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FEDERATION AND TRIAL HARBOUR AREAS

E.L. 11/76 AND S.P.L. 129

ANNUAL REPORT 1980-81

Byron P. Roberts
Exploration Geologist

July, 1981

Copies to:

Renison (2)
Mines Department (1)
Mt. Lyell Mining & Railway Co. Ltd. (1)

An index to transparencies that may be referred to in this report will be found in TCR 85_2426

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FEDERATION AND TRIAL HARBOUR AREAS
E.L. 11/76 AND S.P.L. 129
ANNUAL REPORT 1980-1981.

BY: P. ROBERTS
EXPLORATION GEOLOGIST

JULY, 1981

COPIES TO:
RENISON (2)
MINES DEPARTMENT (1)
MT. LYELL MINING & RAILWAY CO. LTD. (1)

SUMMARY

The Agnew Grid was established on the southern margin of the Heemskirk Granite. Subsequent geochemical and geophysical programs both over this grid and the nearby Globe Mine gave strongly encouraging results. This area is now considered prospective for a series of Sweeney-style tin-silver orebodies which may collectively contain economic quantities of mineralization.

Five diamond drillholes were completed on the Federation Plateau with generally disappointing results. One area of the plateau, Waxman and Westons, remains prospective, however. Elsewhere on the Federation Grid, detailed I.P. work delineated a drilling target on line 1700W.

Reconnaissance mapping programs were carried out over the east end of S.P.L. 129 and over relatively unexplored areas of the Heemskirk Granite.

Work recommended for 1981-82 includes follow-up geophysical and geochemical surveys on the Agnew Grid, the Globe and Waxman and Westons, followed by diamond drilling in all three areas as well as at 1700W, Federation Grid and 25E, Area D Grid. Elsewhere, proposed work includes review of old data on the Spray Mine possibly followed by diamond drilling and further reconnaissance mapping of the Heemskirk Granite.

RENISON LIMITED

COMMENTS

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(All contained in Volume 1.)

1. INTRODUCTION

E.L. 11/76 and S.P.L. 129 are located west and south-west of Zeehan, West Tasmania (Plan 1). The licence areas cover most of the Devonian Heemskirk Granite, and a faulted and deformed sequence of Upper Proterozoic and Palaeozoic sediments, volcanics and basic intrusives south and south-east of the granite.

Known mineralization within the licence areas consists of cassiterite in alteration dykes within granite and in tourmaline veins just south of the granite contact (Kelvin and Maynes), stanniferous polymetallic sulfides within granite at Sweeneys and the Globe, and silver-lead-zinc veins and fault infillings in sediments at the eastern end of S.P.L. 129 (Zeehan field).

Since the licences were granted (S.P.L. 129 in 1973 and E.L. 11/76 in 1976), systematic exploration for tin and base metals has been carried out over both areas. In previous years work has been concentrated on the southern part of the granite (Federation and Sweeneys) and hornfelsed sediments adjacent to its south and south-eastern contact. In 1980-81, work involved diamond drilling, gridding, geophysics and soil sampling on the Federation and Agnew Grids, and reconnaissance mapping and sampling over the rest of the granite and on the east end of S.P.L. 129.

This year the Annual Report for the two areas is combined for the first time. This was done mainly because the Agnew Grid covers part of both leases. In addition it now seems both convenient and logical to view the licence areas as a whole because of the strong similarities between exploration targets in each.

2. EXPENDITURE

2.1 E.L. 11/76

Expenditure on E.L. 11/76 during 1980-81 amounted to $150,723. Total expenditure on the E.L. to date is $573,297. Work proposed for 1980/81 is expected to cost $156,522.

2.2 S.P.L. 129

Expenditure on S.P.L. 129 during 1980-81 amounted to $64,810. Of this Renison's share (at 76%) was $50,900, with Mt. Lyell paying the remainder ($13,910). Total expenditure on the licence to date is $271,136. Work proposed for 1981-82 is expected to cost $128,085.

3. LAND TENURE

3.1 E.L. 11/76

E.L. 11/76 covers 88 sq.km. It is held by Renison Limited. Included within the licence area are 5 mineral leases covering a total of 76.3 ha. (Plans 2a,b). One of these, M.L. 90M/47 of 2 ha. at West Federation, is held by Renison. Details of the rest are as follows:

1) M.L. 103M/71, held by K.P. Cornish, covering 8.1 ha.

2) M.L. 20M/41, held by E.W. Coleman, covering 16.2 ha. An Option to Purchase Agreement covering this lease was allowed to lapse during 1980-81 following the recommendation of the 1979-80 Annual Report.

3) M.L.'s 32M/78 and 33M/78 held by M.J. Bennett and L. Bennett respectively, covering 25 ha. each, over the Peripatetic Mine. An Option to Purchase Agreement over these leases was considered during the year, but this was not proceeded with (see Section 4.1.5., this report).

3.2 S.P.L. 129

S.P.L. 129 covers 46 sq.km. It is held by the Mt. Lyell Mining and Railway Co.Ltd. Since 1978, exploration has been carried out by Renison Limited under a Joint Venture Agreement between the two companies. Renison's share is currently 76%.

Within the licence area, the following leases are held by other parties (Plans 2c, d). :

1) M.L.s 10M/70, 1M/73 and 74M/80, held by the Swansea Mining Co. Pty. Ltd., covering 28.3 ha., over the Swansea Mine. These leases are currently being explored by Amoco Minerals Australia Co. under a Joint Venture or Option Agreement.

2) Part of Consolidated Lease 123M/47 held by the E.Z. Company over the Comstock Workings.

3) M.L. 64M/73, held by the Kynance Mining Co., covering 6 ha. over the Kynance Workings.

4) M.L.s 50M-54M/75, held by Industrial and Mining Investigations Pty. Ltd., covering 145 ha., over ironstone areas east of the Heemskirk Granite including the Tenth Legion Mine. These leases are currently being explored by C.R.A. Exploration Pty. Ltd. under a Joint Venture Agreement.

5) M.L.s 90M/72 and 4M/73, held officially in the names of F.J. Griffiths and D.C. Dunkley, covering 32.4 ha. over Kelvin and Maynes Mine. D.C. Dunkley is deceased. During 1980-81, K. McDermott of Rosebery applied for forfeiture of these leases. The resulting court decision gave McDermott lease 90M/72 and permitted Griffiths to retain 4M/73 pending Ministerial approval. These leases are considered prospective (Appendix 7) but any approach to the leaseholders should await official lease transfer.

6) M.L. 80M/77, held by M.S. Robertson, covering 2 ha. north of Trial Harbour.

7) M.L.s 36M/80, 39M/80 and part of 91M/80, held by the Trial Harbour Mining Co. Pty. Ltd., covering a total of 58 ha. near the coast, south-east of Trial Harbour.

The Swansea, Trial Harbour and Kynance Mining Companies all appear to be subsidiaries of the Minstock Mining Group. These companies have acquired almost 1 sq.km. within S.P.L. 129 over the past eleven years, latterly with permission from the Joint Venture. Minstock's Joint Venture with Amoco, however, indicates that it is no longer purely involved with small-scale mining and prospecting. Instead it is now operating as an exploration company in direct competition with the Joint Venturers. Any further applications for M.L.s within S.P.L. 129 should be viewed in that context.

4. WORK COMPLETED 1980-81

4.1 E.L. 11/76

4.1.1 West Federation

Prior to 1980-81, this area was geologically mapped in detail and covered by the Federation Grid geophysical surveys (Wells, 1978). Diamond drillholes Fed 2 and Fed 10 were completed in 1979 and 1980 respectively.

(1) Diamond Drilling

Following the recommendations of the 1979-80 Annual Report, a further three holes were diamond drilled in January-February 1981, assisted by helicopter support, for a total of 315.5m. NQ triple tube gear was used in an attempt to avoid the core losses experienced in the prospective zone in Fed 10 (19.25m or 49% loss within 39.0m). Diamond drill logs and a geological map with cross-sections are appended (Appendix 2, Plan 3). Hole details are as follows:

(a) Fed 14, 104.5m long, was designed to test "Geason's Lode", a body of tourmaline-quartz and intensely argillized granite, intersected in Fed 10 which assayed 0.16% Sn and 0.20% Zn over 37.4m (including 5m of 0.74% Sn, and 8m of 0.62% Zn and 10 g/t Ag). The results of Fed 10 and surface mapping both suggested that Geason's Lode dipped flatly to the east. In the event the hole intersected 12.6m of hematitic alteration between 62.1 and 74.7m, averaging 0.04% Sn and 3 g/t Ag. This was about 40m deeper than anticipated and, assuming correlation with the Fed 10 intersection, indicates that the mineralization - alteration dips east at 50°.

(b) Fed 15, 100.8m long, was designed to test "Geason's Lode" along strike from the Fed 10 intersection and 50m down-dip from the surface. The hole orientation was changed from vertical (as recommended in the 1979-80 Annual Report) to -55° along 310° (AMG) in response to the result of Fed 14. The hole intersected only minor greisenous alteration, containing negligible tin, which crosses the core at 45-65° to c.a. If this alteration correlates with the intersection

in Fed 14, it should be oriented at about 75° to c.a. It is probably shallow dipping and unrelated to Geason's Lode.

(c) Fed 16, 110.2m long, was designed to intersect the Cross Lode down-dip from its interpreted intersection with Geason's Lode and below where the Tributers pipe reportedly pinched out. The Cross Lode was probably a feeder for most of the West Federation mineralization. It was thought to have potential for higher grade mineralization below its junction with Geason's Lode and Tributers pipe. The hole intersected 3.2m of tourmaline-quartz and altered granite at 48.1 - 51.3m, containing no detectable tin, and crossing the core at 35 - 45° to c.a. This suggests a south dip at about 85°, parallel to the Cross Lode. The latter apparently pinches out above the drillhole.

(2) Discussion

These results downgrade the potential of this area substantially. The intersection in Fed 14 is interpreted as part of a small, steeply dipping pipe-like(?) body which terminates upwards on several flat-dipping quartz-tourmaline alteration dykes - Geason's Lode (Plan 3). Another small pipe is known at Tributers and the pod-like mineralization in Fowler and Dunns workings may also fit into this category. These and any other similar unexposed bodies are much too small to be economically attractive.

Given the lack of any indication of a larger, potentially economic orebody in either the surface mapping and sampling or five diamond drillholes, no further work is recommended for this area.

4.1.2 Waxman and Westons

This area is taken to include the East Federation workings. Prior to 1980-81, three diamond drillholes were completed here to test geophysical anomalies near old workings on the

Federation Grid. All three holes intersected extensive sericitic alteration containing patchy low grade tin. Two of the holes, Fed 5 and 12, were drilled in a large alteration zone around Waxman and Westons trench - the south alteration zone - and one, Fed 8, was drilled in a smaller alteration zone beneath the East Federation workings - the north alteration zone (Plan 4). The latter apparently differs from the south zone in that it carries sphalerite mineralization (13m of 0.95% Zn in Fed 8). Work during the past year included:

(1) Geology - Detailed mapping at 1 : 1000 scale was carried out in summer (Plan 4). The geological picture is similar to that shown by Wells (1978) except that:-

(a) Porphyritic granite is separated as a distinct granite type. Wells regarded it as a variant of the "red" granite but contacts observed in diamond drillcore (Fed 17, 28.2m) and outcrop demonstrate that it is separate. There is, however, some affinity between the porphyritic and "white" granites, with both sharp and gradational(?) contacts observed between them, despite the fact that prominant pink K-feldspar phenocrysts are common within the porphyritic type.

(b) The south alteration zone is not now regarded as a marginal greisen zone within the "white" granite but rather a sericitic alteration zone occurring primarily in "white" granite but also in the "red" and porphyritic types.

(c) The north alteration zone is recognised although only minor outcrop was seen.

(2) Geophysics - Following the recommendation of the 1979-80 Annual Report, detailed dipole-dipole and gradient array I.P. and ground magnetics surveys were carried out in November - December 1980 (Plans 5-8). The I.P. results are fully described in Scintrex Report Tas 081A, to which the reader is referred. This work

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was designed primarily to establish whether any strongly chargeable zones, suggestive of high sulfide (Sweeney-style?) mineralization, exist between the original Federation grid lines or at depth. No such zones were revealed but the surveys were useful in mapping the subsurface distribution of alteration. Points of interest are:

(a) Both alteration zones occur in areas of relatively low resistivity with that of the south zone being the lower of the two. The very low resistivities shown in the south end of Plan 7, however, are probably spurious end effects.

(b) Within the south alteration zone there is a series of moderate chargeability anomalies ($\leq$12 mv/v above background) with limited strike extent ($\leq$50m) (Plan 6).

(c) Interpretation of resistivity pseudosections suggested that:

- the south alteration zone dips shallowly west underneath a capping of fresher granite on line 500E (Plan 5a).
- the northern margin of the south alteration zone may dip moderately northwards and could be connected with the north zone at depth. This is indicated more strongly by the magnetic profiles (Plans 5a-d).
- the northern margin of the north alteration zone dips shallowly northwards. Again this is also shown by the magnetics.

(3) Diamond Drilling - Two holes were completed here in February-March 1981, assisted by helicopter support, for a total of 481.0m. Diamond drill logs are appended (Appendix 3). Results are presented on Plans 4 (plan view) and 5b-e (line profiles). Hole details are as follows:-

(a) Fed 17, 200.0m long, was designed to test the north alteration zone approximately 70m downdip from the intersection in Fed 8. As noted previously, interpretation of geophysical data suggested a shallow north dip for the alteration zone. The hole collar could not be sited along line 700E because of difficult topography, but it was located as far north as possible so that the hole could be angled south in case the alteration dipped more steeply than the geophysical interpretation indicated. In the event the hole intersected several small zones of weak alteration at 37.7 - 46.6m and 140.5 - 144.7m, both containing negligible tin and zinc, before being stopped almost vertically below Fed 8's collar. Either the alteration dips away in some other direction or the weak alteration intersected represents the northern extremity of the northern zone. The second interpretation is preferred.

