining. 181·4 20mm qz-cbte vn at 44°		minor to moderate deformation. strongest in ss; ss fairly uniform. 181·7 B at 66° (ss) 183·5 B at 70° (ss)	minor mineralisation associated & qz & cbte vns. Pb 2%, Py & Sp 1%, Gl tr. 181·4 vn contains Py 4%, Pb 2%	4% 6%
	183·3	3·1	3·1	100%	184·3	quartz carbonate & altered sediments qz & yellow, white & a "dirty" equivalent & pink carbonates with brecciated altered sediments. qz is vuggy.	multiple phase veining. cbtes are rhodocrosite & siderite. cockscomb texture very common		contact at 10° heavily brecciated contacts fine & coarse breccia cbte & cockscomb texture coarse breccia 186·5 non-brec. seds vuggy qz & cbtes of cockscomb texture	Sp 5% along cockscomb (cbte/cbte) margins & along qz/cbte margins & minor Gl 2%. Py 5% along breccia zones in qz & minor Gl 1%, Sp 1%, Pb trace. As Py along qz/qz & qz/cbte margins. & minor Sp 1%. As Py 3%	7% 7% 4%
	186·4	3·1	3·1	100%	187·6	"dirty" carbonate? skarn? off-wh. dk gr mineral in rosettes, xaln & m.g. contains several breccia zones & v. alt. seds?	– –		contact at 46° internal veining parallel to margin	qv at margin contains As Py 2% cbte? contains Sp 10%, Gl 15%	2% 25%
	189·5	3·1	3·1	100%	188·4	tuffaceous sandstone. gy to dk gy, m.g. tuf sandstone with minor gy to dk gy siltstone & black carbonaceous shale at bottom of unit. 192·2 contorted bk shale intercalated & minor gy tuf. sandstone.	minor quartz & v. mnr cbte veining. 191·6 20mm qz/cbte vn at 22° highly veined by cbte & minor qz.		contact at 49° minor deformation in tufes microfaulting common. 190·2 B at 28° (ss) moderate deformation in bk sh (contorted)	barren 191·6 vn contains Gl 5%	0 5%
	192·6	2·40	2·34	97·5%	193·4	carbonate vein? as at 187·6m.	30mm of qz at top		contact at 32° contact at 22°	"vn" contains Sp 6%, Gl 5%	11%
	195·0				193·7	tuf sandstone, siltstone & black shale intc & intb. gy f. to m.g. tuf sandstone & gy & dk gy siltstone & minor bk shale.	slight alt. appearance? (gr tint?) minor cbte vn. v. common qv. (mixed intimately & sediments)		moderate to strong contortion throughout. stigmatic folding common (from microfaulting?)	small cbte vns (< 2mm) & Sp 2% qv. contain Pb & Py 2%.	3% 4%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY JDC FROM 180 TO 195m DATE 27/11/80 PAGE 14 OF 22

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020026

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	195·0	3·0	3·0	100%		intercalated ± interbedded green-grey ± gy fine to medium grained tuf. sandstone with gy, gr-gy ± dk gy siltstone ± black shale. (brown equivalents also present).	moderate quartz ± siderite veining		moderate to strong deformation, increasing down the unit.	in association ± vns of qz ± cbte: Py 2%, AsPy 1%, Sp ± Bo 0·5%	4%
							196·1		196·3 B varies at 51° (sh/ss) cnt.	196·1 minor dis Py in bk sh.	tr
	198·0	3·1	3·1	100%					197·9 B at 65° (sh/ss)		
						-199·5 200 mm of gabbro? with strongly altered units either side. predominantly tuf sandstone ± siltstone	-199·9 highly fractured core infilled by yellow-brown cbte (stained by Sp?)		199·0 B nearly parallel to core axis (silicified ash?) highly frac. core ± cbte vns 200·1 B at 64° (sil ash/ss)	-199·9 Sp 6% in cbte vns	6%
	201·1	3·1	3·1	100%		mixed-up tuf ss, ss + bk sh, irregularly intercalated ± contorted bedding.	minor qz veining minor patchy qz.		201·5 highly contorted.		
							-202·2 small section ± cbte vns in fractures		202·8 B varies 22° (sh/ss/tuf)		
	204·2	3·1	3·1	100%					204·3 B varies 42° (ss/sh)		
									variable bd planes - near 0° (sh, tuf, ss)		
					206·7	talc carbonate zone.	highly veined by milky wh cbte, except for talc bands which are moderately veined. minor qz ± st veining		minor to no foliation	talc cbte probably barren (small blebs could be Sp, chromite or Magnetite)	
	207·3	3·1	3·1	100%		pale gy, pale gr ± milky white cbte, ± bands of dk gr talc; minor bk blebs throughout -208·2 900 mm of talc.			207·5 fol at 66° veining in all directions	qz/st vns ± Py 1%, sp 0·5%, btr	1·5%
						predominantly dk gy cbte ± minor pale brown cbte.			foliation unclear		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C FROM 195 TO 210m DATE 30/11/20 PAGE 15 OF 22

C20346

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						talc carbonate.	highly veined by milky white cbte only		no distinct foliation or constant plane for veining	barren	0
	210·4	3·0	3·0	100%		dark grey talc with pale green carbonate & highly veined by milky white carbonate. minor very small (0·5mm) brown veins.	212·4 300mm qz, Ankerite, St mixed & talc in small lam at 45°			212·4 Po 6%, Cp 1% in qz; Sp 3%, Gal tr & cbte plus AsPy 1%	11%
					212·7	altered sediments	moderate qz veining. mostly irregular & patchy, being mixed & sediments.		moderate to strong deformation. contortion & microfaulting common.	minor mineralisation associated with qz veins.	
	213·4	0·6	0·6	100%		intercalated & interbedded gy, pale & chocolate br & gy-green, fine to medium grained tuffaceous sandstone & gy to dk gy, pale & chocolate br & gy-gr siltstone.			214·6 B variable at 35° (tuf/ss)		
	214·0	3·0	3·0	100%			215·6 80mm qv & v. minor St at 42°.			218·6 Py 3%, Po & Sp 2% in q.v.	7%
									216·2 B at 48° (tuf/ss)		
	217·0	3·0	3·0	100%		217·1 700mm of chocolate & pale brown sediments.			217·7 B at 66° (tuf/ss)		
									218·6 B at 49° (tuf sa)		
					219·0	quartz-carbonate veins.	carbonates have dark/light mottled appearance.		contact at 28°	common mineralisation along cockscomb margin Sp 12%, Gl 13%. needles of AsPy 3% in cbte. Py 5%, AsPy 2% associated & qz	35%
						q.v at top & base; "dirty" gr cbte & minor St & qz in centre (& clasts of sediment) some cockscomb texture present.			contact at 49°		
	220·0	3·0	3·0	100%					contact at 48°		
					220·1	altered sediments	minor small (<2mm) cal vns throughout.		indistinct contact	mineralisation associated & veins	
						intc & minor intbs gy, gr-gy & br, fine grained tuf sandstone & gy, gr-gy & br siltstone.	220·9 130mm q.v at 61°		220·5 B? at 32° (ss/tuf)	221 cbte vns over 50mm & Gl 12% Py & Sp 3%	15%
									221·1 20mm highly broken core		
							222·1 50mm qz/St vn at 75°		221·6 B? at 61° (ss/tuf)		
									minor to moderate deformation		
							223·0 50mm qz/St vn at 75°			223·0 Po 10%, Py 2% in vn.	12%
	223·0	3·0	2·96	98·7%	223·1	talc-carbonate zone.	talc bands highly veined by siderite			223·1 qv & Po, Py 10%	10%
						mixture of talc bands & milky wh, pale gr, pale blue-gr, pale gy & br cbtes. wh/bl-gr/gr carbonates have black blebs other cbtes have fine wh mottling.	minor later phase veins (carbonate) siderite.		minor (in wh unit), to moderate (in dk unit), foliation	barren	0
									224·1 fol at 50°	223·9 3mm Py vn.	?
									224·8 fol at 48°		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C. FROM 210 TO 225m DATE 1/12/80 PAGE 16 OF 22

015

92031A

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE (INTERVAL)	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						talc carbonate zone zones of pale grey, pale brown & minor milky white carbonates mixed with pale green, milky wh & minor gy cbte & bands of talc. darker units have fine wh mottling; lighter units have minor small black blebs of Sphalerite?, Magnetite? or Chromite? some zones are intermediate between light & dark. 228·6 300 mm of talc.	minor later phase milky white carbonate veins. talc zone is moderately veined by wh. cbte.		moderate to strong foliation (variable) 226·4 fol at 43° (intermediate) 227·6 fol at 56° (light/dk contact) 228·4 fol at 82° (intermediate) 229·3 fol at 55° (light) 229·9 fol at 61° (light/dk contact)	minor mineralisation in veins. 229·8 3 mm Py & Pb vn	10%
226·0	3·0	3·0	100%	226							
				227							
				228							
229·0	3·0	3·0	100%	229							
				230	230·2	quartz-Pyrrhotite zone. predominantly large q.v. mixed & minor amounts of talc-cbte at the top & sediments at the base. in some places v. minor sediment/talc cbte has only tinted qz. 234·7 600 mm wh talc/cbte; base of zone mainly qz-St grading to qz. 235·8 500 mm zone of "dirty" cbte & q.v.	top contact indistinct - marked by presence of mineralised cbte - grading to mineralised quartz veining.			mixture of Pb, AsPy & minor Cp (western margin of talc cbte association?) 231·6 800 mm max Pb & v. minor qz. 232·5 bands of massive AsPy 234·6 banded Pb at base of talc cbte zone. 235·8 Sp, Gl & cbte, & later Pb AsPy needles & cbte. Overall %: Sp & Gl 1%; Pb 25% cpx Py 2%; AsPy 10%.	41%
				231							
232·0	3·0	3·0	100%	232					234·9 fol at 40° (talc/cbte)		
				233					235·3 banding at 46° (qz/Pb)		
				234					236·4 vn at 40° (qz)		
235·0	3·0	3·0	100%	235							
				236							
				237	237·2	tuffaceous sandstone, siltstone intercalated green-grey, fine to medium grained tuf. sandstone & gr-gy siltstone	minor q.v. minor qz/cbte vns.		contact at 45° minor deformation common microfaulting 238·5 B at 45° (tuf.ss) 239·6 B at 26° (ss) minor cyclic bedding	minor mineralisation restricted to qz-cbte vns 239·2 qz/cbte vn & 10% Py	10%
238·0	3·0	3·0	100%	238							
				239							
				240							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY ADC FROM 225 TO 240 m DATE 2/12/80 PAGE 17 OF 22

020345

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated & interbedded brown to grey to green-gy tuffaceous sandstone & gr-gy br & gy siltstone.	minor calcite veining units slightly altered		minor to moderate deformation 240·9 B at 49° (ss) microfaulting common	barren	0
	240·0	3·0	3·0	100%					contact at 80°		
					241·4	talc carbonate zone pale grey, milky white (& minor pale brown streaks) carbonates white mottling in darker sections & common dispersed black blebs - Sp, Magnetite or chromite.	top contact is sharp, but irregular & marked by qz-cbte vns mixed & minor seds. 500mm vn zone highly veined by small (<3mm) milky wh cbte vns throughout & by occasional lge wh later phase cbte vns.		minor breccia moderate foliation 243·3 fol at 55° 244·3 fol at 54° 245·8 fol at 42°	qz-cbte vns contain: Po 7%, Sp & AsPy 2%, Cp tr Py 1% minor blebs Sp, Mt, Chromite?	12% 1%
	244·0	3·0	3·0	100%							
	247·0	3·0	3·0	100%			247·4 150 mm cbte vn 249·5 500 mm qz/cbte vns		247·3 fol at 38° 249·1 fol at 83°	249·5 Po 15%, Py 2% Cp tr in vns	18%
	250·0	3·0	3·0	100%	250·0	tuffaceous sandstone & siltstone intc & intb, gy to gr-gy & minor pale br fine to medium grained tuf. sandstone & minor gy to dk gy & gr-gy siltstone; all intc & minor black carbonaceous shale (to 252·4m only).	contact sharp but irregular equal quantity of qz & calcite vns. unit moderately to highly veined. minor St.		contact at 78° moderate deformation bk shale contorted microfaulting common. 252·6 B at 50° (sh/ss) 253·3 B at 58° (tuf ss)	minor Po-Sp 1%, Py tr associated & qz & St vns	2%
	253·0	3·0	3·0	100%							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C FROM 240 TO 255 m DATE 6/12/80 PAGE 18 OF 22

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9203/16

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	255·0			
	256·0	3·0	3·0	100%
	257·0			
	258·0			
	259·0	3·0	3·0	100%
	260·0			
	261·0			
	262·0	1·2	1·2	100%
	263·0			
	263·2	1·8	1·8	100%
	264·0			
	265·0	3·0	3·0	100%
	266·0			
	267·0			
	268·0	3·0	3·0	100%
	269·0			
	270·0			

SCALE 1:100 (1cm = 1 m)

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	intc + minor intb gy,gr + br, f + m.g. tuf sa & gr-gy, gy + br siltstone (minor)	increasing alteration of seds downhole. common actinolite / tremolite vns within br + gr units. moderately to highly veined & qz + cbte.		minor to moderate deformation. microfaulting throughout.	minor Py 2% + Pb 1% associated & q.v	3%
	255·8 200m unit (intc) of gy-wh siliceous sed.					
	257·0 only gy + gr-gy medium tuf. sandstone.			256·3 B at 35° (tuf sa) top unit of tuf sa is massive		
		258·5 q5mm qz, cbte. Fluorite? vns at 45°			258·5 vn contains sp %	1%
	259·5 259·7 predominantly br + gr m.g. tuf. sa.	seds hornfelsed?				
		260·6 7mm cbte vn at 50			260·6 vn contains Gl 85%, Sp 5%	90%
				261·6 B at 78° (ss)		
		262·7 65 mm qz/cbte vn at 52°.			262·7 Pb 30%, Py 3% + Cp 2% in vn	35%
		263·3 30 mm qz/cbte vn at 50°			263·3 Sp + Pb 3% in vn	6%
	263·9 intc unit of gy-wh, gy-gr siliceous sediment (chert?) 100mm.					
		265·0 750 mm mixed qz cbte vns + seds. top at 20°, base at 68°			265·0 Py 2%, Pb + Sp 1% in vns	4%
		266·1 25 mm qv at 44°			266·1 Py 60%, Pb 30% in vn	90%
		266·9 800 mm mixed qz cbte vns + seds at 38°		266·3 B at 47° (ss / tuf sa)	266·9 Gl + Sp 5% in vns	10%
		267·7 100 mm qv, base at 25°				
				268·4 B at 45° (tuf sa)		

5 cm

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C. FROM 255 TO 270m DATE 5/12/80 PAGE 19 OF 22

620341

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						tuffaceous sandstone + siltstone intc + minor intb, gy + gr-gy (minor) + chocolate brown medium grained tuf sandstone & minor gr-gy + br siltstone units hornfelsed?	moderate to high qz + calcite veining common tremolite/ actinolite veining is irregular / ptygmatic + runs in all directions		moderate deformation common microfaulting minor contortion in a few places.	minor Py 1% associated c qz + Cal vns, plus trace amounts of Po + Sp	1%
	271·0	1·7	1·7	100%	271						
					272				272·2 B at 54° (tuf sa)		
	272·7	1·3	1·3	100%	273				273·2 B at 70° (ss)		
									273·8 B at 69° (ss)		
	274·0	3·0	3·0	100%	274		274·4 500mm qz/st vn, bap at 60°, base at 72°			274·4 Po 40%, Sp + As Py 5%, cp + Py 5%	52%
					275				274·9 B at 60° (tuf sa)		
					276						
■	277·0	2·6	2·24	86·15%	277				277·6 B at 60° (tuf sa)		
					278				278·0 B at 48° (tuf sa)		
					279						
	279·6	3·1	3·1	100%	280				279·8 B at 66° (tuf sa/ss)		
					281				281·0 B at 66° (tuf sa)		
					282						
	282·7	3·1	3·1	100%	283				283·1 B at 66° (ss/tuf sa)		
					284				284·4 B at 55° (ss)		
					285						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C. FROM 270 TO 285m DATE 5/12/80 PAGE 20 OF 22.

020349

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						gabbro/dolerite mixed sediments + gabbro					
	285·7	3·0	3·0	100%	286	285·8 massive unit of gr-gy, sometimes mottled (ophitic?) texture, medium to fine grained vns of opaque, gr mineral - crystalline - long needles - acid reaction around these vns (not gr mineral) slightly carbonate throughout?	minor qz + rare cal vns actinolite/tremolite vns?		igneous unit massive - structural features are indistinct.	minor Po 2% associated & qz-dolo vns.	2%
					287						
					288						
	288·7	3·1	3·1	100%	289						
					290						
					291						
	291·8	3·1	3·1	100%	292	small zone of mixed altered sediments + igneous? over 300 mm.	292·1 45 mm qz/dolo vn at 64°				
					293						
					294						
	294·9	3·0	3·0	100%	295						
					296		296·4 70 mm qz/st vn at 47° 296·6 350 mm of qz/st vns mixed & gabbro? at 55°			296·6 Sp 3% + Py 2% in vn	5%
					297	297·0 alteration of gabbro/dolerite, possibly mixed & altered sediments. Zone of mixed gr + gy-gr, gy + br units cut by common gr veins.			this section: minor to moderation deformation contortion + minor microfaulting.		
	297·9	3·1	2·98	96·1%	298						
					299						
					300						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY I.D.C FROM 285 TO 300m DATE 8/12/80 PAGE 21 OF 22

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						continued zone of altered gabbro/dr & sediments, predominantly altered igneous.	actinolite/tremolite? veining common. minor; qz/cbte veining dispersed calcite.		indistinct structural features. minor contortion in some parts.	minor Po + Py associated & qz-cbte vns.	1%
	301·0	3·0	3·0	100%	301						
					302						
					303						
	304·0	3·0	3·0	100%	304		304·2 30mm st/q.v at 22°				
					305						
					306	small (120 mm) unit of silicified gy-wh sed.			no sharp contact		
					306·4	altered sediments			minor to moderate deformation minor microfaulting	306·8 200mm of cbte vnlets & Sp	10%
	307·0	3·0	3·0	100%	307	intc + intb gr-gy, gy + br, fine to medium grained tuf sandstone & gy + buff-gr siltstone.	307·0 mixed seds + q.v. minor to moderate quantity of qz/cbte veining.		307·7 B at 52° (tuf sa/ss lam) minor contortion.	307·0 moderate to common Py + Po associated & qz-cbte. 307·7 minor Py + Po associated & qz-cbte veining.	5%
					308						
					309				309·6 B at 72° (tuf sa)		
	310·0	3·0	3·0	100%	310						
					311						
					312				312·4 B at 72° (ss/tuf sa)		
					313		312·8 70mm qz/cbte vn 25°			312·8 Asly 3% in qz; Sp tr in cbte	3%
	313·0					End of DDH: RBE 18 at 313·0 m.					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 18

LOGGED BY J.D.C. FROM 300 TO 313 m DATE 8/12/80 PAGE 22 OF 22

920350

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
No core recovery until 18.3m depth.																
18.0	25	125	BLD	20	250	BLD	29	200								
19.0	5	120	BLD	110	175	BLD	120	155								
22.0	6	60	BLD	1400	270	2.0	10	120								
24.4	7	60	BLD	15	350	BLD	36	140								
25.4	10	20	BLD	20	150	BLD	13	100								
26.8	10	15	BLD	25	145	0.5	10	110								
27.7	7	30	BLD	5	160	BLD	20	105								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 18 TO 30 m DATE 19/12/80 PAGE 1 OF 20

022

020351

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
30.5	6	30	BLD	5	170	BLD	19	110								
31.0	BLD	105	BLD	5	185	BLD	17	140								
34.0	15	90	BLD	15	150	0.5	14	135								
37.0	5	85	BLD	20	190	0.5	40	140								
40.0	10	95	BLD	15	170	BLD	25	125								
43.0	BLD	100	BLD	15	150	BLD	30	135								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 30 TO 45m DATE 19/12/80 PAGE 2 OF 20

023

9203552

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
45																
46	46·0															
47		8	100	BLD	20	160	BLD	24	130							
48																
49	49·0															
50		5	75	BLD	30	150	BLD	36	140							
51																
52	52·0															
53		30	255	BLD	265	2550	1·5	900	140							
54																
55	55·0															
56		10	90	BLD	15	295	BLD	55	140							
57																
58	58·0															
59		8	85	BLD	15	165	BLD	32	135							
60	60·0															

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 45 TO 60 m DATE 19/12/80 PAGE 3 OF 20

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
60.0	10	75	BLD	5	125	BLD	9	85								
62.9	6	85	BLD	10	140	0.5	10	215								
64.0	5	110	BLD	25	215	BLD	15	125								
67.0	6	90	BLD	20	200	BLD	16	140								
70.0	10	60	BLD	20	165	BLD	45	215								
73.0	8	25	BLD	15	110	BLD	30	110								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 60 TO 75m DATE 19/12/80 PAGE 4 OF 20

025

920354

026

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
75																
76																
76·0	140	1100	BLD	1350	6650	7·5	700	100								
77																
78																
79																
79·0	45	170	tr.	185	720	BLD	75	115								
80																
81																
82																
82·0	120	135	BLD	4950	3950	15·0	750	135								
83																
84																
85																
85·0	50	140	BLD	470	2700	1·0	300	215								
86																
87																
88																
88·0	65	145	BLD	680	2400	1·0	2000	110								
89																
90																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 75 TO 90m DATE 19/12/86 PAGE 5 OF 20

920355

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
90																
91	91.0															
92		35	105	BLD	540	1750	0.5	55	100							
93																
94	94.0															
95		40	75	BLD	480	1750	BLD	55	170							
96																
97	97.0															
98		30	120	BLD	740	3050	BLD	43	120							
99																
100	100.0															
101		25	125	BLD	240	1150	BLD	25	145							
102																
103	103.0															
104		20	140	BLD	60	345	BLD	250	150							
105																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 90 TO 105m DATE 19/12/80 PAGE 6 OF 20

020

92035

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
106·0	30	110	BLD	50	275	BLD	50	150								
109·0	35	215	BLD	165	1250	0·5	400	110								
112·0	3	100	BLD	10	190	BLD	17	120								
115·0	3	105	BLD	15	135	BLD	130	105								
118·0	6	125	BLD	55	110	BLD	10	100								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 105 TO 120m DATE 19/12/80 PAGE 7 OF 20

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
120																
121																
121·0																
122	4	105	BLD	20	65	BLD	24	95								
123																
124																
124·0																
125	BLD	70	BLD	15	50	BLD	23	90								
126																
127																
127·0																
128	3	110	BLD	70	160	BLD	16	90								
129																
130																
130·0																
131	10	135	BLD	215	490	0·5	700	90								
132																
133																
133·0																
134	3	105	BLD	120	695	BLD	55	85								
135																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 120 TO 135 m DATE 19/12/80 PAGE 8 OF 20

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
136·0	4	95	BLD	35	170	0·5	18	80								
139·0	5	100	BLD	10	180	BLD	13	95								
141·7	BLD	90	BLD	10	150	BLD	20	95								
144·8	6	90	BLD	15	115	BLD	23	95								
147·8	8	80	BLD	75	250	BLD	29	95								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 135 TO 150m DATE 19/12/80 PAGE 9 OF 20

9203359

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
150																
151	150·9															
152		50	1300	BLD	565	2950	3·0	2300	110							
153																
154	153·9															
155		8	105	BLD	180	435	BLD	31	90							
156																
157	157·0															
158		15	130	BLD	295	435	0·5	45	100							
159																
160	160·0															
161		15	115	BLD	215	1500	0·5	36	120							
162																
163	162·2															
164		6	60	BLD	55	195	BLD	17	100							
165																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 150 TO 166.m DATE 19/12/80 PAGE 10 OF 20

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
165																
165·4	35	40	BLD	190	490	0·5	200	120								
168·5	30	20	BLD	135	396	BLD	20	110								
169·89	45	20	BLD	185	480	BLD	50	110								
171·5	25	75	BLD	140	1250	0·5	25	100								
174·1	3	70	BLD	20	175	BLD	17	105								
177·2	40	75	BLD	350	1050	1·0	750	90								
180																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 165 TO 180 m DATE 19/12/80 PAGE 11 OF 20

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
180																
180·3	40	40	BLD	510	950	BLD	650	120								
181·9	40	15	BLD	445	680	0·5	200	120								
183·3 (+184·7)	55	50	BLD	2950	7500	4·5	3500	105							Ground	Core ↑
184·15	75	55	30	440	3250	1·5	5200	165							Split ↓	Tq405
184·45	320	365	BLD	2·5%	3·0%	62·0	7000	80								Tq406
185·2	130	265	BLD	4100	2·85%	41·0	7000	95								Tq407
186·1	220	295	BLD	4950	1·55%	24·5	6000	70								Tq408
186·4	280	290	BLD	7350	1·3%	8·0	1·1%	70								Tq409
187·6	520	2550	BLD	10·0%	6·2%	225	1·0%	65								Tq410
188·3	85	200	20	2300	5100	8·5	3800	120							Split ↑	Tq411
188·55 (from 187·57)	370	1600	BLD	8·0%	4·05%	380	6000	65							Ground	core
189·5	45	70	BLD	1100	1400	2·5	1800	110							Ground	Core
192·6	80	85	20	1900	6700	4·0	3100	100							Split ↓	Tq412
193·05	110	125	BLD	1300	3400	3·5	3700	105								Tq413
193·43	420	435	BLD	7600	8·5%	35·5	5600	75							Split ↑	Tq414
193·66 (from 193·58)	65	80	BLD	3250	1·8%	20·0	350	85							Ground	Core
195·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 180 TO 195m DATE 19/12/80 PAGE 12 OF 20

033

920362

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
195·0	75	165	BLD	380	2400	1·5	750	115								
198·0	40	195	BLD	1150	7900	0·5	240	135								
201·1	45	80	BLD	1000	2600	1·0	260	100								
204·2	40	20	BLD	80	230	BLD	550	780								
207·3	4	10	BLD	340	380	BLD	530	1100								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 195 TO 210m DATE 19/12/80 PAGE 13 OF 20

920363

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
210.4 (→213.4)	20	90	BLD	400	3750	1·0	370	785							Ground	Core ↑
212·17	80	5	BLD	150	600	1·5	1900	820							Split ↓	TQ415
212·5	110	1400	BLD	4200	2·25%	17·0	2500	920								TQ416
212·75	420	25	BLD	345	1350	1·0	380	190							Split ↑	TQ417
213·00 (from 210.4)	20	90	BLD	400	3750	1·0	370	785							Ground	Core ↓
213·4	75	40	BLD	200	380	BLD	55	110								
214·0	120	40	BLD	250	530	0·5	170	85								
217·0 (→220·0)	180	115	BLD	3·0%	1·35%	60·0	2700	60							Ground	Core ↑
218·45	1100	20	40	130	710	0·5	2400	115							Split ↓	TQ418
218·75	130	110	30	4250	1·45%	10·5	7200	65								TQ419
219·45	380	270	BLD	6·7%	3·45%	110·0	6300	85								TQ420
219·91	35	25	BLD	290	2650	2·0	1·5%	125								TQ421
220·2	65	5	BLD	646	1750	1·0	1600	90								TQ422
220·7	65	30	BLD	4300	3350	12·0	1000	115								TQ423
221·0	110	10	20	1300	2800	1·0	280	95								TQ424
221·4	55	5	20	125	490	0·5	210	155								TQ425
221·9	75	5	BLD	285	1000	BLD	120	125								TQ426
222·8	35	1150	BLD	340	1900	10·0	180	245								TQ427
223·3	5	10	BLD	170	230	1·0	1700	1450							Split ↑	TQ428
223·5 (from 220)	140	195	BLD	5200	2050	15·0	2000	585							Ground	Core

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 210 TO 225 m DATE 19/12/80 (12/1/81) PAGE 14 OF 20

92064

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni							SAMPLE NUMBER
226·0	70	320	BLD	65	105	0·5	1800	1150							
229·0 (→232·0)	260	2000	BLD	330	2500	5·0	1·7%	1000						Ground	Core↑
229·6	7	470	BLD	80	125	1·5	1700	1100						split↓	TQ429
230·2	340	770	BLD	1300	1·9%	9·5	4400	1400							TQ430
230·4	400	4900	BLD	360	610	13·0	18%	1150							TQ431
230·16	340	1600	BLD	220	1600	7·0	9000	1200							TQ432
231·15	400	4000	BLD	100	305	8·0	2700	560							TQ433
231·4	260	1400	BLD	170	230	7·5	3800	440							TQ434
231·7	410	1250	BLD	60	60	2·0	1500	600							TQ435
232·1	55	1350	BLD	55	50	2·0	900	610							TQ436
232·4	100	950	BLD	70	125	2·5	4000	725							TQ437
232·65	110	420	BLD	2200	190	37·0	10·0%	590							TQ438
232·92	700	4950	BLD	290	410	12·0	3800	860							TQ439
233·15	1900	270	BLD	15	270	1·5	7000	275							TQ440A
233·65	1100	1350	BLD	155	270	4·0	8·0%	195							TQ440B
234·15	110	330	BLD	1600	1900	17·5	20·0%	1150							TQ441
234·4	380	205	BLD	490	470	6·0	8·0%	710							TQ442
234·6	1000	415	BLD	360	700	4·5	3900	750							TQ443
234·8	15	30	BLD	130	135	0·5	3500	1300							TQ444
235·25	55	3650	720	1800	3150	22·5	1·2%	900							TQ445
235·53	1200	5200	300	1·05%	3·9%	51·5	2600	425							TQ446
235·83	260	1050	BLD	1500	5600	14·5	2·0%	120							TQ447
236·28	1000	4300	BLD	7000	2·5%	49·5	2·7%	820							TQ448
236·8	770	1850	BLD	2700	8000	12·0	3700	800							TQ449
237·13	100	180	30	360	780	1·0	250	130							TQ450
237·7	80	15	BLD	46	255	BLD	150	110							TQ451
238·35	70	15	BLD	265	500	BLD	170	115							TQ452
239·35	95	240	BLD	80	390	0·5	170	140							TQ453

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 225 TO 240m DATE 12/1/81 (16/1/81) PAGE 15 OF 20

036

92036

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
240																
240·85	110	50	50	225	900	1·5	160	115								Tq454
241·35	2700	650	BLD	3050	1·1%	15·5	5000	430								Tq455
241·87	3	10	BLD	95	190	0·5	1000	1500								Tq456
242·4	200	20	BLD	415	730	BLD	1500	1350								Tq457
243·0	BLD	5	BLD	15	55	BLD	590	1700								Tq458
244·0	6	5	BLD	10	35	BLD	210	1300								Tq459
245·0	10	5	BLD	165	345	BLD	440	1300								Tq460
246·0	BLD	5	BLD	20	40	BLD	110	1150								Tq461
247·0	BLD	5	BLD	15	40	BLD	60	1500								Tq462
248·0	BLD	15	BLD	15	45	BLD	150	1700								Tq463
249·0	BLD	180	BLD	335	900	0·5	1000	1700								Tq464
249·45	70	150	BLD	1750	8000	8·0	5700	1400								Tq465
249·62	280	1300	BLD	780	1700	9·5	1200	1050								Tq466
250																
250·05	50	30	BLD	215	620	1·0	160	170							Split ↑	Tq467
250·4 (from 250·0)	160	55	BLD	295	725	BLD	430	350							Ground	Core ↓
253																
253·0	15	70	BLD	215	505	BLD	260	340								
255																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 240 TO 255m DATE 12 / 1 /81 PAGE 16 OF 20

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
255																
256																
256·0	40	65	BLD	590	1750	1·0	430	110								
257																
258																
259																
259·0	35	75	BLD	350	535	0·5	430	115								
260																
261																
262																
262·0	590	850	BLD	210	470	2·5	250	120								
263																
263·2	100	60	BLD	230	545	0·5	200	110								
264																
265																
265·0	340	385	BLD	1·75%	2·0%	18·0	6000	85								
266																
267																
268																
268·0	55	80	Tr.	120	350	0·5	370	105								
269																
270																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 255 TO 270 m DATE 19/12/80 PAGE 17 OF 20

920367

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
270																
271																
271·0																
272	60	70	BLD	20	130	BLD	240	100								
272·7																
273	55	45	BLD	30	175	BLD	130	105								
274																
274·0																
275	1250	405	BLD	620	1·0%	4·5	1·0%	145								
276																
277																
277·0																
278	80	45	Tr.	30	235	BLD	390	120								
279																
279·6																
280	120	35	BLD	35	250	BLD	250	100								
281																
282																
282·7																
283	85	50	BLD	65	205	BLD	150	120								
284																
285																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 270 TO 285 m DATE 19/12/80 PAGE 18 OF 20

920368

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
285																
285·6	80	50	Tr	110	210	BLD	300	100								
288·7	80	45	BLD	105	210	BLD	310	100								
291·8	110	30	BLD	60	260	BLD	310	130								
294·9	110	30	BLD	180	535	0·5	750	150								
297·9	180	20	BLD	50	245	0·5	240	115								
300																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 285 TO 300m DATE 19/12/80 PAGE 19 OF 20

040

9203309

041

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
301·0	90	75	BLD	295	785	0·5	310	210	
304·0	90	110	BLD	610	6550	0·5	190	90	
307·0	55	375	BLD	160	1950	1·0	100	115	
310·0	95	45	BLD	55	1650	0·5	500	115	
313·0	End	of	DDH:	RBE 18					

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 300 TO 313 m DATE 19/12/80 PAGE 20 OF 20

920370

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

DDH : RBE 19

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MICROFILMED

920372

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG

SUMMARY SHEET

PROJECT Ranison AREA Grid GAR DRILLHOLE TYPE: DDH NQ RBE 19

CO-ORDS E 312713·0 N 5372307·1 DEC LN -45° AZIMUTH 099° MN RL 147·9 m

DATE COMMENCED 30/11/80 DATE COMPLETED 16/12/80 DRILLED BY Longyear DRILL RIG Longyear 38

GEOLOGIST(S) J. Crimeen NON-CORE TO: 15 m NQ CORE TO: 60 m BQ CORE TO: 365m

SURVEY DATA

INSTRUMENT downhole camera

DEPTH	CORRECT DEC LN	AZIMUTH	DEPTH	CORRECT DEC LN	AZIMUTH
60 m	-47·5°	097° MN	300 m	-40·75°	094° MN
90 m	-47°	099·5° MN	330 m	-38·25°	093° MN
120 m	-46·5°	099° MN	361 m	-35·25°	095° MN
150 m	-44°	095·5° MN			
180 m	-43·25°	095·5 MN			
210 m	-42·5°	094° MN			
240 m	-42°	119·5° MN: assume 045°			
270 m	-41·25°	095° MN			

LOG SUMMARY

DEPTH	ROCK TYPE	MINERALISATION	GRADE
0 - 15 m	friconed through wthd tuf sa, ss + bk sh		
15 - 24·4 m	cnt, intc carb bk sh + dk gy ss	dis Py	4%
24·4 - 27 m	gy, f-m tuf sa	dis Py	tr
27 - 29·9 m	intc + intb carb bk sh + dk gy ss	dis Py	tr
29·9 - 49·3 m	dk gy m tuf sa & gy f-m tuf sa + minor gy ss	dis Py	tr
49·3 - 60 m	intb carb bk sh & dk gy ss + minor gy ss	Cal vns & Py (tr Pb, Sp)	9%
60 - 74·4 m	gy + dk gy ss intb + intc minor carb bk sh + gy f-m tuf sa	vns Py	1%
74·4 - 123·3 m	intc + intb dk gy f-m tuf sa & dk gy ss + minor gr units + carb bk sh	Cal/q vns & Py (tr Pb, Sp)	2%
123·3 - 169·4 m	cnt carb bk sh & dk gy ss + minor gy f-m tuf sa + gy ss	Cal vns & Pb, Py (tr Sp, Gl, AsPy) at base	7%
169·4 - 180·6 m	intc + intb gy + br f-m tuf sa & dk gy + gy ss & minor carb bk sh	Pb, Py & Cal vns	tr
180·6 - 185·5 m	carb bk sh & minor ss + tuf sa	dis Py + cal vns	4%
185·5 - 191·3 m	bk acid tuf & minor intb carb bk sh	dis Py in bk sh	1%
191·3 - 200 m	gy-gr micro-gabbro	barren	0
200 - 211·4 m	intc f-m br + gy tuf sa, gy acid tuf + intb carb bk sh	Cal vns & Sp (tr Pb, Py)	7%
211·4 - 221 m	cnt f-m br, gy, gr-gy tuf sa	Cal vns & Sp, Gl, Pb, Py, AsPy	1%
221 - 242·5 m	wh/gy/gr talc cbte	blebs/stringers Sp? cbte vns & Gl Pb Cal	2% Sp? 1%
242·5 - 249·3 m	qz, Pb vn zone	Pb & minor Py, Cp, AsPy, Sp + Gl	40%
249·3 - 253·2 m	gr/gy/wh talc cbte	Pb & minor Py, Gl, Sp	25%
253·2 - 280 m	hornfelsed, f-c, gr + br tuf sa	qz/Cal vns & Pb, Py, Sp, Gl	3%
280 - 285·1 m	gr/gy microgabbro	qz/cal vns Pb, Py	1%
285·1 - 368 m	hornfelsed, f-c, gr + br intc tuf sa	qz/Cal vns &: down to 300 AsPy, to 300: 12%; Pb, Py, Gl, Sp + below 300 Py Sp Pb	from 300: 2%
368 m	E.O.H.		

