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THE MOUNT LYELL MINING AND RAILWAY COMPANY LIMITED

E.L. 41/71

HENTY-YOLANDE

ANNUAL REPORT

1977/78

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FIGURES

Figures 13 & 19 are not on microfiche

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TABLES

1. INTRODUCTION

During the 1977-78 field season, exploration was continued on the West Sedgwick and Basin Lake grids, and was commenced on the Henty River grid. Five diamond drill holes were completed during the field season.

At West Sedgwick, three diamond drill holes tested two targets - (i) the Lake Margaret tramway pyrite lens and (ii) a combined I.P./geochemical anomaly on Line 84S. No significant sulphide or alteration zones were intersected.

At Basin Lake, following fill-in I.P. and soil sampling, and the excavation of a costean, two diamond drill holes were completed. Collared on Lines 48S and 72S, these holes tested the down-dip and along-strike continuity of the mineralisation intersected in D.D.H. BL802, drilled by Pickands Mather in 1970. Although neither hole intersected significant mineralisation, the down-dip hole, BL1, intersected a down-hole thickness of 97 m of intensely sericitised and pyritised felsic tuffs.

In the Henty River gorge, exploration has commenced to evaluate a zone of galena-sphalerite mineralisation exposed in three old adits at river level. A programme of track cutting, rock chip sampling and soil sampling has been completed.

Exploration proposed for the 1978-79 season includes follow-up of the northern and southern strike extensions of the Henty River mineralised zone using geological mapping, soil geochemistry and I.P. surveys. Three diamond drill holes are proposed to evaluate this zone, and one hole may be drilled at Basin Lake this season. In addition, a soil geochemical survey and geological mapping programme will be carried out on the Madame Howard grid. This overall programme has been costed at a maximum figure of $196,735, but postponement of lower priority sections of the programme and selection of lower cost alternatives will reduce this total to approximately $140,000.

Expenditure on E.L. 41/71 during the 1977-78 year totals $127,101, bringing total expenditure since 1971 to $273,944.

2. EXPLORATION COMPLETED 1977-78

2.1 INTRODUCTION

The exploration objective in both the West Sedgwick and Basin Lake areas for the 1977-78 field season was to test the following targets by diamond drilling:

(i) known, incompletely tested, mineralised zones

(ii) I.P./geochemically anomalous zones delineated on both grids during surface surveys during the period 1973-77.

The planned reconnaissance stream sediment sampling programme over the south-west portion of the licence area was not carried out due to priority being given to the evaluation of the mineralised zone in the Henty River. Continuing exploration in the Henty River area on the western half of the licence will in effect fulfill the objectives of the postponed stream sediment sampling programme.

2.2 WEST SEDGWICK GRID

2.2.1 Diamond Drilling

Details of the West Sedgwick diamond drilling programme were

included as an Appendix to the 1976-77 Annual Report. Drill hole sections are included in this report as Figures 2 and 3.

2.3 BASIN LAKE GRID

2.3.1 Introduction

Exploration during 1977-78 was centred on the eastern section of the grid, where fill-in track cutting, gradient array I.P. and soil sampling were completed to more closely define two categories of drill targets:

(i) combined I.P./geochemically anomalous zones located in the central and northern sections of the eastern zone during the 1976-77 season

(ii) the mineralised zone intersected in Pickand Mather's D.D.H. BL802.

Two diamond drill holes, BL1 and BL2, totalling 780.0 m were completed during the 1977-78 season.

2.3.2 Access

Cutting of fill-in grid lines to reduce the line spacing from 600 ft. to 300 ft. in the southern and northern sections of the grid was carried out by Mt. Lyell field assistants. Total footage cut and pegged was 12,400 ft. and is detailed in Table 1.

2.3.3 Geophysics

Two blocks of gradient array I.P. totalling 16,900 line-feet were surveyed by Scintrex Pty. Ltd. during the period 3rd to 22nd January, 1978, using a potential electrode separation of 100 ft. Details of lines surveyed are shown in Table 1.

The northern block, comprising sections of Lines 9N, 6N, 3N, 00, 3S and 6S, with current electrodes on Line 00, was completed to more closely define and close-off a significant chargeability anomaly located during the 1974 reconnaissance I.P. survey. The 1978 detail survey confirmed the strongest section of the anomaly at Line 00, 7250E with maximum chargeability of 31 milliseconds within a background of 8-10 milliseconds. Resistivities in the area covered by the detail survey varied from 2,000 to 6,000 ohm-metres, with a linear zone of low resistivity striking at a low angle to the chargeability anomaly. This low resistivity zone occurred just west of, coincident with, and just east of, the chargeable zone on Lines 9N, 00, and 6S respectively.

A dipole-dipole I.P. survey using a dipole spacing of 100 ft. was carried out on Line 00 to estimate the depth to the source of the anomaly detected by the gradient array survey. This survey indicated the source to be a narrow easterly dipping body located within 100 ft. of the surface at 7,250E.

The southern block, centred on Line 75S, 6600E, was surveyed to locate any geophysical expression of the mineralisation intersected in Pickand Mather's D.D.H. BL802, and to clarify the source of soil geochemical anomalies located during the 1977-78 season in the general area of BL802. Sections of Lines 66S, 69S, 75S, 78S, 80S and 82S were surveyed, with current electrodes on Line 75S. This survey failed to locate any I.P.

anomalies and defined background chargeability for the area of 10 milliseconds, with resistivity rising steeply on the eastern ends of the lines from a background of 3,000 ohm-metres to in excess of 10,000 ohm-metres.

Checking of outcrops in the area of the strong I.P. anomalies located during the 1974 survey in the eastern section of the grid extending from Line 24S, 6200E to Line 36S, 6200E, indicated that the area was underlain by the eastern margin of the hornblende-pyroxene porphyry intrusive body. The lack of magnetic response associated with these anomalies suggests that their source is accumulations of either pyrite or mafic minerals. These anomalies have not been followed up for geological reasons.

2.3.4 Geochemistry

During the 1977-78 season, soil geochemical sampling was carried out to assist drill target definition on the eastern section of the grid. Details of sample locations are shown in Table 1, and the raw geochemical data in Figure 4. Figure 5 presents a compilation plan of geochemical and geophysical anomalies.

Over the northern I.P. anomaly, sampling was completed on intermediate lines, but no extensions to the strong Cu/Pb/Zn anomaly previously located on Line 00, 7250E to 7600E were located. Sampling was of limited effectiveness due to much of the area being covered by swampy ground.

In the area of BL802, 'A' horizon soil sampling was completed on intermediate lines and also on the main grid lines which had not been previously sampled. In this section of the grid the glacial moraine cover is 30 to 50 metres thick and sampling was carried out to detect any dispersion through the glacial cover from the BL802 mineralisation. Sampling was carried out by hand augering through the 'O' horizon mat of surface vegetation and plant debris, generally 5-10 cm thick, then sampling of the next 5 cm, composed of black to brown sandy or peaty loam of the A_1 horizon. Numerous anomalous Pb values were detected, generally in the range 100-200 ppm Pb within a background of 10-30 ppm Pb. In spite of the close line spacing, ranging from 100 to 250 ft., anomalous values could not be traced on adjoining lines. Of particular interest was a group of strong Pb values located immediately up-slope from BL802 on Line 75S. This association, together with an interpretation of the Pb values suggesting that the trend of the anomalous values ran parallel to the regional strike of the bedrocks rather than perpendicular to the local slope, suggested that geochemical dispersion by secondary processes was emanating from the BL802 mineralisation and was penetrating the 30 to 50 metre thick glacial cover.

2.3.5 Costeaning

As a result of the dipole-dipole I.P. survey indicating that the source of the geochemical/I.P. anomaly centred on Line 00, 7250E was close to surface, this anomaly was evaluated by a costean located 50 ft. north of Line 00, extending from 7200E to 7400E. The costean exposed a 25 ft. thick carbonaceous shale bed with disseminated pyrite locally developed, centred at 7270E and coincident with the axis of the strong chargeability anomaly. The steeply east-dipping sequence exposed consisted of interbedded fine grained tuffaceous shale, carbonaceous shale and minor intermediate and felsic tuffs (7200-7330E), overlain to the east by fine to medium grained sericitic and

chloritic felsic tuffs with minor quartz veins carrying iron and manganese oxides on fractures and joints (7330-7400E). Channel sampling of the costean using 10 ft. sample lengths indicated that this eastern sequence had a higher geochemical Cu/Pb/Zn background than the western tuffaceous shale sequence, values probably being enhanced by the scavenging effect of the manganese oxides present. As the costean adequately explained the sources of the I.P. and soil geochemical anomalies, no further work was carried out on this zone (Figure 6).

TABLE 1

Basin Lake Grid Exploration Details 1977-78

LINE NUMBER	SOIL GEOCHEMISTRY		GRADIENT ARRAY I.P.		TRACK CUTTING	
	INTERVAL	NO. OF SAMPLES	INTERVAL	LENGTH	INTERVAL	LENGTH
9N			7000E-8000E	1,000'	7000E-8000E	1,000'
6N	7000E-8000E	21	7000E-8000E	1,000'	7000E-8000E	1,000'
3N	7000E-8000E	21	7000E-7900E	900'	7000E-8000E	1,000'
00			6500E-8000E & (DIPOLE-DIPOLE)	1,500'		
			6700E-8100E	1,400'		
35	6800E-7900E	23	6800E-7900E	1,100'	6800E-7900E	1,100'
65			6250E-7750E	1,500'		
24S	7400E-7850E	10				
30S	7000E-8000E	21				
36S	7000E-7600E	13				
42S	5000E-5600E	13				
48S	6650E-7050E	9				
54S	6000E-6500E	11				
60S	5800E-7300E	31				
66S	5200E-7800E	53	6000E-7700E	1,700'		
69S	6000E-7700E	35	6000E-7700E	1,700'	6000E-7700E	1,700'
72S	5400E-7600E	45			7000E-7600E	600'
75S	5800E-7600E	37	5800E-7600E	1,800'	5800E-7600E	1,800'
78S	5000E-7600E	53	6000E-7600E	1,600'	6600E-7600E	1,000'
80S	6000E-7600E	33	6000E-7300E	1,300'	6000E-7600E	1,600'
82S			5700E-7600E	1,900'	6000E-7600E	1,600'
84S	4500E-5000E	11				
90S	4200E-5900E	35				
95S	4200E-5500E	27				
	TOTAL	502	TOTAL LENGTH	18,400'	TOTAL LENGTH	12,400'

2.3.6 Diamond Drilling

Two diamond drill holes totalling 780.0 m were completed by Longyear Australia Pty. Ltd. between 10th February and 16th March, 1978, operating on a two shift basis from a caravan camp located 1 km SE of the intersection of Bradshaw's Road and the Basin Lake track. This programme followed the completion of the Red Hills drilling programme, and was completed at a cost of $66.20/metre including mobilisation from Red Hills and the cost of penetrating the glacial overburden in both holes.

D.D.H. BL1

BL1 was designed to evaluate the down-dip extension of the disseminated galena mineralisation intersected in Pickand Mather's D.D.H. BL802 (15 ft. averaging 0.47% Pb, 0.19% Zn) and to evaluate the source of the moderate Pb soil geochemical anomaly located on Line 75S immediately up-slope from the BL802 collar. The thick blanket of glacial moraine over the south-east section of the grid (38 m in BL802) precluded any pre-drilling evaluation of bedrock geology or geochemistry. The fact that the gradient array I.P. survey did not locate any anomalies in the vicinity of BL802 was not considered to down-grade the drilling target, in view of the mineralisation intersected in BL802.

The hole was collared on 10th February, 1978, and was completed at 484.0 m on 2nd March, 1978. The collar was located just south of Line 72S, 5900E, and hole bearing was 95° magnetic with an inclination of 70°. Penetration of the glacial overburden (28.6 m downhole thickness) was achieved by cementing the hole at 10.5 m, 13.5 m and 24.2 m with a Portland/Fondu mixture, and drilling ahead was facilitated by the circulation of quik-gel, quik-trol and diesel. The hole was collared and maintained in HQ rod size to 62.5 m, which assisted penetration of the overburden and reduced hole deflection in the weathered bedrock. Five HQWL bits were consumed in penetrating the overburden, which took 14 shifts to complete, including 3 shifts waiting for cement to set.

BL1 intersected a sequence of dominantly medium grained felsic crystal-lithic tuffs, extensively sericitised and pyritised from 294.7 m to 462.85 m. Apart from a few grains of galena, sphalerite and chalcopyrite in the altered section of the hole, the only notable mineralisation was a 1 cm band of fine grained galena-pyrite mineralisation within fine grained tuffs at 303.9 m. Localised areas of intense calcite and calcite-hematite alteration(?) characterised sections of the core, occurring within and up-hole from the sericitised/pyritised zone. The hole entered Comstock Tuffs at 462.85 m with development of calcite veining and quartz-chlorite-siderite-calcite alteration in the contact zone (462.85-464.35) with the up-hole pyroclastic sequence. Due to the altered nature of the contact and the absence of distinctive lithological layering on either side, the structural/stratigraphic significance of the contact cannot be determined (Figure 7).

The following sections of the hole were assayed for Cu, Pb, Zn, Ag, Mn and total S, in 1.5 m sections: 203-212 m, 296-330.5 m, and 398-464 m. The only significant assays were as follows:

296.0-300.5 m (4.5 m): 0.14% Pb, 0.46% Zn, 4 g/t Ag
303.5-308.0 m (4.5 m): 0.12% Pb, 0.44% Zn, 4 g/t Ag

Average total sulphur for those sections of the sericitised/pyritised zone assayed is as follows:

296.0-330.5 m: 3.5% total S
398.0-464.0 m: 2.3% total S

Due to the mixed nature of the pyroclastic sequence, and the lack of distinctive marker horizons or lithological layering, the stratigraphic relationship between the mineralised zones in BL1 and BL802 is not clear. Either bedding dips vertically and both zones are on the same horizon, or else bedding dips

steeply east or west and each zone is a small pod of low grade mineralisation. The sequence intersected in BL802 is generally similar to the altered zone in BL1, suggesting that bedding dips vertically to steeply east.

Although no significant mineralisation was intersected in BL1, the wide zone of sericite/pyrite alteration was encouraging and justified a second hole.

Geophysical Logging of D.D.H. BL1

The hole was logged to 390 m using a pole-dipole three-array logger by Scintrex Pty. Ltd. on 3rd March, 1978. In order to prevent collapse of the overburden during logging, the drilling crew was put on standby and logging was completed with 62.5 m of HW casing in the hole.

The geophysical profile of the hole (Figure 8) shows fairly good correlation with the geology. Resistivity background for the upper, essentially unaltered, sequence is in the range 4,000 to 10,000 ohm-metres but drops to below 2,000 ohm-metres in the sericitised-pyritised zone below 294.7 m. Chargeability background in the unaltered sequence is 8 to 10 milliseconds with a strongly chargeable zone present from 203.0 m to 212.0 m (max 84 milliseconds). This zone lies within a distinctive unit composed of coarse grained altered calcitic lithic tuff (204.6 m-217.7 m) with angular and rounded 'fragments' of calcite to 3 cm in a grey groundmass of quartz, felspar, calcite and chlorite/sericite. This unit lacks any sulphides (0.6% total sulphur) and base metal assays are all <320 ppm. Consequently a source for this 'anomaly' was not present in the drill core. Strongly chargeable zones from 280 m to 325 m, and 350 m to 390 m, correlate with the sericitised-pyritised zone, with maxima of 100 milliseconds between 295 m and 307 m broadly correlating with the weak galena mineralisation at 303.9 m.

A detailed geophysical analysis of this and other recent Mt. Lyell down-hole E.I.P. surveys will be included in a forthcoming report from Scintrex Pty. Ltd.

D.D.H. BL2

BL2 was designed to follow up the alteration zone intersected in BL1. The fill-in geophysical programme between Lines 66S and 82S located a narrow low-resistivity zone which correlates with the alteration zone in BL1. This low resistivity zone is the southern end of a much longer zone located by the 1974 reconnaissance I.P. survey, extending from Line 84S, 5500E to Line 12S, 7900E, a distance of 8,000 ft. along strike (figure 5). BL2 was collared 2,500 ft. NNE along strike from BL1 where a moderately chargeable zone coincides with the axis of the low resistivity zone. In addition, low order Pb values were detected on Line 48S, 6900E-7000E during A_1 horizon soil geochemical sampling over glacial moraine.