(b) Fed 18, 281.0m long, was designed to test the south alteration zone 65 metres west of the intersections in Fed 5 and 12. It was collared on or near the alteration zone to test the possibility that tin grades are higher at shallower levels. The hole intersected altered and argillized granite from 14.0m (where core was first recovered) to 222.1m. and a pyritic quartz-topaz alteration dyke at 242.6 - 246.8m. Tin grades within the main alteration zone were disappointingly low (maximum 0.15% over a 1 metre interval). Traces of molybdenite were also observed (maximum 180ppm Mo over a 1 metre interval). The pyritic quartz-topaz rock assayed 0.14% Sn over 4.2m and probably corresponds to the "white dyke" outcropping near 500E/150N and the strong dipole-dipole I.P. anomaly at that location.

(4) Discussion - The north alteration zone remains open in all directions except north after this drill program. The zone is known to contain some sphalerite mineralization and patchy, low grade tin (up to 0.20% Sn and 3.05% Zn in different 1m intervals in Fed 8). The

zinc mineralization suggests that this alteration is closer to "Sweeney-style" than the south zone. There are significant differences, however, notably the lack of associated silver (≤7ppm Ag over 1m intervals in Fed 8) and the apparent lack of a sulfide-rich zone (according to the detailed I.P. results).

Work to date on the south alteration zone has indicated the following:

(a) Its surface dimensions are at least 150 x 90m^2 and its depth is at least 200m in places.

(b) Much of the alteration contains geochemically anomalous tin values but more than 0.1% Sn occurs only in several locations within the zone:

(i) at the upper contact between unaltered or only argillized granite and sericitized granite e.g. Fed 5 103.0 - 107.0m (4m of 0.56% Sn), Fed 18 127.9 - 128.9m (1m of 0.15% Sn). Note that neither of these examples is at the very top of the altered intersection - the sericitic alteration is interspersed with patches of unaltered and argillized granite.

(ii) related to veins or faults(?) e.g. Fed 5 181.0 - 184.0m (3m of 0.48% Sn) near fault(?) bearing coarse pyrite; Fed 12 217.0 - 227.0m (10m of 0.21% Sn) within hematite veining and alteration.

At this stage type (i) above,is a more attractive exploration target. It offers the prospect of relatively continuous mineralization compared with type (ii). Nevertheless if average grades are 0.5% Sn or less, much wider intersections are necessary for an economic orebody to be present. The two intersections of type (i) mineralization quoted above (in Fed 5 and 18) may correlate with one another in some way. If they do, the higher Sn grades in Fed 5 may be explained by the presence of altered fine grained, "white" granite compared to Fed 18 where the alteration is derived from porphyritic granite. All of this suggests fairly strong similarities to classic stanniferous greisen

mineralization except in this case the host alteration is sericitic.

The following conclusions can be drawn:

(i) The south alteration zone is quite large and probably extends west and north under a cover of unaltered granite.

(ii) Although drilling results in 1980-81 were unimpressive, the area still has potential for substantial tonnages of low grade greisen-like mineralization. Five drillholes are insufficient to disprove the worth of such large and open alteration zones.

4.1.3 Federation Grid Extension - Follow-up I.P.

A number of gradient array I.P. anomalies were selected for further work in the 1979-80 Annual Report. Following discussions with A.W. Howland-Rose of Scintrex, a modified program of follow-up work was decided upon.

Infill lines were pegged at 50E, 50W, 350W, 1150W, 1250W, 1350W and 1650W (Plans 9 and 10). Dipole-dipole or pole-dipole I.P. was carried out along these lines, as well as the original lines, over anomalies revealed in the 1979 survey (Scintrex Report Tas 074-D). The results of this work are fully described in Scintrex Report Tas 081-B, to which the reader is referred. The data is presented in line profiles on Plans 10a-q.

The target in this work was hidden Sweeney-type mineralization. Chargeability or combined chargeability - resistivity anomalies were chosen which were either low and broad (e.g. 1100-1400W/600S) and hence possibly reflecting deep mineralization, or sharper and narrower and perhaps representing vein style mineralization connected to a larger body at depth.

The results were quite unimpressive except for anomaly 1 on line 1600W. Here several extra lines (1700 and 1800W) were surveyed with dipole-dipole and gradient array I.P. On lines

1600, 1650 and 1700W (Plans 10n-p) the dipole-dipole pseudosections show good double-peak anomalies centred around 930S with higher chargeability values present at n = 4 and 5 than at n = 1. This indicates that a chargeable body probably occurs at some depth, or increases in importance with depth. The best response occurs on line 1700W. Discussions with A.W. Howland-Rose of Scintrex and J. Bishop of Mitre Geophysics suggests that the intrinsic chargeability of the anomaly's source may be as high as 60mv/v. By comparison the Sweeneys mineralization had a chargeability of 65mv/v.

Ground examination between 1600 and 1800W has not revealed any outcropping mineralization. It is therefore either subcropping or completely hidden. Soil geochemistry may help to define a drill target but even if it proves negative, diamond drilling is required to test the anomaly.

4.1.4 Sweeneys - Orientation Soil Geochemistry

A small survey was undertaken at Sweeneys to determine the most effective soil sampling method in sampling the Agnew Grid. A map showing sample locations, together with tabulated results, is appended (Plan 11).

Nine sites were selected to give a reasonable spread of locations with respect to the Sweeneys mineralization. It was not possible to sample directly over the orebody because the soils there have either been disturbed or removed. All of the sampled soils were undisturbed.

At each site auger samples were taken of each soil horizon present to the depth of the auger (0.9m). Where the horizons were thicker than 40cm (particularly B-horizon) more than one sample was taken. In addition, at each sample site, a sample was either obtained directly by mattock or one of the auger samples was taken at 30-45cm depth, which was considered equivalent; this was done to see if mattock sampling would suffice on the Agnew Grid. Each sample was split into + 18#, -18/+80# and -80# fractions. Each fraction was then assayed for Sn, As and Sb by X.R.F. and Cu, Pb, Zn by A.A.S. at AMDEL in Adelaide.

The results of this work are summarized below:

(1) Good soil horizon development only occurs around the mineralization where the granite is known to be argillized. Elsewhere (samples 1,5,7,8 and 9) the soil is generally skeletal, grey to grey-brown, sandy or gritty.

(2) Maximum metal enrichment was obtained in B-horizon samples, with somewhat higher values in the deeper B samples.

(3) All elements - except Sb - were consistently enriched in the -80# fraction. In each depth interval of sample 3, Sb values were higher in the coarser fractions.

(4) A scan of the results shows that where anomalies are present, they are virtually always apparent in the 30-50cm depth range, -80# fraction. This is a convenient depth to sample at, and hence the summary of assay results below is confined to such samples:

(a) Sn background is approximately 20ppm with maximum value (sample 2) of 520ppm.

(b) As background is 2ppm with maximum value (sample 2) of 620ppm, and anomalous values greater than 30ppm at sample sites within 60m of mineralization.

(c) Cu background is 2-4ppm with only one distinctly anomalous value (sample 2) of 85ppm.

(d) Pb background is about 20ppm with a broad distribution of values above this level to 45ppm (samples 2,6).

(e) Zn background is also approximately 20ppm with maximum values of 210ppm (sample 2) and 180ppm (sample 6).

(f) Sb background is 4ppm with one distinctly anomalous value (sample 2) of 75ppm.

(5) Sample site 6 was chosen because it is just above the level of the gossan (despite appearances to the contrary on Plan 11), and thus should be more representative of a site over hidden mineralization than the sites downslope

from the gossan. Distinct anomalies were obtained in As (32ppm) and Zn (180ppm) with above background responses in Sn (55ppm) and Pb (45ppm).

Discussion: The degree of soil development appears to be related to the presence or absence of argillic alteration. In cases where argillized granite is not exposed, soil descriptions should be a useful guide to its presence.

Samples taken by mattock should contain sufficiently high metal values to define an anomaly near Sweeney style mineralization. Deeper samples, particularly in clayey soils, should contain greater metal concentrations, however.

The secondary dispersion of anomalies around Sweeney style mineralization is of the order of 50m with probably greater dispersion downslope and lesser upslope. Reconnaissance soil sampling should therefore take place on lines spaced 100m apart or less.

Anomalies of Sn alone are unlikely to be indicative of Sweeney style mineralization because numerous other sources of economically unimportant cassiterite mineralization are present within the granite (i.e. white dykes); for example the 220ppm Sn anomaly in sample 8 cannot be related to Sweeneys.

Assays of As and Zn should be the most useful in a reconnaissance survey because they both give well defined anomalies and have some potential for forming leakage haloes around hidden mineralization.

Pb is broadly distributed but maximum values are unusually low. Comparison with background obtained in the Agnew Grid survey ($\leq$10ppm) indicates that all but sample 9 may contain anomalous Pb. In this environment, therefore, Pb may be more mobile than is usually the case.

The Cu and Sb results probably reflect the low concentrations of those metals present in the upper part of the Sweeneys orebody. Since higher Cu and Sb values are present at depth in Sweeneys, other Sweeney style orebodies may have exposed Cu- and Sb-rich portions, in which case a wider distribution of anomalies might be expected.

In a reconnaissance survey a combined Sn-As-Zn anomaly, with each element higher than 200ppm, should be considered strongly prospective.

4.1.5 Peripatetic Mine

This mine is located approximately 9km north-west of Federation (Plan 2a) in an area mapped as coarse grained "white" granite (Klominsky, 1972). It was abandoned at the turn of the century after five adits and several shafts and winzes had been driven through the lodes.

The workings were described in some detail by Waller (1902) and more briefly by Waterhouse (1915). In 1969-70 Geophoto Resources Consultants carried out a three hole diamond drilling program for Texins Development P/L. The holes were all drilled from the west side of the lodes, angled south-east, normal to their strike (Figure 1). The core from these holes is stored at the Mines Department in Hobart and was briefly examined by the writer in August 1980. Brief drill logs together with two Geophoto Reports and Waller's mine description are appended (Appendix 3).

In late 1980, Renison was approached by Messrs. Bennett of Rosebery who hold two leases covering the mine (see Section 3.1, this report). In January 1981, the workings were examined with a view to taking out an option over the leases. The following observations were made (Figure 1):

(1) Tin mineralization apparently occurs in thin (<3m wide), steeply dipping, north-east trending lodes which consist of a grey-green, partly vesicular, partly siliceous sericite(?) -clay rock. High grade ore (e.g. sample 12) contains abundant euhedral black cassiterite (average grainsize 0.5mm) but is only present in patches within the lodes.

(2) The host rock is a strongly argillized coarse grained granite which contains geochemically anomalous amounts of tin (0.02 - 0.08%) near the mineralization. Waller (1902) claimed that the host rock in adit No.3 is an argillized aplite containing 0.93% Sn (exclusive of the lodes) in a bulk sample over 10m of adit length. The first several

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ROCK CHIP ASSAYS

Sample No.	% Sn
1	0.06
2	0.08
3	0.02
4	3.72
5	0.08
6	0.01
7	0.46
8	0.04
9	0.05
10	12.27
11	0.04 *
12	1.07 *
13	<0.01
14	0.01
15	0.01
16	<0.01 *
17	<0.01
18	<0.01
19	<0.01
20	<0.01
21	<0.01
22	0.16
23	<0.01
24	0.02

* spoil samples

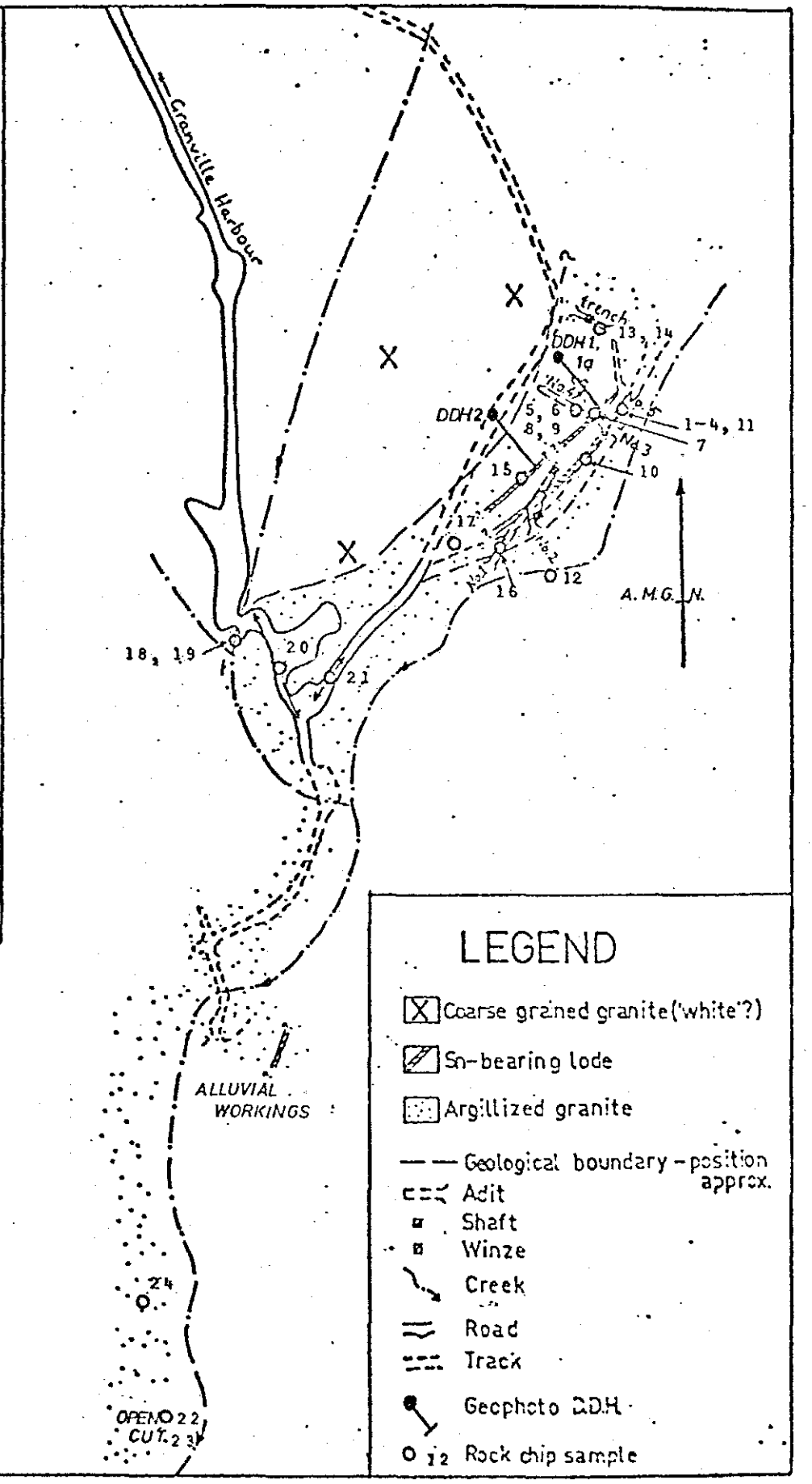


FIGURE 1: PERIPATETIC MINE, E.L.11/76

SCALE 0 50 100m.