001

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					0–15	Tricored to 15 metres, through tuffaceous sandstone, siltstone and black shale.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D. Crimeen FROM 0 TO 15m DATE 9/12/80 PAGE 2 OF 26

9203173

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	18.0	1.0	1.0	100%
	19.0	1.0	1.0	100%
	21.0	1.4	1.4	100%
	18.4	0.6	0.55	91.7%
	19.0	3.0	2.95	98.3%
	22.0	1.0	0.7	70.0%
	23.0	1.5	1.1	73.3%
	24.5	0.5	0.4	80.0%
	25.0	0.4	0.4	100%
	25.4	1.3	1.23	94.6%
	26.7	0.8	0.8	100%
	27.5	0.5	0.5	100%
	28.0	0.2	0.2	100%
	28.2	0.8	0.58	72.5%
	29.0	1.3	1.27	97.7%

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	black shale + siltstone. intercalated carbonaceous black shale with dark grey siltstone, with minor gy medium grained tuffaceous sandstone and rare mudstone.	minor quartz + calcite veinlets (<0.5mm) common "honeycomb" carbonate along veins + more often along tension gashes.		core highly broken tension gashes + cavities very common. moderate to strong deformation. beds contorted. 21.9 B at 36° (bk sh/tuf sa)	moderate amounts of primary disseminated pyrite.	4%
24.4	tuffaceous sandstone grey, fine to medium grained tuffaceous sandstone.	25.0 q.v ~ 80 mm qz + "honeycomb" calc common.		25.0 qv. completely broken up. massive unit & slight deformation.	very minor dis. Py	tr
27.0	black shale + siltstone intercalated + interbedded (minor) carbonaceous black shale + dark gy siltstone, + very minor gy tuf. sandstone.	minor quartz common "honeycomb" calc veinlets.		moderate deformation tension gashes + cavities common 28.1 B at 42° (SS) minor microfaulting.		
29.9				contact at 46°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 19

LOGGED BY J.D.C FROM 15 TO 30m DATE 9/12/80 PAGE 3 OF 26

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	30·3	0·7	0·7	100%
	31·0	1·1	1·04	94·5%
	32·1	0·6	0·54	90·0%
	32·7	0·7	0·6	85·7%
	33·4	0·6	0·5	83·3%
	34·0	0·8	0·8	100%
	34·8	0·7	0·67	95·7%
	35·5	1·5	1·37	91·3%
	37·0	3·0	2·96	98·6%
	40·0	2·3	2·3	100%
	42·3	0·7	0·7	100%
	43·0	3·0	2·82	94·0%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	tuffaceous sandstone contains predominantly dark grey medium grained tuffaceous sandstone & minor grey, f. to m.g. tuf. sa.	minor quartz + rare carbonate veining.		minor deformation, microfaulting + contortion	trace dis. Py	tr.
34·3	light gy. f. to m.g. tuf. sandstone & occasional bands of calated dk gy siltstone.			34·6 B at 17° (tuf sa) tuf. sa massive unit.		
	-36·4 150 mm dk gy siltstone.					
	-37·1 600 mm intercalated bands of gy + dk ss + gy tuf sa.			tension gashes + cavities ozass around 37 m. 37·7 B at 82° (ss/tuf sa)		
				39·8 B at 57° (tuf sa)		
40·3	f. to m.g tuf sandstone interbedded (minor) + int & dk gy + gy siltstone.			41·4 B at 50° (ss)		
		moderately common calcite veining. -42·8 40 mm cal vn at 53°		42·9 B at 38° (tuf sa)		
				44·2 B at 26° (ss/tuf sa)		
		-44·8 20 mm cal vn at 42°		44·7 B? at 27° (ss/tuf sa).		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 30 TO 45m DATE 11/12/80 PAGE 4 OF 26

CRA EXPLORATION PTY LTD 9203 [illegible]

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DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	46·0	3·0	2·82	94·0%
	49·0	3·0	3·0	100%
	52·0	3·0	3·0	100%
	55·0	3·0	3·0	100%
	58·0	2·00	1·75	87·5%
	60·0			

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	interclated & interbedded grey, fine to medium grained tuffaceous sandstone with grey to dark grey siltstone.	very minor calcite in veins & disseminated.		slight to moderate deformation moderately common microfaulting 46·4 B at 44° (ss) minor contortion. 46·9 B at 45° (ss/tuf ss) 47·6 variable bd due to faulting & contortion. 48·8 B at 15° (ss)	trace disseminated Py	tr
49·3	black shale, siltstone, tuffaceous sandstone intb & intc (minor) carbonaceous bk shale & dk gy siltstone & minor gy ss, calated & minor gy. m.g tuf sandstone	minor Cal veining, usually small (5 mm) isolated vns.		contact at 62° moderate deformation common microfaulting minor contortion 50·9 B at 23° (ss/bk sh) bedding contorted, variable 53·7 B at 45° (bk sh). 54·9 B at 33° (ss) 56·2 B at 56° (ss/bk sh) cyclic bedding 57·2 B at 34° (ss)	common Py associated & Cal vns in bk sh, & in patches & veins & minor (tr) Po. 51·0 veinlets of Po over 30mm	8% 50%
	54·4 calated unit of brown tuf, f.g. sandstone & minor br siltstone.					
	55·3 200 mm zone of gy m.g. tuf sandstone & varying sized fragments of bk shale (breccia) mixed.				small veinlets of Sp associated & Cal vns.	1%
		58·0 70 mm St/cal vn at 65° 58·4 65 mm St/Cal vn at 72°			58·4 Py 5% & Sp 5% in vn	10%
	58·9 120 mm bed? of br, m.g. tuf ss.			58·9 B at 45° (bk sh/tuf ss)		
60·0						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 19

LOGGED BY J.D.C. FROM 45 TO 60m DATE 11/12/80 PAGE 5 OF 26

9160026

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	60.0	1.0	1.0	100%
	61.0	1.0	1.0	100%
	62.0	2.0	2.0	100%
	64.0	3.0	3.0	100%
	67.0	3.0	3.0	100%
	70.0	3.0	3.0	100%
	73.0	3.0	3.0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
60.0	tuffaceous sandstone, siltstone, shale grey + dk gy siltstone, interbedded + (mino) intercalated minor carbonaceous black shale, intc ć gy + minor brown, fine to medium grained tuf. sandstone	moderate calcite veining throughout.		minor to moderate deformation. minor contortion in ss/sh common microfaulting 61·8 B at 23° (ss/bk sh) 63·1 B at 40° (tuf sa/bk sh) 64·3 B at 28° (ss/bk sh) 66·0 B at 30° (ss) 67·2 B at 28° (ss/bk sh)	minor Py patches + veins	1%
68·0	2·4 metres of gy, f to m·g tuf sa ć only rare ss. intercalations.	68·1 40 mm Cal vn at 75°		contact between bk sh + tuf sa is 55° bottom contact at 17° 71·3 B at 31° (ss) 72·8 B at 54° (ss) 73·6 B at 40° (bk sh/tuf sa)	68·1 tr Sp in Cal vns	tr
74·4				contact at 59°		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 60 TO 75 m DATE 13/12/80 PAGE 6 OF 26

A13026

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						tuffaceous sandstone + siltstone. intercalated ± interbedded (minor) dark grey, fine to medium grained tuffaceous sandstone & dk gy siltstone	minor calcite veining. usually clustered around deformed areas.		minor to moderate deformation minor contortion common microfaulting. 77·2 B at 49° (ss/tuf sa) 77·9 270 mm Cal vn @ 48° 78·8 B at 20° (ss/tuf sa) 79·3 B at 39° (ss/tuf sa)	trace Py associated & calcite vns.	tr
76·0	3·0	3·0	100%								
79·0	3·0	3·0	100%		80·3	Same? unit as above except tuf. sa + ss are green (slightly altered)			80·9 B at 29° (ss) 81·8 B at 26° (ss/tuf sa)		
82·0	3·0	3·0	100%			83·1 300 mm of dk gy ss & bracciated? fragments associated & cbte veins.	83·2 Cal/St/qz vns. 60 mm at 54°		83·0 B at 8° (ss) 84·7 B at 22° (tuf sa/ss)		
85·0	3·0	3·0	100%		84·9	same unit again reverted back to dk gy tuf sa ± ss.			86·2 B at 52° (tuf sa) 86·7 70 mm Cal vn at 66°		
88·0	3·0	3·0	100%						87·8 B at 43° (tuf sa) 89·7 B at 56° (ss)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C FROM 75 TO 90 m DATE 13/12/80 PAGE 7 OF 26

92037

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	91.0	3.0	3.0	100%
	94.0	1.2	1.2	100%
	95.2	1.8	1.8	100%
	97.0	3.0	3.0	100%
	100.0	3.0	3.0	100%
	103.0	3.0	3.0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	predominantly green, grey, dark gy + brown siltstone, intercalated + interbedded with gy, dk gy + gr fine to medium grained tuffaceous sandstone + minor carbonaceous black shale.	minor veining consisting of calcite/quartz/Cal + qz/qz + cbte in vns up to 10 mm thick.		moderate deformation common microfaulting minor to moderate contortion in isolated places 91.5 B at 60° (tuf ss)	minor Py 1%, Pb 2% and towards base of unit: Sp 1%.	4%
		92.8 100 mm qz/Ankerite/Cal vn at 48°		93.2 B at 63° (ss)	92.8 vn contains Pb 18%, Py + AsPy 6% + Cp tr	30%
93.4	dk gy unit			94.6 B at 63° (ss)		
				96.8 B at 46° (ss)		
97.3	gr. unit ć minor gy.			98.9 B at 54° (tuf sa/ss)		
		100.0 60 mm qz/cal/St vn at 49°		100.7 B at 52° (bk sh/ss).		
	101.5 700 mm of carb. bk. sh.	101.1 200 mm qz/St/Cal vn at 62°			101.1 Pb 3% + Sp 1% in vn	4%
		102.2 100 mm q.v. at 55°			102.2 Pb + Py 14% · Cp 2% in vn	30%
		102.7 700 mm qz/cbte vn top at 75°; base 52°		102.4 B at 35° (bk sh/ss) contorted. 103.6 B at 80° (bk sh/ss) cnt.	102.7 AsPy 4% + Sp + Gl 2% in vn	8%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 90 TO 105m DATE 13/12/80 PAGE 8 OF 26

920379

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated & interbedded gy, dark gy, brown & green-gy fine to medium grained tuffaceous sandstone & gy. dk gy, br & gr-gy siltstone, with rare carbonaceous black shale. predominantly dk gy unit down to 109.8m (equal amount of tuf. sa & ss)	minor Calcite veining, more common in dk gy unit than gy/gr-gy unit.		minor to moderate deform^{n} common microfaulting contortion common in dk gy unit 106.2 B at 42° (ss) contorted bedding. 107.8 B at 22° (ss/tuf sa)	minor mineralisation associated & qz/cbte veins & more rarely & Cal vns; Po & Py tr	tr.
106.0	3.0	3.0	100%								
109.0	3.0	3.0	100%				109.4 180mm qz/st/cal vn at 76°		109.8 B at 55° (ss)	109.4 Po 3%, As Py 2% & Py 1%	6%
					109.8	predominantly light gy. gr-gy & br unit (mainly tuf ss) with small calated units of dk gy unit.					
112.0	3.0	2.95	98.3%				112.5 qz/cal vn, 60mm at 70°		113.1 B at 63° (tuf sa/ss) 114.7 B at 30° (tuf sa/ss)	112.5 Po 3%, As Py 2%, Py 1% in vn	6%
115.0	0.6	0.6	100%								
115.6	2.4	2.4	100%						116.0 B at 32° (tuf sa/ss) 117.1 B at 63° (ss/tuf sa)		
118.0	1.5	1.5	100%						118.5 B at 26° (ss/tuf sa)		
119.5	1.5	1.5	100%						120.0 B at 44° (ss/tuf sa)		

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY I.D.C. FROM 105 TO 120m DATE 15/12/80 PAGE 9 OF 26

92033

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated & interbedded brown & grey, fine to medium grained tuffaceous sandstone with gy & dark gy siltstone.	moderate calcite veining.		moderate deformation common microfaulting moderate contortion.	barren	0
	121.0	1.0	1.0	100%					121.4 B at 4° (ss)		
	122.0	2.0	2.0	100%			122.2 15 mm cal vn at 42°		122.3 B at 58° (tuf sa)		
					123.3	black shale. predominantly carbonaceous black shale, intb & dk gy ss & intc & minor gy, f. to m.g. tuf sa & gy ss.	moderate calcite veining, generally only small veinlets & patches.		contact at 58° moderate to strong deformation - soft sediment strong contortion common microfaulting.	common Py 4% & Pb 3%, associated & Cal veining	7%
	124.0	3.0	3.0	100%					125.5 B at 63° (bk sh)		
									126.8 B at 57° (bk sh)		
	127.0	3.0	3.0	100%			127.2 200 mm qz/Cal vn at 52°			127.2 Pb & Py 8% & Cal in vn	16%
							128.4 30 mm cal/St vn at 58°			128.4 Py 7% & Pb 3% in vn	10%
									129.0 B at 50° (bk sh)		
	130.0	3.0	3.0	100%					130.3 B at 51° (bk sh)		
									131.4 B at 52° (bk sh)		
							132.2 270 mm Cal vn at 66°		132.4 B at 35° (bk sh)	132.2 Pb & Py 1% at vn margin	2%
	133.0	3.0	3.0	100%			133.1 100 mm Cal vn at 23°				
									134.6 B at 52° (bk sh)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 19

LOGGED BY J.D.C. FROM 120 TO 135m DATE 15/12/80 PAGE 10 OF 26

92038

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						predominantly carbonaceous black shale with dark grey siltstone interbedded + intercalated + gy fine to medium grained tuffaceous sandstone (minor).	strong calcite veining throughout (in small veinlets).		strong "soft sediment" deformation. common microfaulting. strong contortion	common Py 5%, Po 3% associated & Cal vns, as well as disseminated	8%
	136.0	0.5	0.5	100%	136						
	136.5	2.5	2.5	100%	137		137.2 150 mm qz/cal/cbte vn at 47°			137.2 Py+Po 3% in vn	6%
							137.6 60 mm Cal/St vn at 72°			137.6 Py+Po 2%, Sp 1% in vn	5%
					138				138.0 B at 62° (bk sh)		
	139.0	3.0	2.97	99.0%	139						
					140				140.1 B at 44° (bk sh)		
					141						
									141.8 B at 46° (bk sh)		
	142.0	3.0	3.0	100%	142						
					143				143.1 B at 53° (bk sh)		
					144						
									144.9 B at 49° (bk sh)		
	145.0	3.0	2.99	99.7%	145		minor cbte veining.			145.0 cbte veining contains Gl + Sp 5% of veins.	10%
					146		145.5 30 mm Cal/St vn at 43°		146.1 B at 39° (bk sh)		
					147				147.2 B at 54° (bk sh)		
	148.0	3.0	3.0	100%	148						
					149				149.3 B at 29° (bk sh)		
					150						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 136 TO 150 m DATE 16/12/80 PAGE 11 OF 26

92038

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	151·0	1·5	1·5	100%
	152·5	1·5	1·5	100%
	154·0	3·0	3·0	100%
	157·0	3·0	3·0	100%
	160·0	3·0	3·0	100%
	163·0	3·0	3·0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	carbonaceous (graphitic in places) black shale interbedded with minor dark grey siltstone & intercalated & minor gy. fine to medium grained tuffaceous sandstone.	strong calcite veining		strong deformation strong contortion.	common Py. Pb associated & calcite veining (slight decrease down hole).	
151·9	band of massive gy. f. tuf sandstone.			151·5 B at 48° (bk.sh)		
152·8				contorted bedding		
				154·2 B at 55° (bk sh)		
				156·4 bd subparallel to core axis.		
				158·4 B at 61° (bk sh/ss) cyclic bedding		
				159·3 B at 42° (bk sh)		
		159·6 30 mm "dirty" cbte vn at 62°			159·6 Py & AsPy 2% in vn	4%
				160·5 B at 48° (bk sh)		
				161·3 B at 32° (bk sh)	minor sp in cbte vns	1%
		161·6 qz/St/Ankerite (minor cal) vns. 60% over 150 mm & cockscomb texture. top at 32°, bottom at 8°			161·6 AsPy, Py & Gl 2% & Sp 1% in veins.	7%
		163·0 qz/cbte vn ("dirty cbte & St) 210 mm at 68°		162·9 B at 59° (bk sh)	163·0 Gl 7% & Sp 5% in vn	12%
				164·3 B at 59° (bk sh/ss)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19.

LOGGED BY JDC. FROM 150 TO 165 m DATE 17/12/80. PAGE 12 OF 26.

92038

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						carbonaceous black shale interbedded with minor dark grey siltstone with minor gy medium tuffaceous sandstone calations.	165.4 dbbz vn & "dirty" dbbz + minor qz, 30 mm at 77° moderate calcite veining 167.1 "dirty" dbbz/qz vns. 600 mm at 68°		moderate to strong contortion. 166.5 B at 72° (bk sh) 167.9 B at 63° (bk sh) 168.9 B at 48° (bk sh)	165.4 Sp + Gl 6%, AsPy 3% in vn dis Py 167.1 Gl 20%, Sp 15%, AsPy 2%, Py 1% in vns	15% 2% 35%
169.0	3.0	3.0	100%		169.4	tuffaceous sandstone, siltstone, intercalated + intb gy + minor brown fine to m.g. tuf. sandstone & dk gy + gy siltstone with minor carb. bk shale.	moderate to high calcite veining (mainly at top) 170.9 small q.v. 175.0 5 mm Cal vn at 54°		moderate contortion common microfaulting 170.8 B at 64° (ss) 171.6 B at 43° (ss) 172.8 B at 22° (ss/tuf sa) 174.3 B at 61° (ss/tuf sa) 176.5 B at 47° (tuf sa/ss) 177.9 B at 48° (ss/tuf sa) 178.8 B at 48° (ss/tuf sa)	v. minor Py + Po associated & Cal vns 170.9 AsPy 10%, Sp 5%, Gl 2% in vn	tr 17%
172.0	3.0	3.0	100%								
175.0	3.0	3.0	100%								
178.0	3.0	3.0	100%								

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 165 TO 180m DATE 18/12/80 PAGE 13 OF 26

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					180.6	**black shale** carbonaceous bk shale, interbedded ± intercalated gy siltstone ± gy tuffaceous sandstone.	moderate to high calcite, veining.		moderate deformation 182.5 B at 23° (bk sh) 183.8 B at 52° (bk sh) 184.5 B at 33° (bk sh)	dis Py → Pj associated & Cal veining (minor)	4%
181.0	3.0	3.0	100%								
184.0	3.0	3.0	100%		185.5 T9505 (PS)	**acid tuff?** intb & carb shale, gy, bk very fine grained mass, with common medium sized (embayed) subangular to subrounded qz phenocrysts ± fragments. minor brown fg. tuf sandstone also present.	moderate to high calcite veining & minor (± generally larger) qz vns.		bd planes not evident in tuff, but in carb sh indicate moderate contortion. 187.5 B at 14° (tu/sh) 189.3 7mm wide qv. containing breccia (from wall rock) – fault?	minor dis Py in tuff ± shale	1%
187.0	3.0	3.0	100%								
190.0	3.0	3.0	100%		191.0	30 mm altered margin. finer seds - pale gy & silt; foliation; veins here; green alteration colour	10 mm Cal vn at 35° – 191.2 & tremolite/actinolite		contact at 35°		
					191.3	**microgabbro** fine to medium grained, gy-gr gabbro.	minor Cal veining appears to be "disseminated" Cal throughout gabbro to 196 m.			barren	0
193.0	3.0	3.0	100%								

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 19

LOGGED BY JDC FROM 180 TO 195 m DATE 18/12/80 PAGE 14 OF 26

920385

014

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						green-grey micro-gabbro becomes progressively finer grained down-hole.	minor calcite veining				
	196·0	3·0	3·0	100%							
							rosettes of actinolite/ tremolite common in last 0.5m				
	199·0	0	3·0	100%	199·2	altered sediments fine tuf sandstone along chilled margin.	two calcite /siderite vns, approx 10 mm at 54°		contact shown by tt' vn at 20°	cbte vns contain Sp 15%. Py 5%.	20%
					200·0	tuffaceous sandstone, shale ⇒ acid tuff. intercalated fine to medium grained, brown to grey tuf. sandstone; light gy acid tuff (finer ⇒ more siliceous than previous tu) ⇒ carbonaceous black shale often interbedded & tuf sa. bk sh often calcareous.	high to moderate Cal ⇒ qz veining, especially bk sh.		minor to moderate contortion of tuf sa ⇒ a tu. V. strong contortion of bk sh	Sp 3% associated & Cal veining. minor Pb/Py 0·5%	3·5%
	202·0	3·0	3·0	100%		sediment between veins is slightly bleached & a green-gy colour.	202·2 qz/cbte vns (some up to 25 mm)		201·9 B at 45° (tuf sa)	202·2 Py 6%, Po 1%, Cp 2% in all vns. AsPy 2% in bottom vn.	14%
						bed between vns is slightly bleached & a gr-gy colour.	203·8 40 mm Cal/St vn at 35°		203·2 B at 53° (bk sh)	203·5 AsPy 10% (margin) + Py 4% (in centre) of vn.	14%
							203·9 qz/cbte vns predominantly qz incorporated into bedrock vns 450 mm at 41°.		204·8 B at 73° (bk sh b/w tu)	203·9 Po 4%, Cp + AsPy 1%, Gl/Sp 1% in vns.	7%
	208·0	3·0	3·0	100%					206·0 B at 42° (bk sh)		
									206·7 B at 36° (bk sh)		
									bd highly contorted		
	208·0	3·0	3·0	100%					209·6 B at 53° (bk sh/tu)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 19

LOGGED BY J.D.C. FROM 195 TO 210 DATE 13/1/81 PAGE 15 OF 26

920386

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						contorted. interbedded carbonaceous shale + minor gray siltstone + brown fine grained tuffaceous sandstone.	highly veined by calcite along bedding plane. 211.0 45 mm cbte vn at bc		beds highly contorted.	sp commonly associated & cal veining	2%
										211.0 GI 30% + Sp 30% in vn	60%
	211.0	3.0	3.0	100%	211.4	tuffaceous sandstone, cnt, f to medium grained, buff-gray, light gy, light green-gy, tuf sandstone, intc & rare bk carb shale (except as shown)	moderate calcite veining throughout, predominantly along bd. planes.		definite bd gives way to "soft sed brecciation" around 214 m strongly deformed. beds generally small to v. small - ie laminations (<3 mm) 212.8 B at 47° (tuf sa) 213.9 B at 53° (tuf sa) 215.3 B at 40° (tuf sa)	v. minor Sp, Gl, Po, Py + AsPy associated & the few crosscutting Cal vns	1%
	214.0	3.0	3.0	100%	215.7	1.4 m of bk carb shale, intb + intc & gy siltstone + units of tuf sa.	high calcite veining		216.5 B at 49° (tuf sa/bk sh)		
	217.0	3.0	3.0	100%	217.1				217.3 B at 49° (tuf sa) 218.1 B at 52° (tuf sa) 218.9 B at 45° (tuf sa)		
	220.0	3.0	3.0	100%	221.0	talc carbonate predominantly milky white, opaque gy. + gr cbtes. Lighter sections usually have bk blebs + streaks (mostly Sp, some Magnetite + Chromite). Darkers units have wh. cbte mottling. Minor talc is present. At section top, sediment fragments within cbte are strongly altered: to gr-br + soft (not as soft as cbte).	minor to moderate white cbte + St vns.		220.0 B at 53° (tuf sa) contact at 72°? minor to moderate foliation. 222.7 fol at 70° 224.4 fol at 47°	minor Sp blebs + streaks	1%
	223.0	3.0	3.0	100%							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 210 TO 225m DATE 13/1/81 PAGE 16 OF 26

015

92038

016

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						talc carbonate, predominantly lighter units: milky white, blue-grey & opaque green & gy units. Minor sections of talc. Common to v. common black blebs & streaks.	minor to moderate milky wh cbte & minor St veining		moderate to strong foliation.	minor blebs of Sp, Mt or Cr throughout.	1%
	226.0	3.0	3.0	100%	226						
					227	-227.6 a few sections of talc (0.2 & 0.4 m)			226.6 fol at 66°		
					228				227.9 fol? at 62° (talc/cbte)		
									228.9 fol at 68°		
	229.0	3.0	3.0	100%	229						
					230				230.7 fol at 64°		
					231	v. common blk streaking (not Sp, Cr or Mt, cbte stained & this).	231.0 unit becomes highly veined				
	232.0	3.0	3.0	100%	232				232.1 fol at 65° - often cut by vns & streaks at 20° & similar shallow angles.	-232.4 1mm Gl vn crosscuts St vns & follows vn plane at 10°	45%
					232.3	dolomite?	232.3 veining is mainly St, mixed & minor talc				
					233	these two units could possibly represent earlier stages in formation of "dirty" gr cbte described in previous holes, top unit would have to be very early; bottom one more recent.			233.0 vn at 30°	-233.1 minor patchy Pb (Py?) & St 60 mm	15%
					T9506		233.25				
					234				234.2 vn at 28°		
							234.3 "dirty" gr cbte unit, showing relict? veining/foliation, base margin marked & St to 10°			-234.4 40 mm vn at 42° & Gl & Sp each 5%.	30%
	235.0	3.0	3.0	100%	235		235.0			-235.0 dis Py in "dirty" cbte	5%
					236				235.8 vn at 42°		
						-236.5 increasing amount of opaque brown cbte, decreasing amount of milky wh. cbte.	-236.7 30 mm St/q v. mixed & talc, top at 40°, base at 30°			-236.7 Py 7%, Pb 2% & Cs 1% in vn	10%
					237						
	238.0	3.0	3.0	100%	238				238.9 fol at 48°		
					239				239.7 fol at 52°		
					240						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY I.D.C. FROM 225 TO 240m DATE 14/1/81 PAGE 11 OF 26

920388

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	241·0	3·0	3·0	100%
	244·0	3·0	3·0	100%
	247·0	1·8	1·8	100%
	248·8	1·2	1·2	100%
	250·0	3·0	3·0	100%
	253·0	3·0	3·0	100%

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	talc carbonate - mainly opaque green & grey cbtes	moderate to high milky wh. veining (cbte)		moderate to strong foliation.	minor blebs of Sp, Cr or Mt	1%
242·5	quartz-pyrrhotite veins Zone of q.v with minor siderite & massive Po; possibly contains relict talc cbte foliation & veining texture. minor fragments of talc cbte still remain.	minor (later phase?) qz & St veining.		contact indistinct, at 20° probably shallow to core axis constant dip at top & base not evident in centre. 243·8 vn at 30° 247·7 veining varies between 46° & 52°	main mineralisation is Po 33%, minor Py 8%. As/Py 1%, Cp tr, Sp/Gl tr, mineralisation is massive to patchy	39%
249·3	talc carbonate. minor talc cbte - opaque gr & milky white cbtes. mostly qz & St veining incorporating the talc cbte with strong relict structures. decreasing amount of talc cbte downhole, & increasing qz. -252·9 "dirty" gr. cbte at bottom of unit.	single phase of veining?		contact at 54°? 20 mm of St/qz/Po & appearance of talc cbte, gradual contact 249·8 fol at 62° exhibits foliation & veining planes to 252·0 m. 252·4 vn at 52°	minor Po. 250·0 Po is v. common & patchy texture. vns contain Po 22%, Py, Gl & Sp all 1%	25%
253·2	hornfelsed? tuffaceous sandstone. fine to coarse grained brown & gr, hard hornfelsed tuf sandstone.	common qz & cal vns. v. common actinolite/tremolite vns. -254·4 100 mm qv at 66°		contact distinct at 57°, marked by qv. slight to strong deformation.	Po & Py 1% associated & qz/cal vns	2%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C FROM 240 TO 255m DATE 14/1/81 PAGE 18 OF 26

CONFIDENTIAL
COMSTAFF
RBE 19
6203 69

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					256	altered tuffaceous sandstone:- chocolate brown, grey & green intercalated and interbedded units of fine to coarse grained hornfelsed? tuffaceous sandstone.	minor to common qz+Cal veining. 256.0 250mm vn tremolite? at 57° moderate actinolite/tremolite vns. alteration of br to gr units occurs around some Cal vns. minor St in some places		slight to strong deformation massive units.	common mineralisation associated & vns of qz, 256.0 Pb 20%, Py 20% in vn tt, Cal + minor St: Pb 2%, Py 1%, Gl + Sp tr.	40% 3%
256.0	3.0	3.0	100%		257				257.6 vn along bd plane? at 61°		
					258						
259.0	3.0	3.0	100%		259						
					260						
					261						
262.0	3.0	3.0	100%		262				262.0 B? at 76° (f to c) vn along bd plane?		
					263						
					264						
265.0	3.0	3.0	100%		265	most of vns mixed & sat	264.3 numerous veinlets of qz + cal to 264.78m 264.75 250mm qv 60° top, 85° bottom. 265.1 150mm qvs at 85° 265.6 500mm qv 75° top, 85° bottom			264.3 Pb 4%, Py 2% in veinlets 264.75 vn & mas Pb centre 265.1 Pb in qvs 265.6 vn contains Pb+Py 0.5% in small streaks + crosscutting vns	6% 50% 5% 1%
					266						
					267						
268.0	3.0	3.0	100%		268						
					269						
					270						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY S.D.C. FROM 255 TO 270m DATE 17/1/81 PAGE 19 OF 26

9203390

DRILL ADVANCE

LITHOLOGY

5 cm

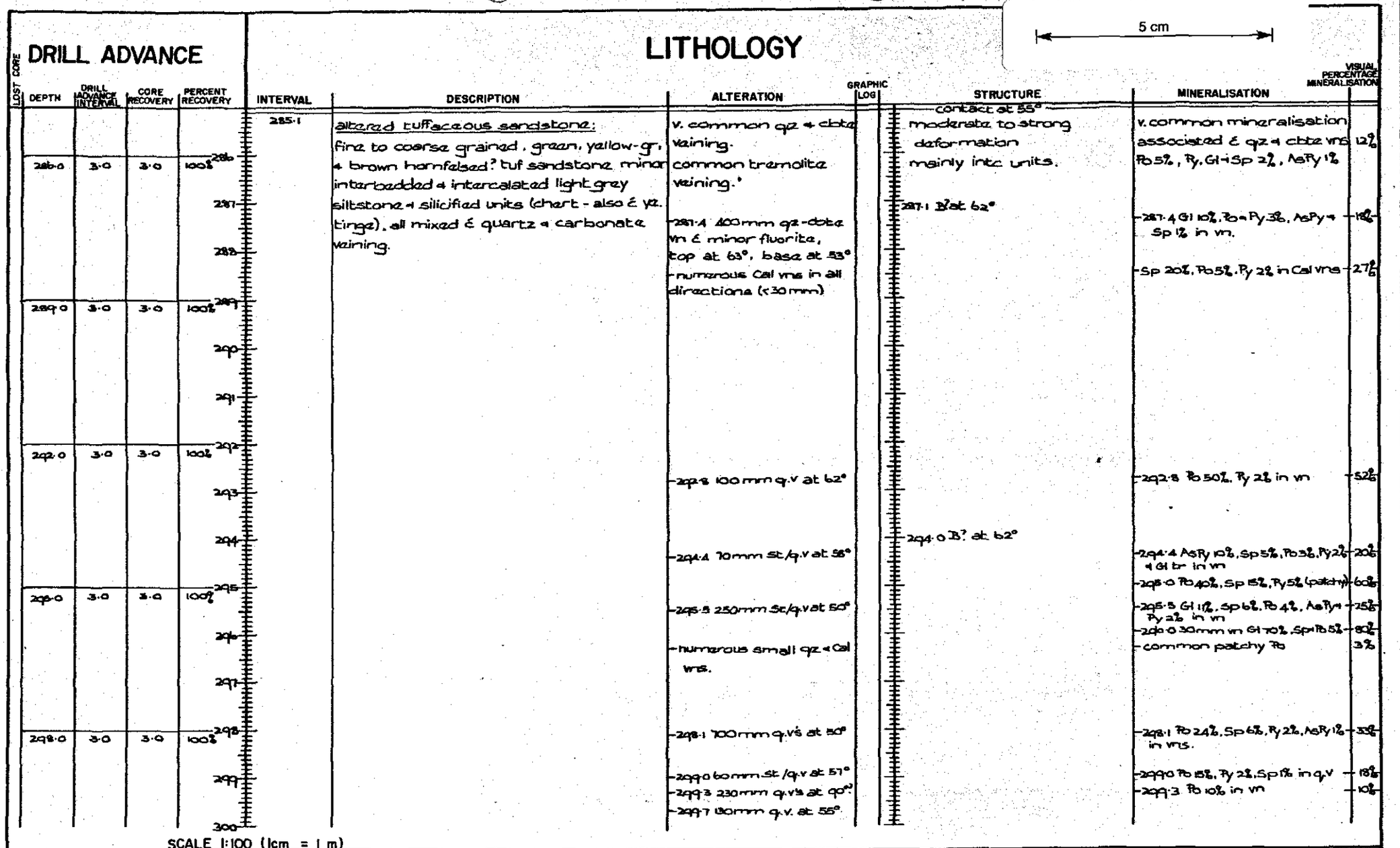
LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered tuffaceous sandstone:- fine to coarse grained (predominantly medium grained) brown, grey & green hornfelsed? tuf sandstone. minor interbedded light gy siltstones and silicified units (chert?).	moderate qz & Cal veining very common actinolite/tremolite veining.		deformation slight to moderate	minor mineralisation associated & qz, dolo & tremolite? vns: Pb 2%, Py 1%, Sp tr	3%
271·0	2·2	2·2	100%	271					271·3 B at 62° (f to c)		
				272							
				273			273·1 70 mm qv & minor mixed seds: top at 45°, bottom 49°				
273·2	0·8	0·8	100%						273·8 B at 64° (c to f)		
274·0	3·0	3·0	100%	274					274·0 B at 63° (f to c)		
				275							
				276					276·8 B at 62° (f gy ss)		
									276·7 B at 62° (gy ch?)		
277·0	3·0	3·0	100%	277					278·1 B at 60° (ss/f tuf sa)		
				278							
				279			278·8 70 mm tt? vn at 64°			278·8 Pb 7% Py 4% in vn	15%
							279·3 70 mm Cal vn & minor cockscomb texture over 400 mm of Cal & sed.	45°		279·3 Sp & Pb 1%, Py tr in vn	2%
280·0	3·0	3·0	100%	280	280·0	gabbro gr, yellow-gr & minor br micro-gabbro, becoming coarser downhole	moderate qz & Cal veining v. common actinolite/tt veining.		contact indistinct (around 60°?) & small hybrid zone. most veins have a fairly constant dip around 60°.	minor Pb, Py mineralisation associated & vns	1%
				281			281·9 15 mm pinkish-br dolo vn & minor Cal at 63°.				
				282							
283·0	3·0	3·0	100%	283							
				284							
				285							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C FROM 270 TO 285 m DATE 17/1/81 PAGE 20 OF 24

92033



LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	286·0	3·0	3·0	100%
	289·0	3·0	3·0	100%
	292·0	3·0	3·0	100%
	295·0	3·0	3·0	100%
	298·0	3·0	3·0	100%

INTERVAL: 285·1

DESCRIPTION

altered tuffaceous sandstone:
fine to coarse grained, green, yellow-gr, & brown hornfelsed? tuf sandstone minor interbedded & intercalated light grey siltstone & silicified units (chert - also & yz. tinge), all mixed & quartz & carbonate veining.

ALTERATION

v. common qz & cbte veining.
common tremolite veining.

- 291·4 400mm qz-cbte vn & minor fluorite, top at 63°, base at 53°
- numerous Cal vns in all directions (<30mm)
- 292·8 100mm q.v at 62°
- 294·4 70mm st/q.v at 58°
- 295·5 250mm st/q.v at 50°
- numerous small qz & Cal vns.
- 298·1 700mm q.v's at 50°
- 299·0 60mm st/q.v at 57°
- 299·3 230mm q.v's at 90°?
- 299·7 130mm q.v. at 55°

STRUCTURE

contact at 55°
moderate to strong deformation mainly intc units.