The hole was collared on 4th March, 1978, and was completed at 296.0 m on 14th March, 1978. The collar was located immediately NW of Line 48S, 6600E and hole bearing was 85° magnetic with an inclination of 60°. A down-hole thickness of 26.0 m of glacial moraine was penetrated in 6 shifts, including 2 shifts waiting for cement to set. Similar cementing and drilling techniques were used to BL1, with cement being set at 10.6 and 29.4 m. The hole was drilled in HQ rod size to 32.5 m, where it became necessary to reduce to NQ. Virtually no deflection of either drill hole occurred during penetration of the overburden.

BL2 intersected a similar sequence of medium to coarse grained felsic crystal-lithic tuffs to BL1, containing a pyritic carbonaceous shale unit from 197.05 m to 222.65 m. In general the grain size of the tuffs was coarser than the BL1 sequence, and included a significant proportion of both felspar and hornblende phenocrysts in the crystal component of the tuffs. Minor mineralisation of two styles was present in altered medium to coarse grained tuffs between 143.0 m and 174.0 m. Felspathised coarse grained pyritic crystal-lithic tuffs (143.0 m-146.0 m) contained very fine grained purplish sphalerite as small veinlets in the matrix. Adjoining this zone, between 146.0 m and 174.0 m, minor disseminated sphalerite, galena and chalcopyrite mineralisation occurred within fine to medium grained tuffs with a chloritised groundmass. The pyritic carbonaceous shale unit contained minor graded pyritic tuff beds and is the source of the I.P. anomaly. The only bedding and facing information in the hole is provided by the graded tuff beds in the shale, and although variable in orientation, suggest the sequence dips steeply west and faces west. The hole did not penetrate far enough across strike to intersect the inferred position of the Comstock Tuffs (Figure 9).

The following sections of the hole were assayed for Cu, Pb, Zn and total S, in 1.5 m sections: 141.4 m-179.5 m (Ag also) and 195.0 m-234.0 m. The only significant assay was:

161.5 m-166.0 m (4.5 m): 0.21% Pb, 0.05% Zn, 1 g/t Ag

All Cu, Pb and Zn values in the altered tuffs from 141.4 m to 179.5 m were less than 1,000 ppm, with average total S at 0.55%. All values for the carbonaceous shale unit (197.05 m-222.65 m) were less than 360 ppm, with average bulked values for the complete thickness of shale of 71 ppm Cu, 63 ppm Pb, 108 ppm Zn and 1.75% Total S.

The geological sequences intersected in BL1 and BL2 and their geophysical surface expressions, suggest that the carbonaceous shale unit intersected in BL2 is a facies variation of the strong alteration zone in BL1. Consequently any further testing for mineralisation within this alteration zone should be directed either between BL1 and BL2 or preferably south of BL1.

Geophysical logging of BL2

An attempt to log the hole using a pole-dipole three-array logger by Scintrex Pty. Ltd. on 15th and 16th March, 1978, was partly unsuccessful due to electrical coupling problems. The attempt took place during fine misty rain, and electrical disturbances are believed to have resulted from electrical discharges taking place on an H.E.C. power transmission pylon adjacent to the hole. A brief analysis of the data (Figure 10) has been presented by Scintrex (Report Job No. Tas-054E).

2.4 HENTY RIVER GRID

2.4.1 Introduction

In the Henty River gorge, exploration has commenced to evaluate a zone of galena-sphalerite mineralisation exposed in three old adits at river level. During the 1977-78 season, the adits were re-located and sampled, and a 300 ft. by 50 ft. grid was established. Rock chip sampling and soil geochemical sampling programmes have been completed, defining a major Cu/Pb/Zn/Ag

anomaly extending from the adits for approximately 1,000 ft. north along strike, and open to the north. Checking of the most intense section of the soil geochemical anomaly located mineralised outcrops 1,000 ft. north of the adits. Geological mapping based on outcrop information and rock chips in the -10+80 fraction C-horizon geochemical soil samples indicates that the disseminated/veinlet galena-sphalerite mineralisation is located near the western margin of an altered shale-fine grained felsic tuff unit.

The mining history behind the adits is poorly known, but it is believed mining was in progress there around 1903, based on information in weekly reports by Mt. Lyell prospector S. McClean, dated 21st February, 6th and 12th March, 1903, and held in the Company's records at Queenstown. McClean and assistant made two abortive trips from a camp at Lake Dora in an attempt to evaluate the Mt. Read Mining Co. Ltd. "workings and show" in the Henty gorge. He variously reports the mineralisation as "a big galena show" (21st February) and as a "silver lead show" (12th March).

McClean's access problems to the adits are still problems 75 years later. The Henty River adits are located 10 ft. above river level on the west bank. This section of the river, averaging 100 to 150 ft. wide and 2 to 4 ft. deep, is located in the central section of a 10 km long V-shaped gorge, with a vertical drop of 1,300 ft. from the peneplain on each side of the gorge to river level. Average gradient up the sides of the gorge is 30°, with open virgin forest cladding the sides of the gorge. Current access is by Bradshaw's Road to the East Tyndall grid, then 1 to $1\frac{1}{2}$ hours walk down the eastern side of the gorge along East Tyndall grid Line 2N to the river.

The adits are located 400 ft. south of the E.L. 9/66-E.L. 41/71 boundary, and the recently cut grid extends across the boundary. For operational reasons, the exploration programme and expenditures on the Henty River grid will be reported under and costed against E.L. 41/71.

2.4.2 Access

In order to provide a detailed evaluation of the mineralisation, a grid was cut and pegged with a nominal line spacing of 300 ft. and pegs at 100 ft. spacing along the lines. The lines are also flagged every 50 ft., and although no corrections for slope were used during the pegging, the grid shown on all plans is corrected for slope.

In all, six lines each extending 1,000 ft. west and 800 ft. east of the river banks were cut and pegged by contractor G. Mallinson and partners at a contract price of $76 per 1,000 ft. In addition, base-lines were established for access along both western and eastern river banks and are numbered 3000E and 3200E respectively. Total footage cut and pegged was 16,800 ft.

The Henty River grid is tied-in to the East Tyndall grid as Line 2N (Henty River grid) is the western extension of Line 2N (East Tyndall grid), although new easting co-ordinates have been used on the Henty River grid.

2.4.3 Geology and Mineralisation

Disseminated and veinlet very fine grained galena mineralisation with minor sphalerite, but only trace pyrite and chalcopyrite,

within strongly sheared and sericitised light green felsic tuffs and tuffaceous shales, has been located at two stratigraphically equivalent areas on the west bank. In the area of the three adits, mineralisation has been traced over a strike length of 190 ft., extending south from the central (No. 2) adit, through No. 1 adit, and on rock platforms forming the river bank for 130 ft. south of this adit. At this southern end the mineralisation enters the river and is covered by water and extensive alluvial boulder fans.

The No. 3 adit, located at river level 150 ft. NNE of No. 2 adit, has been driven for 33 ft. through brecciated altered shales showing only minor disseminations of pyrite. Interpretation of geological data suggests that this adit was not driven far enough across strike to intersect the northern extension of the mineralisation intersected in Nos. 1 and 2 adits.

The results of systematic sampling of both walls of each adit are presented in Table 2 and shown in section in Figure 11.

TABLE 2

Henty River - Adit Sampling Assays

WEIGHTED AVERAGE	NO. 1 ADIT		NO. 2 ADIT		NO. 3 ADIT	
	S WALL 0-20'	N WALL 0-20'	S WALL 3'-16.5'	N WALL 0-16.5'	S WALL 5'-33'	N WALL 0-33'
Cu	125 ppm	217 ppm	122 ppm	156 ppm	130 ppm	111 ppm
Pb	4.36%	1.41%	0.32%	0.84%	430 ppm	518 ppm
Zn	1.66%	1.57%	1.07%	0.33%	885 ppm	821 ppm
Ag	8.8 g/t	4.8 g/t	2.2 g/t	6.7 g/t	1.2 g/t	1.4 g/t
Mn	0.14%	0.15%	0.19%	0.14%	0.13%	0.13%

The second area of galena mineralisation was located during field checking for the source of the strongest soil Pb geochemical anomaly on the grid, and is situated adjacent to Line 4N, 1,000 ft. north along strike from the No. 1 adit. Initially in the follow up a pit was dug at Line 4N, 2600E. At a depth of 30 cm a large floater containing intense disseminated galena mineralisation in altered fine grained tuff was located, situated in transported soils 10 cm above bedrock composed of unmineralised grey shales. Subsequent tracing of mineralised surface float for 100 ft. up-slope located outcrops of altered fine grained felsic tuff with disseminated fine grained galena mineralisation of similar style to the mineralisation in the No. 1 adit. Small cerussite crystals are present on some of the weathered mineralised outcrops, which are located 100 ft. north of Line 4N, 2550E. Assays of samples collected from this Line 4N mineralisation are presented in Table 3.

TABLE 3

Henty River Line 4N Mineralisation Assays

NO.	SAMPLE TYPE	Cu	Pb	Zn	Ag	Au	Mn
24155	Selected Chips From Outcrops	290 ppm	4.10%	2.00%	40 g/t	< 0.1 g/t	880 ppm
24156	Floater in Pit	240 ppm	0.68%	1.31%	6 g/t	< 0.1 g/t	480 ppm
24154	Bedrock in Pit	85 ppm	270 ppm	245 ppm	0.1 g/t	n.d.	610 ppm

Figure 12 shows geological information collected during outcrop mapping, and Figure 13, showing interpretive geology, is based on the outcrop information, lithological data from rock chips in the C-horizon soil samples, aerial photographic interpretation, and soil geochemical patterns reflecting variations in underlying bedrock.

Both areas of mineralisation are located within, but close to the western margin of a steeply east-dipping wedge of altered and sheared fine grained felsic tuffs and tuffaceous shales, with minor carbonaceous and hematitic shales. This wedge thickens to the north from approximately 50 ft. at Line 00, to 700 ft. on Line 4N, resulting from divergence of the N-S bedding trends and the NNE-striking Henty Fault Zone which forms the faulted eastern margin of this wedge. A significant proportion of the areal extent of this unit is concealed by the river bed. Although the southern mineralised zone at the adits is only 200 ft. across strike from the fault zone, only minor barren quartz veining is present in the mineralisation. Localised small veins and pods of quartz + calcite are flattened in the strong foliation and commonly have galena crystals forming a thin layer at their margins. These crystals are much coarser than the bulk of the mineralisation and have recrystallised in low pressure zones during the formation of the intense cleavage, probably during or before the major fault movement.

The mineralised tuff/shale unit overlies a mixed sequence of foliated, altered intermediate and felsic crystal and crystal-lithic tuffs cropping out up the west side of the gorge. A distinctive unit of foliated, sericitised medium grained intermediate felspar crystal tuffs between 50 ft. and 250 ft. wide immediately underlies the mineralised tuff shale unit. A fairly homogeneous sequence of dominantly medium grained felsic crystal-lithic tuffs with ignimbritic appearance underlies the eastern side of the gorge and is bounded under the east bank of the river by the Henty Fault Zone. Small carbonaceous shale units were located on the eastern ends of Lines 00 and 4N.

Based on the direction and spacing of tributary streams, and on the character, width and discontinuity of rock units and soil geochemical anomalies, the faulting interpretation shown in Figure 13 is suggested. The area gridded appears to be cut by four sub-parallel WNW-SSE trending faults with north block west movement. These faults are displaced by the Henty Fault Zone with a small amount of east block north movement. Major vertical movement is required on this fault zone to explain the broad lithological differences between the volcanic

sequences on each side of the river. Insufficient bedding and cleavage data is available to clarify this structural interpretation.

2.4.4 Geochemistry

A total of 236 B/C horizon soil geochemical samples were collected at 50 ft. spacing along the grid lines, with spacing closing down to 25 ft. adjacent to the mineralised No. 1 adit. At almost all sample points the C-horizon was penetrated and consequently the sample collected was not affected by soil creep and transport on the steep gorge sides. Samples were analysed for Cu, Pb, Zn, Ag and Mn by A.A.S., with infrequent checks by fire assay of the accuracy of the Ag determinations. Both -80 and -10+80 fractions were analysed and showed a very close correlation of values. Contoured values are shown in Figures 14 to 18.

The sampling defined a major Cu/Pb/Zn/Ag/Mn anomaly on the west bank of the river, extending from Line 1N adjacent to the No. 1 adit, to Line 4N. This anomaly, defined by values greater than 100 ppm Cu, 400 ppm Pb, 300 ppm Zn, 2 g/t Ag and 1000 ppm Mn, is 1,000 ft. long by 200 ft. wide and is open to the north. The anomaly is parallel to the regional strike and occurs over the western margins of the host tuff-shale unit but locally extends over the underlying intermediate crystal tuff unit Lines 1N and 2N). This overlap is clearly shown by the soil geochemical Cu anomaly which generally occurs parallel to, but slightly west of, the Pb/Zn/Ag/Mn anomaly. Within the latter anomaly, locally stronger anomalies occur on Line 1N overlying and up-slope from the mineralised No. 1 adit (max 0.26% Pb in soils at 1N, 2975E), and on Line 4N from 2500E to 2600E (max at 2600E of 0.44% Pb, 0.14% Zn, 8 g/t Ag in soils). As explained above, pitting of this Line 4N anomaly resulted in the location of the northern mineralised zone.

Manganese in soils on the west bank shows a good correlation with Zn values, while on the east bank, the only soil geochemical anomaly located is a major Mn anomaly defined by values greater than 1% Mn over an area of 600 ft. by 120 ft. The maximum value of this anomaly is 20% Mn in soils at Line 2N, 3650E. In spite of the high Mn values on the east bank, no scavenging of base metals has occurred.

Rock chip samples from 31 outcrops throughout the area gridded, but excluding the mineralised zones, have been assayed. The average for the 17 samples from the west side of the gorge is 39 ppm Cu, 21 ppm Pb, 168 ppm Zn and 935 ppm Mn. The high Zn and Mn averages are significant compared to data from other exploration areas. Rock chip assays are shown in Figure 19.

2.5 EXPLORATION EXPENDITURE 1977-78

1.	Salaries and Wages	$ 18,232
	Burden Charges	6,270
2.	Materials	6,071
3.	Access	4,766
4.	Geophysics	12,404
5.	Geochemistry, Petrology	4,676
6.	Diamond Drilling	66,304
7.	Equipment and Facilities	3,973
8.	General Costs	961
	Indirect Charges of 6½% of 1, 2, 5, 6 (part only) and 7	3,444
	TOTAL	$127,101

Expenditure on E.L. 41/71 from 30th June, 1977 to 28th June, 1978, totals $127,101. Total expenditure since 1971 is $273,944.

3. PROPOSED EXPLORATION PROGRAMME 1978-79

3.1 INTRODUCTION

The proposed exploration programme and budget outlined below details and costs a more extensive exploration programme than can be completed on E.L. 41/71 during the next twelve months. Due to constraints of budget, manpower, and sequential phasing of exploration, most but not all of the outlined exploration will be completed during the 1978-79 season. Based on individual programmes and costs outlined in this report, the final proposed exploration programme and budget for 1978-79 for E.L. 41/71 will be presented in a summary report on planned 1978-79 exploration programmes and budgets covering all four Exploration Licences as a single integrated exploration programme. This summary report will be available during August, 1978.

The main objective of the 1978-79 programme is the evaluation of the Henty River mineralisation and strike extensions of this zone by diamond drilling. Initially geological, geochemical and geophysical programmes will be carried out to locate and investigate the host fine grained tuff-shale unit on strike to the north and south of the known mineralised zone, and targets defined in this programme will be tested by diamond drilling, as will the known mineralised zone.

In addition, a soil geochemical sampling programme is proposed for the Madame Howard grid, and a further diamond drill hole is proposed at Basin Lake to test the southern strike extension of the altered pyritised zone intersected in D.D.H. BL1.