5 cm

metres of the adit have been removed but the rest of the granite (which is coarse grained and carries tourmaline nodules) was sampled (samples 5,6,8) for a maximum assay of 0.08% Sn. Waller also claimed that the tourmaline nodules assayed 0.4% Sn. A sample of nodules obtained by the writer (sample 9) contained 0.05% Sn.

The Geophoto drillholes were apparently unsuccessful in intersecting tin mineralization. All of the core was split but only two assays are recorded: 0.05% Sn at 65.8 - 67.4m and 0.011% Mo at 108.5 - 111.6m in DDH 1. Examination of the core, however, revealed pyrite-bearing sericitic greisen at 39.9 - 40.1m in DDH1a and 68.6 - 71.6, 74.1 - 75.0m in DDH2. These are probably the depth extension of the lode(s). Section views are appended with the logs (Appendix 3).

In summary:

(1) Economically interesting tin mineralization is confined to thin (<3m wide) lodes which contain ore grade shoots no longer than 50m.

(2) Almost 1% Sn as disseminated cassiterite within argillized aplite has been reported, (Waller, 1902) but that report is considered unreliable after ground inspection.

(3) Diamond drilling by Geophoto strongly suggests that the tin content of the lodes is no more persistent with depth than it is along strike.

It was concluded that the potential for a major Sn orebody at the Peripatetic Mine is poor. Consequently the leases were not taken up under option.

4.1.6 Heemskirk Granite - Geological Mapping

Following the recommendation of the 1979-80 Annual Report, reconnaissance geological mapping of the Heemskirk Granite was commenced in 1980-81. R. Poltock, a contract geologist, was engaged to do this work and carried out four weeks of mapping in March-April, 1981.

Results of this work are fully described in Poltock's report, which is appended (Appendix 4) together with an interpretative geology map (Plan 12). Relevant details are summarized below:

(1) The completed mapping was only the first stage of a three year (summer) program, for which a total of 16 weeks of field work has been planned. Consequently the current results are preliminary only.

(2) Most of the granite types are quite similar petrologically and therefore mappable differences are few and subtle. The main criteria used for distinguishing granite types were:

a) feldspar colour,
b) grainsize, and
c) presence and nature of tourmaline nodules.

Additional features were noted during mapping and a comprehensive suite of samples collected. If other criteria for distinguishing granite types become apparent, the interpretation can be amended with minimal extra fieldwork.

(3) Mapping concentrated on delineating the main contact between the "red" and "white" granites which runs approximately north-south through the centre of the granite outcrop. Most other traverses were across areas of "white" granite outcrop west of the main contact. Points of interest are:

a) The main contact's location corresponds reasonably well with its position on Klominsky's (1972) map. North of the Federation area the contact angle appears flat dipping in the way Klominsky describes.

b) At and near the Federation area, intra-granite contacts are much more complex than elsewhere. There may be some relationship between complexity of intra-granite contacts and mineralization.

c) Country rock (?) xenoliths were observed on Mt. Heemskirk and at the Tasman River near the coast. Their presence some distance away from the granite margin may indicate that the granite has only been shallowly unroofed.

4.1.7 Review of Geophysics Data - Federation

Dr. J. Bishop, a consultant geophysicist, was engaged in 1980-81 to conduct a review of geophysical data collected on surveys over E.L. 11/76 up to the end of 1980. His work has continued on a part-time basis during the latter four months of 1981 but his report is not yet available. However he has written a brief memorandum which comments on some aspects of his work (Appendix 11).

4.2 S.P.L. 129

4.2.1 Globe Mine

During 1980-81 work on this area comprised geological mapping, chip sampling the adits, grid cutting and subsequent geophysical surveys.

Ground magnetics and part of the geological mapping and chip sampling were carried out by C. Cannard, a C.G.F.A. graduate trainee, during summer. Cannard's report, which describes most of the work completed this year, is appended (Appendix 5), together with geological maps (Plans 13a,b), an adit sampling plan (Plan 14), line profiles (Plans 15a-h) and contoured magnetics (Plans 16a,b).

Gradient array I.P. was carried out over the grid by Scintrex Pty. Ltd. in December 1980. Details of this work are fully described in Scintrex Report Tas-081C, to which the reader is referred.

Conclusions from this year's work are as follows:

(1) The mineralization comprises tourmalinized granite with minor (2-3%) disseminated sulfides, mostly pyrite.

(2) Significant Sn, Ag, Pb and Zn grades occur in adits 1 and 3; up to 0.41% Sn is present in adit 2 but Ag, Pb and Zn values are low. Within the mineralized zone, Sn assays average a low 0.1% but there are higher grade patches, notably at the end of adit 1 which averages 0.54% Sn over 4m of adit length (including the face). Ag is the other metal of major economic interest, particularly in adit 1 where the mineralized zone contains 61 g/t over 54m of working length (including western end of adit, one crosscut off adit and two drives off crosscut).

(3) The shape of the mineralization is unclear. Comparison between the very limited tourmaline outcrop and the extensive tourmaline within the adits, however, suggests that the tourmalinized body dips shallowly eastwards. The Ag-rich areas in adits 1 and 3 were perhaps localized by a steeply dipping zone of weakness or an underlying pipe. The latter possibility is considered quite

promising as the mineralization's shape would then be similar to the Sweeneys orebody, and may have some tonneage potential.

(4) The gradient array I.P. work revealed chargeability anomalies of up to 40 mv/v with associated resistivities dropping to a minimum of 1000-2000Ωm over the workings (Plans 15a-h). High chargeability values at the south end of some lines are probably spurious end effects resulting from the southern current electrode being placed within relatively chargeable granite. Follow-up pole-dipole I.P. should help define the subsurface distribution of mineralization.

(5) This prospect now requires testing by diamond drilling. One hole has been proposed (Appendix 5). Given the limited understanding of the mineralization's shape, further holes cannot be proposed without knowing the results of the first hole and of the follow-up I.P. Sufficient site preparation should be carried out before drilling commences to permit collaring of drillholes from a variety of positions.

4.2.2 Eastern End S.P.L. 129

Following the recommendation of the 1979-80 Annual Report, 1 : 5000 scale geological mapping was carried out over four weeks in May-June 1981 by R. Poltock, a contract geologist.

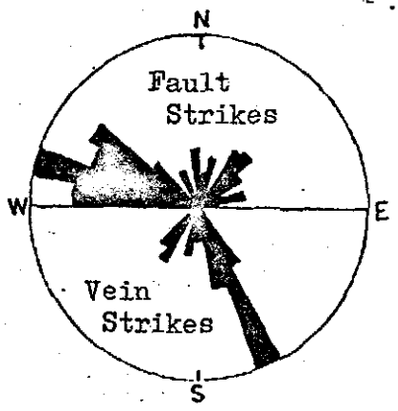
Results of this work are fully described in Poltock's report which is appended (Appendix 6) together with interpretative geology maps (Plans 17a-d).

Before this work was done, it was felt that existing maps were not sufficiently detailed for effective exploration particularly as the target mineralization is probably hidden. Results of this program are summarized below:

(1) Structure Most of the faults shown on the Zeehan 1 mile geological map were not recognized. The main exception, the Tenth Legion Fault, is shorter, terminatin at or near the TLE Workings. Small-scale faulting is present in most mine exposures, however. A low angle

thrust fault may separate the Oonah and Crimson Creek Formations near the Swansea Mine.

Mineralized fractures generally trend north to north-west but do not usually appear to have movement along them. The predominant orientations of faults and veins differ on the Zeehan Field, as is shown below (from Besley, 1971):



Intensity of folding and quartz veining is greater in the Oonah Formation compared to the younger rocks which suggests that an unconformable contact separates them.

(2) Stratigraphy

a) Oonah Formation. Upper Proterozoic. Comprises quartzites and siltstones. Minor carbonate was observed in dump rocks at the Spray Mine, and near the Sunshine Mine where limited outcrop occurs in an unusual flat-bottomed valley, possibly indicating extensive underlying carbonate and/or siltstone. One outcrop of spilite was observed 450m south-east of Grubbs Workings associated with bedded massive pyrite containing minor lead and zinc but negligible tin.

b) Crimson Creek Formation. Lower-Middle Cambrian. Comprises basic volcanics, siliceous siltstones, grits, conglomerates and minor cherts. This succession is a typical of Crimson Creek rocks elsewhere but is correlated with that formation on older maps. Apart from the high volcanic component,

the sequence is similar to Success Creek Group rocks and therefore the correlation is uncertain. The volcanics include submarine lavas (pillow structures have been observed) and may merge westwards into the McIvor Hill Gabbro, in which case the latter may well be the eroded base of a Cambrian volcano.

c) Dundas Group. Middle-Upper Cambrian. Comprises greywackes, conglomerates and siltstones, with minor sandstone and limestone in the south-west portion of the mapped area. The contact between this sequence and the Crimson Creek Formation appears conformable. Outcrop is poor and the rocks tend to be more weathered and soft compared with the other formations. In the south-west of the area, some calcareous greywackes and siltstones are associated with the limestone mentioned previously. The interpreted area of Dundas Group sediments is substantially larger than that shown on older maps, however no diagnostic fossils were observed in this mapping program and therefore the correlation is uncertain.

d) Mt. Zeehan Conglomerate. Ordovician. The mapping has confirmed the previously defined outcrop pattern of this unit with little change.

(3) Discussion The mapping has revealed that carbonates are more widespread than was previously recognized. At the same time, the work has shown that there are fewer major faults related to mineralization than the older maps indicate. The potential for related carbonate-replacement and fault-bound tin mineralization is therefore enhanced in one way and downgraded in another. It is now clear that the Zeehan 1 mile geological map cannot be used as a basis for effective mineral exploration in this area. Therefore the remaining relatively unexplored ground within SPL 129 should ultimately be mapped in similar detail.

4.2.3 Kelvin and Maynes Workings

These workings were examined in September 1980 with the intention of negotiating an Option Agreement over the leases covering the area. Results of this examination are summarized in Appendix 7 and on Plan 18.

4.3 Agnew Grid

This grid covers the area between Sweeneys and the Globe, extending from the edge of the Federation Plateau and the southern slope of Mt. Agnew south-east to the granite margin (Plan 1, Figure 2). The grid was established to allow exploration of this area which is prospective for Sweeney-style polymetallic sulfide mineralization.

Grid cutting was carried out in October to December, 1980. 41.5 line km of grid were cut in lines 100m apart pegged at 30m intervals. A further 4.5 line km was cut in a central baseline and a walking track connecting the northern ends of the grid lines.

Survey control was obtained along the baseline, top walking track and Trial Harbour-Zeehan road during summer. It has been assumed that lines are straight between survey-located pegs because the inaccuracy in the 1 : 5000 topographic map is such that lines cannot be more accurately located using creek and crest positions.

Details of work completed to date are as follows:

4.3.1 Geology

Limited line mapping has been carried out. This information has been incorporated into the interpretative geology map (Figure 2). Much of the grid is underlain by coarse grained "red" granite with some finer grained "white" granite present in the south-east.

4.3.2 Geochemistry

Soil sampling was carried out by the contract team which cut the grid in October to December 1980.

(1) The geochemical technique was guided by the orientation survey over Sweeneys (see Section 4.14 of this report). Features of the sampling program were:

(a) On the northern, rainforest-covered, half of the grid, samples were taken by auger, mostly at a depth of 50 cm but some deeper. On the southern part of the grid, which occurs on gently undulating, button grass country, samples were taken by mattock at a depth of 40-50 cm. In both cases, samples were obtained from the B-horizon where it was developed.