- 287·1 B? at 62°
- 294·0 B? at 62°

MINERALISATION

v. common mineralisation associated & qz & cbte vns 12%
Po 5%, Py, Gl + Sp 2%, AsPy 1%

- 287·4 Gl 10%, Po + Py 3%, AsPy + Sp 1% in vn. — 16%
- Sp 20%, Po 5%, Py 2% in Cal vns — 27%
- 292·8 Po 50%, Py 2% in vn — 52%
- 294·4 AsPy 10%, Sp 5%, Po 3%, Py 2% + Gl br in vn — 20%
- 295·0 Po 40%, Sp 15%, Py 5% (patchy) — 60%
- 295·5 Gl 11%, Sp 6%, Po 4%, AsPy + Py 2% in vn — 25%
- 296·0 30mm vn Gl 70%, Sp Po 5% — 80%
- common patchy Po — 3%
- 298·1 Po 24%, Sp 6%, Py 2%, AsPy 1% in vns. — 35%
- 299·0 Po 15%, Py 2%, Sp 1% in q.v — 18%
- 299·3 Po 10% in vn — 10%

VISUAL PERCENTAGE MINERALISATION

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 19

LOGGED BY J.D.C FROM 285 TO 300 m DATE 17/1/81 PAGE 21 OF 26

020

920392

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered tuffaceous sandstone - fine to coarse grained, green, grey + brown hornfelsed? tuf. sandstone, minor interbedded and intercalated light gy siltstone. (silicified)	predominantly quartz vns & minor sediment to 301 m. From 301 m: minor qz veining. minor to moderate actinolite/tremolite veining		minor to moderate deformation	minor Py vns + patches associated & tremolite vns.	2%
	301·0	3·0	3·0	100%	301				302·7 B at 62° (c to f)		
	304·0	3·0	3·0	100%	304		305·9 9.5mm q.v's at 46°				
	307·0	3·0	3·0	100%	307				307·5 vnlets along bd plane? B at 35° (f gy tuf sa)		
									308·4 vnlets along bd plane? B at 37° (f tuf sa)		
	310·0	3·0	3·0	100%	310				310·2 B at 57° (f to c)		
									311·6 B at 67° (c to f).		
	313·0	0·4	0·3	75·0%	313		313·0 St vn				
	313·4	1·6	1·55	96·8%	314						
	315·0				315	314·9 bleached (white, crumbly) tuf sa.					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 300 TO 315m DATE 17/1/91 PAGE 22 OF 26

021

92033

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					316	altered tuffaceous sandstone - fine to coarse grained grey, green & mainly brown hornfelsed tuf sandstone.	very common quartz & calcite veining common actinolite/ tremolite veining.		slight deformation mostly intc units.	minor mineralisation associated c qz & cal veining : Py 2% & Sp 2%	4%
	316·0	3·0	3·0	100%	317						
					318						
	319·0	3·0	3·0	100%	319				319·3 veining on bd planes? B at 63°?	319·4 q.v c AsPy 5%, below this vn c Po 8%, Py 7%	5% 15%
					320						
					321						
	322·0	3·0	3·0	100%	322						
					323						
					324				323·9 veining along bd plane? B at 62°?		
	325·0	0·3	0·3	100%	325	325·0 300mm of darker, harder, finer grained unit - hornfelsed shale?				325·1 veinlets carry Sp down to 326 m	
	325·3	2·7	2·7	100%			325·6 120 mm qz/St vn at 60°				
					326						
					327				327·0 B? at 61°		
	328·0	3·0	3·0	100%	328						
					329					329·3 veinlets contain Sp	
					330						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 315 TO 330m DATE 17/1/81 PAGE 23 OF 26

920394

023

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					331	altered tuffaceous sandstone - fine to coarse grained, green grey & mainly brown hornfelsed tuf sandstone.	moderate actinolite / tremolite & quartz veining. minor Cal veining.		slight deformation mainly intercalated units.	minor mineralisation associated & q.v's: Pb & Py 0.5%	1%
331.0	3.0	3.0	100%		332		332.0 80 mm qz/St vning at 73°				
					333						
334.0	0.9	0.9	100%		334						
334.9	2.1	2.1	100%		335						
					336						
337.0	3.0	3.0	100%		337						
					338		338.0 numerous small q.v's, (<30mm)		338.1 veining along bd plane. B at 57°?		
					339						
					340				339.9 B at 56°		
340.0	3.0	3.0	100%		341				340.8 B at 61°		
					342		342.3 130 mm qv mixed c sed.				
343.0	3.0	3.0	100%		343		numerous small q.v's		343.6 B at 62°		
					344						
					345						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 330 TO 345m DATE 17/1/91 PAGE 24 OF 26

920305

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					346	altered tuffaceous sandstone: fine to coarse grained, green, grey = mainly brown, hornfelsed tuf sandstone. Only minor amounts of f.g. units.	minor to moderate quartz veining. minor cbte veining. moderate actinolite/ tremolite veining.		348·5 B at 61° (f.br tuf sa) slight to moderate deformation mostly intercalated units.	minor mineralisation associated ε vns: Sp. Po = Py 0·5%	1·5%
346·0	1·2	1·2	100%		347						
347·2	1·8	1·9	100%		348						
					349						
349·0	3·0	3·0	100%		350						
					351						
					352						
352·0	3·0	3·0	100%		353						
					354						
					355		354·8 30mm qz/St vn at 72°		354·7 B at 60° (f.br tuf/f.gy tuf)	354·8 vn contains Sp	5%
355·0	3·0	3·0	100%		356		355·7 40mm qz/St vn at 75°			355·7 vn contains Sp	4%
					357						
					358		357·5 40mm qz/St vn at 78°		357·4 B at 58° (c.br tuf/f.br tuf)	357·5 vn contains Sp	5%
358·0	3·0	3·0	100%		359		numerous St vns + qz mixed in seds down to 359·9m		358·7 B at 62° (f. br tuf sa)		
					360						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 346 TO 360m DATE 17/1/81 PAGE 25 OF 26

024

920396

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					361	altered tuffaceous sandstone - fine to coarse grained (mainly coarse) brown with minor green & grey hornfelsed tuf sandstone.	minor veining of quartz & tremolite		slight deformation	minor Po & Py associated with vns	1%
	361·0	3·0	3·0	100%							
					362						
					363				363·4 B at 80°? (f br tuf)		
					364						
	364·0	1·0	1·0	100%							
					365	End of Hole: RBE 19 at 365·0 m					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 19

LOGGED BY J.D.C. FROM 360 TO 365m DATE 17/1/81 PAGE 2b OF 2b

92039

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
Start of core recovery.																
15·0	10	85	BLD	35	230	BLD	16	130								
16·0	4	115	BLD	35	225	0·5	1	110								
17·0	7	145	BLD	80	140	0·5	17	120								
18·4	4	95	BLD	20	120	BLD	28	85								
19·0	5	115	BLD	15	240	BLD	130	150								
22·0	6	95	BLD	30	195	BLD	40	225								
23·0	5	105	BLD	5	310	0·5	37	145								
24·5	5	50	BLD	5	715	BLD	21	135								
25·0	7	130	40	5	515	BLD	20	130								
25·4	8	80	BLD	10	230	0·5	44	120								
26·7	10	60	BLD	10	620	BLD	37	105								
27·5	7	65	BLD	10	140	0·5	5	85								
28·0	4	55	BLD	15	190	0·5	7	90								
28·2	9	70	BLD	10	125	BLD	28	85								
29·0	10	80	BLD	40	155	BLD	15	105								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 15 TO 30 m DATE 12-14/1/81 PAGE 1 OF 24

026
926033

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
30·3	BLD	80	BLD	20	220	BLD	9	115								
31·0	5	35	BLD	15	125	BLD	22	120								
32·1	BLD	25	BLD	20	130	BLD	20	120								
33·4	4	95	BLD	15	175	BLD	18	120								
35·5	BLD	90	BLD	20	165	0·5	7	130								
37·0	4	70	BLD	20	145	BLD	11	125								
40·0	BLD	90	BLD	10	145	0·5	15	125								
42·3	BLD	80	BLD	20	145	0·5	27	130								
43·0	4	90	BLD	10	160	0·5	24	130								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 30 TO 450 DATE 12-14/1/81 PAGE 2 OF 24

021

9203039

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
46·0	10	55	BLD	20	165	BLD	38	125								
49·0	BLD	145	BLD	65	275	BLD	7	100								
52·0	9	105	BLD	240	850	0·5	11	85								
55·0	10	85	BLD	325	1900	0·5	14	80								
58·0	40	105	30	1050	1·7%	3·0	1900	70								
60·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 45 TO 60 m DATE 12-14/1/81 PAGE 3 OF 24

028

920400

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
60·0	3	90	10	45	1200	0·5	32	85								
62·0	4	100	10	25	295	BLD	23	95								
64·0	5	95	10	45	235	BLD	17	90								
67·0	9	90	BLD	310	1650	0·5	48	90								
70·0	BLD	90	BLD	30	185	BLD	13	80								
73·0	10	100	20	35	1050	0·5	48	110								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 60 TO 75m DATE 12-14/1/81 PAGE 4 OF 24

920402

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
75																
76																
76.0	BLD	55	BLD	20	230	BLD	19	100								
77																
78																
79																
79.0	6	70	10	15	165	BLD	8	115								
80																
81																
82																
82.0	10	75	BLD	520	500	0.5	59	120								
83																
84																
85																
85.0	BLD	25	BLD	10	140	0.5	10	100								
86																
87																
88																
88.0	30	55	BLD	215	740	0.5	65	100								
89																
90																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 75 TO 90 m DATE 12-14/1/81 PAGE 5 OF 24

030

920402

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
90																
91																
91·0	140	95	30	435	1450	1·0	2700	95								
94·0	15	55	10	20	135	BLD	53	85								
95·2	20	80	BLD	25	335	BLD	38	90								
97·0	140	40	30	105	315	BLD	70	95								
100·0	130	265	BLD	2250	3800	6·5	480	160								
103·0	65	95	BLD	1·26%	2000	40·5	4800	100								
105																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 90 TO 105 m DATE 12-14/1/81 PAGE 6 OF 24

031

920403

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
106·0	3	40	BLD	80	280	0·5	66	120								
109·0	50	75	BLD	250	1100	1·5	500	150								
112·0	30	125	BLD	110	355	0·5	38	125								
115·0	8	90	20	110	265	1·0	48	130								
115·6	35	40	20	250	2450	0·5	20	115								
118·0	5	50	10	20	225	BLD	17	110								
119·5																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 105 TO 120 m DATE 12/14/1/81 PAGE 7 OF 24

032

9204104

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	6	40	BLD	35	225	0·5	38	120								
121·0	6	60	BLD	25	175	BLD	28	110								
122·0	7	75	20	20	135	BLD	30	100								
124·0	9	130	BLD	25	85	BLD	8	90								
127·0	15	195	BLD	215	510	0·5	1600	100								
130·0	10	105	BLD	310	1550	0·5	50	85								
133·0	30	75	BLD	550	2500	1·0	34	75								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 120 TO 135m DATE 12-14/1/81 PAGE 8 OF 24

033

92041 05

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
136·0	5	85	BLD	100	290	0·5	31	80								
136·5	20	120	BLD	950	3150	2·5	320	105								
139·0	3	85	BLD	50	160	0·5	25	75								
142·0	BLD	70	15	65	115	0·5	25	70								
145·0	20	100	BLD	1400	4200	2·0	46	70								
148·0	8	95	15	280	630	1·0	22	70								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 135 TO 150 m DATE 12-14/1/81 PAGE 9 OF 24

034

920406

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
150																
151																
151·0	25	80	BLD	410	6100	0·5	31	55								
152																
152·0	4	65	BLD	25	130	BLD	31	90								
153																
154																
154·0	6	75	BLD	320	650	1·0	250	95								
155																
156																
157																
157·0	50	70	10	2150	4700	3·5	630	95								
158																
159																
160																
160·0	150	220	10	4000	1·5%	12·0	2200	70								
161																
162																
163																
163·0	60	150	20	1800	6100	6·0	1700	75								
164																
165																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 18

ASSAYED BY Analabs FROM 150 TO 165 m DATE 12-14/1/81 PAGE 10 OF 24

035

920407

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
165																
166																
166.0	180	500	10	3.5%	1.4%	114.0	1700	75								
167																
168																
169																
169.0	10	75	10	290	1000	1.0	630	105								
170																
171																
172																
172.0	4	65	10	210	660	0.5	59	120								
173																
174																
175																
175.0	BLD	40	BLD	75	770	BLD	31	100								
176																
177																
178																
178.0	7	40	BLD	20	150	0.6	40	115								
179																
180																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 165 TO 180 m DATE 12-14/1/81 PAGE 11 OF 24

920408

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
181·0	5	105	BLD	35	75	BLD	13	75								
184·0	4	80	20	40	230	0·5	21	60								
187·0	20	65	20	60	365	0·5	40	65								
190·0	10	35	20	40	325	BLD	66	130								
193·0	5	70	20	30	130	BLD	59	140								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 180 TO 195 m DATE 12-14/1/81 PAGE 12 OF 24

031

920409

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
196·0	20	30	BLD	25	125	BLD	72	130								
199·0	30	45	BLD	245	1100	0·5	46	90								
202·0	110	240	BLD	1200	4200	4·5	4300	85								
205·0	15	65	BLD	310	2200	0·5	270	135								
208·0	65	85	BLD	3400	1·55%	7·0	130	105								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 195 TO 210 m DATE 12-14/1/81 PAGE 13 OF 24

028
920410

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
210																
211																
211·0	25	130	10	320	2300	3·0	1300	90								
212																
213																
214																
214·0	15	30	10	220	730	1·0	540	150								
215																
216																
217																
217·0	50	35	BLD	150	450	1·0	160	170								
218																
219																
220															Ground Core ↑	
220·0	95	5	BLD	65	170	BLD	90	170							Split ↓	Tq468
220·5	50	30	BLD	230	220	0·5	70	125								Tq469
220·9	260	480	BLD	65	160	1·0	430	1200								Tq470
221																
221·5	15	5	BLD	55	100	0·5	130	1550								Tq471
222																
222·4	40	5	BLD	40	70	BLD	60	1050								Tq472
223																
223·4	10	BLD	BLD	80	150	BLD	50	1500								Tq473
224																
224·0	10	5	BLD	60	120	BLD	270	1250								Tq474
225																
225·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 210 TO 225m DATE 5-9/1/81 PAGE 14 OF 24

039

920411

040

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
225.0	10	5	BLD	285	650	BLD	220	1150							Split ↑	Tq475
226.0	10	5	BLD	50	165	0.5	160	650							Ground	Core ↓
229.0	5	5	BLD	15	65	0.5	28	850							Ground	Core ↑
232.0	15	15	BLD	2050	1400	8.0	120	1300							Split ↓	Tq476
232.4	620	280	BLD	21.3%	6700	210.0	550	1900								Tq477
232.65	40	35	BLD	2750	1300	9.0	550	1600								Tq478
233.25	BLD	BLD	BLD	235	90	1.5	90	1450								Tq479
233.75	3	5	BLD	190	90	1.0	100	1200								Tq480
234.25	110	170	BLD	2.5%	1.25%	29.0	550	1300								Tq481
235.0	6	40	BLD	640	720	1.0	290	1350								Tq482
235.25	4	5	BLD	85	90	BLD	180	1450								Tq483
235.75	BLD	5	BLD	20	50	BLD	43	1150								Tq484
236.25	BLD	5	BLD	20	30	BLD	170	1100								Tq485
236.75	2100	275	BLD	105	6750	3.0	480	1800								Tq486
237.05	20	15	BLD	35	400	BLD	170	1450								Tq487
237.5	30	5	BLD	15	40	0.5	36	1200								Tq488
238.6	45	5	BLD	20	40	BLD	66	1300								Tq489
239.6	45	5	BLD	15	35	0.5	38	1200								Tq490

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 225 TO 240m DATE 5-9/1/81 PAGE 15 OF 24

92041 2

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
240									
240.5	210	20	BLD	20	40	BLD	180	1100	Tq491
241.5	60	40	BLD	25	30	BLD	170	1000	Tq492
242.5	1100	3100	BLD	285	600	8.5	6000	1500	Tq493
243.25	130	4350	BLD	215	330	13.5	220	1700	Tq494
244.0	260	765	BLD	1050	2300	7.5	270	2350	Tq495
244.75	90	900	BLD	310	620	6.0	250	1550	Tq496
245.5	300	2000	BLD	445	690	14.0	1300	1500	Tq497
246.25	460	380	BLD	2800	1.5%	7.5	430	1000	Tq498
247.0	370	1050	BLD	2700	8700	16.5	5600	1450	Tq499
247.77	330	1050	BLD	1150	8500	11.0	620	1550	Tq500
248.5	650	1300	BLD	250	450	4.5	2900	2000	Tq501
249.3	10	140	BLD	160	485	1.0	1800	1450	Tq507
249.65	10	25	BLD	1950	3100	3.0	1200	1150	Tq508
250.0	55	130	BLD	1800	5800	6.5	2000	1700	Tq509
250.4	6	25	BLD	60	170	0.5	650	1200	Tq510
251.1	110	3000	BLD	475	1600	4.0	1500	1700	Tq511
251.4	10	90	TR	1050	2650	3.0	1800	1500	Tq512
251.7	1250	1350	BLD	1.35%	3.7%	35.0	1300	1950	Tq513
252.1	250	110	TR	1400	5050	5.5	1900	1050	Tq514
252.4	2400	165	TR	1500	7700	12.0	1200	1250	Tq515
252.75	510	450	4.0/BLD	1.75%	1.9%	57.5	3300	670	Tq516 W = 2 different methods of analysis
253.2	50	25	BLD	110	300	0.5	88	140	Tq517
253.6	110	10	BLD	60	260	0.5	84	100	Tq518
254.35	510	100	BLD	245	650	1.5	230	145	Tq519
255									

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 240 TO 255 m DATE 28/4/81 PAGE 16 OF 24

GA1

92043

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
255·05	80	15	BLD	55	860	0·5	86	115								T9520
255·4	75	10	BLD	80	280	0·5	200	135								T9521
255·75	130	3350	30	50	145	2·5	49	120						Split Ground	Core↑ Core↓	T9522
256·0	80	85	10	250	650	BLD	70	145								
259·0	180	45	10	95	285	1·0	90	140								
262·0	45	215	10	195	1150	1·0	1900	220								
265·0	45	175	30	75	285	0·5	1300	110								
268·0	200	85	20	140	695	0·5	260	169								

255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 255 TO 270m DATE 2-14/1/81 PAGE 17 OF 24

042

9204114

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
270																
271																
271·0	65	115	10	3100	710	2·0	140	135								
272																
273																
273·0	50	45	10	60	210	BLD	90	145								
274																
274·0	80	190	10	160	520	0·5	120	145								
275																
276																
277																
277·0	160	540	20	185	520	0·5	470	145								
278																
279																
280																
280·0	75	45	15	100	340	0·5	130	135								
281																
282																
283																
283·0	90	30	15	120	265	0·5	120	120								
284																
285																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 270 TO 285m DATE 12-14/1/81 PAGE 18 OF 24

043
920415

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
															Ground	Core ↑
286.0	110	165	BLD	660	2300	2.5	250	110							Split ↓	TQ523
286.75	80	590	BLD	615	1400	4.0	81	155								TQ524
287.1	170	155	30	835	4700	3.5	760	100								TQ525
287.35	230	270	BLD	6.0%	1.2%	160	6200	165								TD805
287.75	190	225	TR	3800	9000	11.5	4800	130								TQ526
288.15	90	70	20	905	2150	2.5	200	115								TQ527
288.65	280	360	4.0/BLD	2400	2.05%	10.5	100	95						W by 2 methods		TQ528
289.4	210	350	9.5/20	3800	1.5%	9.5	170	125						of analysis	Split ↑	TQ529
290.0 (from 289)	200	205	20	2000	1.35%	8.0	220	115							Ground	Core
292.0 (→295.0)	270	530	10	2900	1.35%	19.0	5200	110							Ground	Core
292.75	110	345	20	2150	4450	14.0	410	130							Split ↓	TQ530
293.5	70	450	BLD	240	440	1.0	89	250								TQ531
294.25	330	300	TR	3400	8500	12.0	6100	135								TQ532
294.95	670	2100	3.0/BLD	2.85%	3.8%	68.0	650	220								TD806
295.2	400	1550	9.5/BLD	7450	2.25%	36.5	510	400						Was above		TD807
295.5	380	515	2.0/BLD	10.0%	2.35%	150	5000	115								TD808
296.05	190	800	BLD	2450	6200	11.0	800	150								TD809
296.4	70	5	BLD	55	220	BLD	260	120								TQ533
297.0	140	295	BLD	2550	5500	5.5	150	120								TQ534
297.75	290	2760	BLD	6250	1.75%	25.0	190	125								TQ535
298.0	680	1050	BLD	4350	3.85%	16.0	3500	200								TQ536
298.35	500	60	BLD	665	2400	2.0	2900	175								TQ537
298.75	110	1050	BLD	375	550	4.5	80	190								TQ538
299.0	85	1000	BLD	365	2100	4.5	88	140								TQ539
299.45	100	50	BLD	160	410	1.0	86	140								TQ540
299.95																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 285 TO 300 m DATE 28/4/81 PAGE 19 OF 24

92074S

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	80	35	BLD	100	520	0·5	81	165							Split ↑	19541
300·45 (from 299·8)	60	80	30	350	520	1·0	360	100							Ground	Core ↓
301·0	40	350	15	150	315	0·5	210	165								
304·0	30	265	20	110	195	0·5	36	145								
307·0	15	140	15	290	2000	0·5	47	100								
310·0	60	40	BLD	120	385	0·5	120	135								
313·0	60	20	BLD	35	170	BLD	80	140								
315·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 300 TO 315m DATE 12-14/1/81 PAGE 20 OF 24

045

920411

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
315·0	70	15	BLD	50	130	BLD	80	120								
316·0	70	20	10	45	165	BLD	100	125								
319·0	50	85	BLD	90	660	1·0	8000	135								
322·0	45	115	10	150	3200	0·5	160	100								
325·0	40	75	10	455	3600	7·0	190	100								
328·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 315 TO 330m DATE 12-14/1/81 PAGE 21 OF 24

046

S70026

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	50	100	40	220	4650	0·5	160	140								
334·0	60	60	10	80	270	0·5	210	240								
337·0	50	45	20	60	195	0·5	180	140								
340·0	8	70	10	20	115	BLD	50	140								
343·0	15	90	20	65	165	0·5	50	140								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 330 TO 345m DATE 12-14/1/81 PAGE 22 OF 24

04
920419

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
345																
346	346·0	30	70	30	75	190	0·5	90	130							
347	347·2	50	105	20	50	160	BLD	100	130							
348																
349	349·0	70	35	15	40	135	0·5	90	130							
350																
351																
352	352·0	75	150	15	285	4950	4·0	490	135							
353																
354																
355	355·0	60	100	30	100	4650	2·5	300	125							
356																
357																
358	358·0	40	105	40	80	2050	1·0	300	125							
359																
360																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 345 TO 360 m DATE 12-14/1/81 PAGE 23 OF 24

048

020429

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
360																
361																
361·0	20	70	30	55	310	0·5	66	140								
362																
363																
364																
364·0	25	55	10	20	150	BLD	48	105								
365																
365·0	End of DDH : RBE 19															

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 19

ASSAYED BY Analabs FROM 360 TO 365m DATE 12-14/1/81 PAGE 24 OF 24

CRA
27026

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

DDH : RBE 20

000

920423

MICROFILMED

This log is incomplete:

some core recoveries are unavailable and most analysis results are being queried & thus are not entered. Pages 22-28 are work log only

001

920424

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG

SUMMARY SHEET

PROJECT Renison AREA GAR DRILLHOLE TYPE DDH NQ RBE 20

CO-ORDS E 312689·6 N 5312343·1 DEC LN -45° AZIMUTH 078° MN RL 175·2m

DATE COMMENCED 1/1/81 DATE COMPLETED 6/2/81 DRILLED BY Longyear DRILL RIG Longyear 38

GEOLOGIST(S) S.Yardley, J.Crimeen. NON-CORE TO: 57m NQ CORE TO: BQ CORE:

SURVEY DATA

INSTRUMENT downhole camera.

DEPTH	CORRECT DEC LN	AZIMUTH	DEPTH	CORRECT DEC LN	AZIMUTH
61m	-44·25°	080·5° MN	301m	-42·0°	076·0 MN
91m	-45·25°	080·0° MN	331m	-38·5°	075·0 MN
121m	-44·75°	080·0° MN	361m	-40·75°	076·5 MN
151m	-44·75°	077·5° MN	391m	-49·0°	077·0 MN
181m	-44·25°	077·0° MN			
211m	-44·5°	076·0° MN			
241m	-44·0°	073·5° MN			
271m	-42·5°	073·0° MN			

LOG SUMMARY

DEPTH	ROCK TYPE	MINERALISATION	GRADE
0-57·0m	Tricone'd through glacials/wthd tuf sa,ss	O	
57·0-81·4m	intc gy+gr m.g tuf sa & gy+gr ss & rare gb?(mottled)	O	
81·4-87·0m	gr gabbro?	O	
87·0-150·0m	intc+intb f.g to m.g gr tuf sa+gr ss.	qz/cal vns & Po+Py	2%
150·0-250·0m	intc+intb cnt carb bk sh; gr f.g. to m.g. tuf sa+dk grss	to 225m dis Py+ & cal vns	4%
		to 250m qz/cbte & Pb,Py+BM	Pb,Py 4%; BM 1%
250·0-268·6m	gy ss & minor carb sh, rare narrow qz-cbte vns.	vn Po+Py	1-2%
268·6-269·4m	qz, Pb, AsPy, tr Cp vn	Pb 10%, AsPy 9%, Cp 1%	20%
269·4-298·4m	carb sh, & minor ss, sa	dis+frac Py	1-2%
298·4-300·4m	mas qz vn & Pb+AsPy	vein - Po 5%, AsPy 5%	5-10%
300·4-303·5m	partially bleached (alt?) ss		
303·5-328·8m	TALC CBTE: fairly hard+competant-tr-flecks serpentine		
328·8-331·0m	talcose ss; slithers of talc injected along fracs+bd		
331·0-339·6m	gy ss & cal vns.		
339·6-341·4m	dislocated (brec?) intb gy sa, ss+sh-Cal vns 10cm Py vn@341	frac+bd Py (10cm)	5-7%
341·4-346·0m	competant dk gy carb sh+ss; cal vning less intensive, but regular vn pattern	dis Py	1-2%
346·0-363·0m	bk carb sh+ss & gy sa, 2-5% qv's-overprinted by qz/cbte vns & patchy Po+Py-low angle bd, then steepening	dis Py	1-2%
363·0-366·7m	light gy to cr coloured, bd+banded c.gw-insipient alteration	frac+bd (remobilised) Po+Py-origin bk sh?	5%
366·7-368·4m	intensely sil. ss-fine qz/cbte vns-stockwork.	frac+veinlet Pb	1-2%
At 368·4m	possible knife-like FAULT (vns terminated)-shd competant ss		
368·4-370·6m	band ss, carb sh (fol)+mas ss? dislocated qz-cbte vns at 368·4	dis Py in sh; minor banded Pb	2-4%
370·6-372·4m	gy f.g. ss (new unit?) competant, aggregate Py (spotted)	discreet 5mm aggregates Py	3-5%
372·4-377·0m	alternately banded+brec ss, ss+minor sh, 3-5% qz-cbte vns	frac Pb, dis Py in sh 2-4%	3-5%
377·0-385·5m	brec/frac pale gy sa? pervasive sil. qv at 385m	frac Py+Po	tr
388·5-39·0m	banded ss, sh+minor sa.	2% qz/cbte veinlets+Pb	1%
At 388m	10cms of syngenetic Pb in ss.	banded conformable Pb	20-30%
	E.O.H-391m		

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
0 – 15 m	No core recovered:- Triconed.					

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J. Crimeen FROM 0 TO 15 m DATE 21/1/81 PAGE 2 OF 28

9204 25

DRILL ADVANCE

LOST CORE | DEPTH | DRILL ADVANCE INTERVAL | CORE RECOVERY | PERCENT RECOVERY

LITHOLOGY

INTERVAL | DESCRIPTION | ALTERATION | GRAPHIC LOG | STRUCTURE | MINERALISATION | VISUAL PERCENTAGE MINERALISATION

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

No core recovered:-

Triconed.

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 15 TO 30 m DATE 21/1/81 PAGE 3 OF 28

920420

004

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	31					No core recovered:-					
	32										
	33					Triconed.					
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										
	42										
	43										
	44										
	45										

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C FROM 30 TO 45 m DATE 21/1/81 PAGE 4 OF 28

020427

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						No core recovered:- Triconed.					
	57.0	1.0	1.0	100%	57.0	Start of Coring tuffaceous sandstone, siltstone intercalated grey & green, medium grained tuf sandstone with gy & gr siltstone	minor honeycomb carbonate veining along tension gashes		strong deformation very common soft sediment deformation & brecciation. constant contact along core axis 5 cm	barren	0
	58.0	3.0	2.97	99.0%							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 20

LOGGED BY J.C. FROM 45 TO 60m DATE 21/1/81 PAGE 5 OF 28

920426

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					(con)	gr + gy f. to m.g. tuf sandstone + gr + gy siltstone.	minor honeycomb cbte veining		moderate to strong deformation common s. sed def + brecciation.	barren	0
	61.0	3.0	3.0	100%							
						300 mm of gr/gy, mottled texture, rock - possibly gabbroic? or due to high pervasive cbte "dissemination"			62.9 distinct contact at 44° 63.2 distinct contact at 40°		
					63.7		?— contact unsure —?		?- due to broken core		
	64.0	2.7	2.65	98.15%		gabbro?	dark gr mottling down to 68.5 m. sometimes throughout whole section, or leaves varying sized clasts of ss. Common fractures filled & dk gr material Mottling due to solution of this infilling fracs, + emanating into rock?				
						Sections within are unmottled					
	66.7	1.3	1.3	100%							
	68.0	1.8	1.8	100%							
					68.5	tuffaceous sandstone + siltstone.	?— contact unsure —?		?— due to broken core 68.9 B at 25° (ss)		
	69.8	1.0	1.0	100%							
	70.8	0.7	0.7	100%							
	71.5	1.5	1.5	100%							
	73.0	3.0	3.0	100%	73.0	gabbro?	gr mottling as above 73.6 25mm vuggy q.v. at 39° merges into gabbroic unit?				

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 60 TO 75m DATE 21/1/81 PAGE 6 OF 28

006

92029

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					(con)	gabbro?				barren	
	76·0	3·0	3·0	100%	75·8	tuffaceous sandstone + siltstone intercalated grey, fine to medium grained tuf sa with gy ss.	minor "honeycomb" carboriate veining		Whole unit underwent soft sediment deformation. minor amount of tension gashes.		0
	79·0	2·5	2·47	98·8%							
	81·5	2·0	2·0	100%	81·4	gabbro? green mottled rock. possibly gb.	minor "honeycomb" calcite + dbte vains		minor tension gashes		
	83·5	1·5	1·47	98·0%							
	85·0	2·8	2·8	100%							
					87·0	tuffaceous sandstone + siltstone. intc + interbedded gy, f to m.g. tuf sa + gy ss.	bleached? unit in contact (ss). minor Cal veining small vnlets (1-2mm)		contact sharp but uneven 88·0 B at 44° (ss)		
	87·8	3·1	3·1	100%							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 20

LOGGED BY J.C. FROM 75 TO 90 m DATE 24/1/81 PAGE 7 OF 28

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	90·9	2·9	2·85	98·28%
	93·8	2·5	2·5	100%
	96·3	3·0	2·97	99·0%
	99·3	3·4	3·1	91·18%
	102·7	2·7	?	?

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
(con)	intercalated + interbedded grey, fine to medium grained tuffaceous sandstone + gy siltstone	minor quartz + calcite veining, mainly small veinlets		90·7 B at 35° (ss/tuf sa)	barren	0
				usually massive calated units.		
				ss. usually bedded, very minor tension gashes.		
		93·4 vuggy q.v's over 260 mm at 50°		broken core		
		94·7 q.v's over 70 mm at 51°				
				95·9 B at 15° (ss)		
			sharp contacts	96·6 B at 26° (ss/tuf sa)		
				99·5 B at 40° (ss/tuf sa)		
				101·8 B at 49° (ss/tuf sa)		
				103·5 B at 35° (ss)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 90 TO 105m DATE 24/1/81 PAGE 8 OF 28

EC 9204

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	105.4	2.6	2.5	96.15%	(con)	intercalated & interbedded, fine to medium grained, grey, tuffaceous sandstone & gy siltstone	105.4 150mm Cal vn at 31° minor calcite veining, usually crosscutting vnlets		moderate deformation	barren	0
	108.0	1.0	1.0	100%					107.9 B at 40° (ss/tuf sa)		
	109.0	3.0	3.0	100%					110.3 B at 14° (ss)		
	112.0	3.0	3.0	100%					113.8 B at 28° (ss)		
	115.0	3.0	2.67	89.0%					115.5 B at 18° (ss/tuf sa)		
									117.1 B at 38° (ss/tuf sa)		
	118.0	3.0	3.0	100%					118.8 B at 26° (ss/tuf sa)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 105 TO 120m DATE 24/1/81 PAGE 9 OF 28

010

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						intercalated + interbedded grey, fine to medium grained tuffaceous sandstone with gy siltstone + minor dark gy ss.	minor to moderate calcite veining		minor to moderate deformation. 120·8 B at 36° (ss)	minor mineralisation associated with cal/quartz veining: Py + Pb 1%	2%
	121·0	3·0	3·0	100%	121						
					122						
					123				123·9 B at 26° (tuf ss)		
	124·0	3·0	3·0	100%	124						
					125						
					126		125·7: 65 mm qz/cal vn at 72°		126·1 B at 40° (ss)	125·7 vn contains: Pb 3%, Py 2%	5%
	127·0	3·0	3·0	100%	127						
					128				127·5 B at 28° (ss)		
					129				128·8 B at 42° (ss)		
	130·0	3·0	3·0	100%	130				130·3 B at 34° (ss)		
					131				131·8 B at 60° (ss/tuf ss)		
					132						
	133·0	3·0	3·0	100%	133		133·7: 30 mm Cal/fluorite vn at 49°		133·9 B at 46° (ss/tuf ss)		
					134						
					135						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 120 TO 135m DATE 24/1/81 PAGE 10 OF 28

C.S.R. 026

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	136.0	3.0	3.0	100%
	139.0	3.0	3.0	100%
	142.0	3.0	2.96	98.67%
	145.0	3.0	3.0	100%
	148.0	3.0	3.0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
(2cm)	intercalated & interbedded, grey, fine to medium grained tuffaceous sandstone with gy & minor dark gy siltstone.	minor calcite veining.		slight to moderate deformation.	minor Py + Po (0.5%) associated & qz/Cal veining.	1%
				136.4 B at 42° (ss/tuf sa)		
		137.5: 100mm qz/St vn at 72°		137.8 B at 35° (ss/tuf sa)	137.5 vn contains Pb 22%, Py 2%, el 1%.	25%
				139.0 B at 56° (ss)		
				141.2 B at 38° (ss)		
		143.7: 20mm Cal vn at 55°		143.2 B at 40° (ss/tuf sa)		
				145.8 B at 32° (tuf sa)		
		146.6: 120mm qz/St vn at 76°			146.6 vn contains Pb+Sp 6% Py 3%	15%
		148.6: 190mm qz/St vn at 63°		148.4 B at 51° (ss)	148.5 vn contains needles of Py.	10%
	minor black shale, contorted with common calcite veins.					

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 135 TO 150m DATE 24/1/81 PAGE 11 OF 28

012

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					151	intercalated & interbedded black carbonaceous shale & grey, fine to medium grained tuffaceous sandstone & dark gy siltstone.	moderate calcite veining.		slight to moderate deformation. moderate contortion of bk sh. 151.8 B at 65° (ss/tuf ss)	minor Py associated with Cal veining.	5%
	151.0	3.0	3.0	100%	152						
					153				153.0 B at 57°? (bk sh)		
	154.0	3.0	3.0	100%	154						
					155				155.0 B at 67° (ss)		
					156				156.2 B at 62° (bk sh)		
	157.0	3.0	3.0	100%	157						
					158				157.8 B at 45° (bk sh)		
					159				159.5 B at 57° (ss/tuf ss)		
	160.0	3.0	3.0	100%	160						
					161				161.1 B at 65° (tuf ss)		
					162				contorted bedding.		
	163.0	3.0	3.0	100%	163						
					164				164.6 B at 60° (tuf ss/ss)		
					165						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 150 TO 165m DATE 26/1/81 PAGE 12 OF 28

9204135

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						interbedded ± intercalated, grey, fine to medium grained tuffaceous sandstone ± gy siltstone with minor black carbonaceous shale	moderate calcite veining.		moderate deformation minor contortion common microfaulting 166.4 B at 66° (ss)	minor Py associated with the Cal vns only in carb bk sh.	
166.0	3.0	2.98	99.33%		166						
					167						
					168				168.6 B at 38° (ss/tuf sa)		
169.0	3.0	3.0	100%		169						
					170				170.7 B at 40° (bk sh/tuf sa)		
					171						
172.0	3.0	2.98	99.33%		172				172.0 B at 30° (ss/tuf sa)		
					173				173.2 B at 34° (ss)		
					174						
175.0	3.0	3.0	100%		175				175.6 B at 40° (tuf sa/ss)		
					176						
					177						
178.0	3.0	3.0	100%		178				178.0 B at 40° (tuf sa/ss)		
					179				179.8 B at 16° (ss)		
					180						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 165 TO 180m DATE 26/1/81 PAGE 13 OF 28

013

920436

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					181	interbedded ± intercalated grey, fine to medium grained tuffaceous sandstone with minor gy ± dark gy siltstone ± minor carbonaceous black shale.	moderate calcite veining.		moderate deformation minor contortion common microfauting	disseminated Py ± associated with Cal.	6%
	181·0	3·0	3·0	100%	182						
					183		183·2 : 10mm quartz/ siderite vn at 58°				
	184·0	3·0	3·0	100%	184						
					185						
					186						
	187·0	2·8	2·8	100%	187				187·0 B at 35° (tuf sa)		
					188						
					189				188·9 B at 21° (ss/tuf sa)		
	189·8	3·1	3·1	100%	190						
					191						
					192				191·8 B at 47° (bk sh/ss)		
	192·9	3·1	3·1	100%	193				193·3 B at 44° (tuf sa)		
					194	massive section of calcareous tuf sa					
					195						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 180 TO 195m DATE 29/1/81 PAGE 14 OF 28

920439

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					196	interbedded ± intercalated grey calcareous fine to medium grained tuffaceous sandstone ± dark gy siltstone ± carbonaceous black shale.	moderate veining, strongest in ss/sh units., minor siderite & larger vns.		moderate deformation moderate contortion in ss/sh common microfaulting 197.2 B at 47° (tuf sa/ss) 199.8 B at 50° (bk sh) 201.9 B at 72° (bk sh)	minor calcite veining contains Py	3%
	196.0	3.0	3.0	100%	197						
					198						
	199.0	3.0	3.0	100%	199						
					200						
					201						
	202.0	3.0	2.94	98.0%	202			FK			
					203				203.9 B at 53° (tuf sa)		
					204						
	205.0	3.0	3.0	100%	205				205.3 B at 55° (tuf sa)		
					206						
					207				206.9 B at 45°? (tuf sa)		
	208.0	3.0	?	?	208						
					209				209.9 B at 60°? (bk sh/sa)		
					210						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 195 TO 210 m DATE 29/1/81 PAGE 15 OF 28

9204 33

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	211·0	3·0		
	214·0	3·0		
	217·0	3·0		
	220·0	3·0		
	223·0	3·0		

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
211	intercalated & interbedded grey, calcareous, fine to medium grained tuffaceous sandstone with gy-dk gy siltstone & minor carbonaceous black shale.	moderate calcite veining with minor siderite.		moderate to heavy deformation moderate contortion in ss/bk sh common microfaulting	minor Py (2%), Po (1%) associated & carbonate veining	3%
212		211·9 Cal/St/Ankerite vn, 40 mm at 60°		212·9 B at 60°? (bk sh/tuf sa)		
213						
214				214·3 B at 46° (ss/bk sh)		
215						
216				216·1 B at 61° (bk sh/ss)		
217				217·2 B at 56° (ss/tuf sa)		
218						
219				219·4 B at 57° (ss/tuf sa)		
220				220·6 B at 68° (bk sh/sa)		
221				221·7 B at 47° (bk sh/tuf sa)		
222		222·0 very heavy Cal veining & common st.				
223				223·0 very heavy deformation soft sediment def & common brecciation		
224						
225						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 210 TO 225 m DATE 29/1/81 PAGE 16 OF 28

920439

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					226	intercalated ↔ interbedded black carbonaceous shale, with dark grey siltstone ↔ gy, fine to medium grained (discontinuously calcareous) tuffaceous sandstone.	heavy calcite veining with common siderite. common quartz/st/cal vns.		moderate to heavy deformation strong contortion in bk sh.	common Pb 2%. Py 2% associated ε qz/cbte vn minor Sp 0.5% vns ε cbte	4.5%
226.0	3.0	3.0	100%		227				226.5 B? at 75° (bk sh) "soft sediment def" ↔ brecciation.	226.8 vn contains Pb 15% ↔ Py 5%	20%
					228	228.4 : 3.2 metres contorted carb to graphitic bk sh.	227.9 qz/st vns over 400mm at 60°			227.9 vn contains: Py, Pb, Gl 2% Sp 2% Cp 1%	12%
229.0	2.8	2.8	100%		229						
					230				230.0 B steep to C.A > 70° (bk sh)		
					231						
232.0	3.1	3.1	100%		232				232.6 B at 75° (bk sh/ss)		
					233						
					234				234.1 B at 57° (tuf ss/ss)		
235.0	3.1	3.1	100%		235						
					236				236.0 B at 53° (bk sh/ss)		
					237						
238.0	3.0	3.0	100%		238						
					239		238.6 qz/st/cal vn-brec seds over 1005 mm at: top 43°, bottom 56°.			238.6 vns contain Pb + Py 4%	8%
					240						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C FROM 225 TO 240m DATE /81 PAGE 17 OF 28