Unit costs for various exploration techniques used in the 1978-79 budget are presented in Table 4.

3.2 HENTY RIVER GRID

Five separate phases of exploration are proposed in this area. The detailed execution of each phase of the programme will depend to some extent on the results of the previous phase, and consequently the programme is presented in a flexible form.

3.2.1 Detail Programme on Current Grid

Gradient array I.P. and ground magnetics in progress, and a pole-dipole I.P. survey will be carried out ($5,000).

3.2.2 Evaluation of Northern Extension of Zone

The Henty River grid lies in the SE corner of the old West Tyndall grid cut in 1967-68 with a line spacing of 1,500 ft. This grid was surveyed with McPhar dipole-dipole I.P., ground magnetics, and 200 ft. spaced soil sampling in 1968-69. Compilation of this data indicates that the contact between the host tuffaceous shale unit and the adjoining intermediate tuff, defined on the Henty River grid, can be traced along strike to the NW for in excess of 10,000 ft. across 5 lines of the West Tyndall grid. Low order (100-200 ppm) Pb-Zn soil anomalies were detected in 1968-69 where the contact crosses 3 of these lines, using 200 ft. sample spacing. In addition, weak to moderate strength I.P. anomalies were located over or near the contact on 4 of the 5 lines. These anomalies on the old

TABLE 4

Unit Costs Used in 1978-79 Exploration Budget

EXPLORATION METHOD	UNIT COST	PRODUCTIVITY
1. TRACK CUTTING	Max $350/km Min $250/km	500 m/crew/day
2. GEOCHEMICAL ASSAYS		
(i) soils	1 fraction - $2.25 2 fractions - $4.50	Cu, Pb, Zn, Ag, Mn
(ii) rock-chips	Cu, Pb, Zn, Ag, Mn - $4.25	less $2.00 if sample preparation by field assistants
(iii) drill core	Cu, Pb, Zn, Ag, S - $5.80	
3. GEOPHYSICS		
(i) gradient array I.P.	$400/km	1 km/crew/day
(ii) D.D.H. E.I.P. logging	Max $300/hole (Scintrex) Min $100/hole (Mt. Lyell)	1 hole/day
(iii) ground magnetics	$130/km	3 km/operator/day
4. DIAMOND DRILLING (all inclusive)	Outside contractor $65/m Mt. Lyell crew $45/m	10 m/shift
5. EARTHMOVING		
(i) drill site preparation	D7 - $30/hour	20 hours/drill site
(ii) road construction	$6,000/km - steep terrain $2,100/km - flat terrain	20 dozer days/km 7 dozer days/km
6. HELICOPTER	$340/hour Bell Jetranger 206B	1977-78 average usage 4 hours/day

lines will be followed up to assess the regional significance of the contact and the adjoining tuffaceous shale unit, before detail exploration commences to evaluate the immediate northern extension of the mineralisation located immediately north of Line 4N on the Henty River grid.

(i) Re-clearing and re-pegging of eastern 4,000 ft. of West Tyndall grid Lines 4N, 6N, 8N, 10N, 12N by Mt. Lyell field assistants (time required 3 weeks).

(ii) Geological mapping and 50 ft. spaced geochemical soil sampling on the above grid lines (80 samples per line, 1 fraction analysed - $900 - 3 weeks).

(iii) Re-interpretation by Scintrex Pty. Ltd. of the 1968 McPhar dipole-dipole survey based on results of the current Henty River gradient array and pole-dipole surveys.

(iv) Assuming more detailed follow up is necessary after Phases (ii) and (iii) above, 8 km of access road will be constructed from Howards Road, running as near as possible to the contact, along the top of the west side of the Henty Gorge ($16,800 based on $2,100/km using two D7 bulldozers - time 5 weeks).

(v) Grid line spacing over the contact on the West Tyndall grid will be reduced from 1,500 ft. to 300 ft. by cutting 20 intermediate grid lines each 3,000 ft. long, pegged at 100 ft. intervals. These lines will provide a 300 ft. line spacing from the northern boundary of the current Henty River grid to Line 12N, West Tyndall grid ($7,350 based on 60,000 ft. of traverse line cutting and 10,000 ft. base-line, totalling 70,000 ft. at contract rate of $350/km or $105/1,000 ft. - time 8 weeks, 1 crew - some of proposed road may serve as base-line).

(vi) Geological mapping and 50 ft. spaced geochemical soil sampling on these intermediate grid lines (60 samples on each of 20 lines, 1 fraction analysed, total 1,200 samples - $2700 - time 8 weeks).

(vii) Gradient array I.P. coverage of 30% of the intermediate and reconnaissance grid lines over zones of anomalous geochemistry and/or favourable geology. In addition a ground magnetic survey will cover all grid lines to assist in geological interpretation ($6,250 - based on 25 km ground magnetics and 8 km I.P. - time 2 weeks).

3.2.3 Evaluation of Southern Extension of Zone

This zone extends south of the current Henty River grid and is currently rated of lower priority than the northern extension programme due to access problems and the apparent lensing out of the mineralised zone within the established Henty River grid. Anomalous stream sediment and rock chip samples collected during 1972 in tributaries joining the Henty River between the mineralised zone and the Murchison Highway will be followed up during geological and geochemical reconnaissance along strike to the south of the Henty River grid.

Geochemical assays - $1,950, based on 300 soil samples (2 fractions) and 300 stream sediment samples (1 fraction).

3.2.4 Diamond Drilling Programme

Based on the results of the northern extension evaluation programme drilling targets will be selected from this area and also from the exposed mineralised zone in the Henty gorge. For budget purposes, 3 x 300 m diamond drill holes are planned, but until actual drill targets are defined and corresponding drill sites are selected, access to drill sites by both helicopter and road will be considered and costed separately.

(i) Access - Road: If selected drill sites can be reached by limited road construction from the new access road to be constructed in Section 3.2.2 (iv), bulldozing of drill sites, access tracks and one or more costeans will be carried out ($3,000 - based on 100 machine hours).

(ii) Access - Helicopter: If road access to drill sites is uneconomic due to steep terrain (e.g. in Henty gorge), drill pads will be cleared by contract track cutters. All diamond drilling equipment, fuel and drillers will be transported by helicopter, with a tent camp established at one or more drill sites, depending on the distance between drill sites (see 1977-78 Annual Report for E.L. 21/76 for detail costing of a recent diamond drilling programme using helicopter support). If due to steep terrain or thick forest, suitable drill sites cannot be used, more than one D.D.H. may be drilled from a single site.

Cutting of 3 drill pads at $2,000 each - $6,000; helicopter charter based on 30 hours flying - $10,200.

(iii) Diamond Drilling: 3 x 300 m holes (total 900 m) - $40,500 (Mt. Lyell) or $58,500 (outside contractor).

(iv) Other costs associated with drilling programme: Assays of drill core - 100 x 1.5 m samples in each of 3 holes $1,740; E.I.P. logging of 3 holes (Mt. Lyell) $300; Petrology-mineragraphy studies $1,000.

3.2.5 Environmental Study Programme

Due to the proximity of the target mineralised zone to the Henty River, a water quality sampling programme will commence before the above field programme starts, to establish background levels in the Henty River and its major tributaries above and below the mineralised zone, and to monitor any changes in these levels. Four collection points will be sampled at four weekly intervals throughout the 1978-79 year (48 samples at $10/sample - $480).

3.3 MADAME HOWARD GRID

At Madame Howard, barite veins occur within a sequence of felsic to intermediate pyroclastics with minor carbonaceous shale lenses. The only exploration carried out to date has been a gradient array I.P. survey with limited soil geochemical sampling over the low-order I.P. anomalies located, and reconnaissance geological mapping. Further evaluation of this area is recommended in view of (i) the extensive barite occurrences (commonly barite is associated with volcanogenic massive sulphide deposits), (ii) the favourable volcanic facies of pyroclastic-shale, (iii) the spatial relationship of this area to the Mt. Lyell copper deposits to the east, and (iv) the location of Madame

Howard near the western margin of the Queenstown Pyroclastics, regarded as a favourable section of the sequence for massive sulphide deposits and hosting the Rosebery and Hercules deposits, and the Henty River mineralised zone.

Complete coverage of the grid with geological mapping and soil geochemical sampling will be carried out initially, and depending upon the conclusions drawn from this programme, the grid may be extended to cover favourable sequences adjoining the current grid. Geochemical assays - $810, based on 360 samples collected at 50 ft. spacing along 18,000 ft. of grid lines.

3.4 BASIN LAKE GRID

The intersection of an extensive alteration-pyritic zone in D.D.H. BL1 indicates that further drilling is warranted to evaluate the strike extensions of this zone. D.D.H. BL2 suggested that this zone was the facies equivalent of the carbonaceous shale unit in BL2, but the zone has not been tested south of BL1. Consequently one diamond drill hole is recommended to test the southern extension of this zone, with a collar location 1,200 ft. south of BL1. This hole is rated as a lower priority than all the above programmes and will only be drilled during the 1978-79 season if funds become available due to the postponement of other programmes.

All-inclusive cost for 1 x 400 m diamond drill hole is $26,080 using an outside drilling contractor, or $19,280 using a Mt. Lyell crew. Included in these figures are $580 (assays); $100 (E.I.P. logging by Mt. Lyell), $600 (drill site preparation), and drilling costs of $24,800 (outside contractor) or $18,000 (Mt. Lyell).

3.5 EXPLORATION BUDGET 1978-79

The 1978-79 Exploration Budget for E.L. 41/71 set out below is a preliminary budget for planning purposes, setting out the alternative costs for the various programmes, depending on choice of diamond drilling contractor/Mt. Lyell drilling crew, and selection of either road or helicopter access for the Henty River drilling programme. The final integrated 1978-79 exploration programmes and budgets will be presented in the summary report to be prepared in August, 1978.

Manpower allocation is one geologist and one field assistant for the full year.

1.	Salaries, Wages, Burden Charges	$ 30,000	
2.	Materials	6,000	
3.	Access	40,950	($27,750 if road access used for Henty River drilling programme)
4.	Geophysics	11,650	
5.	Geochemistry/Petrology	10,160	
6.	Diamond Drilling	83,300	($58,500 if Mt. Lyell crew used)
7.	Equipment and Facilities	4,000	
8.	General Costs	2,000	
	Indirect Charges of 6½% of 1, 2, 5, (6) and 7	3,260	
	TOTAL	$193,475	

This total of $193,475 is only a preliminary maximum estimate. The actual final budget total to be decided in August, 1978 will be of the order of $140,000, which can be achieved by cost savings due to postponement of the Basin Lake drill hole until the 1979-80 field season, and using a Mt. Lyell diamond drilling crew to carry out the Henty River drilling programme.

019

230019

AMG REFERENCE POINTS ADDED

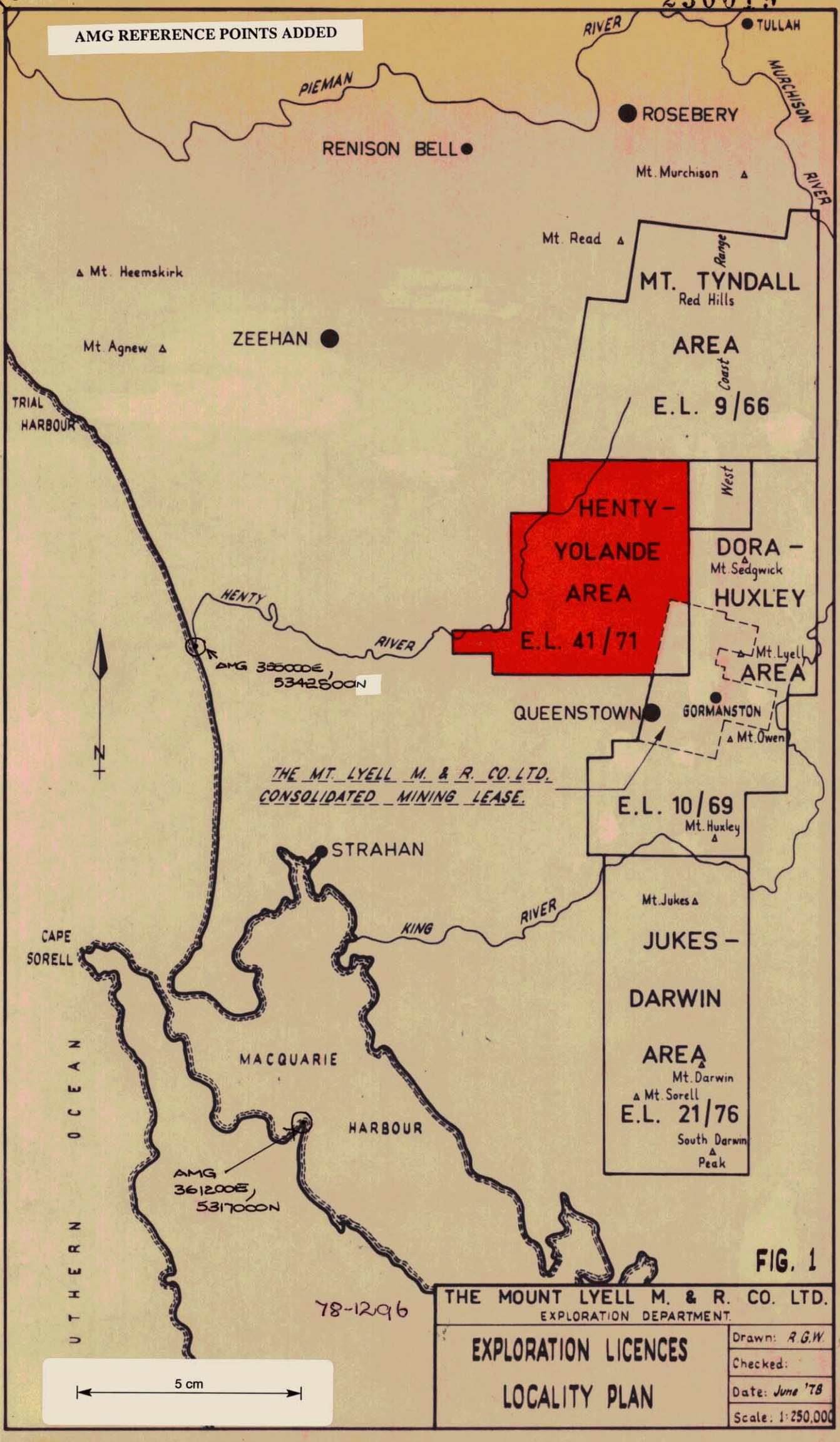


FIG. 1

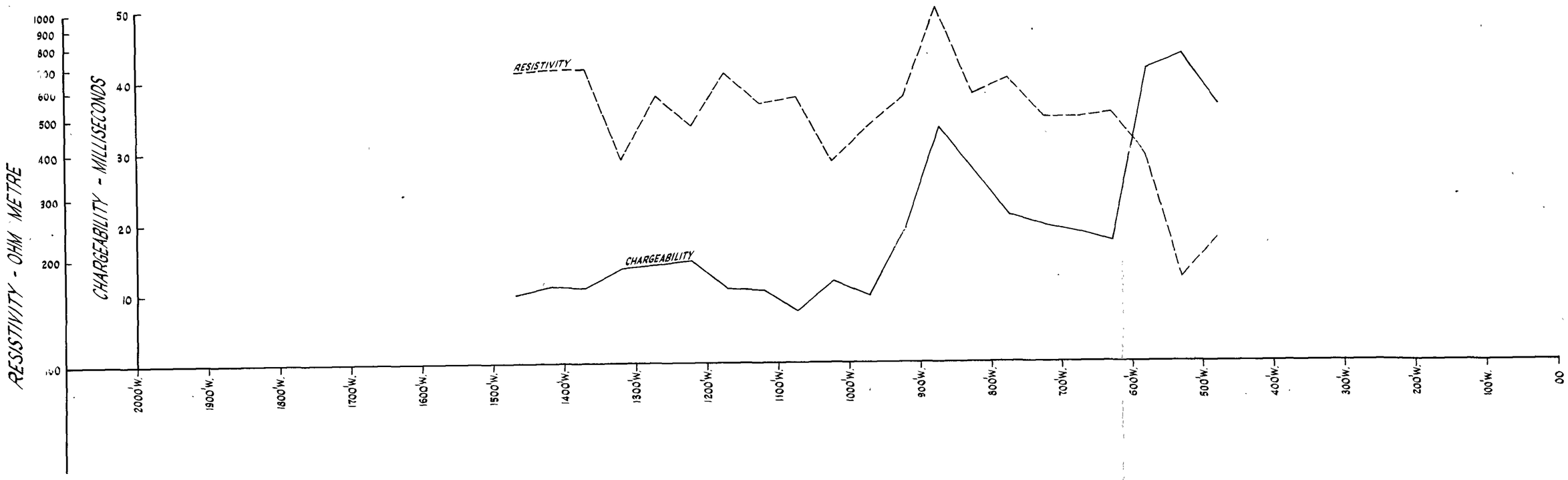
78-1296

THE MOUNT LYELL M. & R. CO. LTD.
EXPLORATION DEPARTMENT.