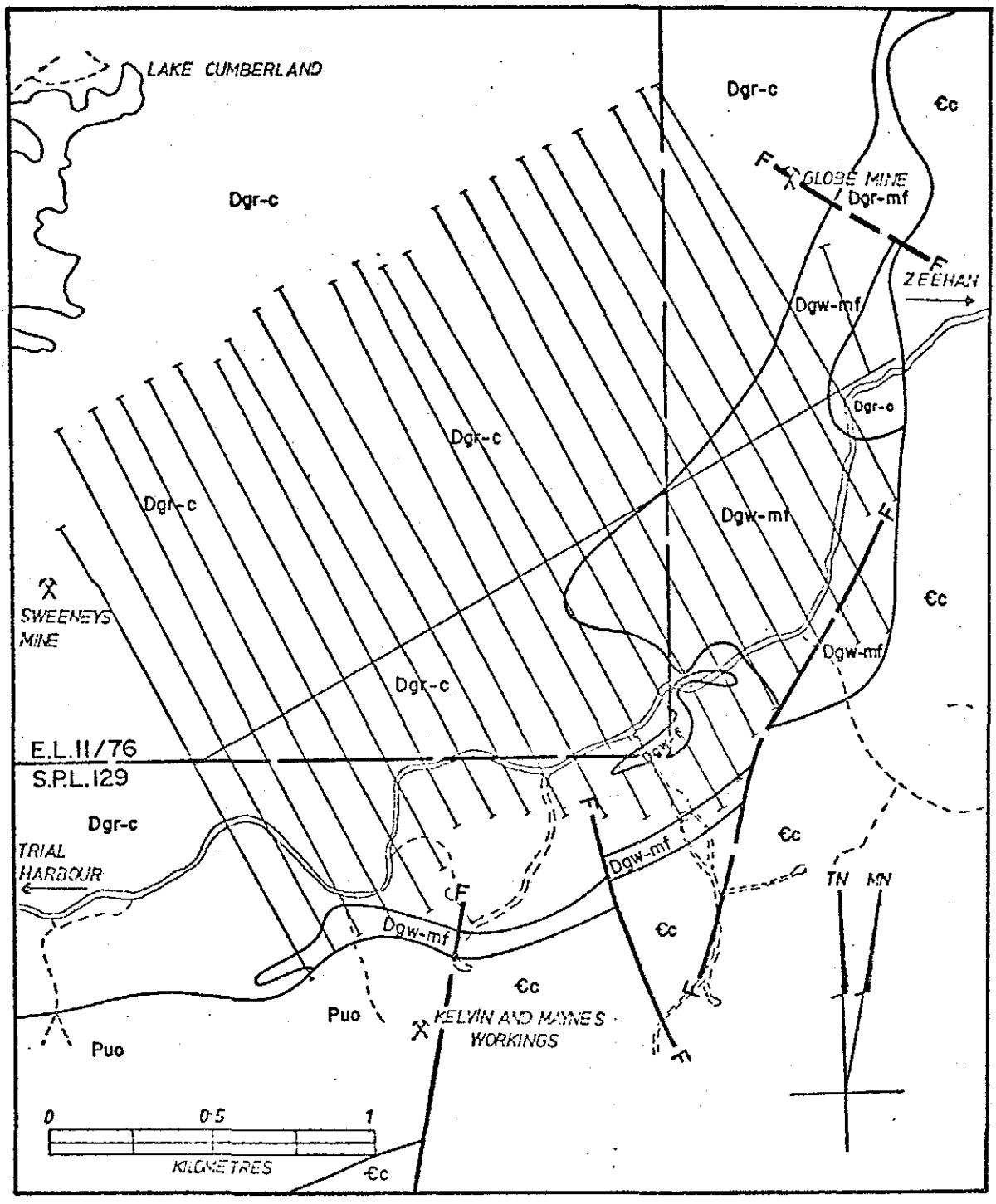


FIGURE 2: AGNEW GRID – GEOLOGY INTERPRETATION

5 cm

LEGEND

€c — Cambrian Crimson Creek Formation

Puo — Upper Proterozoic Donah Formation

DEVONIAN HEEMSKIRK GRANITE

Dgr-c — "Red" granite - coarse grained

Dgr-mf — "Red" granite - medium/fine grained

Dgw-mf — "White" granite - medium/fine grained

Dgw-f — Aplite granite

Geological contact

F—F Fault

(b) Each sample was briefly described by the sampler (Appendix 8).

(c) The -80#(-180 um) fraction was sieved out from each sample and analysed for Sn and As by X.R.F. and Cu, Pb, Zn by A.A.S. Assaying for Sb was also considered but the orientation survey results suggested that little extra information would be gained by this.

(2) Results

(a) The soil descriptions were compiled into a soil type map (Figure 3). Some interpretation was required to draw up the map but the overall picture is considered fairly accurate. The distribution of moderately and well developed soils is of particular interest as they probably overlie argillized granite.

(b) Assays are tabulated in Appendix 9, and presented on contoured plans (Plans 19a-e, 20a-e) and line profiles (Plans 21a-x). The following comments are revelant:

(i) background values of As, Cu, Pb and Zn are all low, all but Zn being at or below the detection limit. Zn background is approximately 20 ppm.

(ii) Sn background values are variable. On some lines, it is below the detection limit. The undoubted presence of colluvial cassiterite derived from economically unimportant white dykes, greisen veins etc. complicates the picture. Anomalies of Sn alone must, therefore, be regarded with some caution.

(iii) detailed statistical analysis of the data has not been carried out, however nine anomalies have been selected for further work by comparison with I.P. results (Table 1, Figure 4). Of these, three are strong, combined Sn-base metals responses (anomalies 1, 4 and 5).

4.3.3 Geophysics

(1) Magnetics Most of the northern half of the grid was

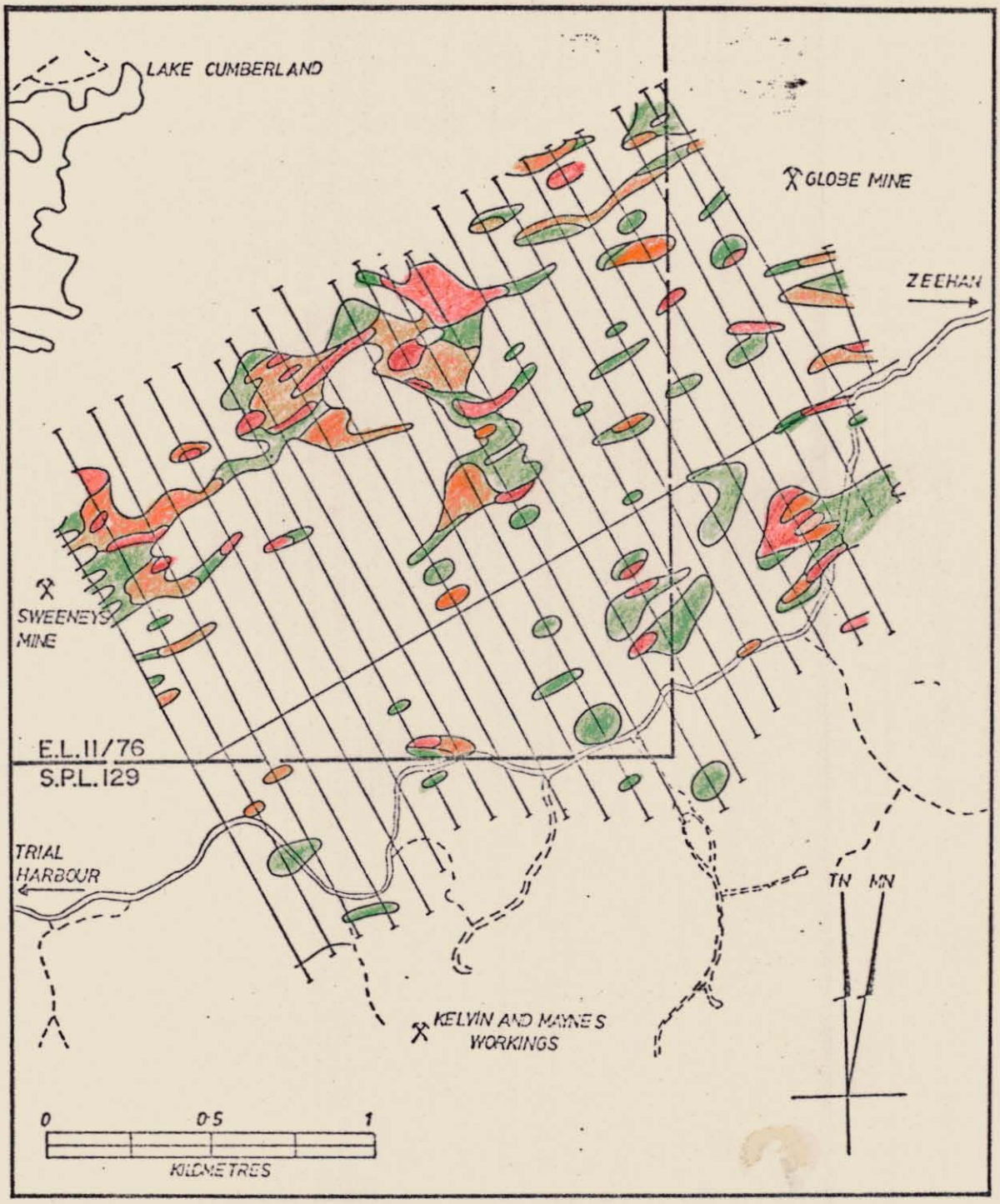


FIGURE 3: AGNEW GRID – SOIL TYPE MAP

5 cm

Legend

- Poorly developed soils, grey, brown, beige, sandy or gritty.
- Weakly developed (?) soils, some with minor grit and clay, or clayey grits.
- Moderately developed soils - B horizon clayey, may be gritty clay.
- Well developed soils - B horizon brown, orange, grey clay.

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TABLE 1 - SUMMARY OF ANOMALIES - AGNEW GRID

ANOMALY NUMBER (IN ORDER OF PRIORITY)	GRID LOCATION (CENTRE)	GEOCHEMICAL RESULTS		GEOPHYSICAL RESULTS				COMMENTS	DRILLING TARGET?
		SOIL TYPE	ASSAY MAXIMA (ppm)	SCINTREX ANOMALY	CHARGEABILITY ABOVE BACKGROUND (mv/v)	MAXIMUM DEPTH TO SOURCE (m)	RESISTIVITY (m)		
1	600E/870N	Clayey	1220Sn, 230As, 120Pb, 350Zn at 900N, 100Cu at 930N	A	29	40	400	Argillized granite indicated by soil type. "Floaters" of silicified altered granite assayed up to 0.16%Sn, 0.05 acid soluble Sn, 0.5%Zn and 29 g/t Ag in different samples. Mineralization subcrops?	Yes
	700E/840N	"	1370Sn, 850As, 95Cu, 190Pb, 600Zn at 900N	A	40	50-60	350		
	800E/880N	"	80Pb at 780N, 170Zn at 810N	A	12	-	400		
2	300E/590S	Skeletal	65Sn, 25Zn at 570S	E	38	50	Small Resistivity Decrease	Granite not argillized. Mineralization at depth?	Probably
	400E/610S	"	400Sn at 630S	E	27	60			
3	1000E/810N	Clayey	40As at 870N, 25Cu, 20Pb, 45Zn at 750N	B	~7	-	150	Argillized granite indicated by soil type. Thinly concealed or off-line mineralization suggested by both geochemical and geophysical results.	Probably
	1100E/790N	"	70Pb, 70Zn at 750N	B	17	Shallow?	270		
	1200E/750N	"	50As at 660N, 85Zn at 690N	B	15	20	350		
4	1400E/850N	Clayey	520Sn at 840N, 420As, 180Pb at 810N	C	15	50	600	Concealed, south dipping mineralization suggested by chargeability profile.	Probably
	1500E/830N	Weakly Developed	30As, 30Pb at 810N	-	7	Deep?	~800		
5	1700E/1005N	Clayey at 960N	1240Sn, 430As, 130Pb at 900N	-	12	50	1000	Concealed, south dipping mineralization suggested by chargeability profile and location of geochemical anomaly (well down slope).	Probably
6	1500E/430S	Skeletal	70Sn, 25Zn at 420S	F	14	~50	Unchanged	Maybe concealed mineralization - chargeability profile quite broad. Combined Sn-base metals response on 1800E encouraging but may be unrelated.	Possibly
	1600E/390S	"	70Sn at 390S, 200Cu at 450S	F	14	~50	"		
	1700E/420S	"	80Sn at 420S	F	15	~50	Small Decrease		
	1800E/350S	Clayey at 300S	60Sn, 60As, 65Cu, 25Zn	-	14	Deep?	Unchanged		

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ANOMALY NUMBER (IN ORDER OF PRIORITY)	GRID LOCATION (CENTRE)	GEOCHEMICAL RESULTS		GEOPHYSICAL RESULTS				COMMENTS	DRILLING TARGET?
		SOIL TYPE	ASSAY MAXIMA (ppm)	SCINTREX ANOMALY	CHARGEABILITY ABOVE BACKGROUND (mv/v)	MAXIMUM DEPTH TO SOURCE (m)	RESISTIVITY (m)		
7	2100E/300S	Weakly Developed	50Pb, 85Zn at 300S	H	20	35-45	1700	Form of chargeability profile suggests shallow source. May be at granite contact. Ground examination required.	Possibly
	2200E/300S	"	170Sn, 40As, 30Pb at 300S	H	17	?	1000		
8	1800E/510S	Skeletal or Weakly Developed	140Sn, 20Pb at 570S	G	25	40-50	Increases	Chargeability is encouraging - may be disseminated sulfides in resistive host.	Possibly
9	1900E/1150N	Skeletal to Weakly Developed	250Sn, 70Zn at 1170N	D	9 (open to north)	?	1200	May represent concealed mineralization. Further work to north necessary.	Possibly
	2000E/1110N	Skeletal	30Sn, 30Pb at 1110N	D	13	?	700		
10	2000E/340N	Clayey	50As, 35Zn	-	8	Deep	Unchanged	Possibly deeply concealed mineralization - broad, low amplitude chargeability response.	Possibly
11	2300E/270N	Weakly Mod. Devel.	50Sn at 300N, 20As at 270N	I	57	Probably outcrops	600	Strongest I.P. anomaly in the survey but represents outcropping source. Lack of associated geochemistry downgrades potential. Ground examination required.	?
12	500E/300S	Skeletal	85Sn at 330S, 50As at 240S	-	9	Deep	1200	Broad low amplitude chargeability anomaly - possibly represents deeply concealed mineralization. As anomaly downslope but may be unrelated.	Possibly