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920410

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	241·0	3·0	3·0	100%
	244·0	3·0	3·0	100%
	247·0	3·0	3·0	100%
	250·0	3·0		
	253·0	3·0		

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
(con)	interbedded + intercalated carbonaceous black shale, with dark grey siltstone + gy, fine to medium grained, (discontinuously calcareous) tuffaceous sandstone.	heavy calcite veining & common siderite. common quartz/ cal/st vns.		240·1 B at 67° (bk sh/ss) moderate to heavy deformation strong contortion in sh. soft sediment daf+ brec 241·9 B at 51° (bk sh) 243·5 B at 63° (tuf sa/ss) 245·6 B at 48° (tuf sa/ss)	244·0 vn contains: Pb, Py ; Gl, Cp, Sp, As Py	1%
246·2	contorted carb bk shale, laminated bk sh + ss.	246·7 140 mm qv's at 58°		247·6 B at 69° (bk sh)	246·2 bk sh & common Pb + Py. (4%).	8%
250·0	disrupted gy-green, gy f to m g tuf sandstone & gy-gr, gy ss (minor pale brown equivalents, rare dk gy units)	250·0 160 mm qz/st/ Ankerite vn at 78° 251·4 relatively minor cal/q·v - 7%		251·1 B? at 52° (ss/sa) 251·5 — — — — — relatively undeformed unit. 252·7 — — — — —	250·0 vn contains Py	5%
252·7	bk shale + dk gy siltstone. common to predominant. intb + intc.			253·0 banding/bd highly daf. 253·1 B at 44° (ss) (cnt + mcr. faulted) 254·2 B at 40° (ss/tuf sa)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 20

LOGGED BY J.C. FROM 240 TO 255 m DATE /81 PAGE 18 OF 28

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					255·0	small unit of contorted carbonaceous black shale with minor siltstone	highly veined by quartz, siderite + calcite (30%)		top contact at 64°, marked & vn deformed, brecciated + laminated	common Py associated & Cal veining	3%
	256·0	3·0			255·8	altered gabbro mottled, bk, green + yellow gr; medium to coarse grained gabbro. extensive - pervasive? alteration.	common qz/carbonate vns, also common bk alteration product at contact between vns + gb (st) 5% veining, predominantly qz.		contact marked & qv at 67°?	minor Pb + Py (1%) associated & qz/cbte vns.	2%
	259·0	3·0				extremely fine grained section (chilled margin?)	259·6: 110mm qz/st vn at 45°		contact marked & qz/cbte vn at 45°	259·6 vn contains AsPy 6%, Cp 1%	7%
					259·7	tuffaceous sandstone + siltstone f.g. gy-gr tuf sa intercalated & gy-gr ss. very minor interbedding.	minor qv's (2%)		260·6 silt clasts in ss (stratakybed) 260·7 B at 39°	rare Py associated & qz	tr
						261·1-261·2 lithic sa & silt clasts					
					261·4	dark equivalent? of above & minor bk sh? gy + dk gy ss & f.g tuf sa.	very common qz/st veining & minor Ankerite veining (12%)		extremely disrupted by qv's.	minor Py with qz	1%
	262·0	3·0									
										264·0 25mm qv & Pb 40%, Py 30%	70%
					264·2	highly altered brown, gr + gy-gr sandstone & siltetone (grading to gy + minor gy-gr units downhole) minor bk sh. intc & intb	minor qz/cbte veining in top section (4%)		moderate to heavy def. & disruption. 265·5 B at 70° (ss/bk sh?)	minor Pb + Py (1%) associated & qz/cbte vns in top section	2%
	265·0	3·0									
	268·0	3·0					268·5 qz/st vns over next 2·0m & mixed in. disrupted sads & "massive" veins.		62° 64° 50° 50° 45° 76° 80°	268·5 mas. "sweated out" Pb 20% + Py 5%. AsPy 2%	27%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY JC FROM 255 TO 270m DATE 8/4/81 PAGE 19 OF 28

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920412

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						siltstone, black shale & tuffaceous sandstone: interbedded & intercalated dark gy & gy, partly calcareous s.s with minor carbonaceous, partly calc. bk sh & gy, f.g to mg, partly calc., tuf sa. (minor sections massive)	minor qz & siderite veins. very common calcite veining, either disrupted or smooth along bedding plane		varying deformation/ contortion/disruption (indicated in graphic log)	minor Py (1%) & rare Pb (tr) & cal vns, usually & tuf sa, not the mas unit.	1%
271·0	3·0			271							
				272	272·5	fairly mas tuf sa & minor ss/sh & minor disruption.			ss/sh unit & minor disruption (intb) 272·0 B at 80° (ss/sh)		
				273					273·4 B at 72° (sh/tuf sa)		
274·0	3·0			274	273·8	ss/sh & minor disruption					
				275	275·0	tuf sa/sh & heavy disruption	275·0 : 40 mm qz/st vn at 72°		274·5 B at 70° (ss/sh)		
				276	275·9	sh/minor sa & moderate to heavy disruption			276·2 B at 65° (ss/tuf sa)		
277·0	3·0			277					277·5 B at 40° (ss)		
				278							
				279							
280·0	3·0			280							
				281	280·7	tuf sa/bk sh & moderate to heavy disruption.					
				282							
283·0	3·0			283							
				284							
				285							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 270 TO 285m DATE 9/4/81 PAGE 20 OF 28

020413

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						interbedded & intercalated grey & dark gy siltstone, with minor black carbonaceous shale & gy tuffaceous sandstone (units partly & commonly calcareous. predominantly ss with equal amounts of bk sh & tuf sa.	very common disrupted & smooth calcite veining (8-10%) more common & ss/sh. very minor quartz/siderite veining.		variable deformation/disruption. 285·9 B at 42° (bk sh/ss) laminated to massive units. 287·9 B at 64° (ss/tuf sa) 288·5 B at 60° (bk sh/ss)	minor Po + Py (tr) usually associated & cal.	0·5%
	286·0	3·0			286						
					287						
					288						
	289·0	3·0			289						
						289·5 predominantly tuf sa & minor ss & bk sh with moderate to heavy disruption.					
					290						
					291						
	292·0	2·8			292				292·8 B at 30° (ss)		
					293						
					294				293·5 B at 35° (ss/tuf sa)		
	294·8	1·0			294						
	295·8	2·2			296						
					297						
						297·3 quartz veins.	mas. q.v's over 2·7m & minor mixed in sediments.		top contact at 20-30° - shallow angle? (core highly broken)	mineralisation of q.v's: Py 18%, Po 2%	20%
	298·0	3·0			298						
					299				bottom contact at 25°		
					300						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 20

LOGGED BY JC FROM 285 TO 300 m DATE 9/4/81 PAGE 21 OF 28

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered sediments extremely altered green sediments ? unit appears to be crystalline (alteration affect)? homogeneous unit.	unit appears to be talcose to extremely talcose up to the point of contact. minor quartz / carbonate veination.		no bedding evident and at bottom unit appears to be disrupted as are the carbonate veins.	minor Py/Po with the quartz carbonate veins	1%
	304.0	3.00			303.5	tale carbonate dark grey, pale grey, pale green and milky white carbonates. lighter sections have black blobs and streaks, darker units are mottled and usually cut by common milky white carbonates. unit both common tale pale grey / black white mottle - streaks masonic blobs / streaks haematite.	rare white carbonate veins cross-cutting foliation direction		t contact @ 35° foliation varies from strong to none. 306.9 fol @ 50° 309.6 fol @ 50° 312.0 fol @ 55° 314.7 fol @ 50°	barren	
	307.0	3.00									
	310.0	3.00									
	313.0	3.00									

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY JC FROM 300 TO 315 DATE 9/4/91 PAGE 22 OF .....

9204/5

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	316			
	316.0	3.00		
	317			
	318			
	319			
	319.0	3.00		
	320			
	321			
	322			
	322.0	3.00		
	323			
	324			
	325			
	325.0	3.00		
	326			
	327			
	328			
	328.0	3.00		
	329			
	330			

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	predominantly pale green and milky white carbonates minor talc. common black talcky streaks / streaks and disrupted veins of magnetite and minor chromite?	minor coarse cutting carbonate veins		weak to strong foliation disrupted in some places	common magnetite Mt	4%
				317.1 fol @ 42°		
				318.4 fol @ 62°		
				weak to strong foliation disrupted in some places		
319.8	equal amounts of talc with white carbonate	highly veinlets with white carbonate veinlets		320.9 fol (coarse) @ 60°		
				322.1 fn @ 58° fol?		
322.6	pale grey/black and white unit.	minor carbonate cross-cutting veins increasing down hole.		weak to strong foliation.		
				325.2 fol @ 50°?		
				Mt	325.6 carbonate "patch" with magnetite 60mm @ 60° Mt	30%
					326 carbonate veins with magnetite over 300 mm	20%
				327.1 fol @ 55°?		
328.9	transition zone.			contact unclear steep?		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C FROM 315 TO 330 DATE 9/4/82 PAGE 23 OF .....

023

9204446

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered sediments - transition zone. Green and green-grey altered sediments (talcose). Grade into grey siltstone and minor black shale.	alteration decreasing steadily downhole. minor carbonate veining at top, common calcite veins towards the bottom.		moderate disruption unit ?foliated to ?bedded downhole intermediate to steeply dipping. 331.3 B° @ 52°	barren.	
	331.0	3.00				332.5 relatively unaltered disrupted calcareous, carbonaceous black shale intercalated with grey-brown fine to medium grained tuffaceous sandstone.					
	334.0	3.00			334.5	tuffaceous sandstone, siltstone and black shale. calcareous green siltstones, grey fine grained tuffaceous sandstones and black shale.	extremely highly veinated (by calcite - 40%?) Majority of veins disrupted.		unit extremely disrupted and mixed up.	very minor pyrite with the calcite veins	Py 1%
	337.0	2.00									
	340.0	3.00									
						341.2 dark grey and grey siltstone with black shale and minor tuffaceous siltstone	less calcite veination than above 10%		moderate disruption 341.6 B @ 70°		
	343.0	3.00				343.2 grey and dark grey siltstone with carbonaceous black shale with very minor tuffaceous sandstone.	minor and smooth calcite veins		interbedded (laminated) unit with little to no disruption. 344.6 B @ 66° (sc/bl).		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RRE 20

LOGGED BY J.C FROM 330 TO 345 DATE 10/4/81 PAGE 34 OF .....

024

9204147

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					346	dark grey siltstone laminated with black shale (cont'd).	minor, disrupted calcite veins. 2V.			minor pyrrhotite / pyrite with calcite veins Po 0.5% Py 0.5%	1%
	346.0	3.00							346.2 B'@ 80°		
					347	346.8 grey and grey-brown fine to medium grained tuffaceous sandstone with minor grey and dark grey siltstone.	moderate to minor calcite veination, mostly disrupted		mostly massive unit with ~~moderate~~ minor disruption		
					348						
					349						
	349.0	3.00	3.00 (+.10)	100							
					350				350.5 B@ 58° (tuf sa/cs)		
					351	350.9 predominantly carbonaceous black shale and grey-dark grey siltstone with minor grey fine to medium grained tuffaceous sandstone interbedded and intercalated.	common calcite veination mostly disrupted		moderate disruption 351.6 B@ 65° (ss/ bk sh).	common pyrite / pyrrhotite with calcite veins Po 2% Py 2%	4%
					352						
	352.0	3.00	2.98	99							
					353				353.7 B@ 65° (tuf sa/ ss)		
					354						
					355				355.2 B@ 78° (blk sh/ ss).		
	355.0	3.00	3.00 (+.10)	100							
					356	356.3 grey and grey-green fine to medium grained tuffaceous sandstone with minor dark grey siltstone and rare carbonaceous black shale.	minor to moderate calcite veination quartz / carbonate veins common also.		moderate to minor disruption	common Po/Py with quartz carbonate veins minor Sp/Ga. Po 3% Py 3% Sp 0.5% Ga tr	6.5%
					357						
					358				357.8 B@ 65° (tuf sa/ ss)		
	358.0	3.00	3.00 (+.15)	100							
					359				359.3 B@ 67° (tuf sa/ ss).		
					360		359.9 disrupted quartz carbonate vein over 150mm		359.9	minor Po/Py/Sa/Ca with vein	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RRE 20.

LOGGED BY J.C FROM 345 TO 360 DATE 10/4/84 PAGE 2 OF

92041 03

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	361.0	3.00	3.00 (0.05)	100	362.0	Shaly sandy dolomitic rocks / light grey, fine grained tuf sandstone with minor grey siltstone and black shale. also contains minor bands of green/grey bleached siltstone and sandstone (interbedded).	calcareous unit with common disrupted calcite veins.		Moderate to heavy disruption	minor Po/Py with the calcite. mostly with the bleached bands in which it appears to be banded mineralization?	3%
	364.0	3.00	3.00 (-0.05)	100			unit also partly silicified.		364.0 B @ 74° (tuf/sa). 366.0 B @ 70° (sa).		
	367.0	3.00	3.00 (0.05)	100					367.8 B @ 60° (ss/blk sh). 367.4 B @ 59° (ss/blk sh). bedded contact @ 43°.		
	370.0	3.00	3.00	100	370.4	bleached tuffaceous sandstone and siltstone. interbedded light grey-grey brown, bleached, fine to medium grained tuffaceous sandstone with light grey and grey-brown siltstone.	very minor, smooth calcite veins.		minor disruption. 371.6 B @ 82° (ss/tuf sa). bedded contact @ 83°.	commonly "spotted with Pyrite some associated with calcite, others disseminated" Py	5%
	373.0	2.30	2.30 (0.05)	100	373.3	dolomite, siltstone, shale and sandstone intercalated and interbedded (minor) brecciated? (sandy?) dolomite with dark grey siltstone and black shale zones (at top).	Common calcite veination disrupted and smooth. 374.2 calcite vein 250mm @ 47°?		siltstones and shale interbedded dolomite disrupted stylolites common. 378.0 B varies 45-65 (ss/sh).	Common Pyrite - Very fine disseminated and along stylolites. Py	3%

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C FROM 360 TO 375 DATE 11/4/81 PAGE 26 OF .....

92047.49

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	375.3	1.70	1.70	100		dolomite light grey dolomite interbedded with siltstone to 377.0.	common calcite veination		dolomite fibrous/	common fine, disseminated pyrite Py	3%
	377.0	3.00	3.00 (+0.20)	100					377.4 B @ 67°? (sc)		
	380.0	3.00	3.00	100			380.8 calcite vein 180mm @ 65°				
	383.0	2.00	2.00 (-0.10)	100			383.6 calcite vein 60mm @ 67° 384.7 calcite vein 400mm @ 33°				
	385.0	2.00	3.00	100	385.5	siltstone: interbedded and intercalated dark grey and grey siltstone with minor black shale and rare grey tuffaceous sandstone.	minor calcite veination with the dark grey siltstone /black shale sections		interbedded to laminated; bedding contorted; minor disruption 387.8 B @ 43° (ss). 389.8 B? @ 70° (sc).	minor Py/Py with the calcite	0.5%
	388.0	1.00	3.00	100							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 20

LOGGED BY J.C FROM 375 TO 390 DATE 12/4/81 PAGE 27 OF .....

920450

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						dark grey and grey siltstone (interbedded)			390.6 B @ 65° (ss/mk sh)		
	391					END OF HOLE					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J.C. FROM 390 TO 391 DATE 12/11/

9204534

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
360																
361																
361·0																
362							600									
363																
364																
364·0																
365	10	40	BLD	22	200	0·1	43	64								
366																
367																
367·0																
368	7	48	BLD	33	210	0·5	62	75								
369																
370																
370·0																
371	20	64	BLD	69	290	0·4	80	110								
372																
373																
373·0																
374	5	24	BLD	19	350	0·3	15	76								
375																
375·0																

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 20

ASSAYED BY Analabs (Cooee) FROM 360 TO 375m DATE / /81 PAGE 22 OF 24

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
375																
375.0																
376	15	28	BLD	52	105	1·4	22	67								
377																
377.0																
378	20	14	BLD	34	102	0·2	10	38								
379																
380																
380.0																
381	20	15	BLD	16	155	1·0	10	40								
382																
383																
383.0																
384	25	13	BLD	12	120	0·3	8	31								
385																
385.0																
386	25	46	BLD	80	410	0·5	580	64								
387																
388																
388.0																
389																
390																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 20

ASSAYED BY Analabs FROM 375 TO 390 m DATE / /81 PAGE 23 OF 24

031

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
390																
	30	67	BLD	21	167	0·3	50	94								
391																
	End of Hole at 391m															

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 20

ASSAYED BY Analabs FROM 390 TO 391 m DATE / /81 PAGE 24 OF 24

920454

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

DDH : RBE 21

000

920456

MICROFILMED

No summary
available.
As of : 25-5-81.

(some analysis incomplete also)

001

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						No core recovery :— Tricored					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY S.R.Y + A.J FROM 0 TO 15m DATE /4/81 PAGE 1 OF 25

9204557

DRILL ADVANCE

LOST CORE | DEPTH | DRILL ADVANCE INTERVAL | CORE RECOVERY | PERCENT RECOVERY

LITHOLOGY

5 cm

INTERVAL | DESCRIPTION | ALTERATION | GRAPHIC LOG | STRUCTURE | MINERALISATION | VISUAL PERCENTAGE MINERALISATION

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

No core recovery :—

tricored

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY & AJ FROM 15 TO 30 m DATE /4/81 PAGE 2 OF 25

9204539

DRILL ADVANCE

LOST CORE | DEPTH | DRILL ADVANCE INTERVAL | CORE RECOVERY | PERCENT RECOVERY

LITHOLOGY

5 cm

INTERVAL | DESCRIPTION | ALTERATION | GRAPHIC LOG | STRUCTURE | MINERALISATION | VISUAL PERCENTAGE MINERALISATION

31
32
33
34
35
36
37
38
39
40
41
42
43
44
45

Key to graphic log:

carbonaceous shale ~~~

siltstone ---

tuffaceous sandstone .....

limestone? dolomite? ——

quartz carbonate veins, —·—·
± Gl. Sp

quartz veins + silicification ———

talc carbonate ////

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY & AJ FROM 30 TO 45 m DATE /4/81 PAGE 3 OF 25

920459

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					46						
					47						
					48						
					49						
					50	Strange rock 50.0 Rotated / polished fragment of ? intrusive rock? 20% pink felt phenocrysts 2-5% magnetite - possible grit!		C		Mt 2-5%	
					51						
	51.0	1.0	0.9	90.0%	51.0	Mixed gray to green to brownish tuf sandstone, siltstone + minor shales -narrow beds.	partially weathered / leached		Bedding 52.0 B CA 40°	Leached qz-carbonate veinlets + fracturing Trace Py + Cp	Tr
	52.0	1.3	1.0	76.9%	52						
					53						
	53.3	1.5	1.35	90.0%							
					54						
					54.5	green coarse grained tuffaceous sandstone.					
	54.8	2.7	1.87	69.3%	54.9	Grey silty sandstone with black carbonaceous shale partings.					
					55						
					56						
					57						
	57.5	2.1	2.4	100%+	57.4	Dark grey carbonaceous shale, minor siltstone + sandstone.			57.6 V CA 60°	multiple qz-dolo (St/Ankerite) veining + frac. fill. 1-2% As Py, Sp, Gl, Py	1-2%
					58						
					58.0	Gray green silty sandstone and carb shale grading into medium grain greenish gray tuffaceous sandstone			59.0 B CA 55°	Sparse qz veinlets + qz filled fractures	
					59						
	59.5	1.4	1.0	71.4%	60						
					59.8	carb shale & pellets + bands. A gy silty sa.				3% dis Py, minor qz-dolo veins	3%

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 21

LOGGED BY SRY + AJ FROM 45 TO 60 m DATE /4/81 PAGE 4 OF 25

9200660

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						carb shale (con)				Disseminated Py	3%
	61.0	3.0	3.0	100%	61.0	Mixed zone of gy-gr tuffaceous sandstone grading into banded siltstone + dark gy siltstone/shale, thence back to predominantly tuf ss + ss + terminating in carb shale & pellets of sandstone.			61.0 BCA 40°	1-2% yellowish-brown cbte (Ankerite) + tr Sp, Py Approx. 1% barren q.v's + vnlets. Increasing Py content of cbte vnlets + fracture fillings; leached in places.	Tr
									qz vnlet stockwork (barren) + later cbte frac filling		
									62.6 qv CA 35° at right angles to bd. BCA 50°		
	64.0	3.0	2.8	93.3%			Bleaching adjacent to vn				
					65.8	Vuggy cbte (Ankerite) vein zone	cbte impregnation.		66.0 cbte vn CA 60-80°	vuggy cbte vn zone, 2-3% Py	2-3%
					66.1	Pale gy intensely silicified carbonaceous shale & pellets + wisps of sandstone (Inclusion of black carb sh from 67.0 to 67.4 m + disseminated Py)	1. Silica flooding replacing shale 2. Barren quartz veining 3. Dislocation/shattering 4. Ankerite/Siderite fracture infilling of episode 3.			Discrete crystals of Py within silicified shale derived from syngenetic Py of bk carb sh.	1%
	67.0	2.5	2.5	100%					67.5 Silica CA 30° subparallel + transgressive to bedding. 68.0 qv CA 35° (barren)		
	69.5	0.5	0.5	100%							
	70.0	3.0	2.95	98.3%	69.9	Mixed tuf ss + ss gy to dk gy; minor carb sh.	2% cal veining + fracture filling.		70.3 BCA 45°	2% barren calcite frac fillings. Trace Py	Tr
					72.0	Tuffaceous sandstone gy green, massive fine to coarse grained with minor bands of ss (gy) + carb shale (bk)	Sporadic calcite veining as above			dis. Py	Tr
	73.0	3.0	3.0	100%					74.0 BCA 60°		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 60 TO 75 m DATE /4/81 PAGE 5 OF 25

9204G1

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						(con) massive tuffaceous sandstone (good interbeds).	Tr to 1% barren Calcite veining			Barren	
	76·0	3·0	3·0	100%	76						
					77						
					78						
	79·0	3·0	3·0	100%	79						
					80				80·5 Cal vn C.A 50°		
					81				81·0 Cal vn C.A 40°		
	82·0	3·0	2·8	93·3%	82						
					83						
					83·35	quartz-carbonate vein			83·35 vn C.A 65°	qz-cbte Py Sp Gl vn	3%
					83·35					Barren	
					84						
	85·0	3·0	3·0	100%	85						
					86				85·5 B.C.A 50°		
					87						
	88·0	2·8	2·35	83·9%	88				88·0 B.C.A 60°		
					88·5	Intensely silicified carbonaceous shale / or tuf sandstone.	Silica flooding as per 66·1 - 69·9 m		Dislocated & healed by qz-cbte vns & veinlets	qz-cbte vns & (vuggy in part) vnlets & healed fractures. Tr to 1% vn & dis Py Tr Pb vn	Tr to 1%
					89						
					90						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY S.R.Y + A.J. FROM 75 TO 90 m DATE /4/81 PAGE 6 OF 25

29 0426

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	90.8	1.8	1.9	100%
	92.6	1.4	1.2	85.7%
	94.0	3.0	3.0	100%
	97.0	3.0	3.0	100%
	100.0	3.0	3.0	100%
	103.0	3.0	2.9	96.7%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
90.1	DK gy carbonaceous shale (pyritic) + qz cbte vn	qz-cbte		90.1 Silic c.A 50°	Ankerite/Cc, qz, 2% Py, 1% AsPy, tr sp	3%
90.5	Carbonaceous Shale :- DK charcoal gy to bk with minor gy siltstone, pellets & lenses of fg. silty sandstone which becomes more prevalent towards base	Calcite fracture/ vn impregnation 10%		90.5 vn C.A 80° 91.0 B.C.A 50° minor soft sediment deformation 93.0 B.C.A 35°	Syngenetic : dis, bedded & fracture Py 1 to 3% 10% fracture Cal.	1% to 3%
94.7	Mixed Zone of :- 1. Silty carb sandstone - in part laminated - with many fine partings of carb shale. The unit is gy br to gy gr in colour. 2 Sporadic gy br f.g sa bands.	1% Cal fracture & vn fillings - contorted			1% dis & frac Py	1%
	carbonaceous shale component increasing towards log m.			98.0 BC.A 30° 104.0 minor s.sed deform^{tn} 108.0 B.C.A 50°		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY & AJ FROM 90 TO 105 m DATE /4/81 PAGE 7 OF 25

9204463

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						(con) predominantly silty carbonaceous sandstone.			106.0 BC.A 40°		
	106.0	3.0	3.0	100%					108.0 s.sed deformation		
	109.0	2.5	2.5	100%	109.0	predominantly bk to dk charcoal gy carbonaceous shale	5-7% Cal veining + frac fillings - sigmoidal distorted			1-3% dis + frac Py	1 to 3%
	111.5	3.1	3.0	96.8%	112.2	silty, br-gy carb. sandstone + siltstone . minor bk shale	1-2% Cal veining		112.2 B.C.A 30°	Tr to 1% dis, frac + vn Py	Tr to 1%
	114.6	3.1	3.1	100%					115.0 B.C.A 40°		
	117.7	2.3	2.3	100%	117.6	Massive tuffaceous sandstone :- gy-br to gy , medium to coarse grained.	rare Cal vns		119.0 B.C.A 40°	Tr dis. vn + frac Py	Tr
	120.0				120.0						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 105 TO 120 m DATE /4/81 PAGE 8 OF 25

920464

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	120·0	1·0	1·0	100%	120·0	Black Carbonaceous Shale:- intermixed with subordinate br-gy silty carbonaceous sandstone. The whole laminated in part. Nuggety/pellet texture of shale due to blobs, streaks & blebs of calcite, often associated & Pyrite_ deformed & disrupted Cal veins?	10-12% Calcite veining - relict in part.		122·0 B.C.A 40°	1. 10-12% Cal vns & Py 2. Rare Cal qz-cbte vns + Py & tr Pb 3. dis syngenetic Py 4. discrete aggregates & crystals of Py (syngenetic) 5. fracture Py & Pb 6. blebs and stringers of Py & Pb parallel to bedding	2% to 3%
	121·0	3·0	2·85	95%	121						
					122						
					123						
	124·0	3·0	3·0	100%	124				125·0 s. sed. deformation		
					125						
					126						
	127·0	3·0	3·0	100%	127				127·0 B.C.A 30°		
					128						
					129						
	130·0	3·0	3·0	100%	130						
					131						
					131·2	Grey tuffaceous sandstone:- with wispy partings of dk gy carb shale. Minor intercalated beds of gy siltstone (132·2 - 133·0) Ss is fine to medium grained with rare coarse bands (142·2) very c band at base of succession 1-2 cms thick with pink + brown	1-3% cal veining		131·1 B.C.A 45° bd planes & surfaces of vns frequently slickensided, vertical Mn stain	Trace calcite/q.v Py & Sp	tr
	132·0	3·0	3·0	100%	132						
					133						
					134				134·0 B.C.A 50°		
					135						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 21

LOGGED BY S.R.Y & A.J FROM 120 TO 135 m DATE /4/81 PAGE 9 OF 25

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DRILL ADVANCE / LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						(con) euhedral feldspar.				trace vn Py + Po	tr
	136.0	3.0	3.0	100%							
									137.0 B.C.A 55°		
	139.0	3.0	3.0	100%							
									140.0 B.C.A 30°		
	142.0	3.0	3.0	100%							
									142.5 B.C.A 40°		
					143.1	Black carbonaceous Shale:- minor gy-br fg. silty sandstone	5-8% Cal veining At 143.85:- Knot of silica flooding & Po infilling fractures.		143.1 B.C.A 70°	2-3% dis, frac + vn Py 1% frac + vn Po	3% to 4%
	145.0	3.0	3.0	100%							
					145.8	Tuffaceous sandstone :- gy. gritty, c.g.	3-5% Cal veining.		146.0 B.C.A 50°	trace Py + Po in vns + fracs	tr
					146.85	Black carbonaceous shale :- silicified 148.35 - 148.5 m.	5% cal veining.			2-4% dis, frac + vn Py	2% to 4%
	148.0	3.0	2.9	96.7%					148.4 qz/cbte vn 15°		
									149.0 B.C.A 60°		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 135 TO 150 m DATE /4/81 PAGE 10 OF 25

920466

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						(con) P.g gy-br sandstone band: 150·6 - 151·2 m.			150·6 B.C.A 45°		
	151·0	3·0	2·9	96·7%					153·0 B.C.A 60°		
	154·0	2·7	2·6		154·0	tuffaceous sandstone :- gy-br, fine to m.g.	trace - 1% Cal vns & veinlets.			trace Py	tr
	156·7	2·7	2·7	100%	155·6	Black carbonaceous shale :- with two minor bands of gy-br sandstone as above.	2-3% Cal veining		156·0 B.C.A 60° 157·2 / 157·4] sa bands 158·3 B.C.A 65° 158·4 / 158·8] sa band	2-3% dis, frac-fill vn Py	2% to 3%
	159·4	1·4	1·4	100%	159·45	Grey siltstone grading into gy, gr & br tuffaceous sandstone	5% Cal veining in ss, grading to 1% in sa.		162·0 B.C.A 40°-50°	2-3% Py	2% to 3%
	160·8	1·9	1·95	100%+							
	162·7	1·7	1·8	100%+							
	164·4	2·0	2·0	100%	164·4	BK carbonaceous shale - spotted Calcite vn clasts.			164·7 10 cm breccia infilled & 165·0 Cal & Py		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY & AJ FROM 150 TO 165 m DATE /4/81 PAGE 11 OF 25

920467

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					165.9	Recrystallised limestone/dolomite ?	Cbte vn?		165.9 B.C.A 30°	Barren	–
	166.4	1.9	1.9	100%	166.4	Black carbonaceous shale :- 'pellet texture' 167.4 to 167.6 m: dislocated limestone band - as per RBE 16	1-2 % Cal veining		166.4 B.C.A 30°	trace Sp, Gl in cbte vn < 1cm thick 2-4% dis, frac, vn Py 1-3% Po; banded, frac + vn.	3% to 7%
	168.3	3.1	3.0	96.8%	168.3	Mixed Zone:- Pale gy to light br, Calcareous banded siltstone, calcareous sandstone, minor shale.			169.0 B.C.A 45°	1% banded Po 1% dis + frac Py	2%
					169.8	Mixed Zone of :- Pellet carb shale, banded carb shale + siltstone, silty sandstone + tuffaceous sa with frequent calc horizons as limestones and in matrix of above units, ie : calc ss, sa + sh. 172.0 to 172.4 m silicified shale with fracture Po - capped by 20 cm ls band				dis Py as crystals + aggregates 1-3% banded + fracture Po tr - 1%	1% to 4%
	171.4	1.3	1.3	100%					172.0 B.C.A 40°-45°		
	172.7	2.3	2.3	100%							
	175.0	3.0	3.0	100%					175.0 B.C.A 40°-50°		
	178.0	3.0	3.0	100%					178.0 B.C.A 30°-50°		
									180.0 minor s. sed. deformation.		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 165 TO 180m DATE 1/4/81 PAGE 12 OF 25

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DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						(con)					
	181·0	3·0	2·95	98·3%		Mixed Zone of essentially :-	1-2% calcite veining		181·0 B.C.A 65°	Py + Pb	1% to 4%
						1. Carbonaceous shale ; pellet texture			191·8 ls		
						2. Banded carb sh + siltstone.			182·75 ls		
						3. Subordinate tuffaceous sandstone + silty ss.			183·2 B.C.A 50°		
						4. Sporadic narrow limestone bands - usually within shale or capping sh			184·0 B.C.A 50°		
	184·0	3·0	3·0	100%							
	187·0	3·0	3·0	100%					187·0 B.C.A 45°		
	190·0	3·0	2·95	98·3%					190·0 B.C.A 50° at ~10° to core axis		
					191·3	Calcareous Siltstone pale chocolate br to gy-gr - banded grading into silty sandstone + fine to medium grained gy-gr ?calc (in part) tuffaceous ss at ~ 195·5 m Occasional narrow bands (195·4, 200·3) of bk carbonaceous shale, also frequent bk carb. partings within ss + ss.	2-3% Cal veining. Locally 15%			1-2% dis, frac Py tr Pb	1% to 2%
	193·0	3·0	3·0	100%					193·0 B.C.A 55°		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 180 TO 195 DATE /4/81 PAGE 13 OF 25

920469

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						(con) Calcareous siltstone + sandstones.	2-3% Calcite veining. Locally 15%		196.0 B.C.A 45°	1-2% dis, frac Py tr Py	1% to 2%
	196.0	2.3	1.7	73.9%							
	198.3	0.7	0.7	100%					199.0 B.C.A. 55°		
	199.0	3.0	3.1	100%					201.0 B.C.A 70° (blk sh band)		
	202.0	2.5	2.5	100%					202.0 B.C.A 60° 202.5 Cal vn C.A 55°		
					203.3	Mixed Zone short cycles of:- Black carbonaceous shale, Light grey. brown siltstone, Light gy. green tuffaceous sandstone			205.9 205.0 B.C.A 45° 205.75 206.7 Cal + q.v brecciation /dislocation. C.A 50° 207.5 208.0 B.C.A 45° + 50° 208.6 qz/cbte vn.	tr to 1% dis. frac Py, especially in shales tr Pb. Narrow, (<1 to 5cm) qz/cbte vns & traces of Sp + Gl	~1%
	204.5	1.2	1.2	100%							
	208.7	2.3	2.1	91.3%							
	206.0	3.0	3.0	100%							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 195 TO 210m DATE /4/91 PAGE 14 OF 25

92047.0

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						(con) Mixed zone 211·1 to 211·15 : narrow zone of banded limestone with carbonaceous shale partings - probably a multiple calcite vein with some associated vn quartz.	cal. very negligible. general discolouration + 'talc' impregnation; incipient hydrothermal alteration related to emplacement of ultrabasic body ⇒ serpentinisation ⇒ talc		211·1 B.C.A 211·25 banded ls		
211·0	2·6	2·6	100%								
213·6	2·7	2·1	77·8%		214·15	Pale gy. white talc carbonate with inclusions of carb shales. 215·15 to 215·8 : qz/cbte vn with cockscomb + breccia textures, aggregates of Gl + stringers of Sp			214·15 B.C.A 214·65 } vn C.A 85° 214·8 } 215·15 vn C.A 75° 215·35 qv + selvage Py 215·8 vn C.A 75° } foliation C.A 45°-55°	214·15 214·65 } qz/cbte vn : 2% Sp 214·8 } tr Gl 216·15 5-8% Gl + Sp, 1% Py 215·8	2% 6% to 9%
216·3	3·0	3·0	100%		217·0	Zone of Mixed talc carbonate + bk carbonaceous shale. minor siltstone + tuf sandstone. 219·0 to 219·3 : qz/cbte vn			217·0 contact. C.A 45° 217·9 talc cbte 219·0 vn contact C.A 75° 219·3 vn contact C.A 70° 221·0 talc fol. C.A 45° 221·7 talc cbte	217·0 tr Py + Py 219·0 qz-cbte & subpamlez vn & rare sulphides 219·3 tr Py + Py	tr tr
219·3	3·1	3·1	100%								
222·4	2·9	2·7	93·1%		222·3	Mixed Zone of:- Bk carb shale, Banded gy-br siltstone, Gy-gr, f.g. tuf sandstone.	(as above) chlorite/clay?		222·3 talc/sed contact C.A. 50° 223·8 224·0 B.C.A 40° (banded gy. br ss)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 210 TO 225 m DATE /4/81 PAGE 15 OF 25

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	226·3	2·0	2·0	100%
	228·3	3·0	3·0	100%
	231·3	3·7	3·65	98·7%
	235·0	3·0	3·0	100%
	238·0	3·0	3·0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
(cm)	frequent slickensiding / shearing terminates in slither of bk shale	chlorite / clay?		slickensided.	tr Po + Py	tr
226·7	Talc carbonate, pale gy + gy-gr, barren.			226·7 fault C.A 45° 227·0 foliation C.A 65°	Barren. Relict magnetite	0
230·3	fault crush zone.	chlorite / clay		230·0 fol C.A 60° 230·3 fault C.A. 75°-80°	Barren	0
230·5	slither of talc clote, grading into alternating: massive Pyrrhotite : mas white Bull qz. : chloritised sediment, sheared in part.	clay . chlorite		230·7 Po banding C.A 70° 231·0 q.v. C.A 70°	qz/clote veinlet at 232·65 & trace sp, Gl. 25% massive Po	25%
232·8	Pale coffee brown dislocated dolomitic tuf ss.	black glassy breccia matrix.		233·0 B.C.A 55°? disrupted-dislocated-brecciated.		
233·4	Gy, blue, gr, br, mixed zone of hornfelsed massive: banded siltstone f. to m.g. tuf sandstone bk shale (pellet texture)? Hornfelsing has overprinted original rock colour & textures: banding the only obvious relict texture	chlorite Tremolite/Actinolite Silica?		236·0 Banding C.A 20° mild s. sed deformation & microfaulting 239·0 Banding C.A 30°-40°	Inert.	