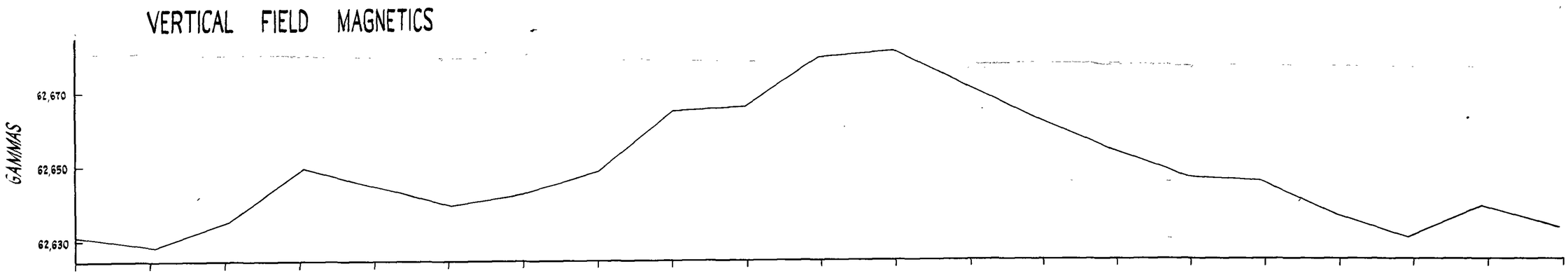
EXPLORATION LICENCES
LOCALITY PLAN

Drawn: R.G.W.
Checked:
Date: June '78
Scale: 1:250,000

E.I.P. GRADIENT ARRAY



VERTICAL FIELD MAGNETICS



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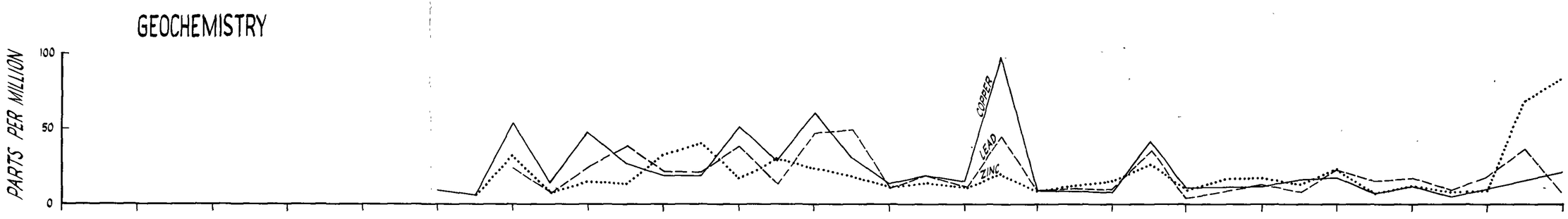
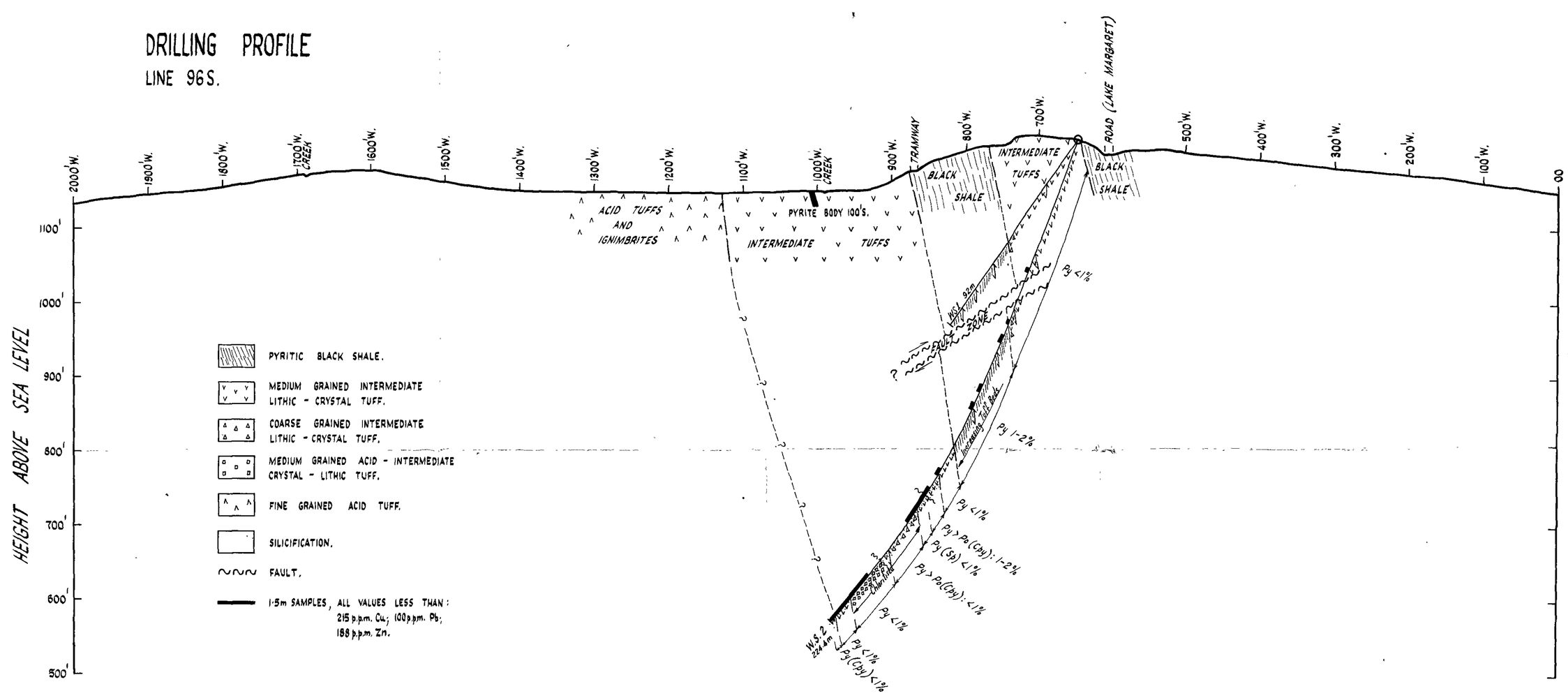


DRILLING PROFILE

LINE 96S.



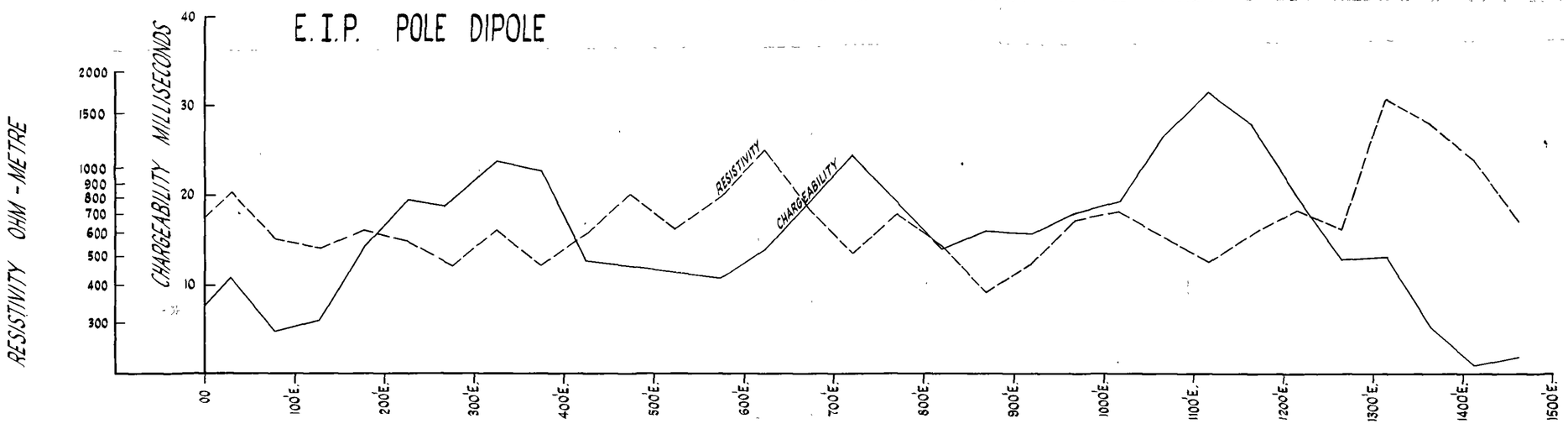
230020

5 cm

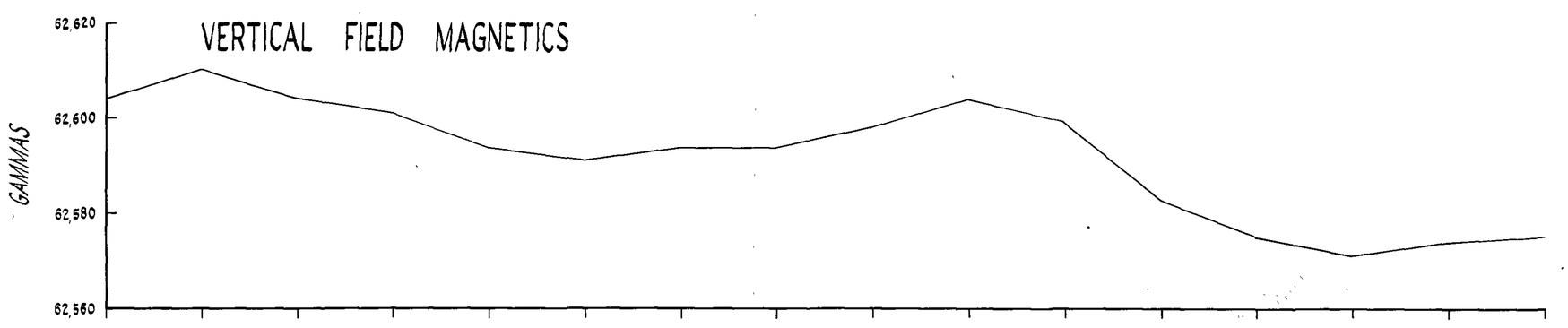
78-1296

MT. LYELL - G.O.D.L. JOINT VENTURE	DRAWN. R. MEARES.
	TRACED. R.G.WILSON.
HENTY - YOLANDE E.L. 41/71	CHECKED. R. Meares
WEST SEDGWICK AREA	DATE. 15:8:'77
D.D. HOLES 1 & 2 2200	SCALE. 1:1200
	FIGURE 2

E.I.P. POLE DIPOLE



VERTICAL FIELD MAGNETICS



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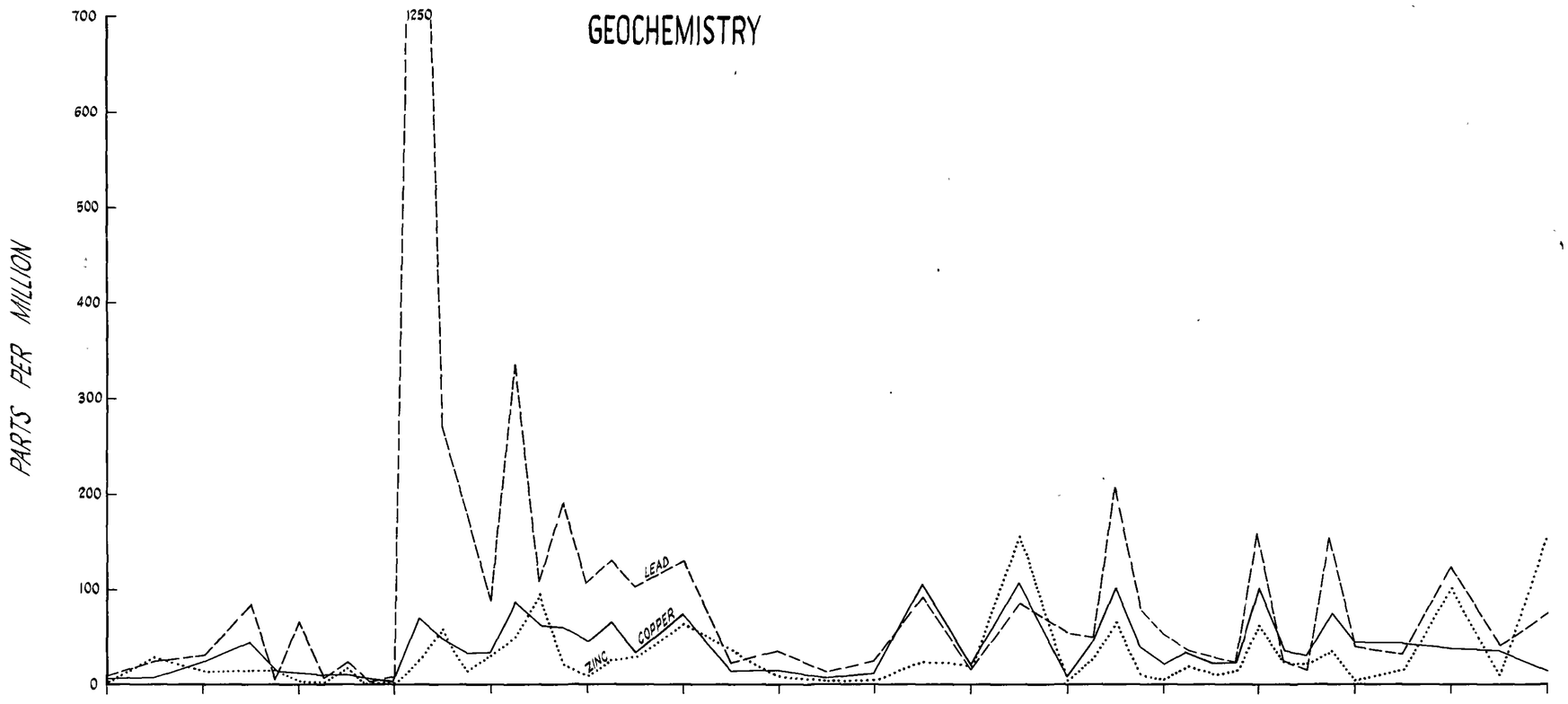
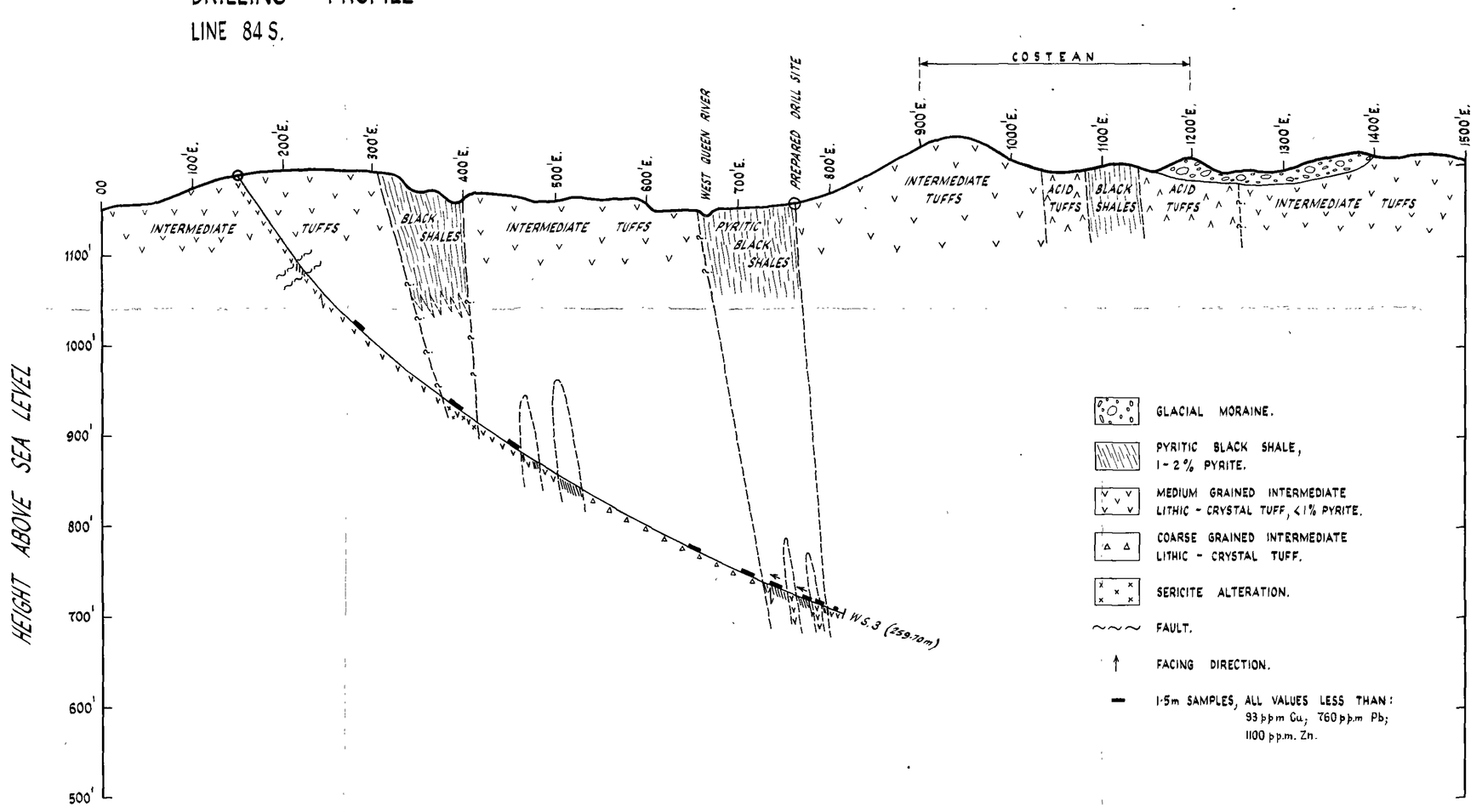