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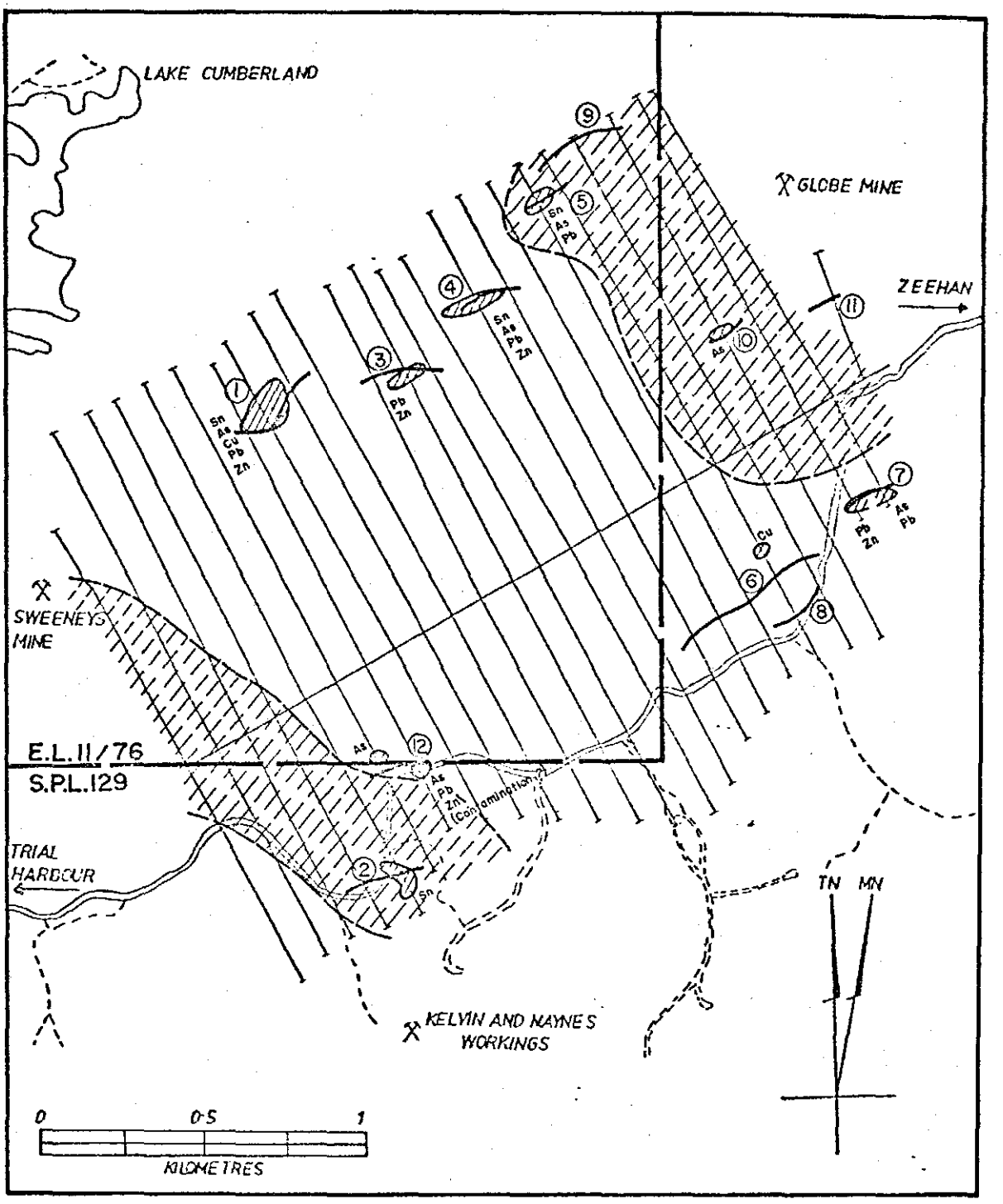


FIGURE 4: AGNEW GRID — ANOMALY LOCATIONS

5 cm

Legend

Axis of chargeability (I.P.) anomaly.

Geochemical anomaly coincident with or ? related to chargeability anomaly, anomalous elements shown.

Area of variable but generally anomalous Sn values.

② Anomaly number.

covered by ground magnetics in December and January. Geometrics G816 proton precession magnetometers were used. Diurnal magnetic variation was recorded at a base station located at grid 450E/90S. The data was tied into the Federation Grid data by reading one station on that grid and adjusting the base station correction appropriately. The corrected readings are tabulated in Appendix 10, and presented on line profiles (Plans 21a-v) and contoured maps (Plans 24a-d).

This work showed that the magnetically noisy area in the south-east of the Federation Grid extends into the west part of the Agnew Grid. Further east, the data becomes progressively "flatter" with values decreasing gradually towards the south-east. A subtle break in the noisy pattern occurs over anomaly 1 - this may reflect altered granite in which accessory magnetite has been broken down by hydrothermal fluids.

The available surface geology and diamond drilling data suggests that magnetically noisy areas are underlain by a thick layer of "red" granite whereas the magnetically "flatter" areas are underlain by either "white" granite or a relatively thin layer of "red" granite over "white" granite.

(2) I.P. A gradient array I.P. survey covering the entire grid was conducted in January 1981. Details of this work are described in Scintrex Report Tas-081D, to which the reader is referred. The data is presented on line profiles (Plans 21a-x) and contoured maps (Plans 22a,b, 23a,b).

Thirteen anomalies were described in the Scintrex report. Of these, ten have been selected for further work, together with two other relatively subtle features (Table 1, Figure 4).

4.3.4 Discussion

Results from the Agnew Grid work are most encouraging. Comparison with geophysical and geochemical data obtained over Sweeneys reveals that five anomalies on Table 1 share similar characteristics (numbers 1,3,4,5, and 10) i.e. they tend to have anomalous Sn-base metals geochemistry, combined chargeability and resistivity responses and occur in

argillized granite. The rest tend to have relatively weak geochemical and resistivity responses compared to their chargeability and tend not to occur in argillized granite. Comparison of the latter group with exploration results on line 2750N of the East Heemskirk Grid, 50m south of the Globe (S.P.L. 129 Report, 1979-80) suggests that they may represent Globe-style mineralization.

Some of the anomalies selected for further work are quite subtle. Nevertheless it is most important that they are followed up because the grid was designed with the understanding that Sweeney-style orebodies between grid lines, and possibly at depth, may give just such anomalies. A pipe shaped body containing 500,000 tonnes over a vertical distance of 200 metres would have a surface diameter of 33m - this is a very small target.

Plotting the anomaly locations on a lineament map (Figure 5) reveals several interesting relationships. All but three of the anomalies lie in two north-east trending "corridors". Three major east-south-east trending lineaments visible on 1 : 40,000 air photographs cross the area: the northern one passes near or through the Globe, the middle one passes through the Phar Lap workings (on the Federation Plateau) and terminates just short of anomaly 1 and the third passes north of Sweeneys and just south of anomaly 6. A fourth feature, clearly visible on LANDSAT imagery, crosses from north to south and includes anomalies 1 and 2 and the Kelvin and Maynes Workings.

The northern anomaly "corridor" includes Sweeneys, and most of the anomalies recorded along it have Sweeney-style characteristics. A belt of clayey soils is irregularly distributed along this trend (Figure 3) suggesting relatively extensive argillic alteration.

The southern anomaly "corridor" lacks the clayey soils indicative of argillic alteration. Most of the anomalies within it exhibit characteristics similar to geophysical and geochemical results obtained near the Globe.

If these anomalies represent mineralization, it is possible that tourmaline-poor, high sulfide (Sweeney-style) ore occurs

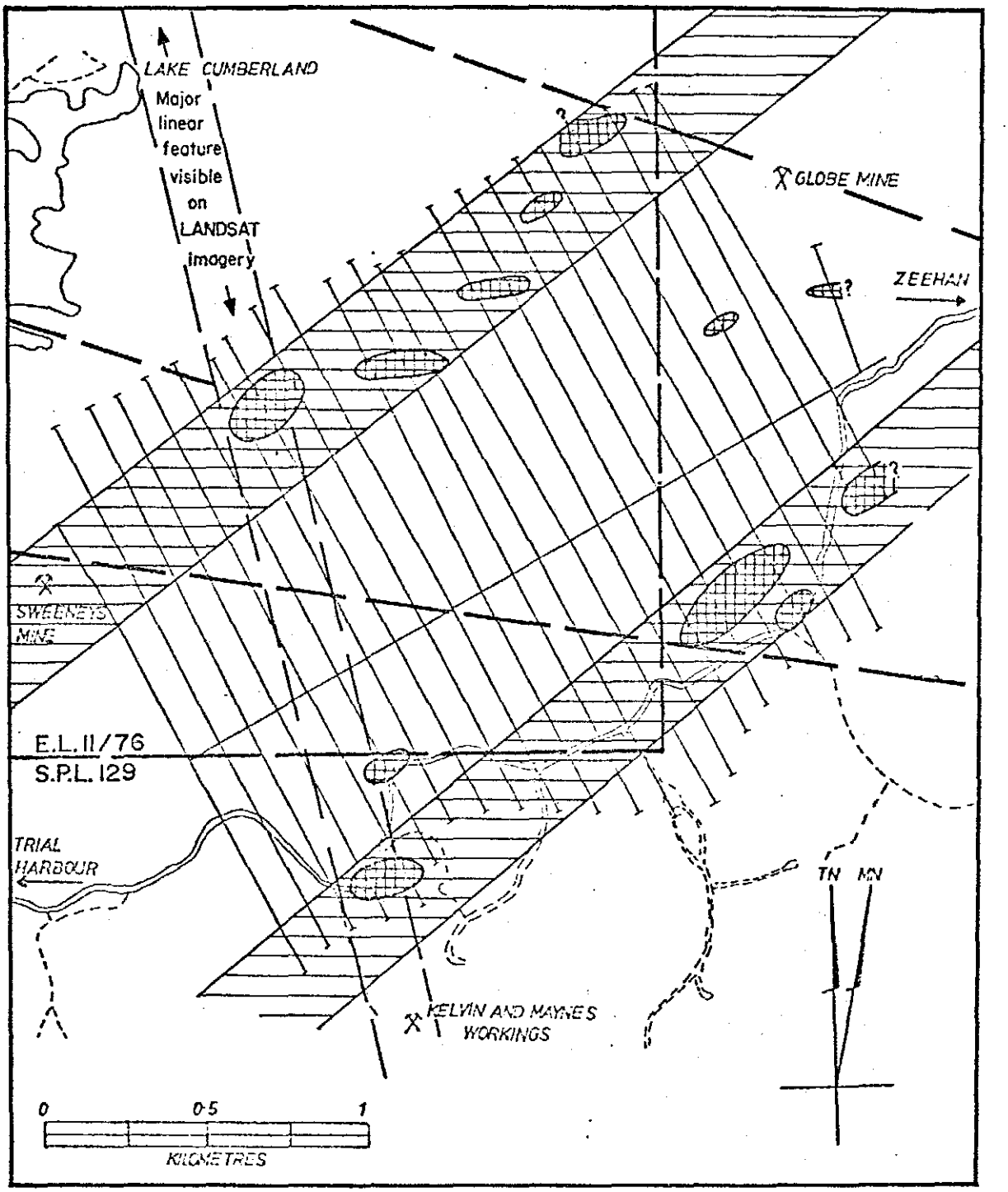


FIGURE 5: AGNEW GRID – LINEAMENT MAP

5 cm

Legend

Major lineaments visible on 1:40 000 aerial photography.

"Corridor" of mineralization (?), I.P. anomalies. ± associated geochemical anomalies.

I.P. anomalies ± associated geochemical anomalies.

040

only within thick layer of "red" granite, whereas tourmaline-rich (Globe-style) mineralization is present within "white" granite or in "red" granite close to the "white" granite contact. If this is so, the Federation grid 1700W anomaly may be one of the latter type.

5. DISCUSSION

5.1 Heemskirk Granite

Exploration within the granite during 1980-81 has caused some change to exploration priorities. The exploration potential of the known mineralization styles is summarized below:

(1) Polymetallic Sulfide Mineralization. High economic potential. Results at the Globe and on the Agnew Grid indicate that at least several mineralized bodies are present near the granite's southern margin. The current exploration target is a series of small orebodies (say 200,000 to 1,000,000 tonnes) containing more than 0.4% Sn and 20 g/t Ag, possibly with recoverable base metals.

(2) Sericitic Alteration. Moderate economic potential. Drilling and mapping indicates that this alteration type is widespread at least in the southern part of the granite. The most extensive zone revealed so far, Waxman and Westons, may contain economically significant tin concentrations within a greisen-like setting. Potential tin grades are low - probably 0.2 - 0.4% average - consequently the current exploration target is a moderate to large tonneage (probably >5 million tonnes) in one or more orebodies.

(3) Quartz-Tourmaline-Topaz alteration Dykes. Low economic potential. The West Federation area was previously considered an exception but drilling during 1980-81 has shown that the previously intersected mineralization occurs in a small, pipe-like(?) body more akin to Sweeneys than to "normal" quartz-tourmaline lodes.

(4) Greisen. Moderate to low economic potential. Classic greisen bodies (e.g. Blue Tier, Erzgebirge) have probably formed in a quiescent environment where release of late stage hydrothermal fluids by brittle fracture was not possible (Taylor,1977). Most - if not all - of the observed mineralization within the Heemskirk Granite is fracture controlled. As such it has much closer affinities with the Ardlethan and Bolivian tin ores. At Ardlethan, tourmaline/greisen vein stockworks occur just below the tin granite contact at the Little Bygoo and Big Bygoo

042

prospects. By analogy the Heemskirk Granite may also have potential for greisen or tourmaline/greisen vein stockworks. A subeconomic greisen vein stockwork was encountered in drilling around the Central Federation (Black Face) lode (see E.L. 11/76 1979-80 Annual Report). A potential area for this mineralization style is beneath Maynes Mine south of the granite contact.