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 21

LOGGED BY SRY + AJ FROM 225 TO 240m DATE /4/81 PAGE 16 OF 25

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DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					241	(con) Hornfelsed sediments, predominantly banded. siltstone-misleading as it is the most recognisable unit.	chlorite tremolite/Actinolite silica?*			Inert.	
	241·0	3·0	3·0	100%	242				242 Banding C.A 30° s.sed deformation microfaulting		
					243						
	244·0	3·0	3·0	100%	244						
					245				245·0 Banding C.A 30°		
					246						
	247·0	3·0	3·0	100%	247						
					248				248·0 Banding C.A 35°		
					249						
	250·0	3·0	3·0	100%	250						
					251				251·0 Banding C.A. 35°		
					252				252·0 Banding C.A 50-55°		
	253·0	3·0	3·0	100%	253						
					254						
					255						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 21

LOGGED BY SRY + AJ FROM 240 TO 255 m DATE /4/81 PAGE 17 OF 25

92047.3

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	256·0	3·0	3·0	100%	256·25	Hornfelsed bk carbonaceous shale? (pellet texture) - subsequently dislocated	rare calcite vn chlorite/silica?		256·25 B contact CA 50°		
	259·0	2·0	2·0	100%	260·5	Pale gr to light br/gy siltstone; fine to medium grained slighty tuffaceous sandstone; minor bk carb shale. Interbedded, moderately bedded with minor disruption.	some chlorite alteration. 2-5% irregular, wispy quartz. Partly hornfelsed.		262·0 B at 50°	2-3% Py dis + small blebs (to 2 mm) in all rock types.	2% to 3%
	261·0	2·6	2·7	100%+							
	263·6	1·4	1·4	100%					265·0 B at 45°		
	265·0	3·0	3·0	100%	266·3	Pale, slightly grish gy ss, sa + bk carb sh. Intb. sa is slightly carb, rarely tuf. Moderately well bd, slightly disrupted.	Partially hornfelsed minor chlorite + talc alteration. 5% irregular wispy qz rare Cal.		268·0 B at 45°	2% Py >> Po dis + small blebs (to 3 mm) in all rock types + on qz wispy stringers	2%
	268·0	3·0	3·0	100%							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 255 TO 270 m DATE /4/81 PAGE 18 OF 25

920474

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	271·0	3·0	3·0	100%
	274·0	3·0	3·0	100%
	277·0	3·0	3·0	100%
	280·0	3·0	3·0	100%
	283·0	3·0	3·0	100%

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	(con) At 270·6 : 50 mm band of calcareous siltstone. Intb ss, sa + bk carb sh. (see previous page)			271·0 B at 40°		
				274·0 B at 45°		
275·6	Slightly calc, pale grish gy siltstone + sandstone with lesser bk carb shale. Well bedded to 276·4 m, thereafter much disrupted.	Numerous (10-20%) irregular qz, minor cal, wisps + stringers, occasional vns. Hornfelsed.		275·6 qz/Fluorite/Cal vn, 10mm at 50° 276·3 B at 55°	1-2% Py ≫ Po dis + in qz wisps.	1% to 2%
278·3	Bk carb shale with lesser dk gy carb siltstone + fine grained sandstone. Poorly bd, much disrupted.	Numerous (10%) irregular qz, lesser cal stringers + wisps (especially at start)			3-5% Py ≫ Po dis in all rock types.	3% to 5%
282·1	Pale gy/gr massive tuffaceous sandstone. V. rare ss/sh intercalation.	Rare Cal wisps		282·1 Contact 80°	Nil	0
284·1	(see next page)					

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 21

LOGGED BY SRY + AJ FROM 270 TO 285 m DATE /4/81 PAGE 19 OF 25

9204/3

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Pale gy/gr tuffaceous sandstone with lesser black carbonaceous shale + siltstone. Poorly + irregularly bedded, partly disrupted. Tuff sa massive in places, especially 289.1 - 290.2 m.	<5% wisps, stringers + minor vns of calcite, + quartz.		285.0 B 70°	Trace disseminated Py, mainly in bk sh	tr
	286.0	3.0	3.0	100%					287.9 : 12 mm Cal vn at 20°		
	289.0	3.0	3.1	100%					289.0 B 60°		
	292.0	3.0	3.0	100%					292.0 B 70°		
									292.15 } vn: Bustamite, qz, minor cbte. contacts at 60° 292.65 }	4% Sp, 2% Gl, 7% Po	13%
											tr
					293.8	BK carb shale + dk gy, fine grained carb sandstone. Rare siltstone, rare tuff. Very carb to 295.4 m. Intermixed, moderately to poorly + irregularly bedded. Partly disrupted.	10-20% irregular cal/qz stringers.			3-5% Py dis + in blebs up to 4 mm long, occasionally on stringers.	3% to 5%
	295.0	3.0	3.0	100%			295.4 rare qz, cal thin vns (< 2mm) + stringers.		295.0 B 45°		
	298.0	3.0	3.0	100%					298.0 B 60°		
					298.4	Pale gy/gr tuf sandstone with lesser siltstone. Moderately to poorly bedded, disrupted.	rare qz/cbte vns.		299.1 q.v. 25 mm at 30°	Trace dis Py, Po	tr

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 285 TO 300 m DATE /4/81 PAGE 20 OF 25

020

920420

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
											tr
	301·0	3·0	3·1	100%	301·6	DK gr/bk Basic? Igneous rock or basalt with fine speckled appearance and rare banding.			301·6 contact 50°	Nil	0
					302·9	Pale gy/gr siltstone & lesser tuf sandstone. Disrupted.	rare cbte vns		302·9 contact 50° 303·3 B ~ 60° 303·65 contact 55°		
	304·0	3·0	3·1	100%	303·65	Vein: Bustamite with lesser cbte/siderite ± qz, sphalerite ± Galena Pale/dk gr mottled, & some banded qz/cbte.				7% Gl in blebs to 40mm 7% sp dis ± intergrown & Gl 7% P dis 3% Py dis <1% Cp dis	25%
					305·15	Slightly greenish, medium gy siltstone ± sandstone, rarely tuf. minor shale, slightly carb. Moderately bedded, partly disrupted	some chlorite alteration occasional to rare qz/cbte vns		305·15 contact 55° 305·25 18mm vn, 80° bustamite, minor 305·45 20mm vn, 50° bustamite, Py, Sp, Ag, minor Py, Pb, tr Sp, Ag Py. 306·0 B 45°	2-3% Pb ± Py dis ± in blebs up to 4mm long occasionally along stringers; in all rocks but more concentrated in ss.	2% to 3%
	307·0	3·0	3·0	100%					308·2 11mm vn, 40°, cbte, qz, minor Pb, Py, Sp		
	313·0	3·0	3·0	100%					310·1 vn, 30°, banded qz, cbte, bustamite, minor Ag Py; 310·45 lesser Sp, Pb; tr Gl, Py 311·0 B 80°		
	316·0	3·0	3·0	100%	311·4	Sandstone ± siltstone in fairly even proportions, broadly interbd. Ss is sometimes tuf, especially at start. Gr/gy & occasional brown tinge. Moderately to poorly bd, partly disrupted.	some specks of chloritic alteration occasional to rare qz/cbte veins ± stringers.		314·5 B 50°	1-2% Py > Pb dis ± in blebs in both rock types. Varies locally from 0-5%	1% to 2%

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 21

LOGGED BY SRY & AJ FROM 300 TO 315 m DATE /4/81 PAGE 21 OF 25

RBE 21
11704026

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					316	(con) Sandstone + siltstone (see previous page)				1-2% Py > Po (see previous page)	1% Po 2%
	316.0	3.0	3.0	100%	317						
					318				318.0 B 60°		
	319.0	3.0	3.0	100%	319						
					320						
					321						
	322.0	3.0	3.0	100%	322				322.0 B 70°		
					323						
					324						
	325.0	3.0	3.0	100%	325				325.0 B 40°		
					326						
					327						
	328.0	3.0	3.1	100%+	328		Some thin (0.5mm) cbte stringers in this zone.		328.0 B 60°		
					329				328.05 / 328.05 vn (T.W. 50mm) 30°, qz lesser cbte, minor Po, sp.		
					330						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY + AJ FROM 315 TO 330 m DATE /4/81 PAGE 22 OF 25

022

CY/1026

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						(con) Sandstone + siltstone (see page 21)			331·0 B 50°	1-2% Py > Po (see page 21)	1% to 2%
	331·0	3·0	3·0	100%	331						
					332						
					333						
					333·7	Dark gy, slightly carbonaceous siltstone + sandstone Poorly bedded, fairly massive.	Occasional qz/cbte wisps + stringers; generally ~ 1 mm.		334·0 B 60°	trace Py	tr
	334·0	2·0	2·0	100%	334						
					335						
	336·0	1·7	1·7	100%	336						
					337						
	337·7	2·3	2·3	100%	338						
					339	338·8					
	340·0	3·0	3·0	100%	340	Sandstone + siltstone in fairly even proportions, broadly interbedded. Sa is sometimes tuffaceous, gy/gr with occasional brown tinge. Moderately to poorly bedded, partly disrupted.	Some specks of chloritic alteration Some cbte/qz vns, stringers + wisps		340·0 B 60°	1% Po > Py in blebs, dis + in vns + stringers.	1%
					341						
					342				342·1 contact 30°; vn. brec for lower 400 mm & seds. cbte/st; lesser qz; minor AsPy, Po; tr Sp, Py	AsPy + Po equally trace Sp, Py	5%
	343·0	3·0	3·0	100%	343				343 agg 150 mm cbte/Py irregular vns.	Py >> Po in cbte vns	3% to 5%
					344				343·7 70 mm vn, 60°, Po > cbte 344·2 minor Py, tr Sp		1%
					345						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 21

LOGGED BY SRY + AJ FROM 330 TO 345m DATE /4/81 PAGE 23 OF 25.

C14026

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	346·0	3·0	3·1	100%					346·0 B 80°		
					346·7	Green. Basic? Igneous rock or basalt, slightly speckled & banded with quartz. No bedding as there is in tuf. sandstone. Otherwise fairly massive.	Chloritic.		346·58 vn, 55°, banded cbte/ 346·7 Ankerite, minor AsPy, Py, Sp.	Nil	0
	349·0	2·7	2·8	100%							
					350·2	Sandstone & siltstone in fairly even proportions, broadly intb. Sa is often tuf. gr/gy with occasional br tinge. moderately bedded, minor folding & disruption.	Occasional to rare carbonate & quartz vns & stringers.		350·2 Contact brecciated 350·6 85 mm vn, 35°, cbte; minor 350·75 qz, weak tr Py, Pb, Sp 351·0 150 mm vn, 30°, cbte; 1250 qz, Py; minor Pb; tr Sp	Minor sulphides only in veins as described	0
	351·7	3·1	3·2	100%					352·0 B 50°		
	354·8	3·1	3·1	100%					357·0 B 50°		
									357·7 18 mm vn, 40°, qz, tr Py.		
	357·9	3·1	3·0	96·8%					359·2 vn, 55° cbte, qz, sads 359·4 minor Sp, tr Pb, Py 359·45 18 mm vn, 60°, cbte, Pb, tr Sp		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 21

LOGGED BY SRY & AJ FROM 345 TO 360 m DATE ../4/81.. PAGE 24 OF 25

02A

9204S0

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
									360·8 40mm qz/sads breccia zone; 60°		
	361					End of DDH: RBE 21 at 361·0m					

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RBE 21

LOGGED BY SRY + AJ FROM 360 TO 361m DATE 1/4/81 PAGE 25 OF 25

920484

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
0											No core recovery: Tricone Sludge.					
	BLD	220	BLD	36	167	BLD	15	101								21/1
13.0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 0 TO 15 m DATE 13/3/81 PAGE 1 OF 25

9210482

Metre	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
	15	179	BLD	35	142	0·4	25	126								21/2
21·0	55	260	BLD	83	290	11·1	300	121								21/3
27·0	30	370	BLD	54	250	3·5	220	110								21/4
30·0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 15 TO 30m DATE 13/3/81 PAGE 2 OF 25

92048

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
30.0																
	40	500	BLD	74	240	5.6	300	136.								21/5
33.0																
	15	135	BLD	155	290	2.0	190	94								21/6
36.0																
	10	125	BLD	86	240	1.1	80	96								21/7
39.0																
	15	310	BLD	74	220	1.3	80	103								21/8
42.0																
	10	143	BLD	64	200	0.9	70	104								21/9
45.0																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 30 TO 45m DATE 13/3/81 PAGE 3 OF 25

9204841

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
45·0	9	105	BLD	103	420	0·7	60	98.					End of Tricone Sludge.			21/10
48·0	No	sample											No analysis			
51·0	25	56	BLD	10	170	0·1	39	100					Start of Ground Core.			
54·8	40	50	BLD	430	890	0·7	56	103								
57·5	70	310	BLD	880	2400	3·0	6000	100								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 45 TO 60m DATE 13/3/81 PAGE 4 OF 25

9204185

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
60																
61																
61.0																
62	100	75	BLD	710	3000	1.0	290	85								
63																
64																
64.0																
65	110	103	BLD	270	720	1.0	530	82								
66																
67																
67.0																
68	15	48	BLD	44	290	0.5	50	59								
69																
69.5																
70																
71	15	48	BLD	35	230	0.2	22	102								
72																
73																
73.0																
74	15	44	BLD	16	250	0.1	18	100								
75																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 60 TO 75m DATE / /81 PAGE 5 OF 25

92018

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
75																
76																
76·0	10	43	BLD	12	260	BLD	10	106								
77																
78																
79																
79·0	15	36	BLD	9	180	BLD	10	103								
80																
81																
82																
82·0	1750	87	BLD	143	510	1·1	750	97								
83																
84																
85																
85·0	50	44	BLD	11	142	0·2	28	96								
86																
87																
88																
88·0	55	130	TR	320	380	2·3	1000	80								
89																
90																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 75 TO 90m DATE / /81 PAGE 6 OF 25

037

920487

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
90																
91																
92																
92·6	35	105	BLD	22	870	0·3	37	99								
94·0	10	44	BLD	13	143	0·2	50	108								
97·0	25	84	BLD	280	1450	0·5	22	110								
100·0	10	47	BLD	8	178	0·3	20	106								
103·0	7	49	BLD	16	186	0·2	9	104								
108																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 90 TO 105 m DATE / /81 PAGE 7 OF 25

832

9204883

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
105																
106	106·0															
107		10	56	BLD	8	170	0·2	13	100							
108																
109	109·0															
110		9	69	BLD	50	310	0·3	43	98							
111																
112	111·5															
113		20	55	BLD	19	220	0·2	22	87							
114																
115	114·6															
116		15	61	BLD	15	390	0·2	21	110							
117																
118	117·7															
119		20	47	BLD	220	370	0·4	40	115							
120	120·0															

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 105 TO 120m DATE / /81 PAGE 8 OF 25

920489

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
120.0	I.S	52	I.S.	41	240	0.3	I.S.	98								
121.0	9	66	BLD	58	180	0.3	7	92								
124.0	20	55	10	20	190	0.2	19	91								
127.0	5	72	BLD	9	133	0.3	12	103								
130.0	20	70	BLD	68	730	0.3	10	100								
133.0	15	71	BLD	13	400	0.3	9	113								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 120 TO 135m DATE / /81 PAGE 9 OF 25

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
135																
136																
136.0	7	53	BLD	15	730	0.2	14	113								
137																
138																
139																
139.0	9	59	BLD	4	210	0.3	7	104								
140																
141																
142																
142.0	15	98	BLD	16	137	0.3	6	89								
143																
144																
145																
145.0	4	56	BLD	7	195	0.2	16	84								
146																
147																
148																
148.0	BLD	66	BLD	10	110	0.4	15	80								
149																
150																

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 21

ASSAYED BY Analabs FROM 135 TO 150 m DATE / /81 PAGE 10 OF 25

055

620401

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
150																
151																
151.0																
152	8	67	BLD	8	240	0.8	19	80								
153																
154																
154.0																
155	7	56	BLD	10	40	0.4	30	95								
156																
156.7																
157	20	103	BLD	148	370	1.5	65	85								
158																
159																
159.4																
160	30	80	BLD	300	1050	1.2	70	99								
161																
162																
162.7																
163	35	72	BLD	310	600	0.5	27	76								
164																
165																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE21

ASSAYED BY Analabs FROM 150 TO 165 m DATE / /81 PAGE 11 OF 25

036

9204392

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
165																
166																
166.4																
167	40	75	BLD	63	410	0.5	250	68								
168																
168.3																
169																
170	30	72	BLD	60	330	0.8	27	82								
171																
171.4																
172																
173	10	59	BLD	21	320	0.4	240	84								
174																
175																
175.0																
176																
177	10	71	BLD	12	164	0.3	19	83								
178																
178.0																
179	8	74	BLD	11	165	0.2	13	86								
180																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 165 TO 180 m DATE / /81 PAGE 12 OF 25

037

92043

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
180																
181																
181.0	9	65	BLD	41	194	0.3	9	71								
182																
183																
184																
184.0	10	50	BLD	11	200	0.2	56	85								
185																
186																
187																
187.0	8	52	BLD	11	210	0.2	26	86								
188																
189																
190																
190.0	25	72	BLD	79	440	0.4	27	89								
191																
192																
193																
193.0	20	49	BLD	26	360	0.3	6	85								
194																
195																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 180 TO 195 m DATE / /81 PAGE 13 OF 25

038

020494

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
196·0	10	56	BLD	20	140	0·3	16	87								
199·0	8	48	BLD	33	161	0·2	28	65								
202·0	15	49	BLD	14	380	0·2	17	79								
205·7	10	54	BLD	12	280	0·2	8	79								
208·0	35	79	BLD	870	1900	1·6	190	58								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 195 TO 210m DATE / /81 PAGE 14 OF 25

080

9204 93

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
211.0	20	99	BLD	88	460	0.5	19	90								
213.6 (→216.3)	380	360	BLD	3.9%	4.1%	1.7	2400	850						End of Split	Ground Core ↓	Core.
214.15	10	15	BLD	335	675	1.5	540	1750								Tq542
214.65	380	3950	BLD	3.8%	8.7%	95.0	1900	780								Tq543
214.8	25	35	BLD	1400	2350	13.5	1000	1700								Tq544
215.15	800	780	2.5/BLD	6.5%	5.3%	130	2400	395				W by 2 analysis	different methods			TD810
215.8	80	210	30	2500	4650	4.5	830	440						Split	Core ↑	Tq545
216.07	380	360	BLD	3.9%	4.1%	1.7	2400	850						Ground	Core ↓	
216.3	35	63	BLD	675	1300	1.4	480	880								
219.3	BLD	30	BLD	540	690	0.6	50	770								
222.4	25	9	BLD	59	240	0.4	200	26								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 210 TO 225m DATE /81 PAGE 15 OF 25

920426

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
225																
225·2																
226																
227	25	6	BLD	56	24	0·4	1800	900								
228																
229																
229·0 (+232·1m)	25	330	BLD	260	1·31%	3·8	4800	860						Ground	Core ↑	
230·5	30	3250	3·0/BLD	1050	10·5%	35·0	1000	1600				W by 2 methods & W different detection levels.		Split	Core ↓	TQ546
230																
230·85	110	205	BLD	130	1700	2·5	1·4%	380								TQ547
231·5	15	1250	BLD	360	2·4%	5·5	950	1800								TQ548
231·75	190	215	BLD/30	6350	9600	13·0	3500	225				W				TQ549
231																
232·05	15	45	BLD	280	600	3·0	620	140								TQ550
232·4	55	80	20	2350	2000	8·5	610	180						Split	Core ↑	TQ661
232·66 (From 232·1)	40	27	BLD	650	600	1·9	1900	115						Ground	Core ↓	
233																
234																
235·0																
235																
236	20	57	BLD	59	360	0·4	180	120								
237																
238·0																
238																
239	20	128	BLD	33	220	0·3	50	135								
240																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 228 TO 240m DATE /81 PAGE 16 OF 25

OAZ

920491

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
241·0	20	15	BLD	27	220	0·3	70	163								
244·0	15	40	BLD	11	170	0·3	48	170								
247·0	25	42	TR	29	185	0·4	34	72								
250·0	10	16	BLD	240	280	0·6	27	60								
253·0	15	23	BLD	21	240	BLD	75	150								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 240 TO 265 m DATE / /81 PAGE 17 OF 25

042

920498

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
255																
256	256.0															
257		20	31	BLD	14	175	0.1	70	140							
258																
259	259.0															
260		20	34	BLD	12	167	BLD	55	114							
261	261.0															
262																
263		15	47	BLD	17	240	0.1	31	101							
264																
265	265.0															
266																
267		6	51	BLD	11	190	BLD	18	85							
268	268.0															
269		45	74	BLD	15	320	0.1	53	81							
270																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 255 TO 270 m DATE / /81 PAGE 18 OF 25

920499

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
271·0	35	46	BLD	24	180	BLD	63	64								
274·0	110	26	BLD	14	260	0·1	2300	96								
277·0	100	124	BLD	16	250	0·2	1900	71								
280·0	15	69	BLD	10	153	BLD	34	85								
283·0	BLD	57	BLD	8	200	0·1	16	100								

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 270 TO 285 m DATE / /81 PAGE 19 OF 25

9205300

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni	SAMPLE NUMBER
286·0	6	49	BLD	7	196	0·1	10	103	
289·0 (+292·0)	20	64	BLD	180	1050	0·6	19	101	
									Ground Core ↑
291·9	55	45	30	700	4400	2·0	380	170	Split ↓ TQ552
292·15	230	280	2·5/BLD	2·35%	1·55%	43·0	5500	70	TD811
292·65	20	25	BLD	155	405	0·5	380	135	Split ↑ TQ553
									Ground Core ↓
292·9 (from 289·0)	310	330	BLD	6500	2·8%	3·0	3600	61	
295·0	BLD	62	BLD	97	300	0·1	37	87	
298·0	55	35	BLD	420	1200	0·6	210	82	

W by 2 methods with different detection levels.

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 285 TO 300 m. DATE / /81 PAGE 20 OF 25

TQ5026

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
301·0 (→304·0)	140	1270	BLD	1700	3300	3·4	2000	110								
														Ground	Core ↑	
303·35	120	10	30	110	225	1·0	480	130						Split	Core ↓	TQ554
303·65	85	215	1·5/BLD	3850	1·2%	25·5	7800	76								TQ555
303·8	310	230	3·5/BLD	2·3%	1·5%	51·5	7500	175								TD812
304·0	450	2450	4·0/BLD	6·35%	4·35%	100	4600	90								TD813
304·3	380	590	1·5/BLD	10·5%	6·6%	280	2000	55								TD814
304·7	250	280	BLD	5400	2·55%	33·0	1·0%	180								TD815
304·9	90	380	20	3900	5500	68·0	850	270								TQ556
305·25	140	135	BLD	810	4300	3·0	2700	125								TQ557
305·6	30	220	BLD	165	230	1·0	98	175						Split	Core ↑	TQ558
306·1 (from 304m)	490	1250	BLD	6·5%	6·9%	18·0	1800	56						Ground	Core ↓	
307·0	85	250	BLD	550	630	1·2	280	92								
310·1	170	260	BLD	1·5%	1·4%	17·5	3·5%	225						split	Core →	TQ559
310·45 (from 310·0)	140	63	BLD	4000	3100	3·3	8000	84						Ground	Core ↓	
313·0	65	167	BLD	82	210	0·2	260	90								

W by 2 methods of analysis with different levels of detection.

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 300 TO 315m DATE /1/81 PAGE 21 OF 25

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
316·0	110	167	BLD	250	490	0·4	390	104								
319·0	140	14	BLD	87	390	0·2	230	103								
322·0	35	310	BLD	51	200	0·2	24	80								
325·0	140	270	BLD	1780	320	4·4	41	85								
328·0	100	260	BLD	90	840	0·7	52	92								

COMSTAFF PROPRIETARY LIMITED **ASSAY RESULT SHEET FOR** DDH RBE 21

ASSAYED BY Analabs FROM 315 TO 330m DATE / /81 PAGE 22 OF 25

9205503

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
330																
331	331·0															
332		70	290	BLD	70	190	0·2	60	82							
333																
334	334·0															
335																
336		25	25	BLD	28	165	0·2	41	102							
337																
338	337·7															
339		80	38	BLD	51	220	0·3	260	100							
340	340·0															
341			89		570	5800	4·8		86							
342																
343	343·0															
344			173		177	830	0·6		93							
345																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 330 TO 345 m DATE / /81 PAGE 23 OF 25

048

020504

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
345																
346	346.0															
347		100	86	BLD	168	920	0.5	1900	80							
348																
349	349.0															
360		120	38	BLD	131	600	0.4	630	80							
351																
352	351.7															
353			26		25	250	0.1		96							
354																
355	354.8															
356		110	18	BLD	70	310	0.1	300	108							
357																
358	357.9															
359		140	17	10	101	340	0.3	200	88							
360																

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 345 TO 360 m DATE / /81 PAGE 24 OF 25

920505

Metres	Sn	Cu	W	Pb	Zn	Ag	As	Ni								SAMPLE NUMBER
360																
361																
361.0																
	End of	DDH:	RBE 21	at 361 m.												

COMSTAFF PROPRIETARY LIMITED ASSAY RESULT SHEET FOR DDH RBE 21

ASSAYED BY Analabs FROM 360 TO 361 m DATE / /81 PAGE 25 OF 25

050
905026

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

DDH : RBE 22

920508

000

C.M.* A.O. | C.Q. | E.O. | D.S.M.E.
Registrar
Received Answered - 1 JUN 1981
E & IL
DEPT. OF MINES
REF. No. 4509181

MICROFILMED

This is the rough working copy only - there are no analysis sheets drawn up & results are incomplete (as is summary)

001

920509

AUSTRALIAN ANGLO AMERICAN LIMITED
DRILLHOLE LOG
Summary Sheet

Page 1 of

PROJECT RENISON	AREA GAR		DRILLHOLE TYPE DDH
CO-ORDS 372601 2 5372780·6	DEC^{LN} −45°	AZIMUTH 77° MN	RL 176 5m DH No. RBE 22
DATE COMMENCED	DATE COMPLETED	DRILLED BY LONGYEAR	DRILL RIG LONGYEAR 38.
Non Coring to: 42·3 m	HQ Core to: —	NQ Core to:	BQ Core to: 500 2 m EOH 500 2 m

SURVEY DATA

Instrument:

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH

LOG SUMMARY

ROCK TYPE.	MINERALIZATION Style	Grade	Intersection width (Corr)
0·0 − 42·3 m tricored			
42·3 − 50 0 inte pu/red fa-cg tuf sa ± py/red ss.		tr Py	
50 0 − 67·8 inte gy, fa-cg, tuf sa ± gy ss.		tr Py	
67·8 − 79·7 inte ± intb, fa-cg, gy, gr/gy tuf sa ± gr/gy ss		tr Py, Aspy	
79·7 − 106·6 inte, fg-cg gy, dk gy tuf sa, intb gy, dk gy ss	Cal vns	tr Py	
106·6 − 120 1 alt gr-wh, mg-cg ums			
120·1 − 121 5 inte ± intb gy (bleached?) fg-mg tuf sa ± ss			
121·5 − 132·2 alt gr gb?			
132 2 − 132·8 gy, mg, tuf sa ± dk gy ss			
132·8 − 133 5 alt gr gb?			
133 5 − 134 8 intb gy ± dk gy ss			
134 8 − 136 4 qtz cbts vn		Sp, Py, Aspy 2%	
136 4 − 145·7 inte ± intb gy ± dk gy ss ± minor gy tuf sa ± bk sh	qtz vns	Py, Aspy 1%	
145·7 − 151 8 fg-mg, gy ± dk gy, tuf sa, minor ss			
151 8 − 176 1 inte gy, fa-mg, tuf sa ± intb gy, ± dk gy ss	Cal vns	Py, Aspy, Gl tr	
176 1 − 182 7 alt br tuf? sa		Py 2%	
182 7 − 230 0 inte ± intb, gr-gy, mg tuf sa ± ss ± tr bk sh		Py tr	
230 0 − 240·0 inte ± intb. gy tuf sa, gy ss ± carb bk sh		Py 1%	
240·0 − 275·0 inte ± intb gy, tuf sa, ± gy ss		Py 1%	
275·0 − 289 4 inte ± intb. gy ± dk gy ss ± carb bk sh ± minor massive tuf sa units		Py 2%	
289 4 − 298·1 mixed sediments.		Py 2%	
298·1 − 303 2 carb bk sh ± calc dk gy ss		Py 3%	
303 2 − 309 3 mixed sediments		Py 4%	
309 3 − 323·0 alt mg, br ± gr/gy tuf sa		Py tr	
323·0 − 324 8 intb ± inte, carb bk sh ± minor gy ss		Py 4%	
324 8 − 351 6 inte ± gy ± dk gy ss ± fg-mg tuf sa		Py tr	
351 6 − 367·1 mixed sediments		Py 5%	

002

920510

AUSTRALIAN ANGLO AMERICAN LIMITED
DRILLHOLE LOG
Summary Sheet

Page 2 of

PROJECT	AREA	DRILLHOLE TYPE

CO-ORDS	DEC^LN	AZIMUTH	RL	DH No.

DATE COMMENCED	DATE COMPLETED	DRILLED BY	DRILL RIG

Non Coring to:	HQ Core to:	NQ Core to:	BQ Core to:	EOH

SURVEY DATA

Instrument:

DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH	DEPTH	DECLINATION Uncorr	DECLINATION Corr	AZIMUTH

LOG SUMMARY

ROCK TYPE	MINERALIZATION Style	MINERALIZATION Grade	MINERALIZATION Intersection width (Corr)
361.1 - 369.8 intln & intc gy. dk gy & minor br ss			
ē fg-mg. gy. br tuf sa		tr P_y /	
369.8 - 375.0 Mixed Sediments			
375.0 - 382.0 intc & intln gy. dk gy ss ē gy fg. mg tuf sa		P_y 4%	
382.0 - 388.0 mixed seds and qtz/cbte vns 388.0 - 394.2 highly alt ~~tuf sa~~ ? (gabbro) (tr P_y)	qtz / cbte vns	(P_o, P_y, Cp, A_{sPy}, Sp, Gl) 12%	
394.2 - 414.7 ~~highly~~ alt. mixed sediments	qtz vns	Sp, P_y 3%	
414.7 - 454.0 gr. wh & gy cbte & talc	sweated out	Mt 5%	
454.0 - 483.1 intc & intln. carb bk-gn ē minor gy. tuf sa & ss	Cal vns	P_y 3%	
483.1 - 486.8 gy-wh. brec. clay	diss & Cal vns	P_y 2%	
486.8 - 487.8 qtz, cbte, P_o vns	mass P_o	P_o, P_y, A_{sPy} 20%	
487.8 - 500.2 intc & intln fg-mg gy. gr-gy & br-gy tuf sa & ss		A_y tr	

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					31	TRIGONIED.					
					32						
					33						
					34						
					35						
					36						
					37						
					38						
					39						
					40						
					41						
					42	START OF NQ CORING.					
	42.30	0.70	0.68	97	43	tuffaceous sandstone and siltstone.	minor carbonate ? along fractures and tension cracks dark green		unit generally fractured heavily, with tension cracks. core highly broken.	very minor amounts of very fine. disseminated Pyrite Py tr.	
	43.0	2.80	2.72	97	44	interclated purple/red fine to coarse grained (mainly coarse) tuffaceous sandstone with purple/red siltstone.					
					45						

5 cm

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RGE 20

LOGGED BY J.C FROM 39 TO 45 DATE 12/4/91 PAGE 4 OF .....

5036

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	46·8	0·50	0·50	100
	46·3	2·40	2·27	95
	48·7	1·30	1·30	100
	50·0			
	50·6	0·60	0·60	100
	50·6	0·80	0·80	100
	51·4	1·00	1·00	100
	52·4	1·10	1·10	100
	53·5	1·50	1·40	100
	55·0	2·50	2·40	88
	57·5	2·10	2·10	100
	59·6	2·00	1·99	100

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
46	tuffaceous sandstone and siltstone intercalated purple section			core highly broken.	minor pyrite	
47						
48						
49				49·5 B @ 35° (ss)		
50	50·0 units change from purple to grey.			50·0 distinct contact @ 20°		
51				51·4 B @ 36° (ss/tuf ss)		
52				52·0 B @ 20° (tuf ss/ss) cyclic?		
53		53·1 tension gashs filled with quartz (vuggy). (minor)				
54				54·0 B @ 20° (ss)		
55						
56						
57	57·00 dark grey units with the grey units	increasing carbonate veins		56·7 B @ 26° (ss) core less broken but still high breakage increasing amount of tension gashs		
58						
59				58·7 B @ 27° (tuf ss).		
60				5 cm		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY TC FROM 45 TO 60 DATE 12/4/81 PAGE 5 OF .....

RBE 22 19

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					61	interbedded and interbedded (minor) fine to coarse grained grey, dark grey tuffaceous sandstone and grey, dark grey siltstone.	common carbonate. minor quartz veination. disrupted and smooth.		core with minor discoloration, sandstone mostly a "massive" unit. 61.2 B @ 45° (tuf sa/ss).	trace mineralisation with the carbonate veins. Asps, Py	tr
61.6	1.50	1.50	100		62						
63.1	0.70	0.50	71		63						
63.8	0.70	1.50	88		64		64.12 quartz vein over 300 mm with chloritized sides.				
65.5	1.40	1.40	100		65				decrease in core "darkness".		
66.9	3.10	2.99	97		66		66.5 carbonate vein with minor brecciated sediments over 100 mm @ 62°				
					67	67.8 sediments change to green/grey.	66.7 carbonate vein over 120 mm		68.0 ?B @ 35° (ss/tuf sa).		
					68						
					69						
70.0	3.00	2.00	100		70						
					71				70.8 B @ 50° (ss/tuf sa).		
					72				72.3 B @ 70° (tuf sa).		
73.0	2.00	2.00	100		73						
					74	74.3 - 0.7m of dark green tuffaceous sandstone.					
					75						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CBE 22

LOGGED BY J.C. FROM 60 TO 75 DATE 13/4/81 PAGE 6 OF .....

CBE 22 60-75

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	75.0	1.00	1.00	100		Green-Grey tuffaceous sandstone and siltstone with Grey bands down to 79.7.	common carbonate veins mostly disrupted. increase in number of veins, generally small (< 2mm).		green-grey units have minor disruption, moderate disruption in the grey/dark grey units. common microfaulting.	trace mineralization with the carbonate veins. Py	tr
	76.0	3.00	2.75	92		76.9 0.9m of dark Grey tuffaceous sandstone and minor siltstone.			76.9 bedding contact? @ 33°		
	79.0	3.00	3.00	100		79.7 units all change to Grey and dark grey equal amounts of intercalated fine to coarse grained tuffaceous sandstone with bedded to laminated grey and dark Grey siltstones with rare black shale.	minor quartz veination usually small veins (<2mm)	tfs	78.8 B @ 15°? bounding across bedding		
									contact marked by carbonate vein (along bedding?) @ 25°		
									81.5 B @ 23° (ss).		
	82.0	3.00	2.91	96							
									84.6 B @ 15°-38° (ss) (microfaulting)		
	85.0	3.00	3.00	100			85.5 quartz carbonate vein 10mm @ 62°			85.3 vein contains Sp, Py, Ag2S? (3%) (1%) tr	4%
									87.5 B @ 47° (ss/tuf sa).		
	88.0	3.00	2.92	96							
									89.6 B @ 25° (ss).		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBC 20

LOGGED BY J.C. FROM 75 TO 90 DATE 13/4/88 PAGE 7 OF .....

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						interbedded and interlaminated grey and dark grey siltstone with minor black shale and sandstone.	common carbonate, mostly with the siltstone / shale, smooth and disrupted		moderate disruption mostly in siltstone / shale units sandstone generally massive.	barren.	
	91.0	3.00	3.00	100							
									93.7 B? @ 28° (SS).		
	94.0	3.00	2.41	80					95.0 B @ 28° (SS/Sh).		
									96.8 B? @ 50° (gy SS/dk gy SS).		
	97.0	2.40	2.40	100					98.6 B @ 52° (thf sc / SS). 99.0 B @ 51° (SS).		
	99.4	0.60	0.60	100		99.5 grey fine to medium grained tuffaceous sandstone with grey siltstone (slightly more sand than silt) interbedded units	minor carbonate vaination (usually basal (Veinlets) and smooth.		minor disruption, mostly massive calcilutite units	barren.	
	100.0	3.00	2.48	99							
	103.0	3.00	3.00	100							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RRE 22

LOGGED BY J.C. FROM 90 TO 105 DATE 13/4/89 PAGE 8 OF .....

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	106.0	3.00	3.00	100
	109.0	3.00	2.90	97
	112.0	3.00	2.85	95
	115.0	3.00	3.00	100
	118.0	3.00	3.00	100

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	interculated grey tuffaceous sandstone and siltstone	minor carbonate veniation		minor disruction massive units.	barren.	
106.6	ultrabasic. altered? green-white (predominantly white) medium to coarse grained ultrabasic with common pale green talc? and very common feldspars? has gritty feel but no / very little quartz present. unit is fairly soft. gabbro?	common black alteration product? along vans; increases downhole.		? contact sharp @ 44° massive unit	barren.	
	slight yellow tinge					
				5 cm		
				? contact sharp @ 49°		

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED — **DRILLHOLE LOG FOR** DDH RIBE 20

LOGGED BY T.A. FROM 105 TO 120 DATE 15/4/81 PAGE 9 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION / VISUAL PERCENTAGE MINERALISATION
					120.1	tuffaceous sandstone and siltstone interstratified and minor interbedded green (bleached?) fine to medium grained tuffaceous sandstone with grey (bleached?) and dark grey siltstone, with rare black shale.	Very minor carbonate veination usually with the dark grey units.		moderate disruption, with the dark grey siltstone 121.6 B @ 26° (TB).	barren, except for minor zone of bleached siltstone with blebs of pyrite between 120.6 and 120.7m
121.0	3.00	3.00	100							
124.0	3.00	2.70	90						125.2 to 126.2 microfaulted and interbedded siltstone, B varies 20° to 65°	
127.0	3.00	3.00	100		127.6	2.5 metres of predominantly dark grey siltstone including considerable broken zone			moderate to heavy disruption. 128.8 B varies 28° - 40° 129.8 300mm of broken core.	
130.0	3.00	2.75	92		131.5	ultrabasic (gabbro?) altered green gabbroic unit	"		soft and broken core	
					132.2	tuffaceous sandstone and siltstone	minor carbonate.			
					132.8	green medium grained tuffaceous sandstone with dk grey siltstone				
					133	ultrabasic (gabbro?) altered green gabbroic unit			soft and broken core	
133.0	3.00	3.00	100		133.5					
						siltstone. interbedded grey and dark grey siltstone.	minor carbonate and quartz veination.		moderate disruption. 134.4 ?B @ 28° contact @ 70°	
					134.8					

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RRE 22

LOGGED BY T.C FROM 120 TO 135 DATE 9/4/81 PAGE 10 OF .....