DRILLING PROFILE

LINE 84 S.



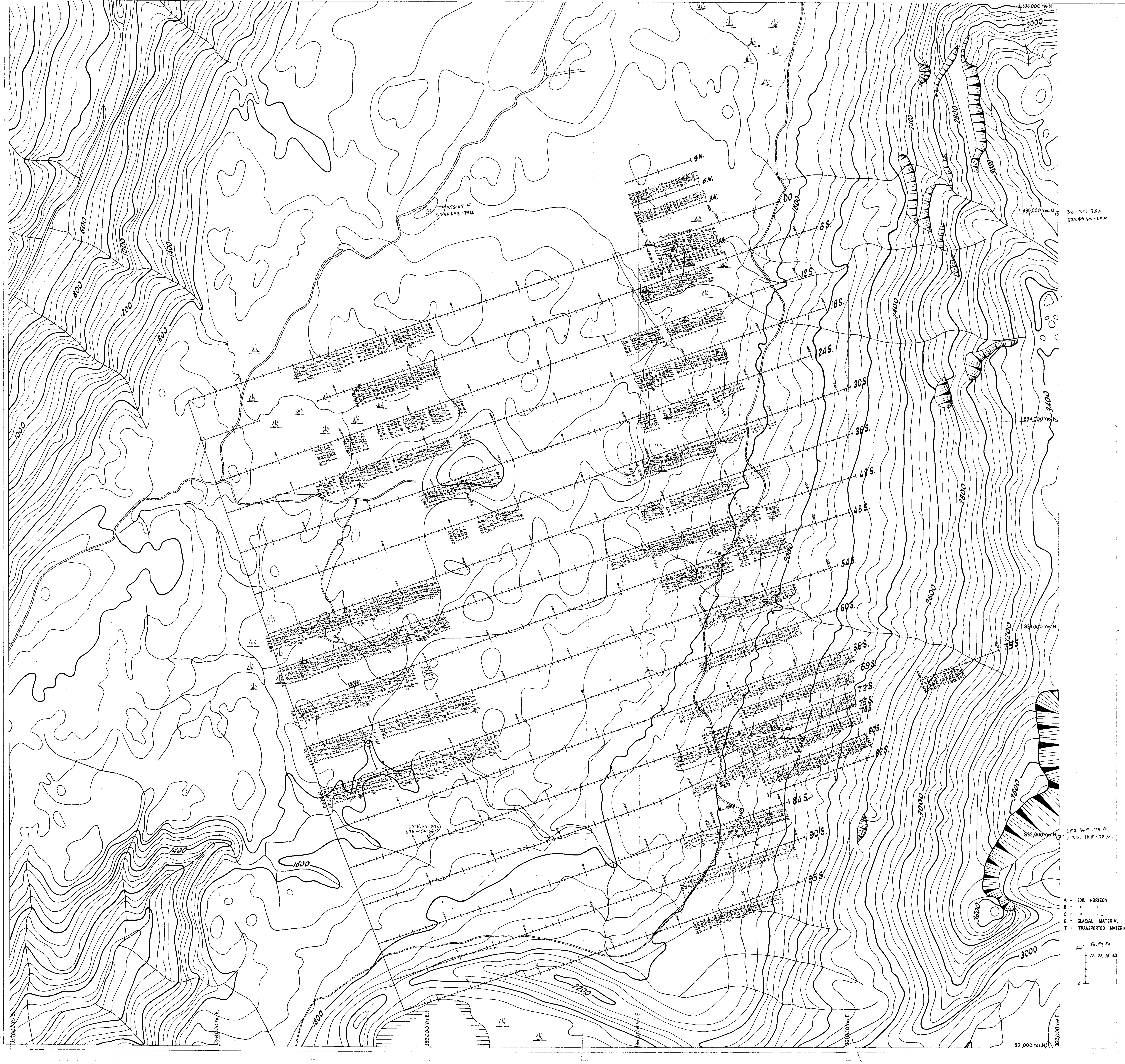
DRILL HOLE PLAN

5 cm

230621

M8-1296

MT. LYELL - G.O.D.L. JOINT VENTURE	DRAWN. R. MEARES.
	TRACED. R.G.WILSON.
	CHECKED.
HENTY - YOLANDE E.L. 41/71	DATE. 30 : 9 : '77
WEST SEDGWICK AREA 2201	SCALE. 1 : 1200
PLAN & SECTION D.D.H. W.S. 3	FIGURE 3



230022

78-1296

THE MOUNT LYELL M. & R. COY. LTD.
GEOLOGICAL DEPARTMENT

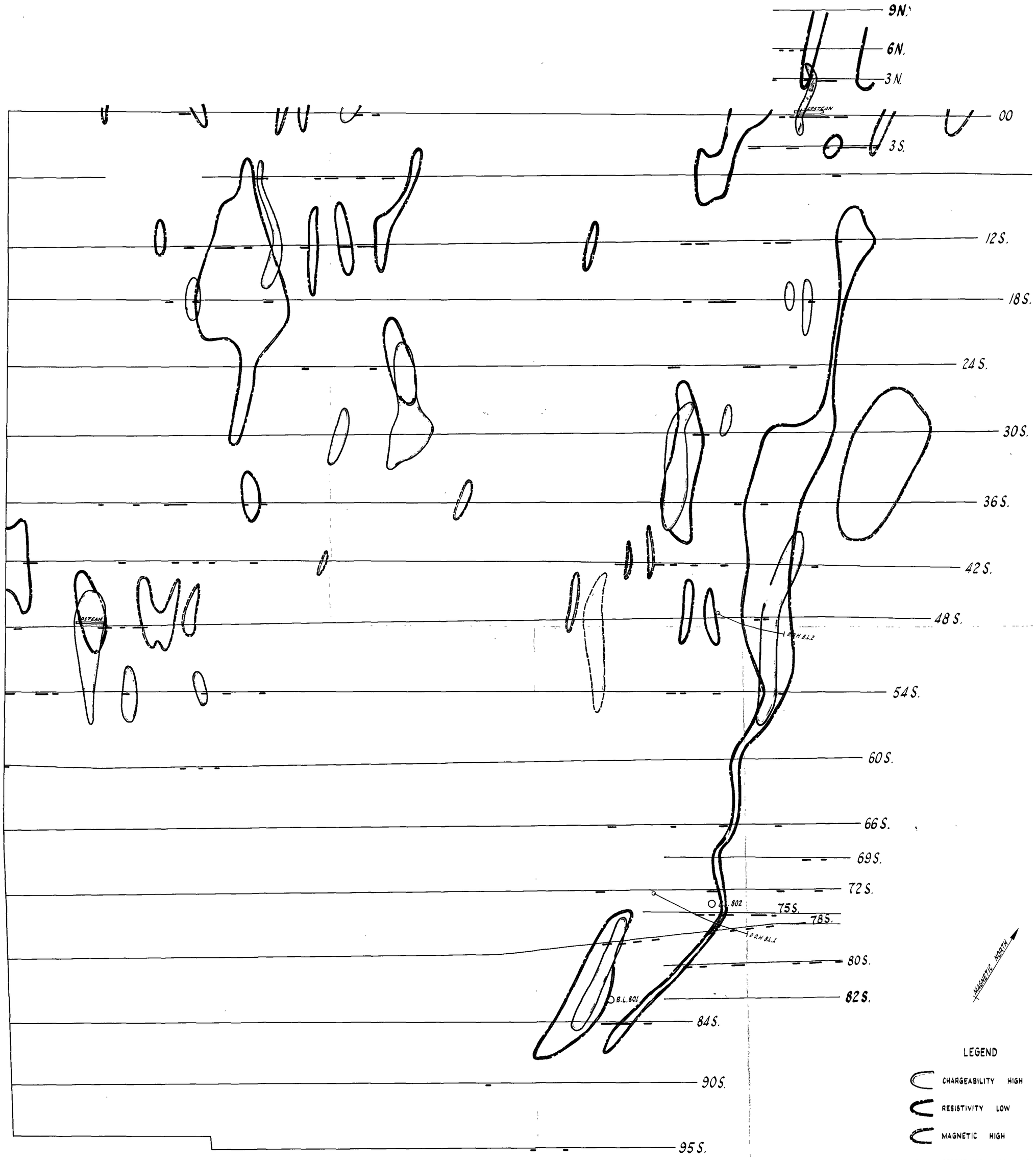
HENTY YOLANDE E.L. 41/71

BASIN LAKE GRID
SOIL GEOCHEMISTRY
-80 # FRACTION

2202

DRAWN.	R.G. WILSON
TRACED	
CHECKED.	
DATE	APRIL 1977
SCALE	1:6000

FIGURE 4



230023

78-1296

MT. LYELL - G.O.D.L. JOINT VENTURE

HENTY - YOLANDE E.L. 41/71

BASIN LAKE GRID 2203

GEOPHYSICAL & GEOCHEMICAL ANOMALIES

DRAWN	R. MEARES.
TRACED	R.G.WILSON
CHECKED	
DATE	JUNE. 1978
SCALE	1:6000

FIGURE 5

GEOPHYSICS

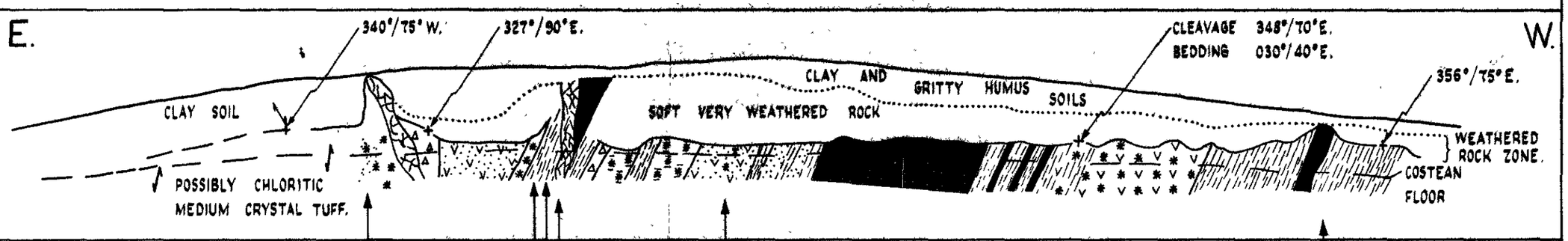
7400'E. 7350'E. 7300'E. 7250'E. 7200'E.

CHARGEABILITY — 20 MILLISECONDS | 81 MILLISECONDS | 20 MILLISECONDS

SOIL GEOCHEMISTRY

	7400'E.	7350'E.	7300'E.	7250'E.	7200'E.
	"C" HORIZON	"C" HORIZON	"C" HORIZON	"A" HORIZON	"C" HORIZON
Cu	18	74	59	44	56
Pb	60	137	268	79	61
Zn	116	141	154	39	44

GEOLOGY



CHANNEL SAMPLING

FLOOR - 10' LENGTHS

Cu	153	307	178	270	150	139	154	90	78	138	67	73	108	82	65	163	79	75	59
Pb	126	128	120	92	140	142	260	540	100	120	36	48	44	34	54	35	34	36	32
Zn	520	560	440	375	295	270	205	180	102	104	56	31	63	46	50	46	41	42	68
Mn	440	520	450	630	650	405	380	350	300	137	89	37	100	70	93	108	107	118	148

7400'E. 7350'E. 7300'E. 7250'E. 7200'E.

SINGLE ROCK ASSAYS

		F.G. TUFFAC. SH.							
Cu	F.G. SER.	220	41	128	65	73	F.-M. G.	1070	BLACK SHALE
Pb	TUFF +	520	16	150	186	34	CRYSTAL	130	WITH
Zn	Mn/Fe,	94	55	85	171	75	LITHIC TUFF.	100	PYRITE BANDS.
Mn		110	170	254	425	185		157	
				M.G. SER. CRYSTAL TUFF.	QTZ. VEIN WITH Mn, Fe OXIDES.				

GEOLOGICAL LEGEND

- BLACK CARBONACEOUS SHALE.
- FINE GRAINED TUFFACEOUS SHALE.
- FINE GRAINED SERICITIC TUFF.
- MEDIUM GRAINED LITHIC TUFF.
- COARSE GRAINED LITHIC TUFF.
- MEDIUM GRAINED FELSIC CRYSTAL TUFF.
- MEDIUM GRAINED INTERMEDIATE CRYSTAL TUFF.
- QUARTZ, WITH Mn/Fe OXIDES.