(5) Argillic Alteration. Low economic potential. Examination of the Peripatetic Mine revealed geochemically anomalous tin values in strongly argillized granite. There is an outside chance that large areas of such alteration exist unrecognized within the Granite, particularly on the western coastal plain. Intensely argillized granite can be worked by alluvial methods, hence very low grade "ore" (say 200 ppm Sn or more) may be economic if in sufficiently large quantities.

During 1981-82 exploration for polymetallic sulfides should be confined to evaluating known anomalies by follow-up geochemistry, geophysics and drilling. Beyond then, further close spaced grid exploration north and north-east of the Agnew Grid should be considered.

The economic potential of large sericitic alteration zones is not known. Further work is necessary at Waxman and Westons to establish this. A bedrock geochemical sampling program together with several drillholes within altered fine grained "white" granite should determine finally whether further work is justified there.

Continuing evaluation of the three other mineralisation styles should be facilitated by an ongoing 1 : 10,000 mapping program.

5.2 Contact Rocks South and South-East of Heemskirk Granite

This area is essentially the contact aureole of the granite. It has been virtually completely covered by cut grids on which geophysical and gepchemical programs have been conducted.

Crimson Creek and Oonah Formation rocks both contact the granite. Both are prospective for stanniferous magnetite skarn mineralization. As the ground has been covered by extensive geochemical and

geophysical programs already, further diamond drilling should be considered. One obvious site for a drillhole is along line 25E (Plan 25). DDH TH1 intersected a weakly stanniferous magnetite-pyrrhotite skarn here. Diamond drilling down dip from this intersection is justified. Further drilling proposals in this area should await recompilation of the data. Detailed airborne magnetics, recently completed by the Tasmanian Mines Department, and covering this area, should also be useful.

5.3 Eastern End S.P.L. 129

Known mineralization within this area comprises small fault and vein controlled silver-lead-zinc orebodies. These are not attractive exploration targets because of their small size. To the north of the area, however, Aberfoyle Ltd. and Gippsland Minerals have outlined several tin orebodies on and around Queen Hill. Recent reports quote reserves of 1.75 million tonnes of 0.7% Sn on Queen Hill and 3 million tonnes of 0.3-0.4% Sn and 20 g/t Ag in the nearby Severn Lode. Significant tonneages of low grade (0.3 - 0.4%Sn) mineralization may also occur at the Oonah Mine, currently being explored by C.R.A. Exploration and Minops Pty. Ltd.

This section of S.P.L. 129 contains a similar sequence of rock types and is therefore considered prospective for Queen Hill style mineralization.

Available data about Queen Hill is limited, however the following has been gleaned from publications and one company report (O'Shea, 1972):

(1) The mineralization is hosted by spilites and black shales. Other lithologies in the vicinity are siltstones and pale grey quartzites. All lie within the Oonah Formation.

(2) Two ore types are present:

(a) Pyrrhotite-pyrite-cassiterite. This is thought to comprise the majority of ore reserves. It is apparently stratabound and probably replacive.

(b) Pyritic "stannite lodes" - containing silver, lead and zinc as well as stannite and cassiterite. These are fault or fissure fillings.

(3) The mineralization, although emplaced in a different stratigraphic position, has strong similarities to the Renison orebodies. Type (a) above, resembles "sill" ore, and type (b) Federal-Bassett ore. Major differences are the absence of primary carbonate (at least in Queen Hill drill logs G1 - 18) and the multiplicity of type (b) lodes.

(4) The area is intensely fractured and faulted.

Stannite has been recorded in a north trending belt of mines from the Montana silver - lead workings in the north to the Spray Mine in the south (Williams and Both 1972). At the centre of this belt lies Queen Hill and the outcropping tin orebodies. It is possible that economic tin mineralization occurs north and south of there at progressively greater depths. It seems likely that a tin-granite cupola underlies Queen Hill, possibly in the shape of a north trending ridge.

Several avenues of exploration for Queen Hill style orebodies are suggested:

(1) Deep drilling beneath the Spray Structure The Spray was one of the most important silver lead mines on the Zeehan Field, producing 63,141 tons of silver-lead ore between 1898 and 1918 (King, 1961). Since then,exploration, including diamond drilling, has been completed by the Tasmanian Government in 1931-32 (Rept. Sec. Mines 1932), Zeehan Explorations in 1946-47 and Tenneco in 1971 (Besley, 1971). In all three cases disappointing results were obtained, however this may have been because silver-lead ore was the target.

The Spray "line of lode" apparently extends from the Spray to Nubeena but is only intermittently mineralized along its length. Individual lodes all lie parallel to the main structure and trend NNW. The structure's orientation is important: at least three major mineralized faults on the Zeehan one mile sheet lie in this direction, namely the Federal-Bassett, Grand Prize and Exe River faults. It is likely that tensional opening of NNW oriented structures occurred during Devonian ore formation.

A reappraisal of all the old data is required here before any decision to proceed with drilling is made. It may be necessary to

re-locate the core of old drillholes and re-assay them for total and acid soluble tin. If drilling goes ahead and results are encouraging, further holes should be aimed at intersecting dolomitic units that are known in the area (Appendix 6) close to their juncture with the Spray structure.

(2) Evaluation of the Tenth Legion Fault. A series of small workings occur along this structure. From west to east they are Tenth Legion (Fe), Kynance (Ag-Pb-Cu-Zn), South Comstock (Ag-Pb-Zn) and T.L.E. (Ag-Pb-Zn). Significant features of the fault zone are:

a) Mineral zonation. Close to the granite associated mineralization is predominantly magnetite with minor tin (up to 0.3% recorded) in ludwigite-paigeite and lesser cassiterite. Further away from the granite, at Kynance, lesser magnetite occurs with base metal mineralization containing around 0.2% Sn (Lees and Newnham, 1974). At T.L.E. on the eastern termination(?) of the Fault, base metal ore assayed 70 ppm Sn (Appendix 6).

b) Recent mapping by Renison geologists has indicated that the structure is, in fact, a series of faults (Ross, 1979, Plan 17a). For instance south-east of Kynance, one fault striking NW is terminated by another striking WNW.

c) Soil geochemistry over the fault zone on the East Heemskirk Grid resulted in major tin anomalies over the Tenth Legion mine, 30 ppm Sn (above <5 ppm background) at Kynance but no response south-east of Kynance (on line 3800N).

The stanniferous base metals mineralization at Kynance may be analogous to parts of the Federal-Bassett structure adjacent to but outside the ore zone. Diamond drilling beneath the Kynance workings, closer to the granite may intersect higher grade tin mineralization. Consideration should therefore be given to approaching the Kynance leaseholders with an option proposal.

(3) Evaluation of the rest of the area will be difficult. It is unlikely that an outcropping tin orebody remains undiscovered, given the openness of the country and the intensity of past exploration

by alluvial sampling and trenching. Furthermore, since feeder structures (such as the Federal-Bassett) should contain subeconomic tin well beyond the limit of economic tin mineralization, it is improbable that a hidden orebody within reach of geophysical and geochemical techniques does not have some known surface expression. If Queen Hill style orebodies do occur they are almost certainly deeply buried. It is open to question whether Queen Hill size (and grade) orebodies could be economic if deeply concealed. Nevertheless several techniques could be used to delineate a drilling target:

(a) Gravity. A regional gravity survey by the Tasmanian Mines Department is partly completed over the area. When the data becomes available it may be useful in delineating the subsurface topography of the Granite. Deeply concealed cupolas may be identified.

(b) LANDSAT. Analysis of good quality LANDSAT false colour imagery may indicate as yet unrecognised structural features associated with mineralization.

(c) Geological interpretation. Carbonate lithologies have been described from various localities in the recent mapping program. Careful analysis of structural data may indicate where carbonates intersect feeder structures or granite cupolas predicted by (a) and (b) above. If further mapping identifies other reactive rock units, such as carbonated ultramafics or conglomerates with a calcareous cement, a similar analysis may be possible.

The possibility that relatively shallow tin orebodies are present within the area cannot be discounted completely, however. A relatively inexpensive exploration technique to test for such targets might be airborne EM. Renison style massive pyrrhotite causes strong EM anomalies but the response over the more pyritic Queen Hill mineralization is weaker (A. Howland-Rose, pers. comm.).

6. RECOMMENDATIONS 1981-82 (Figure 6)

6.1 E.L. 11/76

6.1.1 Waxman and Westons

(1) A detailed bedrock geochemistry program should be undertaken covering both alteration zones on a 25 x 15m grid (approximately 100 samples in all). A power auger will be required to penetrate the overburden of peaty soils and swamp.

(2) One diamond drillhole is proposed, sited at grid 700E/50N, oriented at -60° along grid south (Plans 4, 5e). Estimated depth 250m. Helicopter support is recommended for ease of operation and to avoid environmental damage.

6.1.2 Federation Grid (700W)

Limited soil sampling is recommended here to test whether the source of the I.P. anomaly has a geochemical expression. Since the I.P. work showed that the source is probably hidden, diamond drilling is necessary here, irrespective of the geochemistry results. Proposed hole details are: collar at grid 1700W/960S, oriented at -50° along grid north, estimated depth 150m.

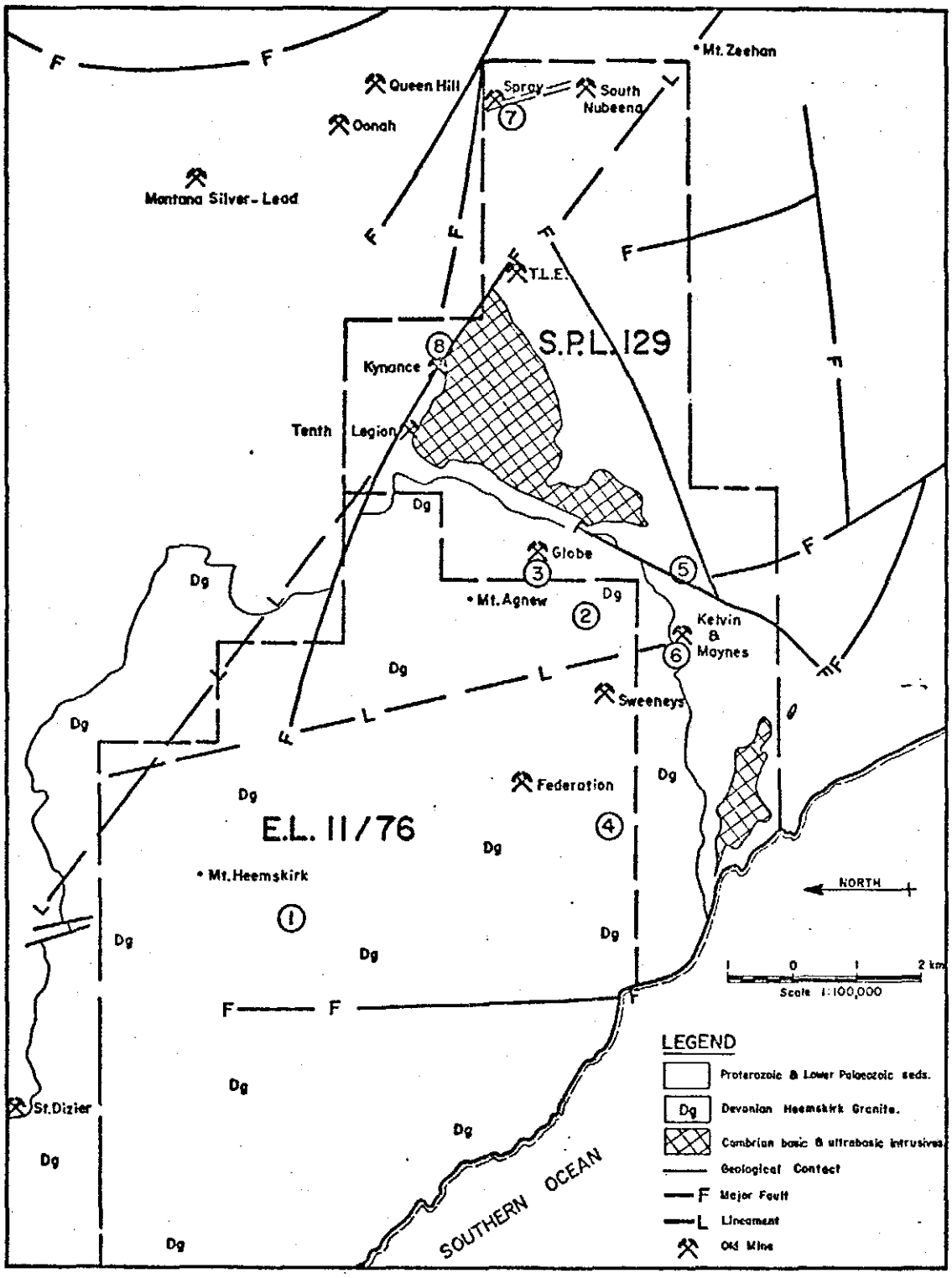
6.1.3 Granite Mapping Program

The three year 1 : 10,000 scale geological mapping program over the Heemskirk Granite should continue. Contract geologist R. Poltock should be engaged for six weeks in January-February, 1982. Some helicopter support would be valuable during this period.

6.2 S.P.L. 129

6.2.1 Globe Mine

(1) A further 2 line km of grid should be cut and pegged to permit further magnetics north of the north-western magnetic anomaly, pole-dipole I.P. along lines 80E, 120E and 160E over the workings, and gradient array I.P. on southern extensions of the grid to test chargeability anomalies on the south ends of most lines.