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Quartz carbonate vein. Siderite / quartz vein with minor brecciated sediments			vein @ 31°?	very minor sphalerite, pyrite and arsenopyrite?	2%
	136.0	3.00	3.00	100	136.4				contact @ 44°? (61°?)		
						siltstone interbedded and interbedded grey and dark grey siltstone, with minor grey tuffaceous sandstone and black shale.	minor to moderate calcite veination. minor quartz veination		Moderate disruption. bedding variable, but generally shallow to core axis in top section.	barren except for quartz veins at 141.9	
	139.0	3.00	3.00	100							
	142.0	1.80	1.74	97			141.9 highly broken core with common vuggy quartz to 143.0. with minor carbonate.		core highly broken.	common pyrite. Minor arsenopyrite?	10%
	145.8	3.00	3.00	100					142.1 B @ 44° (ss/sa)		
							145.1 carbonate / quartz veins. over 60 mm. @ 68°			145.1 veins contain Py	5%
					145.7				sharp contact @ 70°		
	148.8	1.20	1.16	96		tuffaceous sandstone. fine to medium grained grey and dark grey tuffaceous sandstone, minor clasts of black siltstone in some sections. parts with brown tinge.	slight alteration throughout? minor calcite veination throughout		minor disruption, massive unit	barren	
	148.0	3.00	3.00	100							

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C. FROM 135 TO 160 DATE 22/4/91 PAGE 11 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						massive tuffaceous sandstone					
	151.0	3.00	3.00	100	151.8	tuffaceous sandstone and siltstone interbedded grey fine to medium grained tuffaceous sandstone with interbedded grey and dark grey siltstone.	minor quartz / calcite veination.		minor to moderate disruption 152.7 B @ 28° (cs)	trace pyrite in calcite veins	0.5%
	154.0	3.00	3.00	100					154.6 B @ 31° (cs)		
	157.0	2.80	2.70	100			157.2 barren quartz vein over 120mm @ 54° with minor calcite 158.0 barren quartz veins over 200mm @ with minor calcite		157.5 B @ 55° (cs / tuf sa) 158.7 B @ 35° (cs).		
	159.7	2.00	3.00	100			159.3 quartz / anhydrite / siderite vein 140mm @ 65°		160.3 B @ 32° (cs / tuf sa). 161.3 B @ 39° (cs). 162.4 B @ 49° (cs)	159.3 veins contains Asp. Py. tr (Gl) 4% 2% 6%	
	162.8	3.10	3.10	100					164.9 B @ 64° (cs).		

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY T.C FROM 150 TO 165m DATE 22/4/91 PAGE 12 OF .....

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					166	intercalated grey. (minor green-grey and pale brown) fine to medium grained tuffaceous sandstone with interbedded grey and dark grey siltstone. massive altered sandstone @ 170.0 metres siltstone often contains clasts of dark (or light) grey siltstone.	common calcite veination disrupted and smooth. veins usually small (< 5mm) (sandstones all shattly altered?)		moderate disruption, mostly in the siltstones., Sandstone generally massive. beddins in siltstones contorted and microfaulted but generally shallow to intermediate to core axis	minor pyrite in veins and patches, mainly in the siltstones, occasionally in the Sandstone Py	1%
	165.8	2.00	3.00	100	167						
					168						
	168.8	3.00	3.00	100	169						
					170	170.0 m Mixed sandstone and siltstone (described above)					
					171						
	171.8	3.00	3.10	100	172						
					173				173.8 B.? disrupted @ 47° (sl).		
					174						
	174.9	3.00	2.00	100	175						
					176	176.1 massive altered dark grey-brown fine-grained tuffaceous? sandstone.					
					177						
	177.9	3.00	3.00	100	178						
					179						
					180						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBE 22

LOGGED BY J.C. FROM 165 TO 180 DATE 24/4/81 PAGE 13 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						massive dark grey brown sandstone (altered) continues. (similar to rock sample from 218. dock Anthony – don't write this Veronica!)	minor disrupted calcite veination 3%		massive unit. no? disruption	trace pyrite and sphalerite in veinlet Py Sp	tr
	180.0	3.10	2.10	100	181						
					182	kehtens to grey over bottom 1 metre.					
						182.7 interbedded green-grey medium grained tuffaceous sandstone with grey and dark grey siltstone.	moderate calcite veination (disrupted) 4%		moderate disruption in the siltstone, sandstone is massive	trace pyrite with calcite veins Py	tr
					183						
					184						
	184.0	3.00	2.00	100							
					185						
						185.6 massive shattly altered green-grey medium-grained tuffaceous sandstone	minor calcite veination mostly disrupted 2%		massive unit, undisturbed.	barren.	
					186						
					187						
	187.0	3.00	3.00	100							
					188						
						189.0 interbedded green-grey, medium-grained, altered tuffaceous sandstone and grey and dark grey siltstone.	moderate calcite veination (50 mm vein at 189.8m) 5%		moderate disruption in the siltstone. sandstone massive shallow dip in sandstone?	barren	
					189						
	190.0	3.00	3.00	100	190	MD.3 massive altered green-grey medium to fine grained tuffaceous sandstone	minor/c calcite veination mostly disrupted 2%		minor disruption, sandstone mostly massive, sometimes bedded.	trace pyrite with calcite veins	tr
					191						
					192						
					193	193.0 minor siltstone					
	193.0	3.00	2.00	100							
					194	194.4 minor bedded siltstone?			194.5 'B' @ 45° (Inf sa)		
					195						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C FROM 180 TO 195 DATE 24/4/81 PAGE 14 OF .....

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					196	massive tuffaceous sandstone (continued).					
	196.0	3.00	3.00	100		196.5 interealated green-grey tuffaceous sandstone with grey and dark grey siltstone.	196.5 calcite veins (smooth) over 95 mm @ 54°. moderate calcite veination mostly dismuted 4%		moderate to heavy disruption mainly in the siltstone. bedding present is variable	trace pyrite in patchs and veins with the calcite.	tr
					197						
					198						
	199.0	3.00	3.00	100	199						
					200						
					201	201.4 undisturbed (though microfaulted) interbedded grey and dark grey siltstone and grey, medium grained tuffaceous sandstone.	minor (mainly smooth) calcite veination. 1%		very common microfaulting rare contortion. 202.0 B @ 20° (ss).	trace amounts of Pyrite	tr
	202.0	3.00	3.00	100	202				203.7 B @ 28° (ss/tuf sa)		
					203						
					204	204.5 grey fine-to medium grained tuffaceous sandstone intercalated with minor grey and dark grey siltstone.	minor calcite veination, and very minor quartz/siderite veination (1%)		moderate disruption 205.9 B @ 16° (tuf sa/ss).	trace Pyrite Py	tr
	205.0	3.00	3.00	100	205						
					206						
					207						
	208.0	3.00	3.00	100	208				208.2 B @ 16° (tuf sa/ss)		
					209	209.5 mixed unit (See next page)	209.5 calcite veins over 160 mm @ 25° & 55°	Cal Cal			
					210						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RRE 22

LOGGED BY J.C FROM 195 TO 210 DATE 24/4/81 PAGE 15 OF

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					211	mixed unit of intercalated and interbedded fine grey fine to medium grained tuffaceous sandstone with grey and dark grey siltstone with very minor black shale.	moderate calcite (minor quartz/siderite) veination disrupted and smooth 4%.		moderate to heavy disruption mostly with the siltstone.	minor pyrite with the calcite	1%
211.0	3.00	3.00	100		212						
					213				212.6 B @ 21° (SS/tuf ca).		
					214						
214.0	3.00	3.00	100		215				214.4 B @ 20° (SS)		
					216				215.5 B @ 19° (SS)		
					217						
217.0	3.00	3.00	100		218				217.7 B @ 17° (ss).		
					219						
					220				219.5 B @ 15° (SS).		
220.0	3.00	3.00	100		221				221.1 B @ 22° (SS).		
					222						
					223	223.2 mostly undisturbed interbedded and minor intercalated siltstone and sandstone. (predominantly siltstone)			222.7 B @ 19° (ss/tuf ca).		
223.0	3.00	2.00	66		224						
					225				224.5 B @ 22° (ss/tuf ca)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY I.G. FROM 210 TO 225 DATE 24/4/82 PAGE 16 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					226	siltstone with minor tuffaceous sandstone	minor calcite and quartz veination . 3%		Minor disruption mostly interbedded units 226.2 B @ 31° (ss).	trace pyrite Py	tr
	226.0	3.00	3.00	100	227				227.5 B @ 32° (tuf sa/ss)		
					228				228.2 B @ 37° (tuf sa/ss)		
	229.0	3.00	3.00	100	229				229.3 B @ 33° (tuf sa/ss)		
					230	230.0 intercalated grey and dark grey siltstones with grey tuffaceous sandstone and black shale (carbonaceous)	common calcite veination (smooth and disrupted veins) 12%		moderate to heavy disruption	common pyrite (+ arrhotite) with the calcite in the black shale Py 80% Pb 15%	8%
					231	231.6 intercalated grey siltstone and grey medium-grained tuffaceous sandstone. (very minor dark grey siltstone)	very minor calcite veination (<1%)		minor disruption	trace pyrite	tr
	232.0	3.00	3.00	100	232						
					233						
					234						
	235.0	3.00	3.00	100	235	235.1 intercalated and (minor) interbedded calcareous grey and dark grey siltstone and calcareous grey medium-grained tuffaceous sandstone and carbonaceous, calcareous black shale.	common calcite veination 10%		heavy disruption 236.2 B @ 44° (ss).	common pyrite	4%
					236						
					237						
	241.0	2.00	2.00	100	238						
					239	238.9 intercalated and (minor) interbedded grey medium-grained tuffaceous sandstone with grey and dark grey siltstone	common calcite veination 4%		heavy disruption and contortion	minor pyrite	tr%
					240						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RSE 22

LOGGED BY J.C. FROM 225 TO 249 DATE 24/4/81 PAGE 17 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						disrupted tuffaceous sandstone and siltstone (Continued)					
	241.0	3.00	3.00	100							
									242.2 B? @ 40° (ss).		
	244.0	3.00	3.00	100		244.5 interbedded light grey fine to medium grained tuffaceous sandstone with grey and dark grey siltstone (sandstone calcareous).	minor calcite veination 2%		mostly well-bedded. minor contortion	minor pyrite, trace sphalerite in calcite veins.	1%
									245.9 B @ 61° (tuf sa/ss)		
	247.0	3.00	3.00	100					247.2 B @ 54° (tuf sa/ss).		
									248.6 B @ 62° (ss).		
	250.0	3.00	3.00	100					250.6 B @ 50° (tuf sa/ss)		
							251.3 quartz/siderite and quartz/flourite veins each 25mm @ 70° & @ 40°			251.3 veins contain pyrite	5%
						252.1 grey fine to medium grained tuffaceous sandstone with minor grey siltstone.			moderate disruption mostly 'massive' sandstone.		
							252.6 quartz/siderite vein 50mm @ 65° minor calcite veination			252.6 vein contains pyrrhotite minor pyrite/pyrrhotite	20% 1%
	253.0	3.00	3.00	100							

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY T.S FROM 240 TO 255 DATE 26/4/81 PAGE 18 OF .....

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					256	grey tuffaceous sandstone with minor grey siltstone. (cont).	minor calcite veination		minor to moderate disruption	trace Pyrite Py	tr
	256.0	3.00	3.00	100	257						
					258						
	259.0	3.00	3.00	100	259						
					260	260.0 inter-calated grey and dark grey fine - medium grained tuffaceous Sandstone with minor grey siltstone and dark grey siltstone.	common calcite (with the dark grey sdtstone) 4%. (minor quartz).		heavy disruption, massive sandstone.	minor pyrite with the calcite Py	1%
					261						
	262.0	3.00	3.00	100	262						
					263						
					264						
	265.0	3.00	3.00	100	265						
					266						
					267	267.0 inter-calated and (minor) interbedded grey and dark grey fine to medium grained tuffaceous sandstone with grey and dark grey siltstone.	266.8 calcite with flourite minor calcite veination 1%		moderate to heavy disruption	minor Pyrite Py	0.5%
	268.0	3.00	3.00	100	268						
					269						
					270						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 20

LOGGED BY J. Crimeen FROM 255 TO 270 DATE 26/4/81 PAGE 19 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					271	intercalated / minor interbedded grey tuffaceous sandstone with grey and dark grey siltstone (continued) (with minor black shale).	minor calcite veination 1%		moderate to heavy disruption	minor pyrite Py	0.5%
	271.0	3.00	3.00	100	272				272.6 B @ 65° (ss/thf ca)		
					273						
	274.0	3.00	3.00	100	274						
					275	275.0 contorted unit of grey (minor) and dark grey siltstone with carbonaceous black shale	minor calcite veination mostly disrupted 2%.		heavy disruption and contortion	minor pyrite Py	2%
					276						
	277.0	3.00	3.00	100	277						
					278	277.6 inter-calated brown and dark grey medium grained tuffaceous sandstone with grey and dark grey siltstone	very minor calcite veination		moderate to heavy disruption	trace pyrite Py	tr
					279				278.4 B? @ 40° (thf sh / ss)		
	280.0	3.00	3.00	100	280	279.8 intercalated and interbedded dark grey and carbonaceous black shale, minor grey siltstone.	minor calcite, common siderite, smooth veins mostly, 10%		moderate contortion	common pyrite with calcite, schalerite with the siderite Sp 1%, Py 4%	5%
					281						
					282		283.5 siderite / quartz / calcite 150mm @ 50°		282.2 B @ 32° (bksh / ss)		
	283.0	3.00	3.00	100	283				283.5 B @ 55° (bk sh / ss)		
					284				284.8 B @ 60° (bk sh / ss)		
					285						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH RBC 22

LOGGED BY T.C FROM 270 TO 285 DATE 26/4/81 PAGE 20 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					286	285.6 interbedded and intercalated grey, medium grained tuffaceous sandstone, and grey (and minor dark grey) siltstone.	very minor calcite veination (<1%).		moderate disruption, sandstone mostly massive.	barren	
	286.0	3.00	3.00	100	287				287.2 B @ 28° (bb).		
					288				288.5 B @ 30° (bb)		
	289.0	3.00	3.00	100	289	289.4 intercalated dark grey siltstone with carbonaceous black shale, minor grey siltstone and grey tuffaceous sandstone.	common calcite veination mostly disrupted. 5%		heavy disruption.	common pyrite	2%
					290				291.1 B @ 75°? (bk sh)		
	292.0	3.00	3.00	100	292				292.6 B @ 48°. (bk sh).		
					293						
					294						
	295.0	3.00	3.00	100	295				295.0 B @ 45° (bk sh).		
					296				296.5 B @ 56°? (bk sh/cc).		
					297						
	298.0	3.00	3.00	100	298	298.1 interbedded carbonaceous black shale and calcareous dark grey siltstone.	common calcite veination 5%		minor disruption, well-bedded units.	common pyrite	2%
					299				299.5 B @ 65° (bk sh/cc).		
					300						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH GBE 22

LOGGED BY T. Crowe FROM 285 TO 300 DATE 27/4/81 PAGE 2 OF

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					301	Interbedded carbonaceous black shale and calcareous grey siltstone.	Common calcite veination		Minor disruption.	Common pyrite	
	301.0	2.00	2.00	100					301.2 B @ 65° (SS/bk.sh).		
					302				302.6 B @ 74° (SS).		
					303	303.2 interbedded and interbedded (minor) grey and dark grey siltstone with carbonaceous black shale and grey medium grained siltaceous sandstone units commonly calcareous	Minor calcite veination 1-3%		moderate to heavy disruption	common pyrite with the black shale. Py 4%	
					304						
	304.0	3.00	3.00	100							
					305						
					306				306.8 B? @ 58° (SS)		
					307						
	307.0	3.00	3.00	100							
					308				308.0 B @ 56° (bk.sh/SS)		
					309	309.3 grey siltstone and sandstone altered.					
					310						
	310.0	3.00	3.00	100							
					311						
					312						
					313						
	313.0	3.00	3.00	100							
					314						
					315				314.9 B @ 55° (SS/SS).		

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RDT 22

LOGGED BY T.C FROM 300 TO 315 DATE 27/4/81 PAGE 22 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	316.0	3.00	3.00	100	316	316.3 highly altered tuffaceous sandstone? Green-grey fine to coarse-grained? (borehole) common brown blebs. unit calcareous?	very common pervasive carbonate - toward bottom coarser grained? section also has siderite throughout in discontinuous / disrupted stringers and veinlets. minor smooth calcite, quartz and siderite veins common? disrupted calcite? veins with black alteration zones.		"massive" unit. commonly cut by disrupted calcite? veins with black alteration products	minor pyrite, pyrrhotite and sphalerite with quartz/siderite veins	tr
					317				317.2 quartz/calcite/siderite vein 90mm @ 52°		
					318						
	319.0	3.00	3.00	100	319						
					320						
					321						
					322	321.7 unit of intercalated pale brown and grey fine grained tuffaceous sandstone and pale brown and grey siltstone.	minor calcite veination, unit slightly hornfelsed?		moderate to heavy disruption.	minor pyrite	1%
	322.0	3.00	3.00	100	323	323.0 interbedded and intercalated carbonaceous, calcareous black shale with minor grey siltstone.	very minor calcite veination		moderate contortions	common pyrite	4%
					324				323.4 B @ 65° (bk sh).		
					325	324.8 intercalated and interbedded (minor) grey (minor pale brown) and dark grey siltstone with grey and pale brown fine to medium grained tuffaceous sandstone.	minor calcite veination, mainly with the dark grey siltstones. (2%).		moderate disruption, sandstone mostly massive.	minor pyrite with the calcite.	0.5%
	325.0	3.00	3.00	100	326						
					327						
	328.0	3.00	3.00	100	328						
					329				329.2 B? @ 45° (bk sh / ss)		
					330						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C FROM 315 TO 330 DATE 28/4/81 PAGE 23 OF .....

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	331.0	3.00	3.00	100
	334.0	3.00	3.00	100
	337.0	2.30	2.30	100
	339.3	3.10	3.00	100
	342.4	3.00	3.00	100

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
331	interbedded and minor interbedded grey, pale brown and dark grey, fine to medium grained tuffaceous sandstone with grey, pale brown and dark grey siltstone. (continued)	minor calcite veination, mostly with the dark grey siltstone. unit shows hornfelsed.		moderate to heavy disruption, sandstone mostly "massive"	minor pyrite	0.5%
332						
333						
334						
335						
336		increase in calcite veination minor quartz, siderite veination.		336.4 B @ 23° (tuf sa / ss).		
337						
338						
339						
340						
341				340.7 B @ 62° (tuf sa / ss)		
342				341.8 B @ 46° (tuf sa / ss)		
343		243.6 quartz / siderite veins every 150 mm @ ~ 20°			243.6 veins contain sphalerite and chalcopyrite. Sp 3% Cp 1% and pyrite Py 2%	8%
344						
345						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C. FROM 330 TO 345 DATE 26/4/91 PAGE 24 OF

5 cm

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	345.4	0.60	0.60	100	346	intercalated and minor interbedded grey, pale brown and dark grey fine to medium grained tuffaceous sandstone with grey, pale brown and dark grey siltstone.	minor calcite veination, slightly hornfelsed sediments		core from 345.4 to 348 mainly broken moderate disruption	minor pyrite	
	346.0	2.70	2.70	100	347						
					348				347.9 B @ 67° (tuf sa/ss)		
	348.7	3.10	3.10	100	349						
					350				350.3 B @ 53° (tuf sa).		
					351						
						351.8 intercalated and interbedded carbonaceous black shale with grey and pale brown medium grained tuffaceous sandstone, with dark grey siltstone	common calcite veinations		heavy contortion	common pyrite	4%
	352.8	3.10	3.10	100	352		352.5 quartz / siderite veins over 250 mm @ 55°			352.5 veins contain pyrite, arsenopyrite Py 18% Aspy 2%	20%
					353						
					354						
	354.9	3.10	3.10	100	355						
						356 last 1.5 metres mainly brown sandstone and siltstone.					
					357						
						357.5 interbedded calcareous dark grey and grey siltstone with carbonaceous black shale and minor grey fine-grained tuffaceous sandstone	very common calcite veination (5-10%)		generally well-bedded, minor contortion.	common pyrite	40%
	358.8	3.00	3.00	100	358				358.2 B @ 53° (ss).		
					359				359.6 B @ 53° (ss)		
					360						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RRE 22

LOGGED BY J.C FROM 345 TO 360 DATE 25/4/91 PAGE 25 OF .....

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	361.0	2.70	2.70	100
	368.7	1.50	1.50	100
	366.2	0.80	0.80	100
	367.0	2.00	3.00	100
	370.0	3.00	3.00	100
	373.0	3.00	3.00	100

LITHOLOGY

5 cm

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
361						
	361.1 interbedded & intercalated grey, dark grey and minor pale brown siltstone with grey and minor pale brown, fine to medium grained tuffaceous sandstone.	minor calcite veination (< 1%).		minor disruption	minor pyrite	Pr
362						
				362.9 B @ 40° (ss).		
363						
364				364.3 B @ 55° (ss/tuf ss)		
365				365.5 B @ 50° (ss/tuf ss)		
366						
				366.8 B @ 49° (ss/tuf ss).		
367						
				368.0 B @ 50° (tuf ss/ss).		
368						
369						
	369.8 same as above, includes a carbonaceous black shale.	increase in calcite veination.		increase in disruption		
370				370.2 B @ 50° (ss).		
371						
				371.9 B @ 45° (ss/tuf ss)		
372				372.8 B @ 70° (ss)		
373						
374						
375						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED — DRILLHOLE LOG FOR DDH RAE 20

LOGGED BY J.C FROM 360 TO 375 DATE 28/4/81 PAGE 26 OF .....

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY
	376.0	3.00		
	379.0	3.00		
	382.0	3.00		
	385.0	3.00		
	388.0	2.00		

LITHOLOGY

INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
376	Interealated and interbedded grey and dark grey Siltstone with grey, fine to medium-grained tuffaceous sandstone.	minor calcite veination to 379.0		minor disruption to 379.0	common Pyrite	4%
				376.5 B @ 44° (to/sa).		
377						
378				378.8 B? @ 38° (to/sa).		
379		common calcite / quartz veination		increased disruption		
380						
381				381.7 B @ 62° (SS).		
382	382.0 Interealated green-grey altered siltstone and tuffaceous sandstone with common quartz and quartz / siderite veins folded and disrupted. showing corcomb texture	382.4 quartz veins 500mm @ 70°		Moderate to heavy disruption	common, scholerite in small veinlets throughout, arsenopyrite in large vein and minor disseminated zone for pyrite and pyrrhotite trace galena, chalcopyrite. 382.4 vein contains Aspy, Cp. (50%) (2%)	52%
383						
384		384.8 quartz vein 250mm @ 65°			384.8 vein Contains Py, Po (18%) (4%)	15%
385						
386		386.1 quartz / siderite veins 2-10 metres @ 47° minor calcite & flourite at bottom.		386.5 Vn @ 36°	386.1 veins contains Po, Py, Aspy Sp (8%) Ga(6%) (2%) (5%) (8%)	28%
					totals Py(1%), Po(3%) Aspy(6%) Sp(2%) Ga(tr) Cp(tr)	12%
387				387.5 Vn @ 36°		
388	388.0 highly altered tuffaceous sandstone?? green grey fine to coarse grained, hard unit. (possibly gabbro?)	pervasive quartz alteration? Common quartz and calcite veination (6%)		massive unit showing no clear structure	minor Pyrite	8%
389						
390						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY JC FROM 315 TO 390 DATE 29/4/81 PAGE 27 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						highly altered green-grey tuffaceous sandstone.	common calcite / quartz veination		"massive"	trace pyrite	tr
	391.0	3.00									
									indistinct & gradual contact		
	394.0	3.00				394.2 interclated and interbedded (minor) altered green-grey and green fine to coarse grained tuffaceous sandstone with green-grey siltstone and carbonaceous black shale (minor).	common quartz veinlets in the black shale. Minor calcite veination.		moderate to heavy chloritisation 395.3 B ? @ 34° (bk sh / ss).	common pyrite and sphalerite with veinlets in black shale. Sp (1-6%) / Py 2 0%	3%
	397.0	3.00							predominantly massive sandstone.		
	400.0	3.00							401.5 B @ 60° (bk sh / ss).		
	403.0	1.50							404.3 B @ 60° (ss).		
	404.5	1.50									

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RGE 32

LOGGED BY ... FROM ... TO ... DATE ... DATE 28 ...

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						altered/sheared green-grey medium grained tuffaceous sandstone with green-grey and dark grey siltstone, and minor black shale. whole unit slightly altered	minor calcite veination		heavily disrupted unit, mostly massive but disrupted..	minor pyrite	Py 1%
406.0	3.00			406							
				407							
				408							
409.0	3.00			409			409.6 quartz/calcite vein, disrupted. over 200mm @ 44°				
				410							
				411							
412.0	3.00			412							
				413					413.3 B? @ 25° (ss).		
				414					414.4 B? @ 40° (ss)		
					414.7						
415.0	3.00			415		talc carbonate small section of green-white carbonate/talc	highly veinted by carbonate veinlets		? contact unclear, marked by broken core and increasingly talcose to the talc carbonate.	very common magnetite, especially with the talc.	Mt 7-8%
				416		416.4 monotonous unit of dark green talc. cut by veins, venalets and patches of milky white carbonate	minor smooth carbonate veins (>8mm).. very highly veinated by veinlets of carbonate, sometimes mottled.		416.2 vn @ 54° foliation? if present. generally steep to core axis.		
				417							
418.0	3.00			418					418.4 Bd? @ 65°.		
				419							
				420					419.5 vn @ 60°		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C FROM 405 TO 420 DATE 29/4/81 PAGE 29 OF .....

LITHOLOGY

5 cm

DRILL ADVANCE

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					421	section of predominantly talc cut by veinlets of milky white carbonate	increasing amount of white carbonate giving mottled appearance		foliation and veining generally steep to intermediate to core axis.	very common magnetite with the white carbonate	7-8%
	421.0	3.00			422				421.2 fol @ 45°		
					423				423.1 ?fol @ 57°		
	424.0	3.00			424				424.4 vn @ 47°		
					425						
					426				426.0 vn @ 57°		
	427.0	3.00			427	427.5 0.4 metres of white and dark grey carbonate (dark grey colouration due to magnetite?)	slight mottling				
					428	427.9 unit of dark green talc and milky white carbonate (equal amounts	white carbonate in large patches and numerous veinlets		427.2 fol @ 65°	very common magnetite Mt	12%
					429				429.2 fol @ 70°		
	430.0	3.00			430						
					431	430.7 green and blue white - white carbonate with common small black blebs of magnetite and pyrite	minor later phase veinlets			common magnetite, minor pyrite	4% 1%
					432				431.8 vn @ 55°		
	432.0	3.00			433	433.0 mixture of dark green talc, white and green-white and grey carbonate	carbonate in patches, veins + veinlets + blebs		various degrees of foliation	common magnetite	6%
					434				434.0 fol @ 45°		
					435						

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH RBE 22

LOGGED BY J.C FROM 420 TO 485 DATE 29/4/91 PAGE 30 OF .....

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
					436	white, grey carbonate in varying amounts with minor talc at the top. Commonly coarse mottling; veinlets of milky white carbonates and patches and blebs.	numerous smooth white carbonate veins with magnetite		varying degree of foliation (none to strongly foliated)	common magnetite	5%
	436.0	3.00			437						
					438				438.1 fol @ 57°		
	439.0	3.00			439				439.6 fol @ 55°		
					440				440.7 fol @ 65°		
					441						
	442.0	3.00			442				442.2 fol @ 65°		
					443				443.6 fol @ 62°		
					444						
	445.0	3.00			445				445.4 vn @ 47°		
					446						
					447				447.4 fol @ 45°		
	448.0	3.00			448	448.5 section of non-foliated, lath-like veinlets green and green-grey carbonate and minor talc?	not as heavily veinated as other sections, not mottled		not foliated?	very minor magnetite	tr
					449						
					450						

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBC 22

LOGGED BY IC FROM 435 TO 450 DATE 29/4/91 PAGE 31 OF .....

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						Green and grey-green carbonate with minor talc.	minor white carbonate veinlets		not foliated	trace magnetite	tr
	451.0	3.00									
	454.0	3.00			454.0	interbedded and interlaminated carbonaceous black shale and dark grey siltstone and minor grey siltstone and medium grained grey and green-grey (altered) tuffaceous sandstone.	minor calcite veination minor quartz veination		contact not clear – 67°. marked by light green carbonate veinlets / common pyrite minor to moderate disruption and contortion. 456.2 B @ 41° (thf sa/se). 457.8 B @ 42° (bk sh).		3%
	457.0	3.00									
	460.0	3.00							460.2 B @ 50° (bk sh) 462.5 B @ 55° (bk sh).		
	463.0	3.00				463.7 2.7 metres of massive altered tuffaceous sandstone. (green-grey)	with pervasive calcite?		massive.		

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH BRF 22

LOGGED BY J.C. FROM 450 TO 465 DATE 29/4/81 PAGE 32 OF

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	466.0	3.00			466	interbedded and intercalated carbonaceous black shale and dark grey siltstone with minor grey medium grained tuffaceous sandstone and grey siltstone.	common calcite veination; (2V.) minor quartz veination		moderate to heavy contortion	common pyrite with the calcite	4%
					467				467.3 B @ 60° (bk sh).		
					468				468.5 B @ 65° (bk sh)		
	469.0	3.00			469				469.3 B @ 50° (bk sh)		
					470				470.3 B @ 63° (bk sh)		
					471	470.8 intercalated and interbedded grey fine to medium grained tuffaceous sandstone with grey and dark grey siltstone	very common calcite veinlets (mostly loose veins) 20%		moderate distortion.	minor pyrite	2%
	472.0	3.00			472				472.6 B @ 60° (sh)		
					473						
					474		474.1 calcite vein 110 mm @ 70° 474.5 calcite vein 120 mm @ 65°		474.3 B @ 60° (ca)		
	475.0	2.20			475	475.0 120 mm of silicified greenish white sediment (with stylolitization? Possibly dolomite?)			475.9 B @ 50° (ca).		
					476	476.4 silicified greenish white sediment (dolomite?) with minor intercalated siltstone at bottom of unit	476.2 quartz/calcite/siderite vein over 300 mm very common calcite veination 12% (mostly loose veins)		massive unit but very common stylolitization, heavy distortion	common pyrite	4%
					477						
	477.2	0.80									
	478.0	1.50			478	478.5 interbedded and minor intercalated grey and dark grey siltstone with carbonaceous black black shale and minor grey brown tuffaceous sandstone (and dolomite?) units calcareous	common calcite veination small veins unit calcareous (5%)		478.1 B @ 60° (ca) moderate distortion, beds thin to laminations, contorted.	common pyrite	5%
					479						
	479.5	1.50			480				479.7 B @ 60° (ca)		

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED **DRILLHOLE LOG FOR** DDH BBE 22

LOGGED BY J.C FROM 465 TO 480 DATE 30/4/88 PAGE 33 OF .....

DRILL ADVANCE

LITHOLOGY

5 cm

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
	481.0	3.00	3.			interbedded and minor interlaminated grey and dark grey siltstone with carbonaceous black shale, with minor grey tuffaceous sandstone. (unit calcareous).	Very common calcite veination. Mostly small (10%)		minor distortion and contortion beds thin to laminated.	common Pyrite	1%
					482		482.1 calcite veins over 260mm, silicified at top		481.9 B @ 60° (ss)		
					483				contact marked by calcite vein @ 60°		
					483.1	dolomite?					
	484.0	1.00			484	Grey-white, earthy silicified, slightly calcareous, brecciated, with common silicification, dolomite?	Minor calcite veination 2% increases towards bottom contact.		massive, brecciated unit	minor pyrite, disseminated and with calcite veins, increases towards bottom contact	2%
	485.0	3.00			485						
					486						
					486.8						
					487	quartz, carbonate, Pyrrhotite veins.	veins generally shallow to to intermediate to ore axis		bottom contact under, mixed zone of veins and sediments.	massive pyrrhotite with minor pyrite and arsenopyrite Pb (16%) Py (3%) Aspy (1%)	20%
					487.8	quartz, siderite, calcite, pyrrhotite and fluorite veins with minor mixed sediments.			487.5 VNS @ 20° - 45°, sqtz		
	488.0	3.10			488	tuffaceous sandstone and siltstone. interbedded and minor interbedded. Predominantly fine to medium grained, grey, green-grey and brown-grey tuffaceous sandstone with grey, green-grey and dark grey siltstone, [illegible].	minor calcite/quartz veination, mostly large veins. unit slightly hornfelsed?		contact unclear @ 52°? with very common quartz veins to 488.2	very minor pyrite	0.5%
					489				minor to moderate disruption, sandstone mostly massive.		
					489.4				489.4 B @ 54° (ss)		
					490						
					491						
	491.1	3.10			491.6				491.6 B @ 55° (ss)		
					492						
					492.1				492.1 B @ 56° (ss)		
					493						
					494				494.1 B @ 50° (ss)		
	494.2	3.00			494.1						
					495						

SCALE 1:100 (1cm = 1m)

COMSTAFF PROPRIETARY LIMITED

DRILLHOLE LOG FOR DDH CRE 28

LOGGED BY J.C. FROM 480 TO 495 DATE 30/4/81 PAGE 34 OF .....

DRILL ADVANCE

LITHOLOGY

LOST CORE	DEPTH	DRILL ADVANCE INTERVAL	CORE RECOVERY	PERCENT RECOVERY	INTERVAL	DESCRIPTION	ALTERATION	GRAPHIC LOG	STRUCTURE	MINERALISATION	VISUAL PERCENTAGE MINERALISATION
						interealated and minor interbedded green-grey. Grey and brown-grey. medium grained; tuffaceous sandstone with green-grey, grey and dark grey siltstone. (sandstone predominant)	Minor calcite veination. mainly loose veins. minor quartz veination		moderate disruption; sandstone mostly massive	very minor pyrite	0.5%
	496										
	497								497.1 B @ 44° (SS)		
	497.2	3.00									
	498										
	499										
	500						500.1 calcite veins over 100mm @ 40°				
	500.2					END OF HOLE					
	501										

5 cm

SCALE 1:100 (1cm = 1 m)

COMSTAFF PROPRIETARY LIMITED DRILLHOLE LOG FOR DDH RBC 22

LOGGED BY J.C. FROM 495 TO 500.2 DATE 30/4/91 PAGE 35 OF .....