5 cm

BASIN LAKE GRID - COSTEAN LINE 00 SOUTH WALL - GEOLOGY & GEOCHEMISTRY

2204

SCALE: HORIZONTAL. 1:240

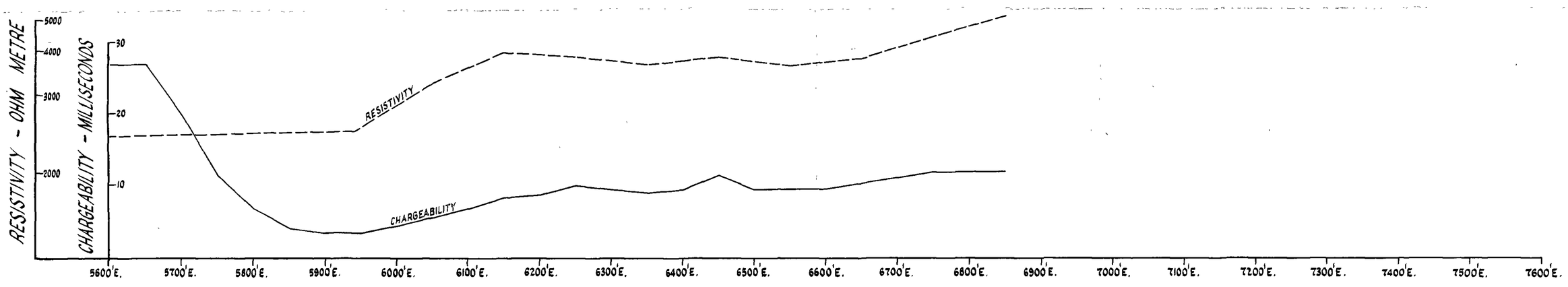
VERTICAL. 1:120

78-1296

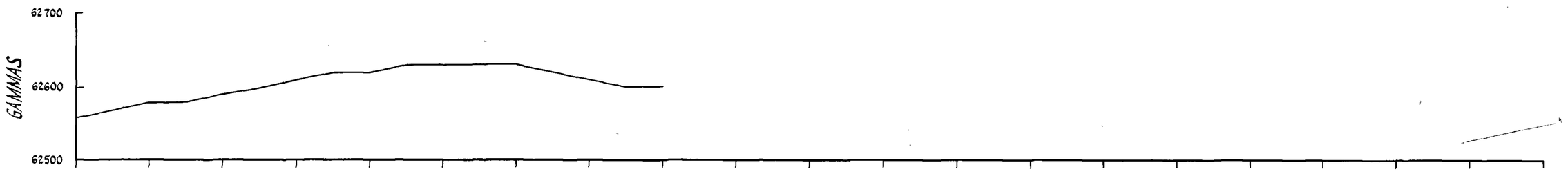
FIGURE 6

230024.

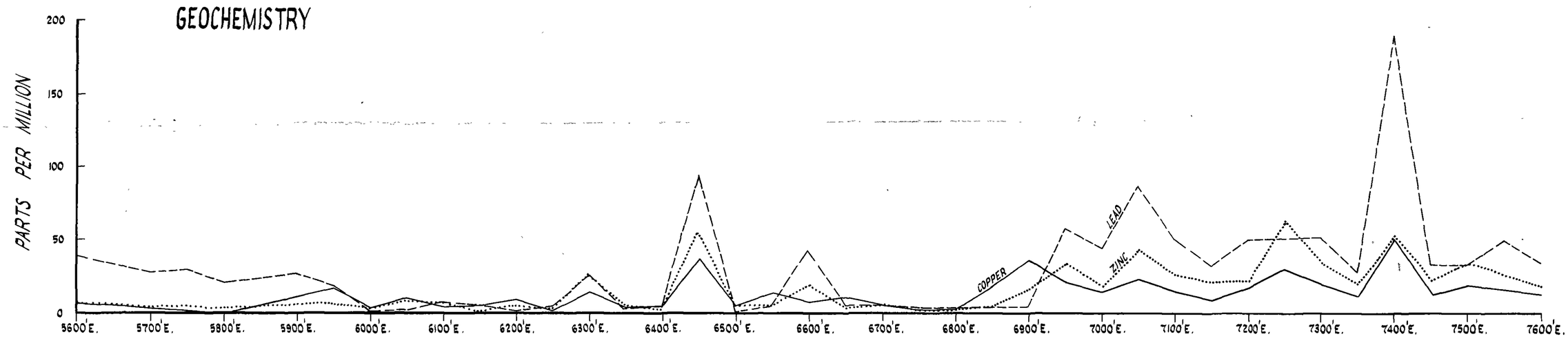
GRADIENT ARRAY I.P.



TOTAL FIELD MAGNETICS

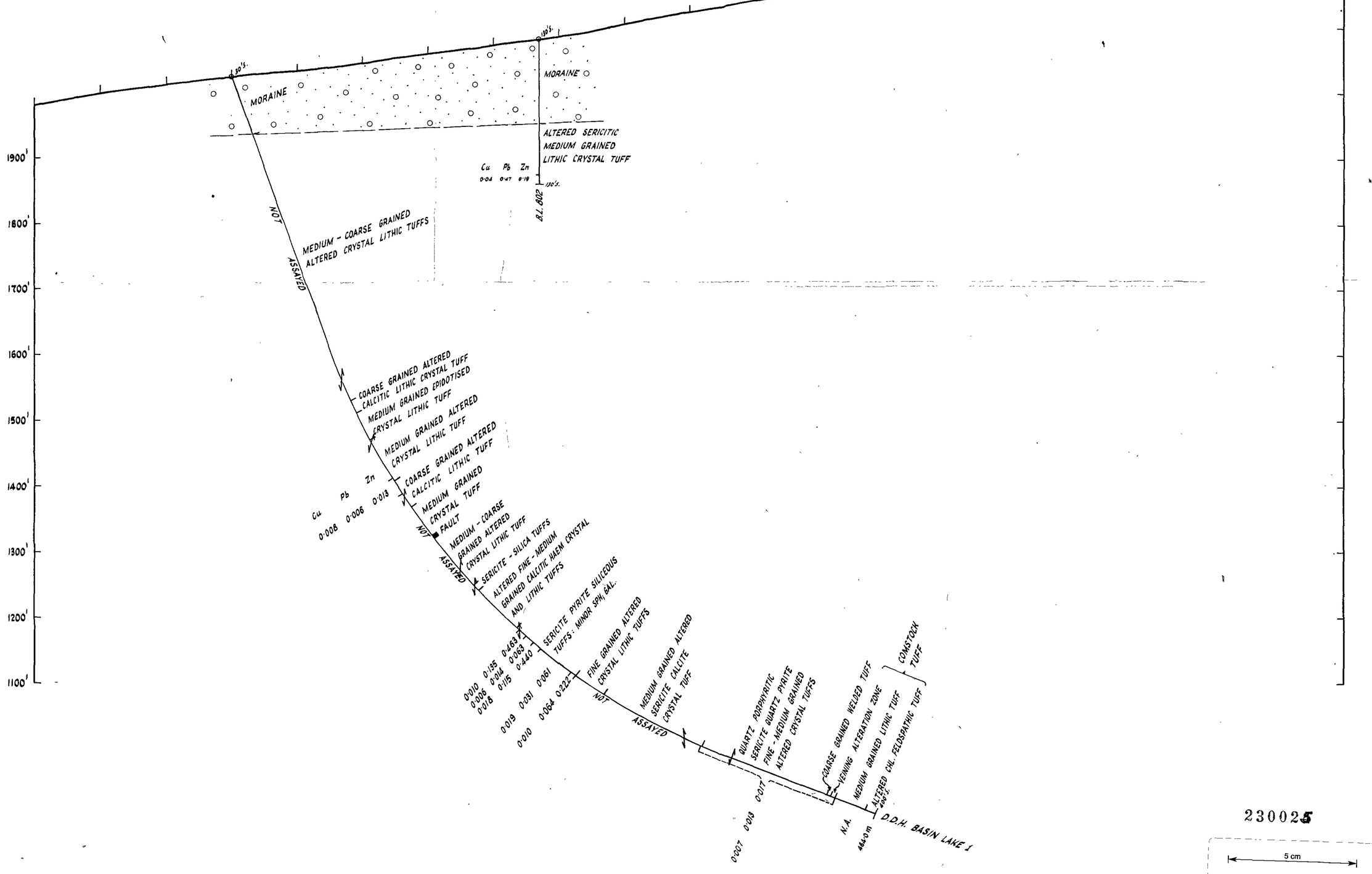


GEOCHEMISTRY



DRILLING PROFILE

LINE 72 S.



230025

5 cm

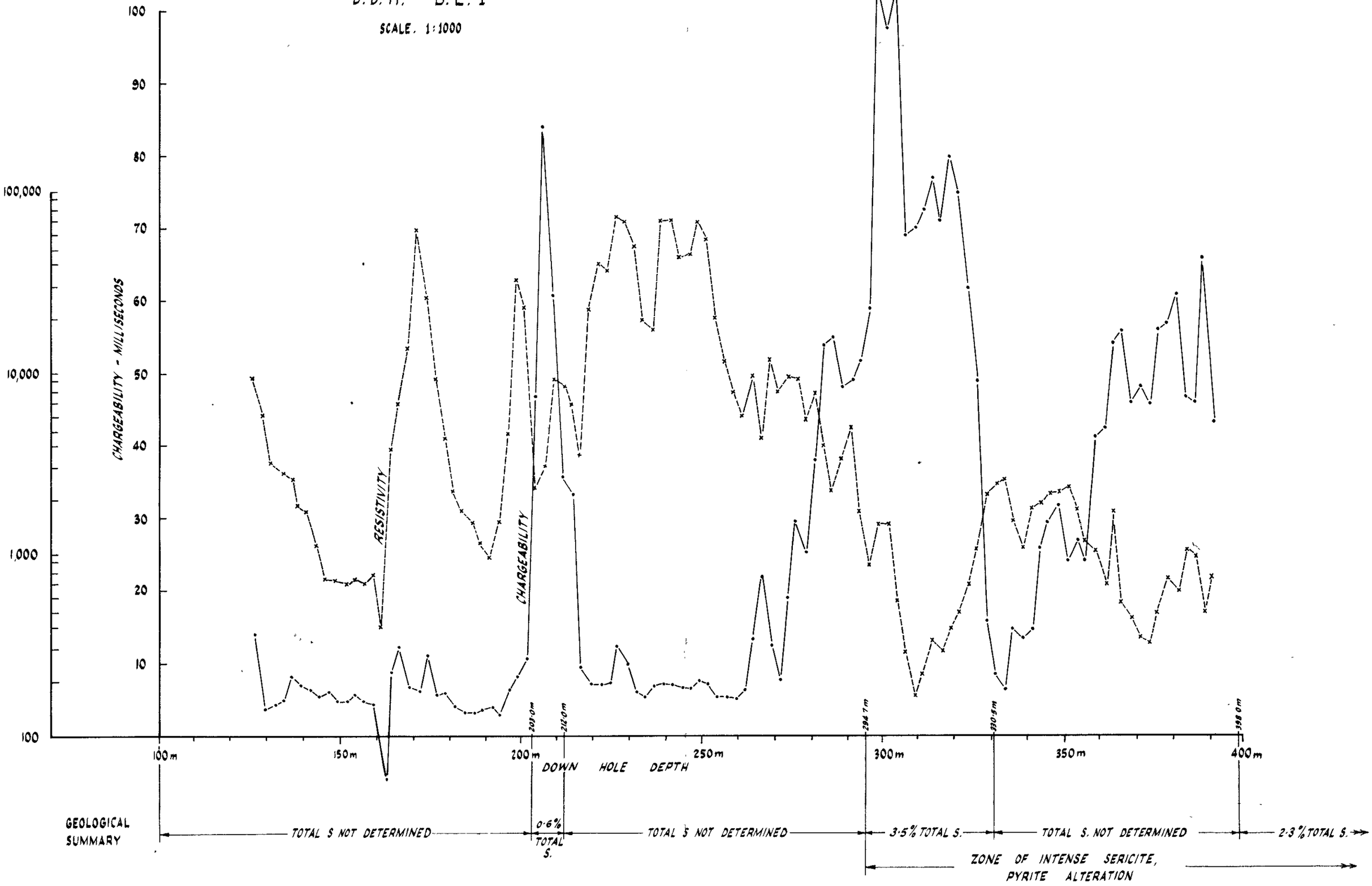
78-1296 4785

THE CONSOLIDATED SYNDICATE	DRAWN A.C.W.
	TRACED R.G.WILSON.
HENTY - YOLANDE E.L. 41/71	CHECKED.
BASIN LAKE AREA	DATE. FEB. '78
LINE 72 S - B.L. 1 2205	SCALE. 1 : 1200
	FIGURE 7

DOWN HOLE E.I.P. SURVEY

D.D.H. B.L. 1

SCALE. 1:1000



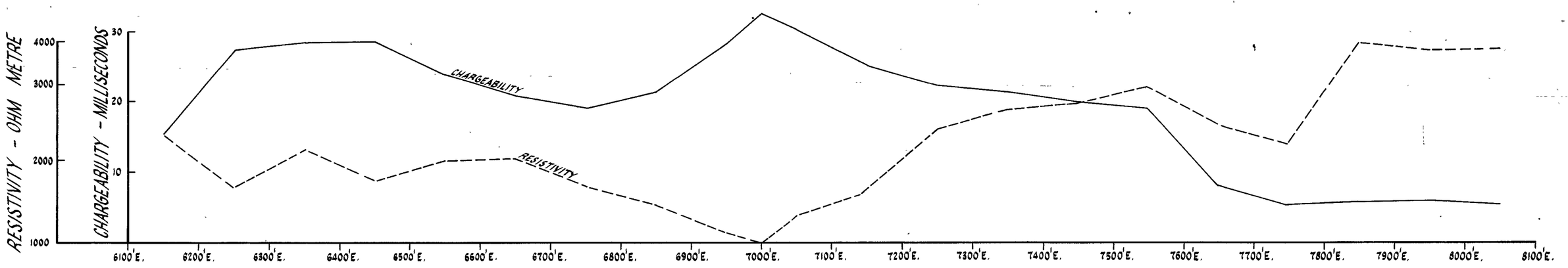
78-1296

FIGURE 8

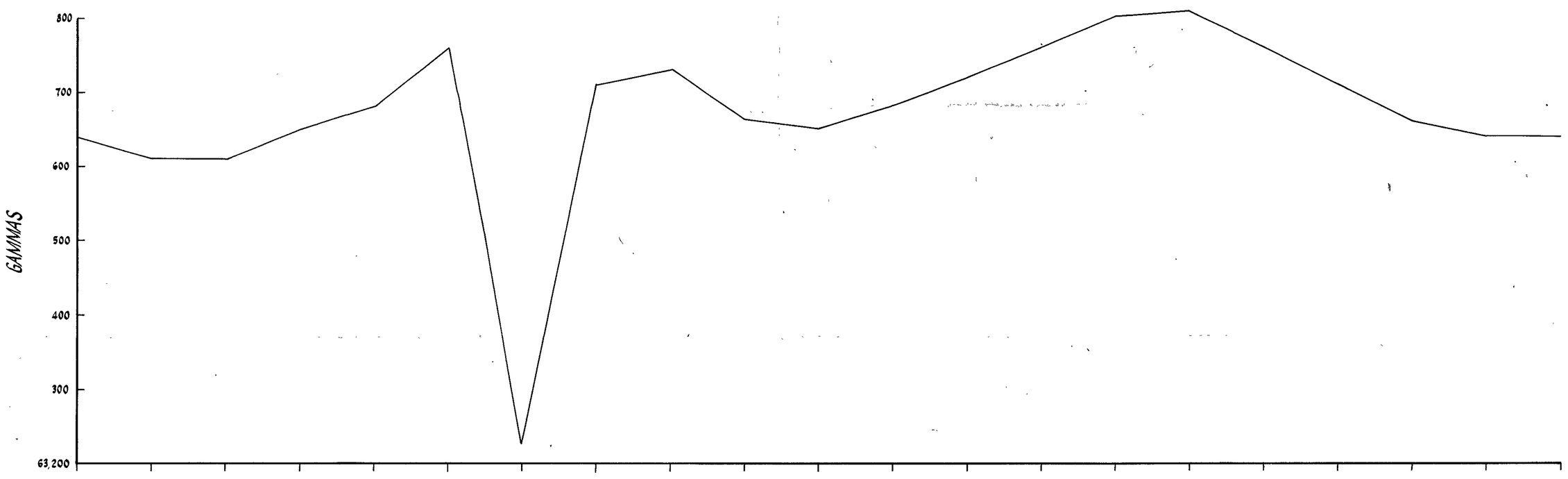
230026

2206

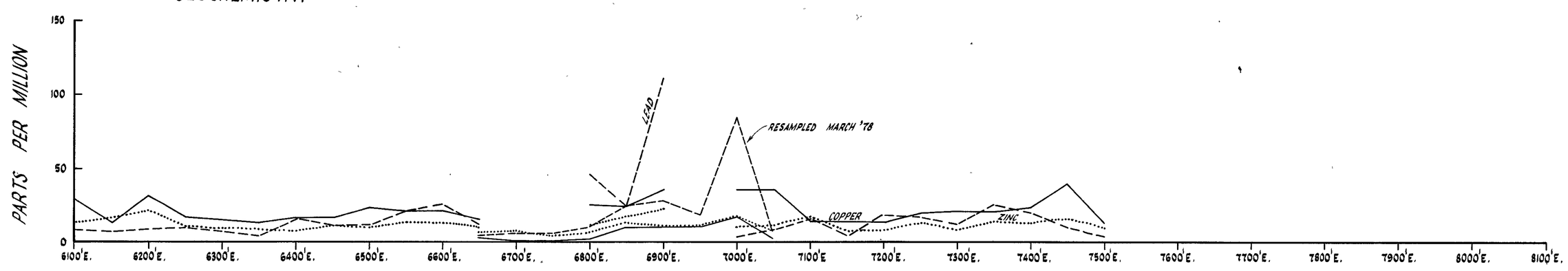
GRADIENT ARRAY I.P.