5 cm

FIGURE 6: PROPOSED WORK 1981–82
(with generalized geology)

PROPOSED WORK AREAS NUMBERED.
DETAILS:

1. 1:100 000 Mapping Heemskirk Granite.
2. Geophysics, Geochemistry and 500m Diamond Drilling Agnew Grid.
3. Geophysics, Geochemistry and 600m Diamond Drilling Globe Grid.
4. 150m Diamond Drilling 1700W, Federation Grid.
5. 350m Diamond Drilling Area D Grid.
6. Evaluation of Kelvin and Maynes.
7. Evaluation of Spray structure possibly by Diamond Drilling.
8. Evaluation of Tenth Legion Fault near Kynance(?).

(2) Soil sampling over the Globe Grid is recommended to help define drilling targets in conjunction with the above I.P. work. Sample spacing should be 30m.

(3) Four diamond drillholes, each approximately 150m long, are recommended for 1981-82. Details of one proposed hole are:
Collar at AMG 5359455N, 353365E, oriented at -70° along 280° (AMG), aim - to intersect the depth extension of mineralization beneath crosscut in adit No.1. Locations and orientations of the other three holes should be determined using the results of the proposed programs in (1) and (2) above. A flexible attitude will have to be retained, however, as final drillhole locations will depend on results of the previous holes.

6.2.2 South of Granite Contact

(1) Data obtained previously over this area should be re-assessed in conjunction with the new Government airborne magnetic data, when it becomes available.

(2) Area D. One drillhole is proposed to test the magnetite skarn zone intersected in DDH TH1. Hole details are: collar at grid 25E/7.25N, oriented at -57° along grid north. The hole is planned to intersect the skarn approximately 150m downdip from TH1 (Plan 25). Estimated length 350m.

(3) Kelvin and Maynes. Further assessment of this area is hampered by an unresolved land tenure situation. When this is classified, hopefully within the next few months, the leaseholders should be approached over an option agreement.

6.2.3 Eastern End S.P.L. 129

All of the old data from the Spray Mine should be re-examined. If considered necessary, old drillcore should be re-assayed for total and acid soluble tin. If results of this work are encouraging one diamond drillhole should be completed beneath the Spray workings. Estimated length 350m minimum.

6.2.4 Tenth Legion Fault

Should the review of data over the Spray Mine fail to indicate a worthy drilling target, further work over the Tenth Legion Fault zone should be considered. As a first step, the leaseholders of the Kynance mining lease should be approached about an Option Agreement.

6.3 Agnew Grid

6.3.1 Bulldozer access should be prepared up to anomalies 1,3 and 4. Diamond drill pads large enough to permit helicopter drill rig moves should be cleared around anomaly 1.

6.3.2 Infill grid lines, at 50m spacing, are recommended at anomalies 1 to 5,7,9 and 10 (Figure 7). Soil geochemistry and gradient array I.P. should be carried out along them. Following this work pole-dipole I.P. is proposed along those lines with the strongest gradient array response to help define drilling targets.

6.3.3 Anomalies 6, 8 and 12 should be covered by pole-dipole or dipole-dipole I.P. along existing lines to test if the gradient array I.P. anomalies reflect hidden mineralization.

6.3.4 500m of diamond drilling is recommended to test anomaly 1. Three holes, each of 150-200m depth, should be drilled, but details of locations and orientations must await the results of the geochemical and geophysical programs. Helicopter support is recommended here to help minimize environmental damage and to ensure efficient drilling operations in an area of rugged topography.

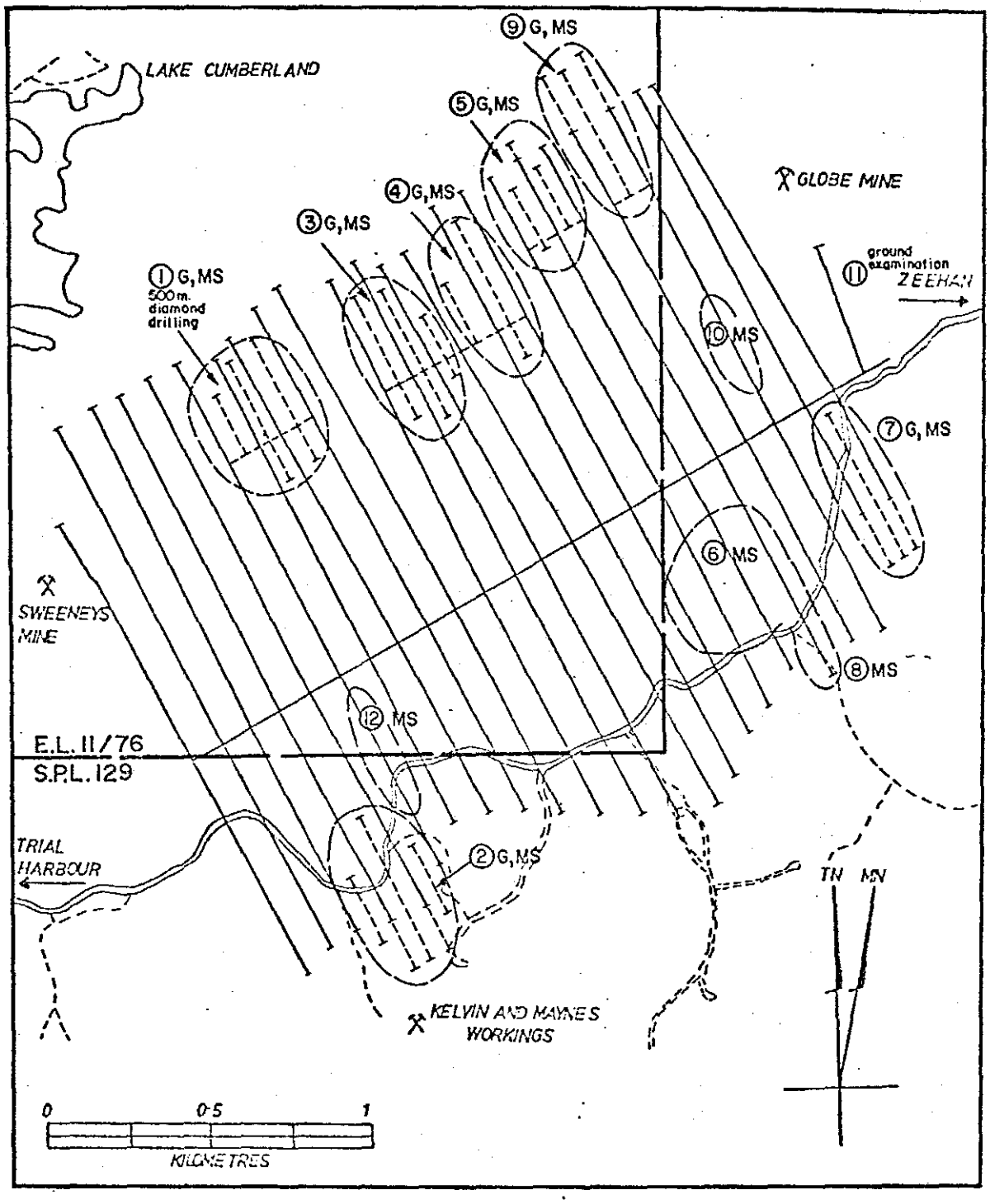


FIGURE 7: AGNEW GRID – PROPOSED WORK 1981-82

NOTE: The ground magnetics should be completed south of the baseline. Soil sampling is recommended at 30m. intervals along the new lines.

5 cm

LEGEND

② Anomaly number (table 1)

Proposed new grid line, pegged at 30m. intervals

G Gradient array I.P. recommended

MS Moving source array (pole-dipole or dipole-dipole) I.P. recommended.

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APPENDIX 1

EXPENDITURE BREAKDOWNS AND PROPOSED BUDGETS 1981-82

055

RENISON LIMITED

919057

E.L. 11/ 76 - TOTAL EXPENDITURE 1980-81

ITEM	$ EXPENDITURE	% OF TOTAL EXPENDITURE
SALARIES (INCLUDING LOADING)	13,716	9
CONSUMABLES	3,050	2
RENISON SERVICES (SURVEY, ASSAY, RESEARCH ETC.)	7,880	5
TRAVEL AND ACCOMMODATION	1,806	1
DIAMOND DRILLING	45,960	30
ROAD CONSTRUCTION	12,875	9
GEOLOGICAL CONSULTANTS	3,414	2
OUTSIDE SERVICES (GEOPHYSICS, TRACK CUTTING, HELICOPTER, DRAFTING ETC.)	60,784	40
LEASE PAYMENTS	1,238	1
ROUNDING	-	1
TOTAL:	150,723	100

056

RENISON LIMITED

919058

E.L. 11/76 - BUDGET 1981-82

ITEM	$ EXPENDITURE	% OF TOTAL EXPENDITURE
SALARIES (INCLUDING LOADING)	18,204	12
CONSUMABLES	3,742	2
RENISON SERVICES (SURVEY, ASSAY, RESEARCH ETC.)	8,928	6
TRAVEL AND ACCOMMODATION	579	-
DIAMOND DRILLING	79,807	51
ROAD CONSTRUCTION	5,128	3
GEOLOGICAL CONSULTANTS	8,530	5
OUTSIDE SERVICES (GEOPHYSICS, TRACK CUTTING, HELICOPTER, ETC.)	30,429	19
LEASE PAYMENTS	1,175	1
ROUNDING	-	1
TOTAL:	156,522	100

057

RENISON LIMITED

919059

S.P.L. 129 - TOTAL EXPENDITURE 1980-81

ITEM	$ EXPENDITURE	% OF TOTAL EXPENDITURE
SALARIES (INCLUDING LOADING)	8,904	14
CONSUMABLES	2,627	4
RENISON SERVICES (SURVEY, ASSAY, RESEARCH ETC.)	7,010	11
TRAVEL AND ACCOMMODATION	406	1
DIAMOND DRILLING	6,029	9
ROAD CONSTRUCTION	4,245	7
GEOLOGICAL CONSULTANTS	3,988	6
OUTSIDE SERVICES (GEOPHYSICS, TRACK CUTTING DRAFTING)	31,564	49
LEASE PAYMENTS	37	-
ROUNDING	-	- 1
SUB-TOTAL:	64,810	100
Charged to Mt. Lyell	13,910	
TOTAL:	50,900	

058

RENISON LIMITED

919060

S.P.L. 129 - BUDGET 1981-82

ITEM	$ EXPENDITURE	% OF TOTAL EXPENDITURE
SALARIES (INCLUDING LOADING)	24,209	19
CONSUMABLES	3,524	3
RENISON SERVICES (SURVEY, ASSAY, RESEARCH ETC.)	6,829	5
TRAVEL AND ACCOMMODATION	579	-
DIAMOND DRILLING	75,374	59
ROAD CONSTRUCTION	3,689	3
GEOLOGICAL CONSULTANTS	7,628	6
OUTSIDE SERVICES (GEOPHYSICS, TRACK CUTTING, DRAFTING)	6,217	5
LEASE PAYMENTS	36	-
SUB-TOTAL:	128,085	100
Minus 24% charged to Mt. Lyell	30,741	
TOTAL:	97,344	

APPENDIX 2

DIAMOND DRILL LOGS

KEMSOK LIMITED - DRILL CORE RECORD

HOLE NUMBER	FED 14
PURPOSE	To test for extensions of mineralization intersected in FED 10
LOCATION	WEST FEDERATION WORKINGS
COLLAR R.L.	425.26
CO-ORDINATES	S 359 650.98 N 349 941.46 E
LENGTH	104.5m
HOLE SIZE	0 - 18m HQ 18 - 104.5 NQ (triple tube). All core is NQ ~~hole was reamed out to H size to take casing.~~
DATE DRILLED	12.1.81 - 19.1.81
SIGNIFICANT CORE LOSS ZONES	2.7m loss 5.5 - 15.9m 1.4m loss 22.6 - 27.7m ~~0.9m loss 67.5 - 68.8m~~
ORE ZONE GROUND CONDITIONS	
LOGGED BY	P. ROBERTS

SURVEY Depth (m)	SURVEY Bearing (A.M.G.)	SURVEY Dip	From - To	Distance D	VERTICAL D Sin Dip	VERTICAL R.L.	HORIZONTAL D Cos D	HORIZONTAL Prog. Tot.
COLLAR	-	- 90°	0.0 - 25.0	25.0	25.0	400.3	0.0	0.0
50.0	359°	-88.5°	25.0 - 76.0	51.0	51.0	349.3	1.3	1.3
102.0	350°	-88°	76.0 - 104.5	28.5	28.5	320.8	1.0	2.3

COMMENTS

This hole was designed to test 'Geason's Lode' down-dip from the intersection in FED 10. Exposure of this lode in Geason's trench suggests that the mineralization dips very shallowly south-east, consequently the hole was oriented vertically. The alteration/mineralization at 62.0 - 75.0m was therefore unexpectedly deep. Assuming that this mineralization can be correlated with that in FED 10, this result indicates that either the lode is tabular, dips moderately (i.e. ~50°) south-east and thins down-dip or that both FED 10 and FED 14 intersected the edges of a steeply plunging pipe-like? body.