920543

035 **ANALABS**

A division of MacDonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106 (Reg. Office) Phone (09) 458 7999

Division Cooee, Tasmania Phone 316837

Code No. 6.1 08 164
Rack No. R-23
Page No. 1
Order No. 81/96

RESULT SHEET

TUBE No.	SAMPLE No.			Cu	Pb	Zn	Ag	Ni	
1	RBE	22	42.3 - 43	100	20	660	1.0	125	
2			43 - 45.8	55	20	450	0.5	130	
3			45.8 - 46.3	75	20	730	0.5	115	
4			46.3 - 48.7	80	20	355	0.5	115	
5			48.7 - 50	75	20	390	0.5	115	
6			50 - 51.4	65	220	550	1.0	110	
7			51.4 - 52.4	10	25	240	x	110	
8			52.4 - 53.5	10	15	200	x	90	
9			53.5 - 55	1500	80	475	4.0	100	
10			55 - 57.5	140	95	465	1.0	95	
11			57.5 - 59.6	45	170	385	0.5	120	
12			59.6 - 61.6	160	25	390	40.0	145	
13			61.6 - 63.1	90	55	420	1.5	110	
14			63.1 - 63.8	65	75	530	21.5	145	
15			63.8 - 65.5	50	40	365	1.0	140	
16			65.5 - 66.9	65	90	915	0.5	130	
17			66.9 - 70	85	155	320	0.5	125	
18			70 - 73	90	45	275	0.5	125	
19			73 - 75	110	25	250	0.5	135	
20	RBE	22	75 - 76	115	25	295	0.5	125	
21			76 - 79	90	25	215	0.5	125	
22			79 - 82	80	20	600	0.5	115	
23			82 - 85	250	35	260	0.5	115	
24			85 - 88	85	415	1050	1.0	115	
25			88 - 91	80	10	160	0.5	125	
26			91 - 94	80	5	150	x	95	
27			94 - 97	60	150	380	0.5	100	
28			97 - 99	95	40	265	2.5	90	
29			99 - 100	130	20	250	x	95	
30			100 - 103	85	10	165	4.5	120	
31			103 - 106	75	5	165	x	125	
32			106 - 109	85	35	265	x	160	
33			109 - 112	60	10	190	1.0	150	
34			112 - 115	60	15	250	x	120	
35			115 - 118	65	20	280	x	125	
36			118 - 121	90	40	210	0.5	170	
37			121 - 124	80	10	270	x	115	
38			124 - 127	105	5	175	x	95	
39			127 - 130	85	15	215	x	125	
40	RBE	22	130 - 133	80	15	185	0.5	215	
Detection				5	5	5	0.5	5	
Standard	AS55			465	335	105	0.5	40	
Repeat–	RBE	22	42.3 - 43	100	20	670	0.5	115	

RESPONSIBLE OFFICER 15.5.81

= element present, but concentration too low to measure
= element concentration is below detection limit
= element not determined

920544

ANALABS

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Division Cooee, Tasmania

Phone 316837

Code No. 6.1 08 164
Rack No. R - 26
Page No. 2
Order No. 81/96

RESULT SHEET

TUBE No.	SAMPLE No.			Cu	Pb	Zn	Ag	Ni	
1	RBE	22	133 - 136	235	210	1700	6.5	190	
2			136 - 139	90	195	2100	0.5	100	
3			139 - 142	70	35	255	x	100	
4			142 - 143.8	45	20	435	x	100	
5			143.8 - 146.8	75	35	290	x	100	
6			146.8 - 148	110	10	400	x	60	
7			148 - 151	115	20	180	x	70	
8			151 - 154	100	35	200	x	75	
9			154 - 157	65	10	280	x	100	
10			157 - 159.7	120	40	230	6.0	100	
11			159.7 - 162.7	75	5	155	0.5	100	
12			162.7 - 165.8	65	10	180	x	85	
13			165.8 - 168.8	135	20	250	1.0	70	
14			168.8 - 171.8	70	10	185	4.0	80	
15			171.8 - 174.9	95	10	130.	x	100	
16			174.9 - 177.9	75	10	175	x	80	
17			177.9 - 180.9	105	15	150	x	60	
18			180.9 - 184	115	30	340	x	80	
19			184 - 187	65	5	145	x	115	
20			187 - 190	60	5	185	x	115	
21			190 - 193	75	5	145	1.0	115	
22			193 - 196	100	15	195	x	115	
23			196 - 199	80	5	200	11.5	160	
24			199 - 202	70	5	155	x	110	
25			202 - 205	75	10	170	x	115	
26			205 - 208	60	5	180	x	120	
27			208 - 211	80	70	260	1.5	100	
28			211 - 214	60	20	290	x	100	
29			214 - 217	45	5	170	5.5	105	
30			217 - 220	115	5	130	0.5	105	
31			220 - 223	70	5	155	2.0	75	
32			223 - 226	100	35	315	8.5	120	
33			226 - 229	145	5	250	6.5	140	
34			229 - 232	85	40	465	1.0	100	
35			232 - 235	75	10	220	0.5	125	
36			235 - 238	80	15	110	0.5	75	
37			238 - 241	50	5	165	0.5	95	
38			241 - 244	45	20	155	x	95	
39			244 - 247	35	50	200	0.5	60	
40			247 - 250	45	60	200	0.5	60	
Detection				5	5	5	0.5	5	
Standard	AS55			420	335	110	0.5	45	
Repeat-	RBE	22	133 - 136	240	230	1800	7.0	195	

RESPONSIBLE OFFICER B Cox 15.1.81

ults in ppm unless otherwise specified
element present, but concentration too low to measure
element concentration is below detection limit
element not determined

920545

037

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106 (Reg. Office)

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Division Coore, Tasmania

Phone 316837

Code No. 6.1 08 164
Rack No. R-18
Page No. 3
Order No. 81/96

RESULT SHEET

TUBE No.	SAMPLE No.			Cu	Pb	Zn	Ag	Ni	
1	RBE	22	250 - 253	115	250	1250	1.0	85	
2			253 - 256	25	235	500	0.5	120	
3			256 - 259	30	100	260	x	120	
4			259 - 262	105	10	160	x	115	
5			262 - 265	65	15	160	x	125	
6			265 - 268	50	10	150	x	105	
7			268 - 271	60	15	170	x	100	
8			271 - 274	45	15	200	0.5	105	
9			274 - 277	85	15	160	x	95	
10			277 - 280	50	30	240	x	95	
11			280 - 283	165	575	1700	16.5	70	
12			283 - 286	155	1150	4350	3.5	85	
13			286 - 289	75	75	1150	3.5	115	
14			289 - 292	55	40	280	x	105	
15			292 - 295	85	30	150	x	80	
16			295 - 298	85	210	710	1.0	90	
17			298 - 301	70	25	195	x	75	
18			301 - 304	55	30	245	x	70	
19			304 - 307	1450	85	160	0.5	175	
20	RBE	22	307 - 310	155	365	1200	0.5	105	
21			310 - 313	200	105	480	1.0	65	
22			313 - 316	110	80	240	0.5	105	
23			316 - 319	185	50	240	x	80	
24			319 - 322	205	90	650	5.0	65	
25			322 - 325	80	115	505	2.0	90	
26			325 - 328	95	20	190	0.5	130	
27			328 - 331	105	55	260	0.5	125	
28			331 - 334	75	15	190	2.5	130	
29			334 - 337	75	25	260	0.5	120	
30			337 - 339	85	30	250	0.5	110	
31			339 - 342	70	65	355	x	100	
32			342 - 345	90	25	370	x	95	
33			345 - 346	50	10	250	x	95	
34			346 - 348.7	90	20	200	x	110	
35			348.7 - 351.8	65	80	615	x	105	
36			351.8 - 354.9	180	765	3650	2.5	90	
37			354.9 - 358	70	290	525	x	100	
38			358 - 361	60	40	145	x	65	
39			361 - 363.2	95	25	150	x	115	
40			363.2 - 366.2	75	15	140	x	110	
Detection				5	5	5	0.5	5	
Standard	ASS5			450	340	100	0.5	40	
Repeat–	RBE	22	250 - 253	120	245	1350	1.5	90	
Repeat–									

RESPONSIBLE OFFICER B Dore 15.1.81

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

920546

038

ANALABS

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Division Coose, Tasmania
Phone 316837

Code No. 6.1 08 164
Rack No. R-22
Page No. 4
Order No. 81/96

RESULT SHEET

TUBE No.	SAMPLE No.			Cu	Pb	Zn	Ag	Ni	
1	RBE	22	366.2 - 367	55	25	155	<	110	
2			367 - 370	70	135	2200	0.5	120	
3			370 - 373	70	205	1150	<	215	
4			373 - 376	60	140	205	0.5	85	
5			376 - 379	110	105	500	<	85	
6			379 - 382	45	220	920	<	85	
7			382 - 385	835	1000	2250	6.0	90	
8			385 - 388	55	80	315	<	95	
9			388 - 391	220	1350	6850	10.5	65	
10			391 - 394	70	40	140	<	140	
11			394 - 397	160	450	1450	2.0	115	
12			397 - 400	165	30	135	<	100	
13			400 - 403	90	165	455	<	80	
14			403 - 404.5	60	615	3050	0.5	70	
15			404.5 - 406	55	80	255	<	70	
16			406 - 409	85	135	245	1.0	80	
17			409 - 412	75	90	460	1.0	150	
18.			412 - 415	5	10	140	<	290	
19			415 - 418	<	20	115	<	1700	
20	RBE	22	418 - 421	<	10	185	<	2000	
21			421 - 424	<	5	95	<	1750	
22			424 - 427	SAMPLE NOT SUBMITTED					
23			427 - 430	5	15	85	<	1350	
24			430 - 433	<	10	70	<	730	
25			433 - 436	<	10	75	<	1050	
26			436 - 439	<	15	160	<	1350	
27			439 - 442	<	10	80	<	660	
28			442 - 445	<	15	495	<	870	
29			445 - 448	<	10	90	<	1050	
30			448 - 451	15	15	60	<	1950	
31			451 - 454	15	20	105	<	1250	
32			454 - 457	85	40	245	<	85	
33			457 - 460	105	25	105	<	115	
34			460 - 463	105	15	120	<	125	
35			463 - 466	115	15	125	<	120	
36			466 - 469	120	25	130	5.0	120	
37			469 - 472	95	40	260	<	95	
38			472 - 475	85	25	105	<	110	
39			475 - 477.2	50	30	125	<	85	
40			477.2 - 478	140	30	295	0.5	125	
Detection				5	5	5	0.5	5	
Standard	ASS5			465	355	105	0.5	45	
Repeat-	RBE	22	366.2 - 367	60	25	160	<	110	

RESPONSIBLE OFFICER B. Dunn 15/5/81

results in ppm unless otherwise specified
< = element present; but concentration too low to measure
= = element concentration is below detection limit
= = element not determined

920547

039

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106 (Reg. Office)

Phone (09) 458 7999

Division Copper, Tasmania

Phone 316837

Code No. 6.108164
Rack No. R-54A
Page No. 5
Order No. 81/96

RESULT SHEET

TUBE No.	SAMPLE No.			Cu	Pb	Zn	Ag	Ni	
1	RBE	22	477.2 - 478	130	25	275	2.0	120	
2			478 - 479.5	120	x	100	0.5	100	
3			479.5 - 481	80	5	105	x	80	
4			481 - 484	60	55	255	x	75	
5			484 - 485	65	65	360	x	85	
6			485 - 488	1550	210	990	5.0	70	
7			488 - 491.1	70	25	210	x	120	
8			491.1 - 494.2	80	25	225	x	120	
9			494.2 - 497.2	65	20	215	x	115	
10			497.2 - 500.2	95	x	170	x	135	
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
Detection				5	5	5	0.5	5	
Standard	ASS5			450	325	105	0.5	40	
Repeat–	RBE	22	477.2 - 478	130	30	275	2.0	125	

RESPONSIBLE OFFICER 15/5/81

= element present, but concentration too low to measure
= element concentration is below detection limit
= element not determined

APPENDIX 6

Fentons (GAR) Prospect – Results of diamond drilling,

Incorporating drill logs, drill sections & analytical results.

Surveyed points on lines, Sections of drillholes,

Detailed geological section.

920549

Appendix 6: Fentons (GAR) Prospect - Results of diamond drilling, incorporating drill logs, drill sections and analytical results.
Surveyed points on lines, Sections of drillholes, Detailed geological section.

2578	1	1:500	L 4820N, DDH RBE	22	
2559			L 4160N,	21	
2406			4880	20	
2405			4280	19,	Geochemical Results for As Ni
2404					Pb Zn
2403					Geochemical Results for Sn Cu W
2402					Geological Details
2342			4340N	18,	Geochem. Results for As Ni
2341	2				Pb Zn A
2340					Sn Cu W
2339					Geological Details
2338			4400	17,	Geochem. results for As Ni A
2337					Pb Zn A
2336					Sn Cu W
2335					Geological Details
2334			4460	16,	Geochem. Results for As Ni A
2333	3				Pb Zn A
2332					Sn Cu W
2331					Detailed Geol. Secti

920550

2316	3	1:500	L4520, DDH RBE 15, Geochem. Results for As Ni Au
2315			Pb Zn Ag
2314			Sn Cu W
2313			Geological Details
2398		1:2500	Mise à la Masse survey results Summary of results.
2397	4		
2396		-	Mise à la Masse survey results for DDH RBE 19, 245m depth
2395			
2394			18, 234m
2393			
2392			17, 235m
2391			
2390			16, 300m
2389	5		
2388			277m
2387			
2386			14, 254.9m
2385			
2384			Mise à la Masse survey results for DDH RBE 12, 233m depth
2383			
2382	6		12, 221m
2381			
2380			11, 234m
2379			215.8m
2378			10A, 251m
2377			222.8m
2376			7, 67.7m

DDH RBE 22
(SECTION)

mean sea level

150 m

100 m

50 m

- 50 m

- 100 m

- 150 m

- 200 m

5 372 800 m N

5 372 790 m N

5 372 780 m N

DDH RBE 22
(PLAN)

372 650 m E

372 700 m E

372 800 m E

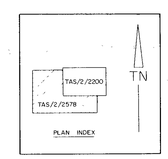
372 900 m E

373 000 m E

3809

of Mines	A.Q.	D.G.	E.G.	D.D.H.'s
Received	- 1 JUN 1981			
Assessed				

DEPT. OF MINES
ADD. NO. 14 SOUTH ST.



5 cm

920551

3809

81-1604. Vol 14/14.

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4820 N
SECTION OF DRILLHOLE DDH RBE 22
DETAILED GEOLOGICAL SECTION

COMPILED: J D C
DRAWN: GEODRAFT 18/5/81
CHECKED:
SCALE: 1 : 500
REF No. TAS/2/2578

5 372 175 mN

5 372 150 mN

DDH RBE 21 (PLAN)

5 372 125 m N

DDH RBE 21 (SECTION)

5000 4900 4800 4700 4600

150 m

100 m

50 m

mean sea level

- 50 m

E.O.H 361 m

372 700 m E | 372 800 m E | 372 850 m E | 372 900 m E | 372 950 m E | 373 000 m E | 373 050 m E

LEGEND

- Bedding plane showing facing
- Vein
- Geological boundary
- Mineralization
- Fault

For abbreviation explanation see TAS/2/1566

5 cm

920552

81-1604. Vol 14/14

0010

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4160 N
SECTION OF DRILLHOLE DDH RBE 21
DETAILED GEOLOGICAL SECTION

COMPILED	S R Y
DRAWN	GEODRAFT
DATE	6/5/81
AMENDED	
SCALE	1 500
PLAN No.	TAS/2/2559

DDH RBE 20
(SECTION)

3,121,700mE

372 800m E

372 900m E

373 000 m E

2000

4900

4850

4750

End of grdline

150 m

100 m

50 m

mean sea level

- 50 m

Hanging fmn. dacite with tuf. ss./sh./lith.

intc. cr.B grs.mg tuf.ss & gr.B. gr.ss

gr. gs.

tuf. ss./sh.

gs.

intc. tuf. ss./sh.

gs.

intc. B. wthd. gr. f.mg. tuf. ss & gr.ss

mixed rocks

intc. B. intc. gr. ms. tuf. ss./sh. B. minor lith. sh.

mixed tuf. ss./sh./lith.

intc. B. lith. gr. ms. tuf. ss./sh. B. minor lith. sh.

intc. B. intc. gr. B. lith. gr. ss./sh. sh. B. minor tuf. ss.

mixed tuf. ss.

Py, Po, AsPy 25%

tuf. ss. & ss. B. minor lith. sh.

qz. /CSPy /Po vnts.

mixed ss./minor lith. sh. /tuf. ss.

tuf. ss. & lith. sh.

mixed tuf. ss./sh./lith. sh.

Py, Po, 20%

Qz/Py vnts.

dk. wthd.

tuffc. dsite

dk. wthd. c lith. sh.

dk. units of predominantly tuf. ss. & ss. B. than lith. sh.

mth/intc. dm. /s./tuf. ss. B. minor lith. sh.

bleached tuf. ss./ss.

mh/s./ss. B. minor lith. sh.

dm. c. minor ss.

intc. B. intc. gr. B. lith. ss. c. minor lith. sh. /tuf. ss.

EOH 391 m

5 372 860 m N

DDH RBE 20
(PLAN)

5 372 840 m N

LEGEND

- Bedding plane showing facing
- Vein
- Geological boundary
- Mineralization
- Fault

For abbreviation explanation see TAS/2/1566

5 cm

920553

81-1604. Vol 14/14. 3811

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4880 N
SECTION OF DRILLHOLE DDH RBE 20
GEOLOGICAL DETAILS

COMPILED	J D C
DRAWN	GEODRAFT
DATE	15/5/81
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2406

DDH RBE 19 (SECTION)

150 m

100 m

50 m

mean sea level

- 50 m

- 100 m

5000

4900

4800

GRID LINE 4280 N — MURCHISON HIGHWAY

DATUM

700

800

DDH RBE 19 (PLAN)

5 372 310 m N

5 372 300 m N

5 372 290 m N

5 372 280 m N

5 372 270 m N

5 372 260 m N

5 372 250 m N

5 372 240 m N

5 372 230 m N

5 372 220 m N

372 700 m E

372 800 m E

372 900 m E

373 000 m E

EOH 365 m

5 cm

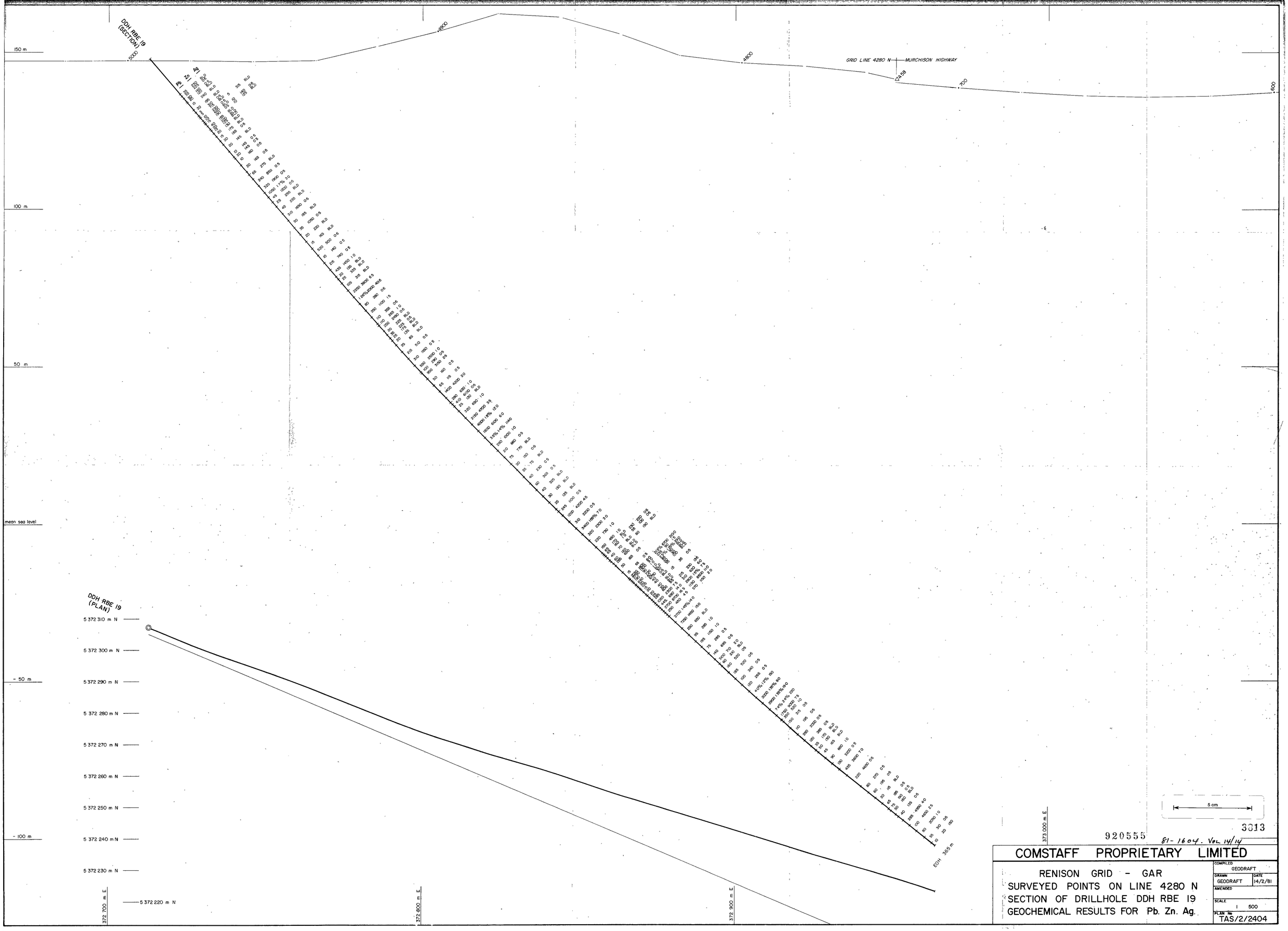
3812

920554 81-1604. Vol 14/14.

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4280 N
SECTION OF DRILLHOLE DDH RBE 19
GEOCHEMICAL RESULTS FOR As. Ni.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	14/2/81
AMENDED	
SCALE	1 500
PLAN No.	TAS/2/2405



920555

81-1604. Vol 14/14

3313

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4280 N
SECTION OF DRILLHOLE DDH RBE 19
GEOCHEMICAL RESULTS FOR Pb. Zn. Ag.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	14/2/81
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2404

DDH RBE 19 (SECTION)

5000 4900 4800 4700 700 600

GRID LINE 4280 N — MURCHISON HIGHWAY

150 m

100 m

50 m

mean sea level

- 50 m

- 100 m

DDH RBE 19 (PLAN)

5 372 310 m N

5 372 300 m N

5 372 290 m N

5 372 280 m N

5 372 270 m N

5 372 260 m N

5 372 250 m N

5 372 240 m N

5 372 230 m N

5 372 220 m N

372 700 m E

372 800 m E

372 900 m E

373 000 m E

EOH 365 m

5 cm

920556 81-1604. Vol 14/14 3814

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4280 N
SECTION OF DRILLHOLE DDH RBE 19
GEOCHEMICAL RESULTS FOR Sn. Cu. W.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	13/2/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2403

DDH RBE 19 (SECTION)

150 m

100 m

50 m

mean sea level

- 50 m

- 100 m

5000

4900

4800

GRID LINE 4280 N — MURCHISON HIGHWAY

274.58

700

600

DDH RBE 19 (PLAN)

5 372 310 m N

5 372 300 m N

5 372 290 m N

5 372 280 m N

5 372 270 m N

5 372 260 m N

5 372 250 m N

5 372 240 m N

5 372 230 m N

5 372 220 m N

372 700 m E

372 800 m E

372 900 m E

373 000 m E

EOH 365 m

LEGEND

Bedding plane showing facing

Vein

Geological boundary

Mineralization

Fault

For abbreviation explanation see TAS/2/1566

5 cm

920557 81-1604, Vol 14/14 3815

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4280 N
SECTION OF DRILLHOLE DDH RBE 19
GEOLOGICAL DETAILS

COMPILED	J.D.C. & S.R.Y.
DRAWN	GEODRAFT
DATE	4/5/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2402

372 700 m. E.

372 800 m. E.

372 900 m. E.

373 000 m. E.

DDH RBE 18
(SECTION)

150 m

100 m

50 m

mean sea level

- 50 m

5200

5100

5000

4400

4332

EXE RIVER

4800

As Ni

EOH 313 m

5372 310 m N

DDH RBE 18
(PLAN)

5372 300 m N

5 cm

920558

61-1604. Vol 14/14. 3816

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4340 N.
SECTION OF DRILLHOLE DDH RBE 18
GEOCHEMICAL RESULTS FOR As. Ni.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	20/12/80
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2342

372 700 m E

372 800 m E

372 900 m E

373 000 m E

DDH RBE 18
(SECTION)

5200

5100

5000

4900

A32

EXE RIVER

4800

150 m

100 m

50 m

mean sea level

- 50 m

EOH 313m

5 cm

5372 310 m N

DDH RBE 18
(PLAN)

5372 300 m N

920559

81-1604. Vol 14/14. 3817

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4340 N
SECTION OF DRILLHOLE DDH RBE 18
GEOCHEMICAL RESULTS FOR Pb. Zn. Ag.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	20/12/80
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2341

372 700 m E.

372 800 m E.

372 900 m E.

373 000 m E.

DDH RBE 18
(SECTION)

150 m

100 m

50 m

mean sea level

- 50 m

5200

5100

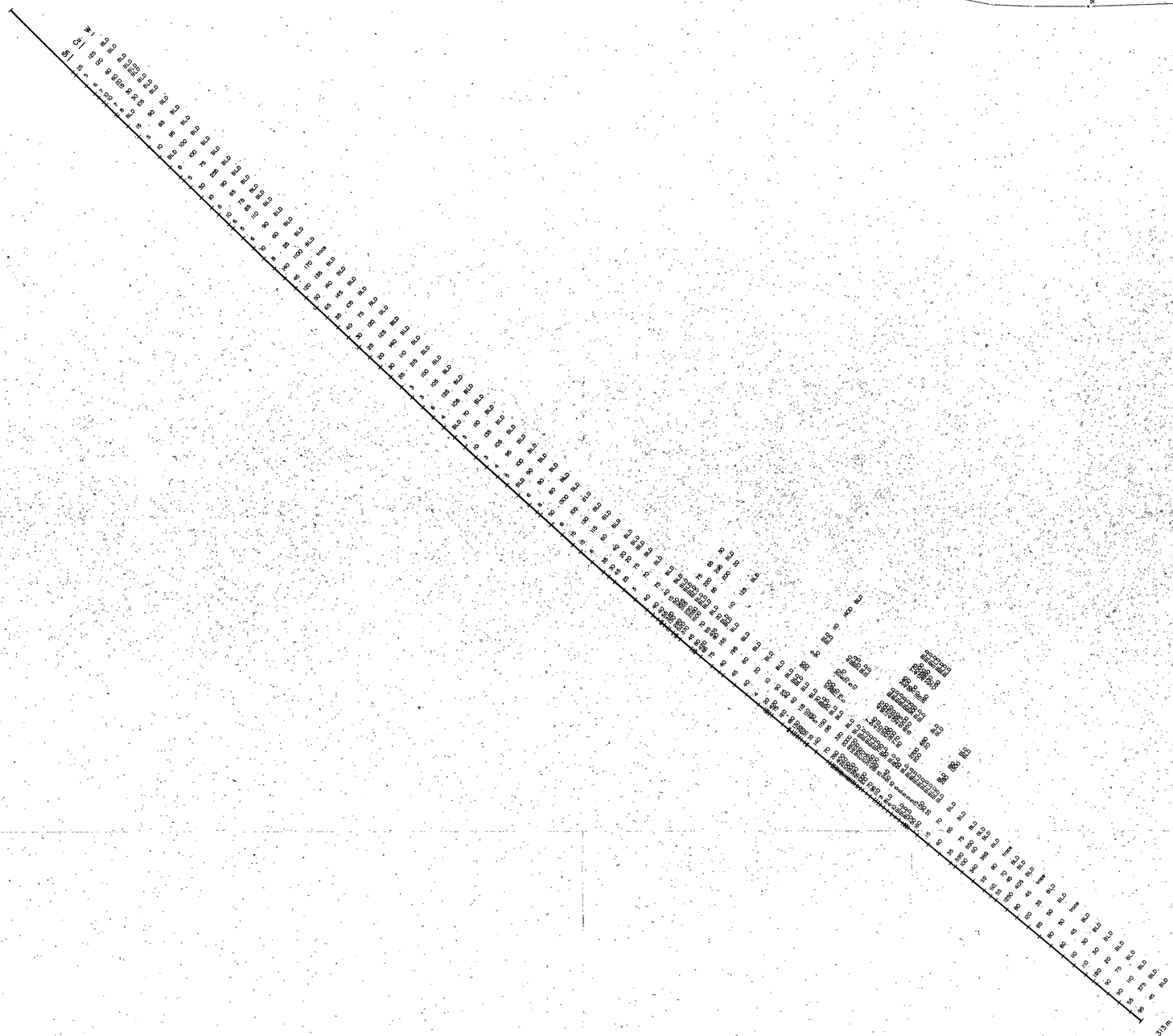
5000

4400

4132

4800

EXE RIVER



5 372 310 m N

DDH RBE 18
(PLAN)

5 372 300 m N

5 cm

920560

81-1604. Vol 1 of 14.

3618

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4340 N
SECTION OF DRILLHOLE DDH RBE 18
GEOCHEMICAL RESULTS FOR Sn. Cu. W.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	20/12/80
AMENDED	
SCALE	1 500
PLAN No.	TAS/2/2340

372 700 m E

372 800 m E

372 900 m E

373 000 m E

DDH RBE 18 (SECTION)

150 m

100 m

50 m

mean sea level

– 50 m

5200

5100

5000

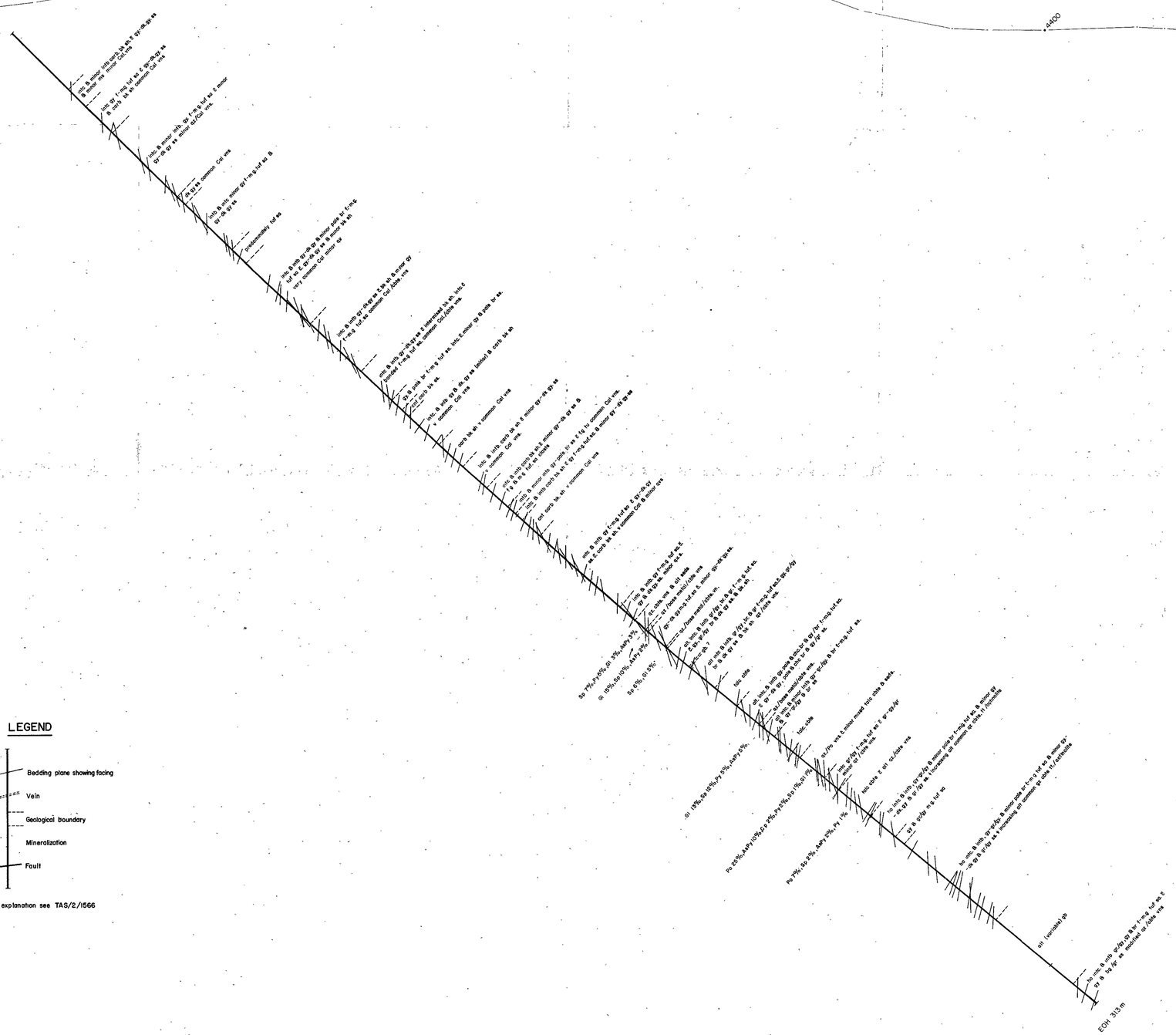
4400

A 32

EXE RIVER

4800

EOH 313 m


ults & mstn gr-sdgr & minor pgte br f-cm g
tuf as C, gr-sh gr as & minor sh as
very common Cal minor cv
ults & mstn gr-sdgr & sh as & minor gr
f-mg tuf as common Cal/chl vns
ults & mstn gr-sh gr as & interbed pgte sh as
bedded f-mg tuf as common Cal/chl vns
gr as pgte br f-cm g tuf as ults & minor gr & pgte br as
cal/c carb sh as
ults & mstn cg & slt gr as laminor & carb sh as
v common Cal vns
ults & mstn carb sh as & minor gr-sh gr as
v common Cal vns
carb sh as & common Cal vns
ults & mstn carb sh as & minor gr-sh gr as
f g & ms tuf as dists
ults & mstn carb sh as & minor gr-sh gr as
ults & mstn carb sh as & f g tu & common Cal vns
ults & mstn carb sh as & gr f-mg tuf as & minor gr-sh gr as
ults & mstn gr-sdgr & br f-mg tuf as & minor gr-sh gr as
cal/c carb sh as & common Cal vns
ults & mstn carb sh as & minor gr-sh gr as
ults & mstn gr-sdgr & br f-mg tuf as & minor gr-sh gr as
cal/c carb sh as & common Cal vns

372 600 m E

372 700 m E

372 800 m E

372 900 m E

DDH RBE 17
(SECTION)

5100 W

5000 W

4900 W

A 33

4800 W

150 m

100 m

50 m

mean sea level

- 50 m

As Ni Au

EOH 283.5 m

5 372 370 m N

DDH RBE 17
(PLAN)

5 cm

920562 81-1604. Vol 14/14.

3820

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4400 N
SECTION OF DRILLHOLE DDH RBE 17
GEOCHEMICAL RESULTS FOR As. Ni. Au.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	16/10/80
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2338

372 600 m E

372 700 m E

372 800 m E

372 900 m E

DDH RBE 17
(SECTION)

5000 W

4900 W

4 33

4800 W

5100 W

150 m

100 m

50 m

mean sea level

– 50 m

Pb Zn Ag

EOH 283.5 m

5 372 370 m N

DDH RBE 17
(PLAN)

5 cm

920563 81-1604. Vol 14/14. 3822

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4400 N
SECTION OF DRILLHOLE DDH RBE 17
GEOCHEMICAL RESULTS FOR Pb. Zn. Ag.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	16/10/80
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2337

372 600 m E

372 700 m E

372 800 m E

372 900 m E

DDH RBE 17
(SECTION)

5100 W

5000 W

4900 W

4850 W

A 33

150 m

100 m

50 m

mean sea level

– 50 m

EOH 283.5 m

5 372 370 m N

DDH RBE 17
(PLAN)

5 cm

920564 81-1604. Vol 14/14. 3821

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4400 N
SECTION OF DRILLHOLE DDH RBE 17
GEOCHEMICAL RESULTS FOR Sn. Cu. W.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	16/10/80
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2336

372 600 m E

372 700 m E

372 800 m E

372 900 m E

DDH RBE 17
(SECTION)

5100 W

5000 W

4900 W

4850 W

A-33

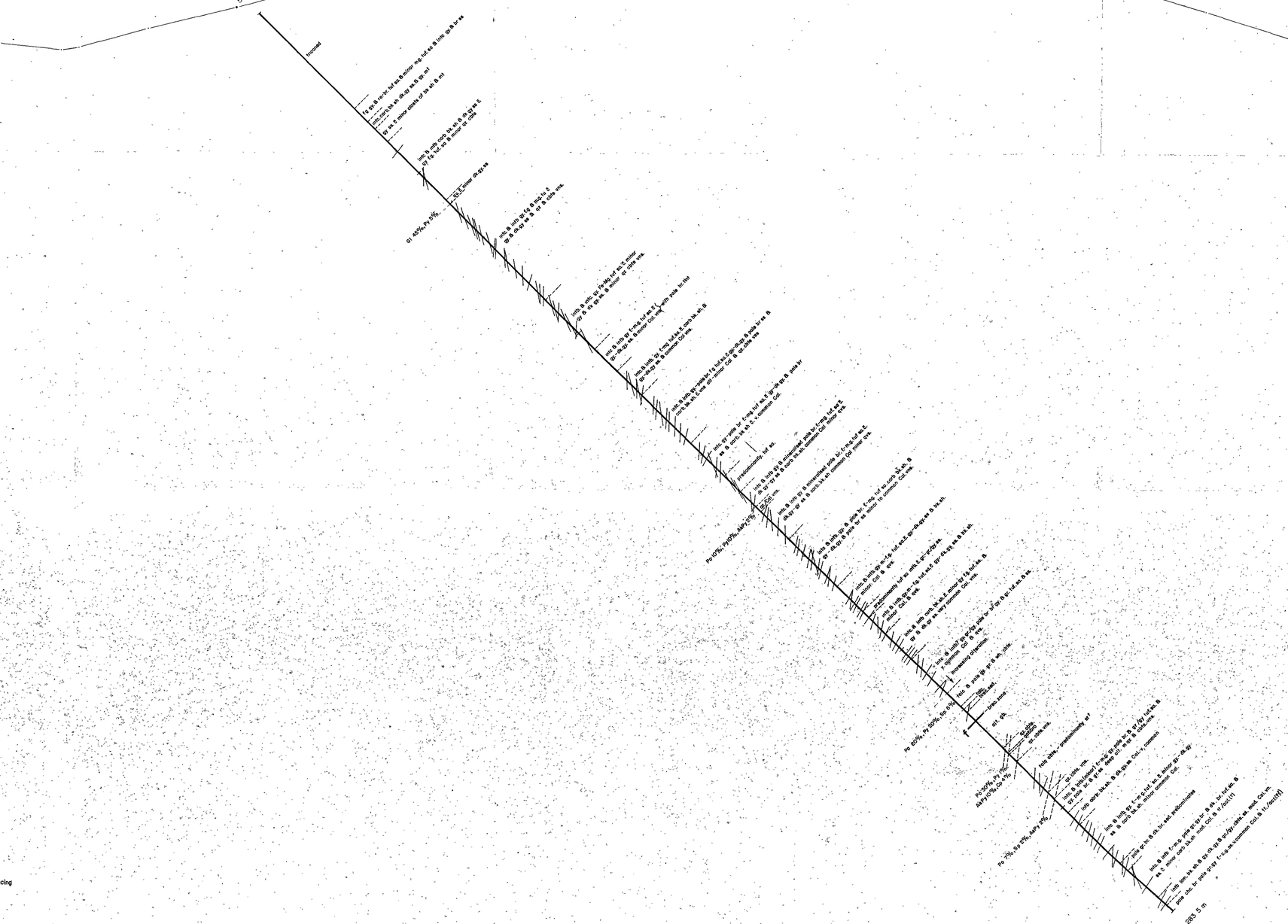
150 m

100 m

50 m

mean sea level

– 50 m



LEGEND

Bedding plane showing facing

Vein

Geological boundary

Mineralization

Fault

For abbreviation explanation see TAS/2/1566

5 372 370 m N

DDH RBE 17
(PLAN)

5 cm

920565

81-1604. Vol 14/14.

3823

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4400 N
SECTION OF DRILLHOLE DDH RBE 17
GEOLOGICAL DETAILS

COMPILED	J D C
DRAWN	GEODRAFT
DATE	10/4/81
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2335

DDH RBE 16
(SECTION)

372 700 m E

372 800 m E

372 900 m E

373 000 m E

5500 W

5000 W

4500 W

4000 W

A34

150 m

200 m

50 m

mean sea level

-50 m

As Ni Au

DDH RBE 16
(PLAN)

5 372 410 m N

EOH 364.5 m

920566 81-1604: Vol 14/14. 3324

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4460 N
SECTION OF DRILLHOLE DDH RBE 16
GEOCHEMICAL RESULTS FOR As. Ni. Au.

COMPILED GEODRAFT
DRAWN GEODRAFT DATE 24/11/80
AMENDED
SCALE 1 500
PLAN No TAS/2/2334

DDH RBE 16
(SECTION)

372 700 m E

372 800 m E

372 900 m E

373 000 m E

5000 W

4950 W

4900 W

4850 W

150 m

200 m

50 m

mean sea level

-50 m

Pb Zn Ag

DDH RBE 16
(PLAN)

5 372 410 m N

EOH 354.5 m

5 cm

920567 81-1604. Nov 14/14. 3825

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4460 N
SECTION OF DRILLHOLE DDH RBE 16
GEOCHEMICAL RESULTS FOR Pb. Zn. Ag.