TOTAL FIELD MAGNETICS

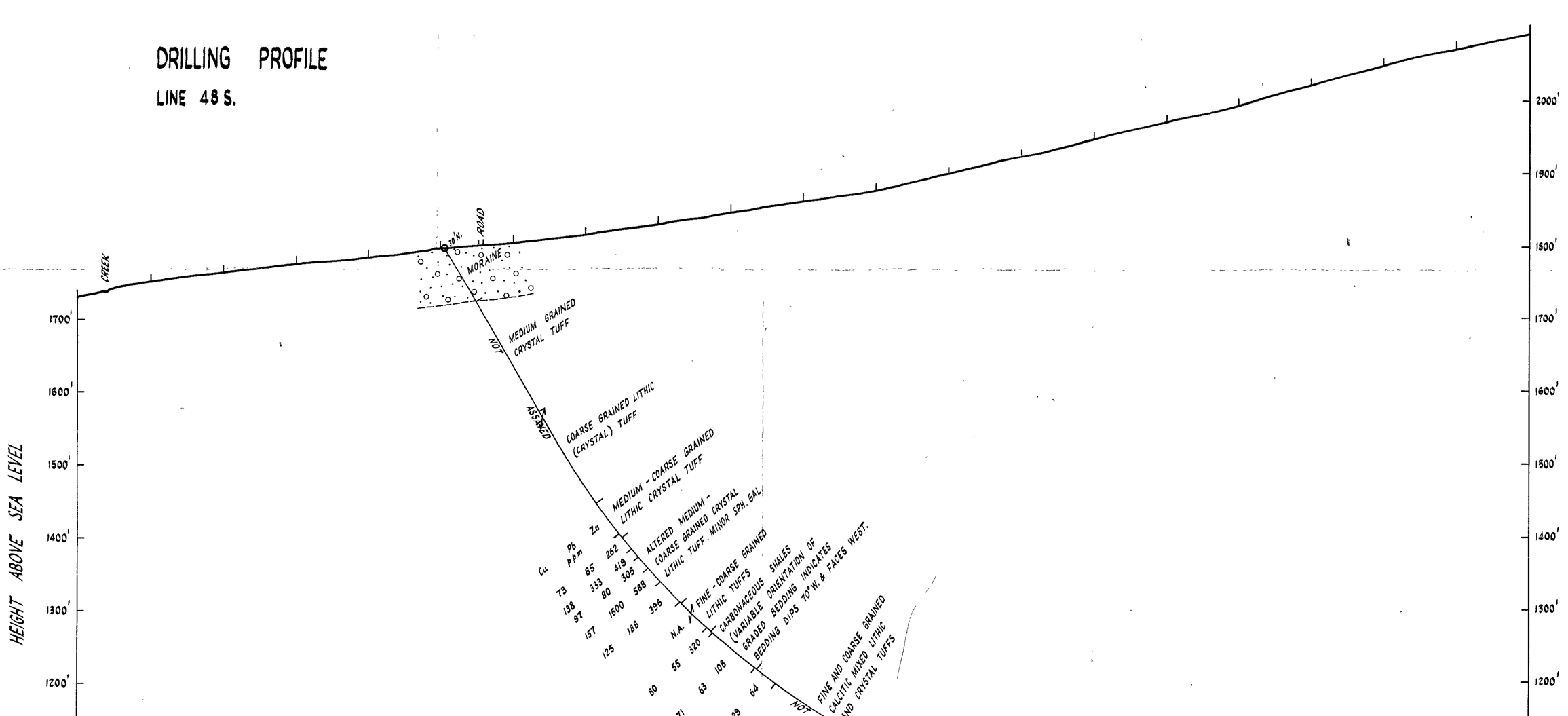


GEOCHEMISTRY



DRILLING PROFILE

LINE 48 S.



230027

5 cm

78 - 1296

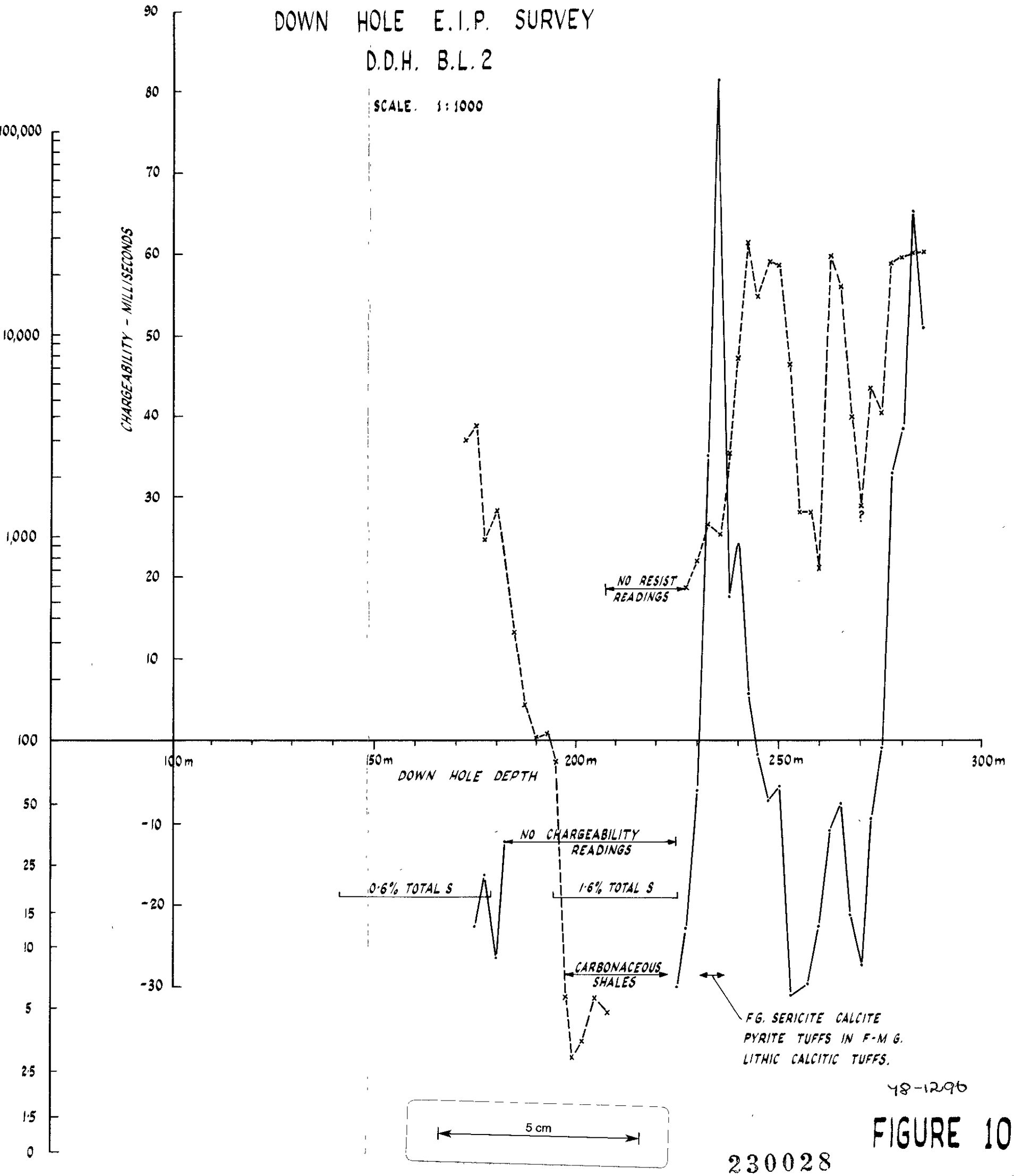
THE CONSOLIDATED SYNDICATE	DRAWN. A.C.W.
	TRACED. R.G.WILSON.
HENTY - YOLANDE E.L. 41/71	CHECKED.
BASIN LAKE AREA	DATE. FEB. '78
LINE 48 S. - B.L. 2	SCALE. 1 : 1200
	FIGURE 9

800

DOWN HOLE E.I.P. SURVEY

D.D.H. B.L. 2

SCALE. 1:1000



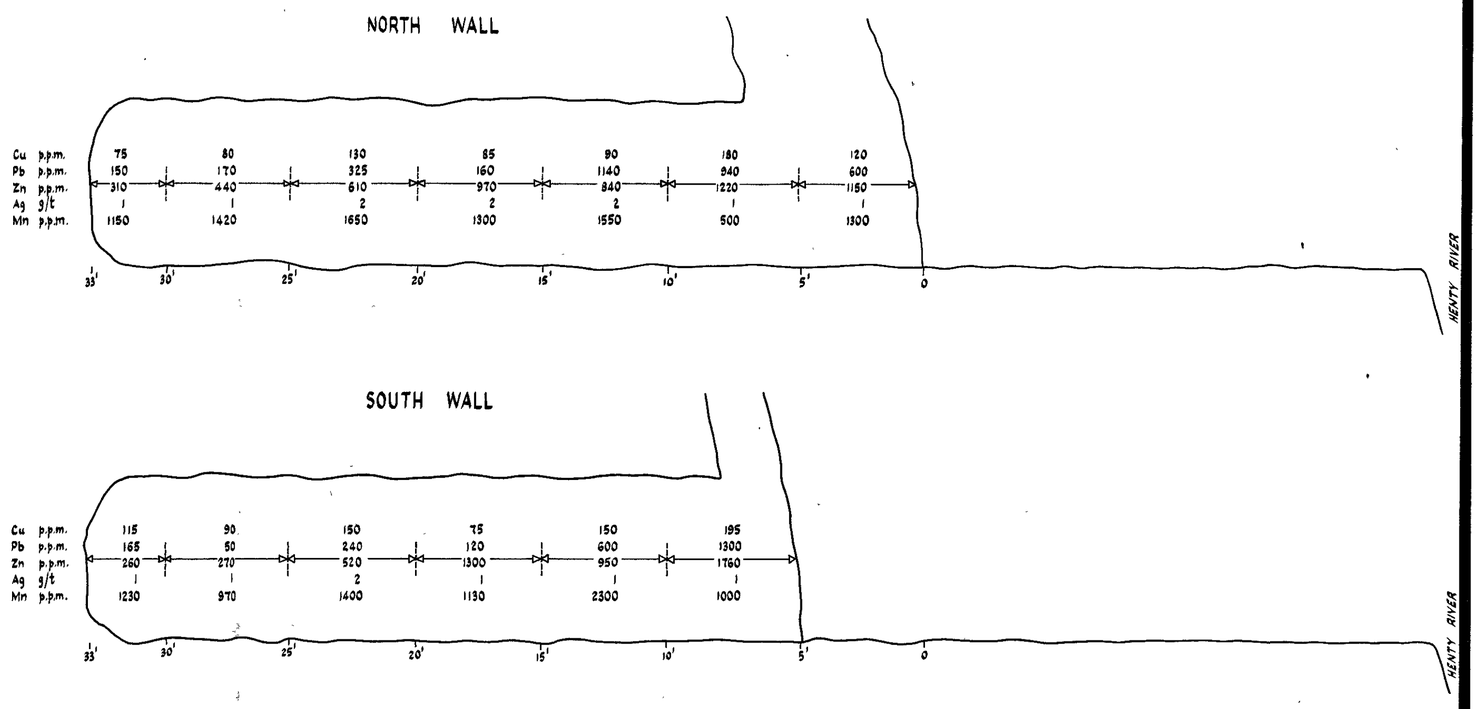
48-1296

FIGURE 10

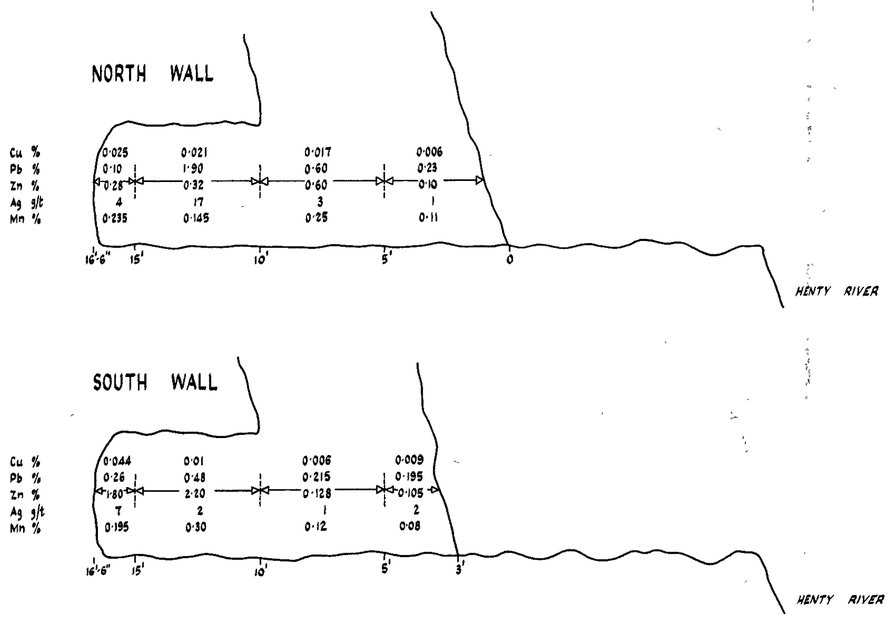
230028

2208

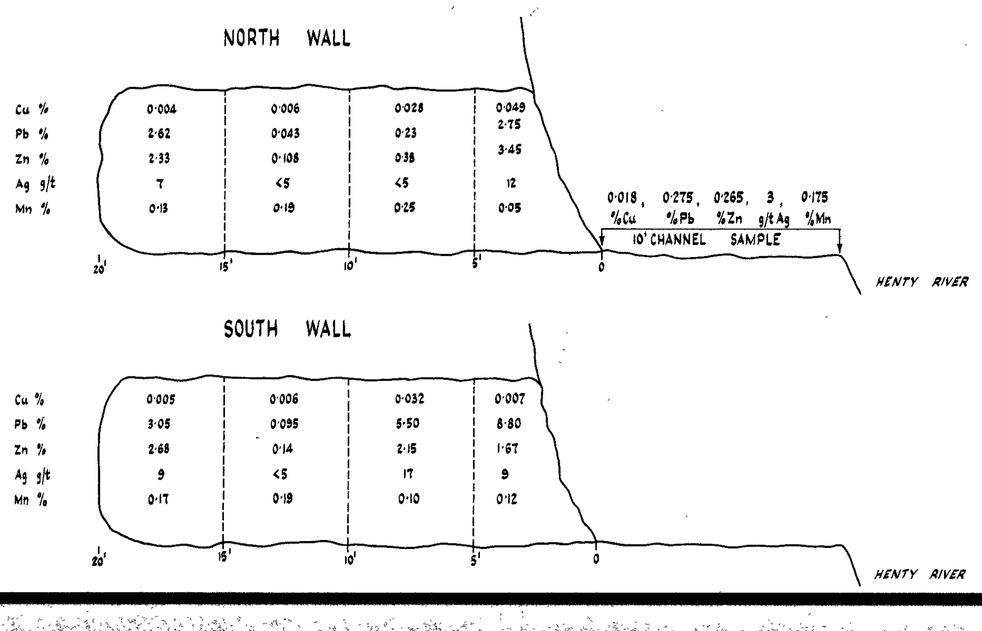
No. 3 ADIT (CHANNEL SAMPLES 3 FEET ABOVE FLOOR)



No. 2 ADIT (CHANNEL SAMPLES 3 FEET ABOVE FLOOR)



No. 1 ADIT (SAMPLES BULKED FROM FULL HEIGHT AND WIDTH OF WALL)



230029

5 cm

78-1296

MT. LYELL - G.O.D.L. JOINT VENTURE

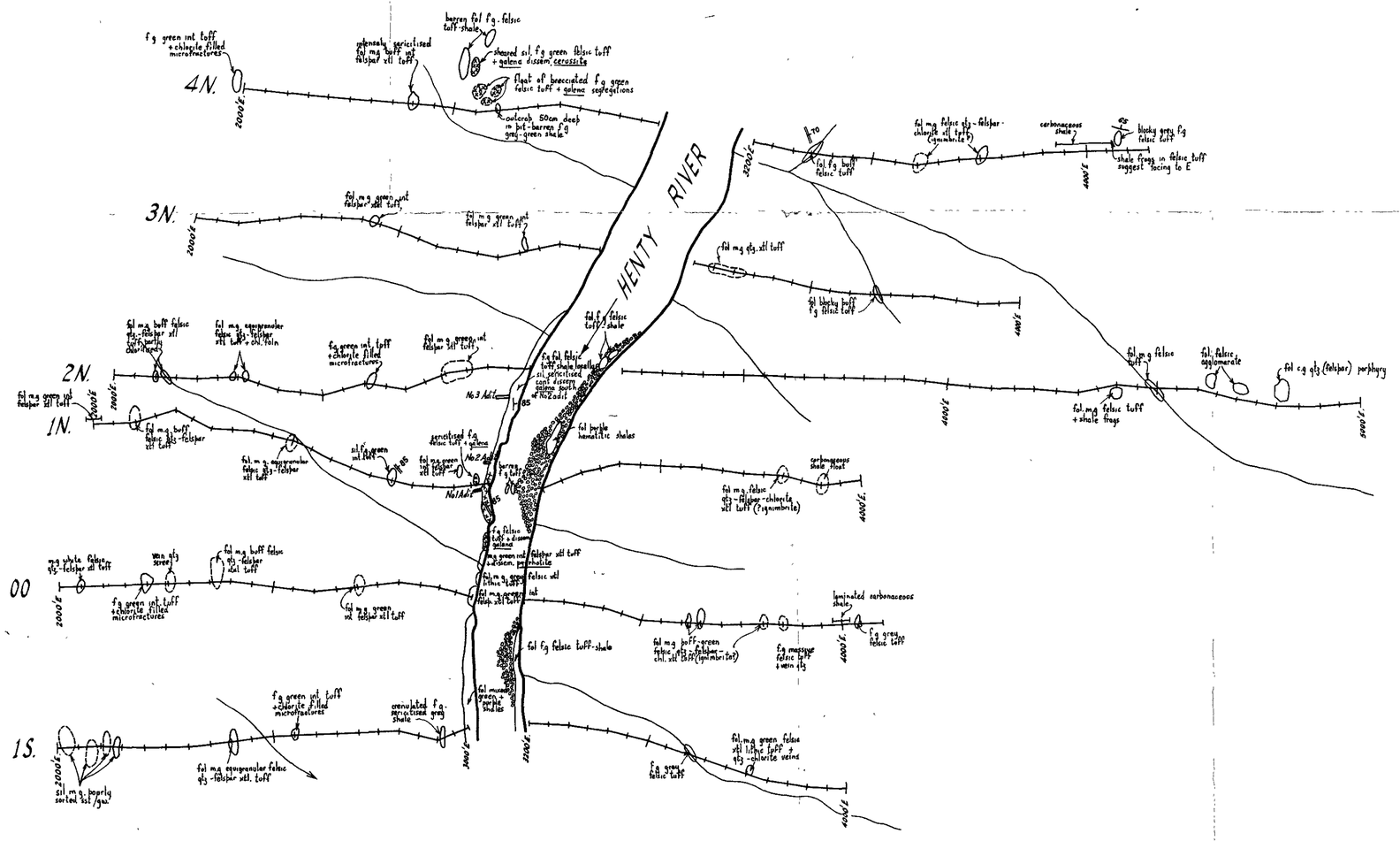
HENTY - YOLANDE E.L. 41/71

HENTY RIVER GRID

ADIT SAMPLING ASSAYS 2209

DRAWN	R. MEARES.
TRACED	R.G. WILSON.
CHECKED	
DATE	JUNE '78
SCALE	1 : 50

FIGURE 11



LEGEND

- ADIT.
- RIVER BANK.
- RIVER GRAVELS AND BOULDERS.
- 85 BEDDING.
- 70 CLEAVAGE.
- OUTCROP BODY.
- FLOAT BODY.
- C-HORIZON ROCK CHIP DATA.
- xxxxx DISSEMINATED GALENA (SPHALERITE) MINERALISATION.

MAGNETIC NORTH

5 cm

220030

78-1296

MT. LYELL - G.O.D.L. JOINT VENTURE

HENTY - YOLANDE E.L. 41/71

HENTY RIVER GRID

OUTCROP GEOLOGY 2210

DRAWN.	R. MEARES
TRACED.	R G.WILSON
CHECKED	
DATE.	JUNE '78
SCALE.	1 : 2500

FIGURE 12

Cu Pb Zn Ag Mn
3000' 50 40 30 2 300
2900'
2800'

CONTOUR INTERVALS - 30, 100 & 200 p.p.m Cu

MAGNETIC NORTH

230031

5 cm

48-1296

FIGURE 14

MT. LYELL - G.O.D.L. JOINT VENTURE	DRAWN. R. MEARES
	TRACED R G WILSON
	CHECKED.
HENTY - YOLANDE E.L. 41/71	DATE. JUNE 1978
HENTY RIVER GRID 2211	SCALE. 1:2500
SOIL GEOCHEMISTRY -80 # FRACTION - COPPER	

Cu Pb Zn Ag Mn
50, 40, 30, 2, 300

3000'
2900'
2800'

CONTOUR INTERVALS - 100, 400, 1000 & 2000 p.p.m. Pb.

MAGNETIC NORTH

5 cm

78 1296 230C32 **FIGURE 15**

MT. LYELL - G.O.D.L. JOINT VENTURE	DRAWN. R. MEARES
	TRACED. R G.WILSON
HENTY - YOLANDE E.L. 41/71	CHECKED.
HENTY RIVER GRID 2212	DATE. JUNE 1978
	SCALE 1:2500
SOIL GEOCHEMISTRY -80 # FRACTION - LEAD	

Cu Pb Zn Ag Mn

3000' 50 40 30 2 300

2900'

2800'

CONTOUR INTERVALS - 100, 300 & 900 p.p.m. Zn.

MAGNETIC NORTH

5 cm

78-1296 230033 FIGURE 16

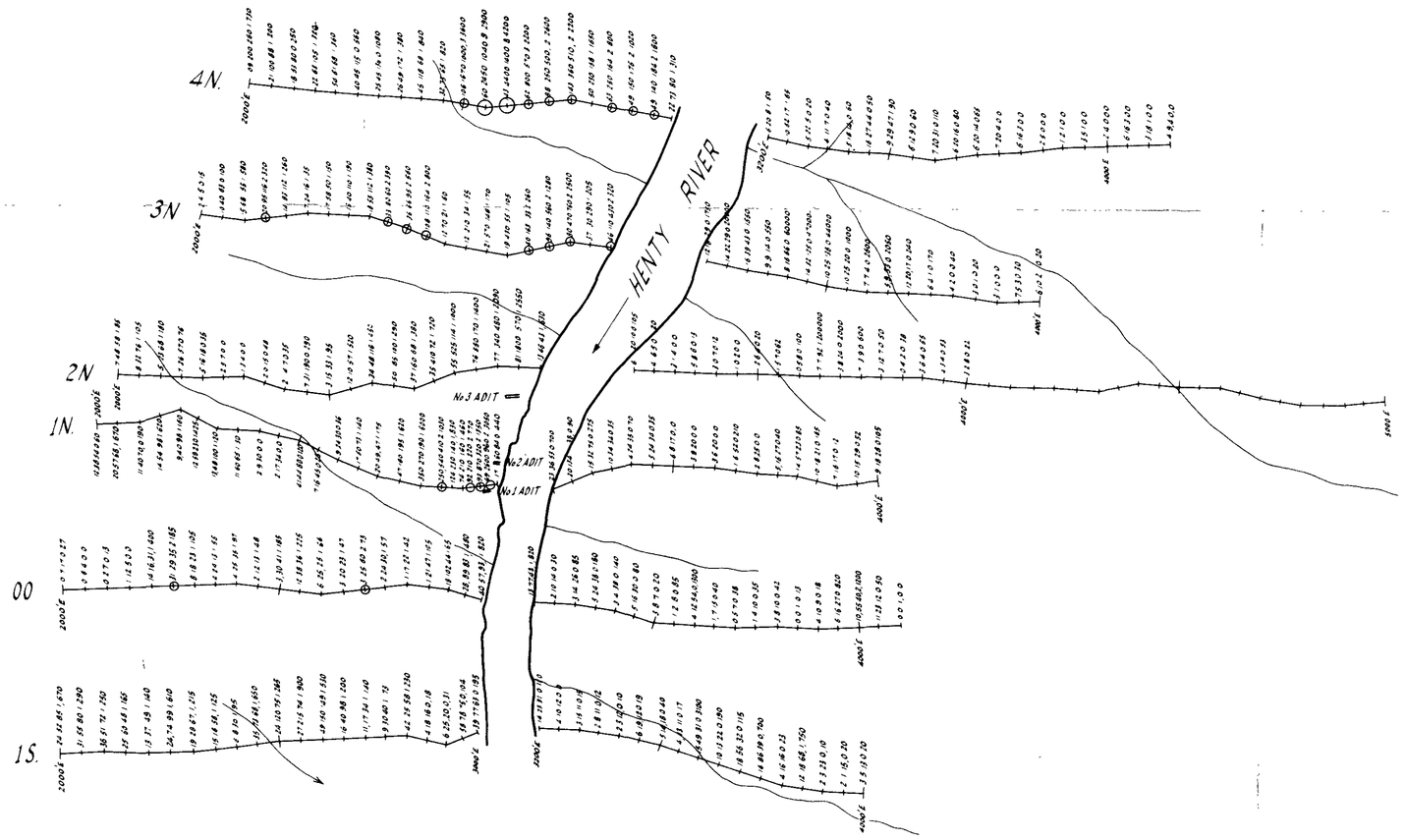
MT. LYELL - G.O.D.L. JOINT VENTURE

HENTY - YOLANDE E.L. 41/71

HENTY RIVER GRID 2213

SOIL GEOCHEMISTRY -80 # FRACTION - ZINC

DRAWN.	R. MEARES
TRACED.	R.G.WILSON.
CHECKED.	
DATE.	JUNE 1978
SCALE	1:2500



Cu Pb Zn Ag Mn

3000'
2900
2800

50 40 30 2 300

○ >7 p.p.m. Ag.

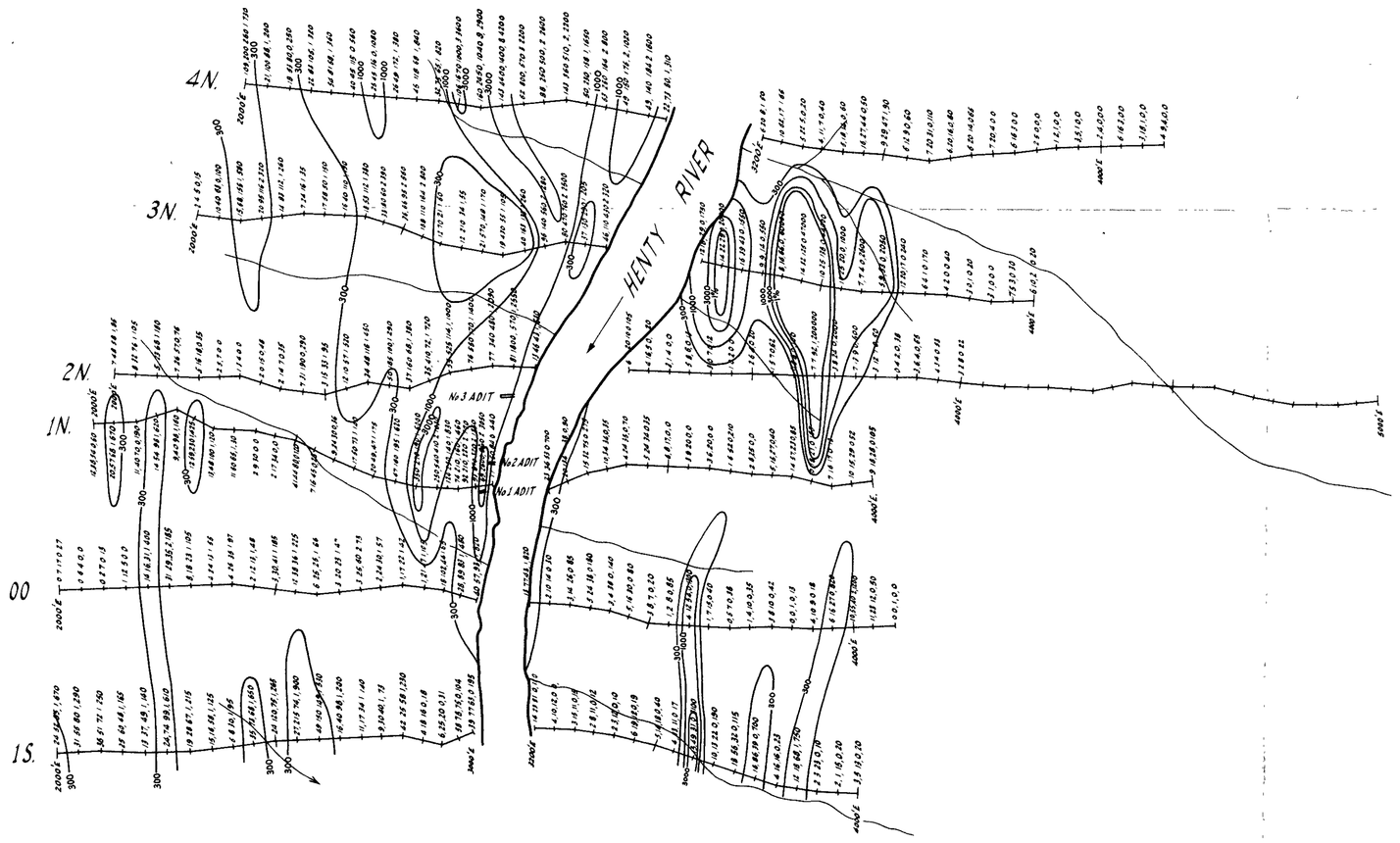
○ 2-7 p.p.m. Ag

MAGNETIC NORTH

5 cm

78-1296 230034 **FIGURE 17**

MT. LYELL - G.O.D.L. JOINT VENTURE	DRAWN R. MEARES
	TRACED R G WILSON
	CHECKED
HENTY - YOLANDE E.L. 41/71	DATE JUNE 1978
HENTY RIVER GRID 2214	SCALE 1 2500
SOIL GEOCHEMISTRY -80 # FRACTION - SILVER	



Cu Pb Zn Ag Mn
3000'
50 40 30 2 300
2900'
2800'

CONTOUR INTERVALS - 300, 1000 & 3000 p.p.m. & 1% Mn.

MAGNETIC NORTH

5 cm

230035

78-1296

FIGURE 18

MT. LYELL - G.O.D.L. JOINT VENTURE

HENTY - YOLANDE E.L. 41/71

HENTY RIVER GRID 2215

SOIL GEOCHEMISTRY -80 # FRACTION - MANGANESE

DRAWN.	R. MEARES
TRACED.	R.G.WILSON
CHECKED	
DATE.	JUNE 1978
SCALE	1:2500