COMPILED: GEODRAFT
DRAWN: GEODRAFT
DATE: 24/11/80
AMENDED:
SCALE: 1 : 500
PLAN No: TAS/2/2333

DDH RBE 16
(SECTION)

372 700 m E

372 800 m E

372 900 m E

373 000 m E

5500 W

5400 W

5300 W

5200 W

5100 W

5000 W

4900 W

4800 W

4700 W

4600 W

4500 W

4400 W

4300 W

4200 W

4100 W

4000 W

3900 W

3800 W

3700 W

3600 W

3500 W

3400 W

3300 W

3200 W

3100 W

3000 W

2900 W

2800 W

2700 W

2600 W

2500 W

2400 W

2300 W

2200 W

2100 W

2000 W

1900 W

1800 W

1700 W

1600 W

1500 W

1400 W

1300 W

1200 W

1100 W

1000 W

900 W

800 W

700 W

600 W

500 W

400 W

300 W

200 W

100 W

0

100 E

200 E

300 E

400 E

500 E

600 E

700 E

800 E

900 E

1000 E

1100 E

1200 E

1300 E

1400 E

1500 E

1600 E

1700 E

1800 E

1900 E

2000 E

2100 E

2200 E

2300 E

2400 E

2500 E

2600 E

2700 E

2800 E

2900 E

3000 E

3100 E

3200 E

3300 E

3400 E

3500 E

3600 E

3700 E

3800 E

3900 E

4000 E

4100 E

4200 E

4300 E

4400 E

4500 E

4600 E

4700 E

4800 E

4900 E

5000 E

5100 E

5200 E

5300 E

5400 E

5500 E

5600 E

5700 E

5800 E

5900 E

6000 E

6100 E

6200 E

6300 E

6400 E

6500 E

6600 E

6700 E

6800 E

6900 E

7000 E

7100 E

7200 E

7300 E

7400 E

7500 E

7600 E

7700 E

7800 E

7900 E

8000 E

8100 E

8200 E

8300 E

8400 E

8500 E

8600 E

8700 E

8800 E

8900 E

9000 E

9100 E

9200 E

9300 E

9400 E

9500 E

9600 E

9700 E

9800 E

9900 E

10000 E

10100 E

10200 E

10300 E

10400 E

10500 E

10600 E

10700 E

10800 E

10900 E

11000 E

11100 E

11200 E

11300 E

11400 E

11500 E

11600 E

11700 E

11800 E

11900 E

12000 E

12100 E

12200 E

12300 E

12400 E

12500 E

12600 E

12700 E

12800 E

12900 E

13000 E

13100 E

13200 E

13300 E

13400 E

13500 E

13600 E

13700 E

13800 E

13900 E

14000 E

14100 E

14200 E

14300 E

14400 E

14500 E

14600 E

14700 E

14800 E

14900 E

15000 E

15100 E

15200 E

15300 E

15400 E

15500 E

15600 E

15700 E

15800 E

15900 E

16000 E

16100 E

16200 E

16300 E

16400 E

16500 E

16600 E

16700 E

16800 E

16900 E

17000 E

17100 E

17200 E

17300 E

17400 E

17500 E

17600 E

17700 E

17800 E

17900 E

18000 E

18100 E

18200 E

18300 E

18400 E

18500 E

18600 E

18700 E

18800 E

18900 E

19000 E

19100 E

19200 E

19300 E

19400 E

19500 E

19600 E

19700 E

19800 E

19900 E

20000 E

20100 E

20200 E

20300 E

20400 E

20500 E

20600 E

20700 E

20800 E

20900 E

21000 E

21100 E

21200 E

21300 E

21400 E

21500 E

21600 E

21700 E

21800 E

21900 E

22000 E

22100 E

22200 E

22300 E

22400 E

22500 E

22600 E

22700 E

22800 E

22900 E

23000 E

23100 E

23200 E

23300 E

23400 E

23500 E

23600 E

23700 E

23800 E

23900 E

24000 E

24100 E

24200 E

24300 E

24400 E

24500 E

24600 E

24700 E

24800 E

24900 E

25000 E

25100 E

25200 E

25300 E

25400 E

25500 E

25600 E

25700 E

25800 E

25900 E

26000 E

26100 E

26200 E

26300 E

26400 E

26500 E

26600 E

26700 E

26800 E

26900 E

27000 E

27100 E

27200 E

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27400 E

27500 E

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28800 E

28900 E

29000 E

29100 E

29200 E

29300 E

29400 E

29500 E

29600 E

29700 E

29800 E

29900 E

30000 E

30100 E

30200 E

30300 E

30400 E

30500 E

30600 E

30700 E

30800 E

30900 E

31000 E

31100 E

31200 E

31300 E

31400 E

31500 E

31600 E

31700 E

31800 E

31900 E

32000 E

32100 E

32200 E

32300 E

32400 E

32500 E

32600 E

32700 E

32800 E

32900 E

33000 E

33100 E

33200 E

33300 E

33400 E

33500 E

33600 E

33700 E

33800 E

33900 E

34000 E

34100 E

34200 E

34300 E

34400 E

34500 E

34600 E

34700 E

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35700 E

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36000 E

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36200 E

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36700 E

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37600 E

37700 E

37800 E

37900 E

38000 E

38100 E

38200 E

38300 E

38400 E

38500 E

38600 E

38700 E

38800 E

38900 E

39000 E

39100 E

39200 E

39300 E

39400 E

39500 E

39600 E

39700 E

39800 E

39900 E

40000 E

40100 E

40200 E

40300 E

40400 E

40500 E

40600 E

40700 E

40800 E

40900 E

41000 E

41100 E

41200 E

41300 E

41400 E

41500 E

41600 E

41700 E

41800 E

41900 E

42000 E

42100 E

42200 E

42300 E

42400 E

42500 E

42600 E

42700 E

42800 E

42900 E

43000 E

43100 E

43200 E

43300 E

43400 E

43500 E

43600 E

43700 E

43800 E

43900 E

44000 E

44100 E

44200 E

44300 E

44400 E

44500 E

44600 E

44700 E

44800 E

44900 E

45000 E

45100 E

45200 E

45300 E

45400 E

45500 E

45600 E

45700 E

45800 E

45900 E

46000 E

46100 E

46200 E

46300 E

46400 E

46500 E

46600 E

46700 E

46800 E

46900 E

47000 E

47100 E

47200 E

47300 E

47400 E

47500 E

47600 E

47700 E

47800 E

47900 E

48000 E

48100 E

48200 E

48300 E

48400 E

48500 E

48600 E

48700 E

48800 E

48900 E

49000 E

49100 E

49200 E

49300 E

49400 E

49500 E

49600 E

49700 E

49800 E

49900 E

50000 E

50100 E

50200 E

50300 E

50400 E

50500 E

50600 E

50700 E

50800 E

50900 E

51000 E

51100 E

51200 E

51300 E

51400 E

51500 E

51600 E

51700 E

51800 E

51900 E

52000 E

52100 E

52200 E

52300 E

52400 E

52500 E

52600 E

52700 E

52800 E

52900 E

53000 E

53100 E

53200 E

53300 E

53400 E

53500 E

53600 E

53700 E

53800 E

53900 E

54000 E

54100 E

54200 E

54300 E

54400 E

54500 E

54600 E

54700 E

54800 E

54900 E

55000 E

55100 E

55200 E

55300 E

55400 E

55500 E

55600 E

55700 E

55800 E

55900 E

56000 E

56100 E

56200 E

56300 E

56400 E

56500 E

56600 E

56700 E

56800 E

56900 E

57000 E

57100 E

57200 E

57300 E

57400 E

57500 E

57600 E

57700 E

57800 E

57900 E

58000 E

58100 E

58200 E

58300 E

58400 E

58500 E

58600 E

58700 E

58800 E

58900 E

59000 E

59100 E

59200 E

59300 E

59400 E

59500 E

59600 E

59700 E

59800 E

59900 E

60000 E

60100 E

60200 E

60300 E

60400 E

60500 E

60600 E

60700 E

60800 E

60900 E

61000 E

61100 E

61200 E

61300 E

61400 E

61500 E

61600 E

61700 E

61800 E

61900 E

62000 E

62100 E

62200 E

62300 E

62400 E

62500 E

62600 E

62700 E

62800 E

62900 E

63000 E

63100 E

63200 E

63300 E

63400 E

63500 E

63600 E

63700 E

63800 E

63900 E

64000 E

64100 E

64200 E

64300 E

64400 E

64500 E

64600 E

64700 E

64800 E

64900 E

65000 E

65100 E

65200 E

65300 E

65400 E

65500 E

65600 E

65700 E

65800 E

65900 E

66000 E

66100 E

66200 E

66300 E

66400 E

66500 E

66600 E

66700 E

66800 E

66900 E

67000 E

67100 E

67200 E

67300 E

67400 E

67500 E

67600 E

67700 E

67800 E

67900 E

68000 E

68100 E

68200 E

68300 E

68400 E

68500 E

68600 E

68700 E

68800 E

68900 E

69000 E

69100 E

69200 E

69300 E

69400 E

69500 E

69600 E

69700 E

69800 E

69900 E

70000 E

70100 E

70200 E

70300 E

70400 E

70500 E

70600 E

70700 E

70800 E

70900 E

71000 E

71100 E

71200 E

71300 E

71400 E

71500 E

71600 E

71700 E

71800 E

71900 E

72000 E

72100 E

72200 E

72300 E

72400 E

72500 E

72600 E

72700 E

72800 E

72900 E

73000 E

73100 E

73200 E

73300 E

73400 E

73500 E

73600 E

73700 E

73800 E

73900 E

74000 E

74100 E

74200 E

74300 E

74400 E

74500 E

74600 E

74700 E

74800 E

74900 E

75000 E

75100 E

75200 E

75300 E

75400 E

75500 E

75600 E

75700 E

75800 E

75900 E

76000 E

76100 E

76200 E

76300 E

76400 E

76500 E

76600 E

76700 E

76800 E

76900 E

77000 E

77100 E

77200 E

77300 E

77400 E

77500 E

77600 E

77700 E

77800 E

77900 E

78000 E

78100 E

78200 E

78300 E

78400 E

78500 E

78600 E

78700 E

78800 E

78900 E

79000 E

79100 E

79200 E

79300 E

79400 E

79500 E

79600 E

79700 E

79800 E

79900 E

80000 E

80100 E

80200 E

80300 E

80400 E

80500 E

80600 E

80700 E

80800 E

80900 E

81000 E

81100 E

81200 E

81300 E

81400 E

81500 E

81600 E

81700 E

81800 E

81900 E

82000 E

82100 E

82200 E

82300 E

82400 E

82500 E

82600 E

82700 E

82800 E

82900 E

83000 E

83100 E

83200 E

83300 E

83400 E

83500 E

83600 E

83700 E

83800 E

83900 E

84000 E

84100 E

84200 E

84300 E

84400 E

84500 E

84600 E

84700 E

84800 E

84900 E

85000 E

85100 E

85200 E

85300 E

85400 E

85500 E

85600 E

85700 E

85800 E

85900 E

86000 E

86100 E

86200 E

86300 E

86400 E

86500 E

86600 E

86700 E

86800 E

86900 E

87000 E

87100 E

87200 E

87300 E

87400 E

87500 E

87600 E

87700 E

87800 E

87900 E

88000 E

88100 E

88200 E

88300 E

88400 E

88500 E

88600 E

88700 E

88800 E

88900 E

89000 E

89100 E

89200 E

89300 E

89400 E

89500 E

89600 E

89700 E

89800 E

89900 E

90000 E

90100 E

90200 E

90300 E

90400 E

90500 E

90600 E

90700 E

90800 E

90900 E

91000 E

91100 E

91200 E

91300 E

91400 E

91500 E

91600 E

91700 E

91800 E

91900 E

92000 E

92100 E

92200 E

92300 E

92400 E

92500 E

92600 E

92700 E

92800 E

92900 E

93000 E

93100 E

93200 E

93300 E

93400 E

93500 E

93600 E

93700 E

93800 E

93900 E

94000 E

94100 E

94200 E

94300 E

94400 E

94500 E

94600 E

94700 E

94800 E

94900 E

95000 E

95100 E

95200 E

95300 E

95400 E

95500 E

95600 E

95700 E

95800 E

95900 E

96000 E

96100 E

96200 E

96300 E

96400 E

96500 E

96600 E

96700 E

96800 E

96900 E

97000 E

97100 E

97200 E

97300 E

97400 E

97500 E

97600 E

97700 E

97800 E

97900 E

98000 E

98100 E

98200 E

98300 E

98400 E

98500 E

98600 E

98700 E

98800 E

98900 E

99000 E

99100 E

99200 E

99300 E

99400 E

99500 E

99600 E

99700 E

99800 E

99900 E

100000 E

150 m

200 m

50 m

mean sea level

-50 m

DDH RBE 16
(PLAN)

5 372 410 m N

EOH 364.5 m

5 cm

920568

81-1604. Vol 14/14, 3826

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4460 N
SECTION OF DRILLHOLE DDH RBE 16
GEOCHEMICAL RESULTS FOR Sn. Cu. W.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	24/11/80
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2332

DDH RBE 16
(SECTION)

372 700 m E

372 800 m E

372 900 m E

373 000 m E

5000 W

4900 W

4800 W

T.3.34

150 m

200 m

50 m

mean sea level

– 50 m

Tricone

DDH RBE 16
(PLAN)

5 372 410 m N

E.O.H. 354.5 m

LEGEND

- Bedding plane showing facing
- Vein
- Geological boundary
- Mineralization
- Fault

For abbreviation explanation see TAS/2/1566

5 cm

920569 81-1604. Vol 14/14. 3627

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4460 N
SECTION OF DRILLHOLE DDH RBE 16
DETAILED GEOLOGICAL SECTION

COMPILED	J D C
DRAWN	GEODRAFT
DATE	8/4/81
AMENDED	
SCALE	1 500
PLAN No.	TAS/2/2331

372,700 m E

372,800 m E

372,900 m E

373,000 m E

DDH RBE 15
(SECTION)

5500 W

4900 W

A 35

4800 W

4700 W

150 m

100 m

50 m

mean sea level

-50 m

EOH 303.8 m

5 372 500 m N

DDH RBE 15
(PLAN)

5 372 475 m N

5 cm

920570 81-1604. Vol 14/14.

3828

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4520 N
SECTION OF DRILLHOLE DDH RBE 15
GEOCHEMICAL RESULTS FOR As. Ni. Au.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	30/11/80
AMENDED	
SCALE	1 500
PLAN No	TAS/2/2316

372,700 m E

372,800 m E

372,900 m E

373,000 m E

DDH RBE 15
(SECTION)

5000 W

4900 W

A 35

4800 W

4700 W

150 m

100 m

50 m

mean sea level

-50 m

5,372,500 m N

5,372,475 m N

DDH RBE 15
(PLAN)

EOH 303.8 m

5 cm

920571

M-1604. Vol 14/14.

3829

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4520 N
SECTION OF DRILLHOLE DDH RBE 15
GEOCHEMICAL RESULTS FOR Pb. Zn. Ag.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	30/11/80
AMENDED	
SCALE	1 500
PLAN NO.	TAS/2/2315

372 700 m E

372 800 m E

372 900 m E

373 000 m E

DDH RBE 15
(SECTION)

5000 W

4900 W

4800 W

4700 W

△ A 35

150 m

100 m

50 m

mean sea level

-50 m

EOH 303.8 m

5 372 500 m N

DDH RBE 15
(PLAN)

5 372 475 m N

5 cm

920572

3830

91-1604, Vol 14/14.

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
SURVEYED POINTS ON LINE 4520 N
SECTION OF DRILLHOLE DDH RBE 15
GEOCHEMICAL RESULTS FOR Sn. Cu. W.

COMPILED	GEODRAFT
DRAWN	GEODRAFT
DATE	30/11/80
AMENDED	
SCALE	1 : 500
PLAN No	TAS/2/2314

372 700 m E

372 800 m E

372 900 m E

373 000 m E

DDH RBE 15 (SECTION)

5500 W

4900 W

A 35

4800 W

4700 W

150 m

100 m

50 m

mean sea level

-50 m

overburden of predominantly clastic derived material

10% Py dis and fracture infill; some pcls up to 2mm as ss & as some f vns assoc/w Fe ox & Si alts

30cm qz-ser/chl/ta & 20% Po 10% Py 5% AsPy 5% Cpy 5% Sp tr Gl

5% qz-chl/ta & brec and 15% Py 5% Gl 5% Po tr Sb AsPy Cpy

3% Py f vns associated E alts vneg & f dis

65mm qz-St vn & 20% Py 15% Po & AsPy 7% Sp tr Gl

5% Py tr Po dis in ss & wk Po irreg'ly/pdsly/ vns

m-vf ss & bx carb as f vnlts m-f qz- pods gr tuf as S

tr-f qz-carb vns & pchy & dissem f sul

common cm qz-carb & Py-Po & Py-Po-Sp & Py-Sp

common f wk carb & Py & Cpy & Sp & Gl & Ga & Bi & Au & Ag

common irreg Cp-Mg-Fe ox

m-vf ss & bx carb as f vnlts & pods dis/vnd irreg-pdsly bx-ds qz carb wh

& Gl as f vns to m-c vns & pchs & dis & pchs & Py-Po & Py-Sp & Py-Cpy

matrix of calc pdsly to m-cm ss common wh clastic vns & Gl patches in

m-c ss & bx & pchs & vns & Gl & Py-Po & Py-Sp & Py-Cpy & Py-Sp-Cpy

concentrated Py irreg

concentrated Py irregs

common wh clastic vns & Gl patches in

concentrations f vns

def bk carb ss, f vnlts qz gn ss common gy-wh impure calc

ds irreg patches & disseminations

vnlts qz f-m to tr c ss & ds qz as lvnc of base

common wh irreg calc patches & vns

f bdd m def ds qz as minor def & carb f qz as

minor carb ds carb & pchs ds & Gl & Py-Po & Py-Sp & Py-Cpy

or stringers & common f disseminations & irreg Cal vning

def bk carb as f minor carb & qz & carb bks sometimes Cal

ds qz as decreases downhole diamictite zones as f wh

disrupted, Cal vns pervasive to bk or ds 65% to 0.4 % & patchy Cal

matrix calc ss zones & 15% Po as

5 - 7% Py as 1 / mm dis in pl and

2 / cm replacement as ss

1 - 3 % Po as v f spdsly/ vns & pl and

vnlts qz f-m to tr c ss & ds qz as lvnc of base

common wh irreg calc patches & vns

def bk carb ss & qz as lvnc of base

common wh irreg calc patches & vns

def bk carb as f minor carb & qz as lvnc of base

common wh irreg calc patches & vns

def bk carb ss & qz as lvnc of base

common wh irreg calc patches & vns

def bk carb as f minor carb & qz as lvnc of base

common wh irreg calc patches & vns

def bk carb ss

Lobe on the side of 17- 235 m
Due to erroneous readings ?

17- 235 m

18- 234 m

19- 245 m

16- 300 m

17/18, 19

16

5 372 000 m N

372 000 m E

373 000 m E

TAS/2/2397

TAS/2/2398

SHEET INDEX

TN

5 cm

920574

81- 1604. Vol 14/141 - 38324

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR
MISE-A-LA-MASSE SURVEY RESULTS
SUMMARY OF RESULTS

COMPILED	D B T
DRAWN	GEODRAFT
DATE	31/1/81
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 : 2500
PLAN No	TAS/2/2398

372 000 m E.

373 000 m E.

5 373 000 m N

5 373 000 m N

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 5250 W

L 5000 W

L 4750 W

GAMMA

BETA

ALPHA

TRACK

STREET

COLOMBO

SUMBOOT

PITMAN RIVER

EMU BAY RAILWAY

EAST TIE LINE

EXT

5-127m

5-165m

10A - 284 m

11 - 234 m

10A - 223 m

11 - 216 m

12 - 233 m

16 - 300m

18 - 227 m

19 - 221 m

5 cm

Axis of mise-a-la-masse

Amplitude equal to,or greater than 85% maximum amperage

Plan position of mise-a-la-masse electrode

SHEET INDEX

TAS/2/2397

TAS/2/2398

TN

920575 81-1604. Vol 14/ap 3833

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

SUMMARY OF RESULTS

COMPILED: D B T

DRAWN: GEODRAFT

DATE: 31/1/81

AMENDED (REDRAFTED 30/3/81)

SCALE: 1 2500

PLAN No: TAS/2/2397

DDH RBE 19

HIGHWAY

EXE RIVER

EASTERN TIE LINE

5 372 000 m N

372 000 m E

373 000 m E

5 cm

920576

81-1604. Vol 14/14, 3834

TAS/2/2395

TAS/2/2396

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 19, 245m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	28/1/81
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 2500
PLAN No	TAS/2/2396

372,000 m. E.

373,000 m. E.

5 373,000 m N

5 373,000 m N

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 5250 W

L 5000 W

L 4750 W

GAMMA

BETA

ALPHA

TRACK

STREAM

RIVER

EMU BAY RAILWAY

EASTERN

STREET

COLUMBO

EAST TIE LINE

50

60

70mV

5 cm

3835

920577

81-1604. Vol 14/14.

TAS/2/2396

TAS/2/2396

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 19, 245m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	28/1/81
AMENDED (REDRAFTED 20/9/80)	
SCALE	1 : 2500
PLAN NO	TAS/2/2395

DDH RBE 18

80mV

70

60

50

MURCHISON HIGHWAY

EXE RIVER

EASTERN FIRE LINE

PMG ROAD

TRACK

5 372 000 m N

372 000 m E

373 000 m E

5 cm

TAS/2/2393

TAS/2/2394

SHEET INDEX

TN

920578

81-1604. Vol 14/14. 3836

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 18, 234m DEPTH

COMPILED	D B T
DRAWN	DATE
GEODRAFT	28/1/81
AMENDED (REDRAFTED 3/11/90)	
SCALE	1 2500
PLAN No	TAS/2/2394

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5250 W

L 5000 W

L 4750 W

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

GAMMA

TRACK

TRACK

TRACK

TRACK

ALPHA

TRACK

TRACK

TRACK

TRACK

TRACK

EUMBOOT

STREET

STREET

STREET

STREET

PATMAN

RIVER

EMU BAY RAILWAY

RIVER

EAST TIE LINE

EAST

RBE 18

RBE 19

RBE 20

RBE 21

RBE 22

RBE 23

RBE 24

RBE 25

RBE 26

RBE 27

RBE 28

RBE 29

RBE 30

RBE 31

RBE 32

RBE 33

RBE 34

RBE 35

RBE 36

RBE 37

RBE

5 372 000 m N

372 000 m E

373 000 m E

80mV

70

60

50

L 4340 N
L 4280 N
L 4220 N
L 4160 N
L 4100 N
L 4040 N
L 3980 N
L 3920 N
L 3860 N
L 3800 N
L 3740 N
L 3680 N
L 3620 N

L 4750 W
L 5250 W

HIGHWAY
MUNCHISTA
FEATHERS
EXE RIVER
EASTERN EXE LINE
EXE Road
PMG
ROAD

L 1452 EXE RIVER
L 1607 EXE RIVER
L 1760 EXE RIVER
L 1960 EXE RIVER

5 cm

920550

81-1604. Vol 14/44 3838

TAS/2/2391
TAS/2/2392
SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 17, 235m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	28/1/81
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 : 2500
PLAN No.	TAS/2/2392

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5350 W

L 5000 W

L 4750 W

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

GAMMA

TRACK

RUPA

GUMBOOT

STREET

COLUMBO

FENDER

EMU BAY RAILWAY

RIVER

EAST TIE LINE

60mV

10mV

DDH RBE 17

5 cm

TAS/2/2391

TAS/2/2392

SHEET INDEX

TN

920581

81-1604. Vol 14/14.

3840

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 17, 235 m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	28/1/81
AMENDED (REDRAFTED 20/9/90)	
SCALE	1 : 2500
PLAN No	TAS/2/2391

5 372 000 m N

372 000 m E

373 000 m E

L 4340 N
L 4280 N
L 4220 N
L 4160 N
L 4100 N
L 4040 N
L 3980 N
L 3920 N
L 3860 N
L 3800 N
L 3740 N
L 3680 N
L 3620 N

L 4750 W
L 5250 W

80mV
70
60
50
40

MURCHISON HIGHWAY
EXE RIVER
EXE RIVER
EASTERN LINE
EXE RIVER
EXE RIVER
P.M.G. ROAD

L 1452 EXE RIVER
L 1607 EXE RIVER
L 1760 EXE RIVER
L 1950 EXE RIVER

5 cm

920582

81-1604. Vol 14/14.

3839

SHEET INDEX

TAS/2/2389
TAS/2/2390

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE-16, 300 m DEPTH

COMPILED	D.B.T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 : 2500
PLAN No	TAS/2/2390

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5250 W

L 5000 W

L 4750 W

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

GAMMA

BETA

ALPHA

TRACK

SUMMIT

COLUMBO

DDH RBE 16

PIEMAN RIVER

EMU BAY RAILWAY

EAST TIE LINE

5 cm

TAS/2/2389

TAS/2/2390

SHEET INDEX

TN

920583

3841

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 16, 300m DEPTH

COMPILED: D B T

DRAWN: GEODRAFT

DATE: 23/1/81

AMENDED (REDRAFTED 20/9/80)

SCALE: 1 2500

PLAN No. TAS/2/2389

5 372 000 m N

372 000 m E

373 000 m E

L 4340 N
L 4280 N
L 4220 N
L 4160 N
L 4100 N
L 4040 N
L 3980 N
L 3920 N
L 3860 N
L 3800 N
L 3740 N
L 3680 N
L 3620 N
L 4750 W
L 1452 EXE RIVER
L 1507 EXE RIVER
L 1760 EXE RIVER
L 1980 EXE RIVER
70mV
60
50
40
MURCHISON HIGHWAY
EXE RIVER
EASTERN LINE
PMG ROAD
GRID
TRACK
TRACK
EXETER
TAS/2/2387
TAS/2/2388
SHEET INDEX
TN
5 cm

920584

3842

81-1604. Vol 14/14.

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 16, 277 m DEPTH

COMPILED	DBT
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 : 2500
PLAN No	TAS/2/2388

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5300 N
L 5240 N
L 5180 N
L 5120 N
L 5060 N
L 5000 N
L 4940 N
L 4880 N
L 4820 N
L 4760 N
L 4700 N
L 4640 N
L 4580 N
L 4520 N
L 4460 N
L 4400 N

L 5250 W
L 5000 W
L 4750 W

GAMMA
TRACK
GUNBOOT
BETA
ALPHA
DELTA
EMU BAY RAILWAY
PEMAN RIVER
EAST TIE LINE
DDH RBE 16
70 m N
60
50
40

5 cm

920585 81-1604. Vol 14/14. 3843

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

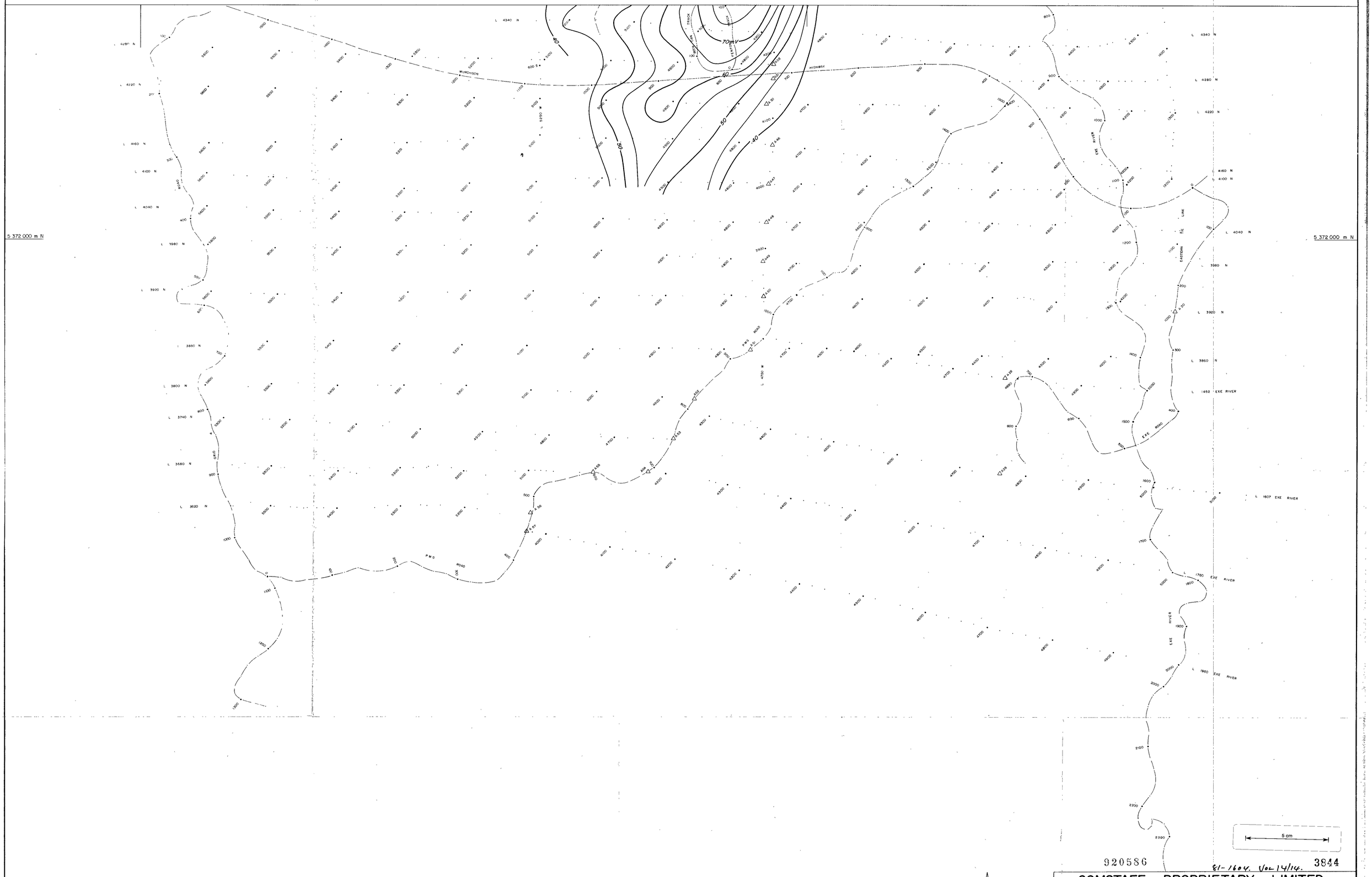
MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 16, 277m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 20/9/90)	
SCALE	1 2500
PLAN No	TAS/2/2387

TAS/2/2387
TAS/2/2388
SHEET INDEX

TN.



TAS/2/2385
TAS/2/2386

SHEET INDEX

TN

920586

81-1604. Vol 14/14. 3844

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 14, 254·9m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 : 2500
PLAN No.	TAS/2/2386

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 5250 W

L 5050 W

L 4750 W

GAMMA

BETA

TRACK

SUNSHOOT

SLOPING

DDH RBE 14

EMU BAY RAILWAY

HENMAN RIVER

EAST TIE LINE

5 cm

TAS/2/2385

TAS/2/2386

SHEET INDEX

TN

920587 81-1604. Vol 14/14. 3845

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

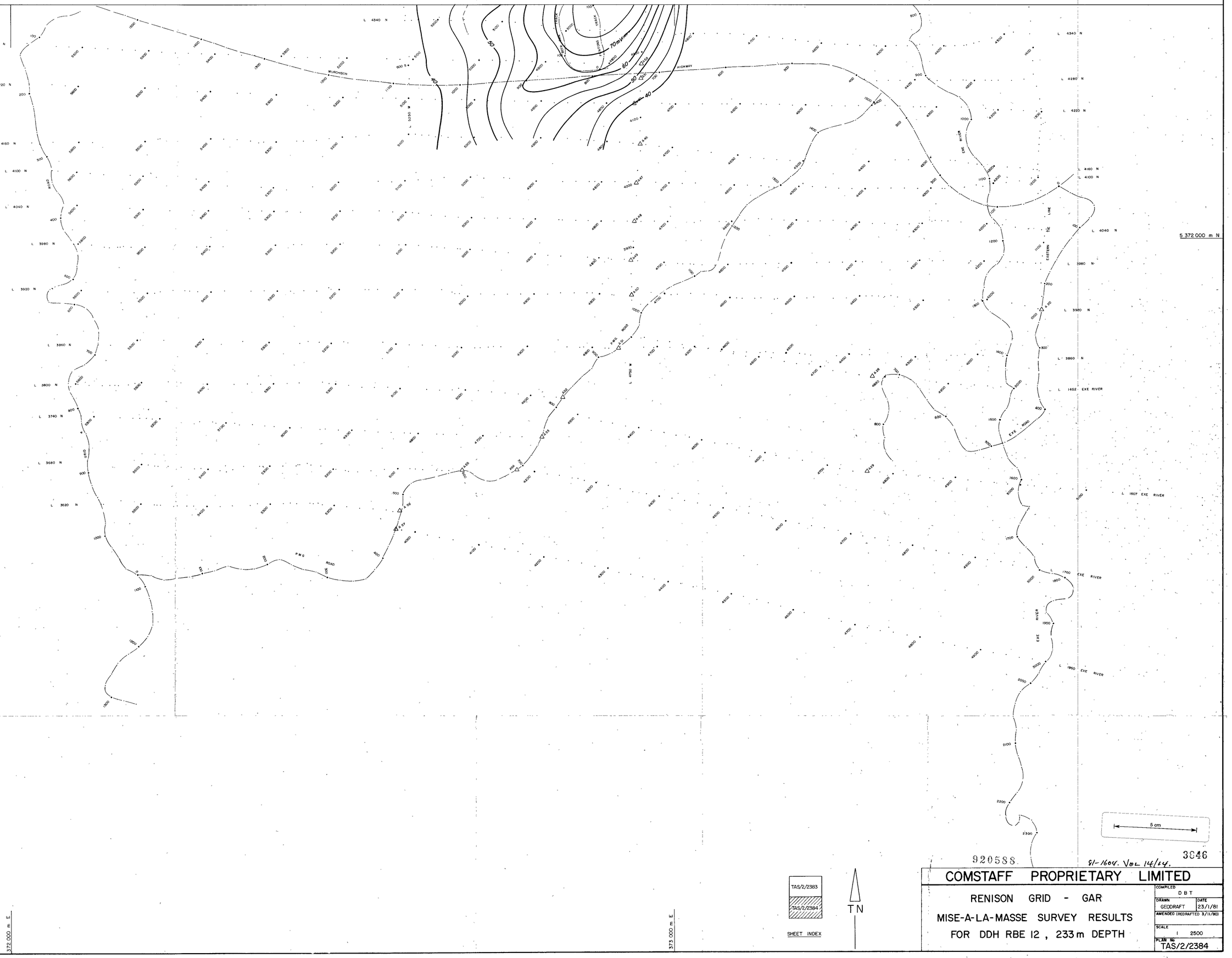
FOR DDH RBE 14, 254·9m DEPTH

COMPILED	DBT
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 20/9/80)	
SCALE	1 2500
PLAN No	TAS/2/2385

5 372 000 m N

372 000 m E

373 000 m E



TAS/2/2383

TAS/2/2384

SHEET INDEX

TN

920588.

81-1604. Vol 14/14.

3046

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 12 , 233m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 2500
PLAN No.	TAS/2/2384

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5300 N
L 5240 N
L 5180 N
L 5120 N
L 5060 N
L 5000 N
L 4940 N
L 4880 N
L 4820 N
L 4760 N
L 4700 N
L 4640 N
L 4580 N
L 4520 N
L 4460 N
L 4400 N

L 5250 W
L 5000 W
L 4750 W

GAMMA
TRACK
METH
TRACK
TRACK
ALPHA
TRACK
GUMBOOT
TRACK
TRACK
STREET
COLUMBO
DDH RBE 12
CENTRAL
RIVER
HUMAN
RIVER
EMU BAY RAILWAY
EAST TIE LINE
EXE
BETA
ARGENTINE
ARGENTINE
ARGENTINE

5 372 000 m N

373 000 m E

372 000 m E

L 4340 N
L 4280 N
L 4220 N
L 4160 N
L 4100 N
L 4040 N
L 3980 N
L 3920 N
L 3860 N
L 3800 N
L 3740 N
L 3680 N
L 3620 N

L 5250 W
L 4750 W

MURCHISON HIGHWAY
PMG ROAD
EXE RIVER
EASTERN FORE LINE
L 1452 EXE RIVER
L 1607 EXE RIVER
L 1780 EXE RIVER
L 1960 EXE RIVER

TRACK
TRACK
TRACK

80mV
60
50
40
10

5 cm

920590

81-1604. Vol 14/14. 3948

TAS/2/2381
TAS/2/2382

SHEET INDEX

TN

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 12 , 221 m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 3/11/80)	
SCALE	1 : 2500
PLAN No	TAS/2/2382

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 5150 W

L 5000 W

L 4750 W

400 N

300 N

200 N

100 N

0 N

100 S

200 S

300 S

400 S

500 S

GAMMA

TRACK

RBE 15

ALPHA

TRACK

BUSHROAD

TRACK

STREET

DDH RBE 12

COLUMBIA

TRACK

TRACK

TRACK

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 5250 W

L 5000 W

L 4750 W

KEY GAMMA

TRACK

ALPHA

BETA

GUMBOOT

STRIKE

DDH RBE II

30 mV

20

10

DUMMA RIVER

EMU BAY RAILWAY

EAST TIE LINE

EXE

5 cm

920592 81-1604. Vol 14/14. 3850

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE II , 234 m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 20/9/80)	
SCALE	1 2500
PLAN No	TAS/2/2380

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 5250 W

L 5000 W

L 4750 W

GAMMA

TRACK

ALPHA

GUMBOOT

COLOMBO

STREET

AVENUE

EAST

RIVER

EMU BAY RAILWAY

DDH RBE 11

30mV

20

10

EASTING

EAST TIE LINE

5 cm

920593 81-1604. Vol 14/14. 3851

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 11, 215·8m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 20/5/80)	
SCALE	1 2500
PLAN No	TAS/2/2379

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5080 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

L 5250 W

L 5000 W

L 4750 W

GAMMA

TRACK

SLIPHA

ROADPOST

DDH RBE 10A

STREET

COLUMBO

TRACK

FITMAN

RIVER

EMU BAY RAILWAY

EAST TIE LINE

5 cm

920594 81-1604. Vol 14/14. 3052

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 10A, 251m DEPTH

COMPILED D B T

DRAWN GEODRAFT DATE 23/1/81

AMENDED (REDRAFTED 20/9/90)

SCALE 1 2500

PLAN No TAS/2/2378

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5250 W

L 5000 W

L 4750 W

L 5300 N

L 5240 N

L 5180 N

L 5120 N

L 5060 N

L 5000 N

L 4940 N

L 4880 N

L 4820 N

L 4760 N

L 4700 N

L 4640 N

L 4580 N

L 4520 N

L 4460 N

L 4400 N

GAMMA

BETA

TRACK

ALPHA

GUMBOOT

STREET

COLUMBO

DDH RBE 10A

30mS

20

10

RIVER

PITMAN

EMU BAY RAILWAY

EAST TIE LINE

AVENUE

5 cm

920595 91-1604. Vol 14/14. 3853

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 10A, 222·8m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 20/9/80)	
SCALE	1 : 2500
PLAN No	TAS/2/2377

372 000 m E

373 000 m E

5 373 000 m N

5 373 000 m N

L 5300 N
L 5260 N
L 5180 N
L 5120 N
L 5060 N
L 5000 N
L 4940 N
L 4880 N
L 4820 N
L 4760 N
L 4700 N
L 4640 N
L 4580 N
L 4520 N
L 4460 N
L 4400 N

L 5850 W
L 5000 W
L 4750 W

GAMMA
ALPHA
BETA
GUMBOOT
TRACK
COLUMBO
EMU BAY RAILWAY
RIVER
EAST TIE LINE

RBE 7
30m
20
10

920596

61-1604. Vol 14/14. 3854

COMSTAFF PROPRIETARY LIMITED

RENISON GRID - GAR

MISE-A-LA-MASSE SURVEY RESULTS

FOR DDH RBE 7, 67·7m DEPTH

COMPILED	D B T
DRAWN	GEODRAFT
DATE	23/1/81
AMENDED (REDRAFTED 20/8/80)	
SCALE	1 : 2500
PLAN No	TAS/2/2376