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A.
				AVERAGE WEIGHTED ASSAYS													
	62.0	75.0	13.0	0.04	<0.01	0.04	<0.1	0.1	<0.01	<0.01	0.004	0.03	3				
	including:																
	68.0	69.0	1.0	0.16	<0.01	0.05	<0.1	0.7	<0.01	<0.01	0.012	0.04	10				

NWPS 27344

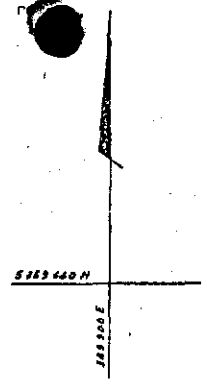
HOLE No FED. 14 SCALE: 0 10 20

DIAMOND DRILL HOLE PLOT

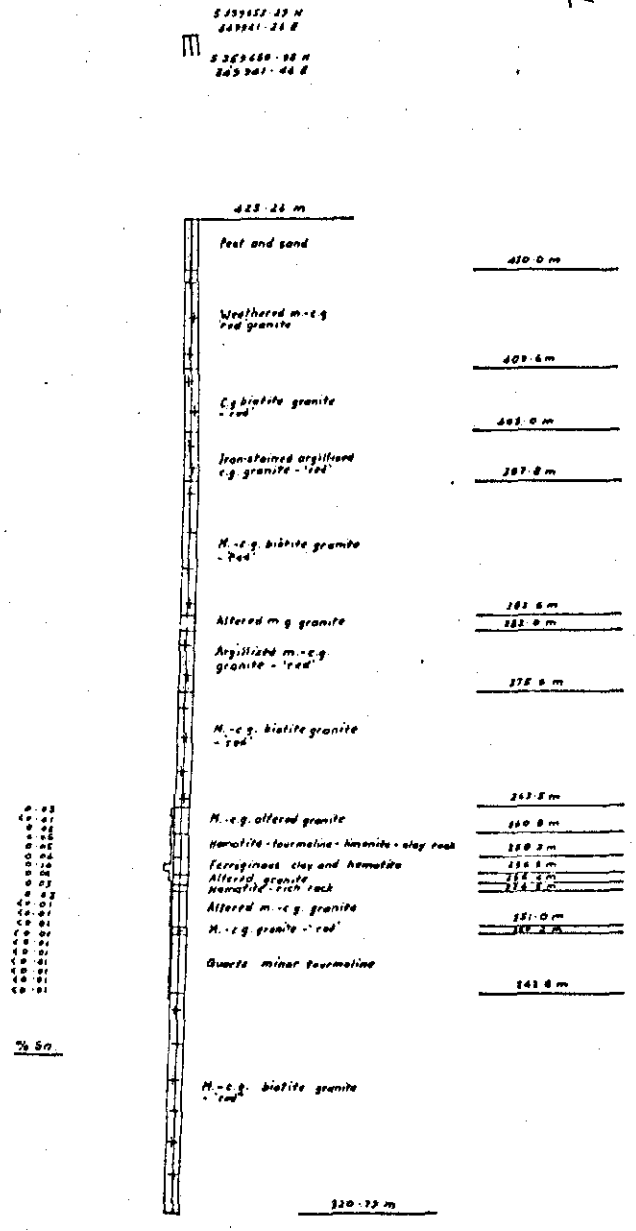
061

5 cm

PLAN



DIP PROFILE



919063

062

DIAMOND DRILL RECORD

HOLE NUMBER : FED 14

LOGGED BY : P.R.

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO_3
0.0	5.5	0	0	PEAT AND SAND No core recovered.													
5.5	15.9	7.7	74	WEATHERED GRANITE White, medium to coarse grained. Approximately 60% weathered/argillized feldspars - white, yellow, green-yellow - 35% grey quartz minor chlorite (after biotite), black tourmaline in few clots and one nodule (5cm diameter), trace muscovite, trace pyrite along joints, fractures. One thin (5cm wide) slightly pyritic grey greisen vein at 10.1m (VCA 70°). Broken along few joints parallel to c.a. (i.e. vertical), clay-coated. 2.7m core loss - highly weathered sections where granite converted to granitic sand. Becoming less weathered with depth.													
15.9	22.6	6.7	100	BIOTITE GRANITE Pale pink-grey, pale yellow-brown, coarse grained. Similar to above but feldspars pink, white to pale yellow, yellow-brown (ferruginous), variably but weakly argillized. Minor black biotite where granite fresher, elsewhere converted to chlorite, includes one 10cm grey-green greisen vein - quartz, muscovite, sericite with black tourmaline-rich centre - VCA ~70°. Competent core - rare iron-stained joints, JCA 60-70°.												
22.6	27.7	3.7	73	IRON-STAINED ARGILLIZED GRANITE Yellow-brown, coarse grained. Broken. Varies from soft and incompetent to moderately hard. Broken along clay- and goethite-coated joints parallel to c.a., also rare joints at 60-70° to c.a. Argillization and iron-staining probably reflect weathering downwards along vertical joints.												
27.7	42.0	14.3	100	BIOTITE GRANITE Pink-grey, yellow-grey, medium to coarse grained. Similar to 15.9-22.6m. Broken along few joints near parallel to c.a., 10-20° to c.a. (clay-coated) and 50-80° to c.a. Includes one grey greisen vein - quartz, muscovite, tourmaline - 6cm thick, VCA ~80°.												
42.0	43.5	1.5	100	ALTERED GRANITE Pale, grey, green-grey, medium grained. Comprises bands of pale grey, pyritic, siliceous greisen (with little or no muscovite) with softer bands of green-grey sericitized, argillized or greisenized (with muscovite) granite. Contact angles are 70-80° to c.a. Badly broken (particularly siliceous greisen) along joints near parallel to c.a.												

919064

DIAMOND DRILL RECORD

HOLE NUMBER FD14

LOGGED BY P.R.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g t Ag	% WO3
43.5	50.0	6.1	94	ARGILLIZED GRANITE													
				Pale yellow to white, medium to coarse grained. Feldspars and													
				biotite largely converted to clays or (minor) sericite. Includes													
				several siliceous veinlets near parallel to c.a. with minor black													
				tourmaline. Brown ferruginous stained 43.7 - 44.9m, 48.4 - 49.0m.													
				Becoming increasingly badly broken downwards along clay-coated joints													
				parallel to c.a., 10-20° to c.a. and less frequently 40-70° to c.a.													
50.0	62.1	12.1	100	BIOTITE GRANITE													
				Pale pink-grey, pale yellow-grey, medium to coarse grained. Feldspars													
				pink, white or pale yellow-green (weakly argillized and/or sericitized),													
				minor biotite or chlorite (after biotite). Includes bands of grey													
				siliceous greisen from 55.6m downwards. Core competent, joints rare.													
				55.6 - 55.7 Greisen with central tourmaline veinlet (VCA 85°).													
				56.7 - 57.5 Grey, green-grey, siliceous greisen: quartz, minor													
				sericite, muscovite, tourmaline in quartz-rich bands,													
				very minor pyrite. Band contacts at 40-60° to c.a.													
				58.9 - 60.3 Siliceous greisen similar to above. Broken along few													
				joints (JCA 0-35°).													
				CONTACT ~20° to c.a.													
62.1	65.0	2.9	100	ALTERED GRANITE		62.0	63.0	0.03	<0.01	0.04	<0.1	<0.1	<0.01	<0.01	0.003	7	0.02
				Grey, green-grey, pale green-yellow, medium to coarse grained.			64.0	<0.01	<0.01	0.03	<0.1	<0.1	<0.01	<0.01	0.002	<1	0.02
				Comprises quartz-tourmaline alteration of granite crossing core at			65.0	0.02	<0.01	0.03	<0.1	<0.1	<0.01	<0.01	0.003	1	0.02
				shallow angles (5-30° to c.a.) haloed by variably sericitized granite.													
				Broken along few rough joints.													
				CONTACT irregular ~30° to c.a.													
65.0	67.5	2.5	100	HEMATITE-TOURMALINE-LIMONITE-CLAY ROCK		65.0	66.0	0.05	<0.01	0.04	<0.1	<0.1	<0.01	<0.01	0.006	2	0.02
				Mauve-black and brown, comprising grey and red-brown (ochreous)			67.0	0.05	<0.01	0.04	<0.1	<0.1	0.01	<0.01	0.006	7	0.03
				hematite, limonite, limonitic clay, black tourmaline; patchily			68.0	0.04	0.01	0.03	<0.1	0.9	<0.01	<0.01	0.006	2	0.04
				micaceous, very minor, patchy, coarsely crystalline pyrite. Vuggy													
				where clay and powdery limonite washed out during drilling. Few													
				joints, 10-40° JCA. Note core loss between core blocks at 66.8 - 68.1m													
				assumed to be in ferruginous clay - below.													
67.5	68.8	0.4	31	FERRUGINOUS CLAY		68.0	69.0	0.16	<0.01	0.05	<0.1	0.7	<0.01	<0.01	0.012	10	0.04
				Red-brown, extremely soft, hematitic, with abundant finely													

063

919065

064

DIAMOND DRILL RECORD

HOLE NUMBER FE[illegible]

LOGGED BY F.R.

KWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn	% Bi.	g/t Ag	% WO3
				disseminated pyrite and tourmaline. Lower 10cm of recovered core is broken and includes pieces of harder hematite. 90cm core loss.													
68.8	69.1	0.3	100	MASSIVE HEMATITE Mauve-grey, featureless, minor black tourmaline.													
69.1	70.3	1.2	100	SERICITIZED GRANITE Pale green, yellow-brown, comprising quartz, sericite, disseminated black tourmaline, trace fine pyrite. Partly intensely ferruginized (yellow-brown) - ferruginization overprints sericitic alteration(?).		69.0	70.0	0.06	<0.01	0.03	<0.1	<0.1	<0.01	<0.01	0.004	2	0.05
70.3	71.0	0.6	86	HEMATITE-RICH ROCK Mauve-grey, brown, lesser amounts of limonite and black tourmaline. Lower 10cm yellow-brown and ferruginous similar to ferruginous zones 69.1 - 70.3m. Badly broken.		70.0	71.0	0.03	<0.01	0.04	<0.1	<0.1	<0.01	0.01	0.006	2	0.03
71.0	74.7	3.7	100	ALTERED GRANITE Grey-green and pale-grey, medium to coarse grained, comprising sericitized and/or chloritized(?) feldspars, pale grey quartz, minor patchy disseminated tourmaline, trace pyrite. Broken along few irregular joints. 71.0 - 71.1 Fine grained, contacts 50° to c.a., sharp. 71.9 - 72.0) Fine grained, gradational contacts. 72.6 - 72.9). 73.45 - 73.6 Irregular vein of black tourmaline enveloped by fine grained, brown ferruginous material, 2-4cm thick, VCA ~5°. 73.5 - 73.9 Pale grey quartz, minor disseminated black tourmaline. Gradational contacts at ~30° to c.a. 74.4 - 74.5 Pale grey quartz, minor disseminated black tourmaline. Upper contact ~70° to c.a.		71.0	72.0	0.03	<0.01	0.03	<0.1	<0.1	<0.01	0.01	0.002	1	0.02
							73.0	<0.01	"	"	"	"	"	<0.01	0.003	1	0.03
							74.0	"	"	"	"	"	"	"	0.002	<1	0.02
							75.0	"	"	0.04	"	"	"	"	"	<1	0.02
74.7	75.4	0.7	100	GRANITE Pinkish yellow, medium to coarse grained. Feldspars pink or green-yellow, minor chlorite (after biotite). Gradational upper and lower contacts. Competent core.													

919066

065

DIAMOND DRILL RECORD

HOLE NUMBER : FFD14

LOGGED BY : F.R.

NAPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO.
75.4	81.6	6.2	100	QUARTZ MINOR TOURMALINE		75.0	76.0	<0.01	<0.01	0.03	<0.1	<0.1	<0.01	<0.01	0.001	1	0.02
				Quartz grey or pink stained (minor); tourmaline black and disseminated			77.0	<0.01	"	"	"	"	"	"	"	< 1	0.02
				or infrequently in vein form. Derived from coarse grained granite(?			78.0	"	"	"	"	"	"	"	"	< 1	0.02
				Bordered by green-grey greisen comprising quartz, sericite, muscovite,			79.0	"	"	"	"	"	"	"	"	1	0.03
				5-10cm. thick. Upper contact ~20° to c.a., lower contact near			80.0	"	"	0.04	"	"	"	"	"	< 1	0.03
				parallel to c.a. Broken along rough joints mostly 0-10° JCA.			81.0	"	"	0.03	"	"	"	"	<0.001	< 1	0.03
							82.0	"	"	"	"	"	"	"	0.001	1	0.05
81.6	104.5	22.9	100	BIOTITE GRANITE													
				Pink-grey, yellow-grey medium to coarse grained. Feldspars pink,													
				yellow (weakly argillized) to pale green (weakly sericitized), minor													
				black biotite or chlorite after biotite. Few greisen zones - quartz,													
				sericite, muscovite minor black tourmaline - controlled by joints,													
				fractures at ~70° to c.a. particularly at 82.2 - 82.3m, 87.0 - 87.4m													
				(with minor pyrite). Core mostly competent down to 93.1m, more broken													
				(and yellowish, weakly argillized) below that point. Breaks mostly													
				parallel to c.a. and clay-coated.													
				END OF HOLE 104.5m.													

919067

HOLE NUMBER	FED 15
PURPOSE	To test for extensions of mineralization intersected in FED 10
LOCATION	WEST FEDERATION WORKINGS
COLLAR R.L.	437.56
CO-ORDINATES	5 359 695.23 N 349 962.01 E
LENGTH	100.8m
HOLE SIZE	0 - 6m HQ 6 - 100.8m NQ (triple tube)
DATE DRILLED	21/1/81 — 25/1/81
SIGNIFICANT CORE LOSS ZONES	0.7m loss 21.2 - 24.5m 1.7m loss 70.3 - 73.7m 11.6m loss in weathered, near surface zone (0 - 18.7m)
ORE ZONE GROUND CONDITIONS	
LOGGED BY	P.A. ROBERTS
COMMENTS	The hole was designed to test "Geason's lode" north-east of the mineralized intersection in FED 10. Initially the hole was planned to be vertical, however the results of FED 14 suggested that the lode dips moderately to the south-east (assuming the mineralization has a tabular shape). Consequently this hole was angled north-west towards the lode. Only minor alteration with insignificant Sn was found. This suggests that either the mineralization's strike extent is very limited, or that alteration/mineralization is patchily distributed.

SURVEY Depth (m)	SURVEY Bearing (A.M.G.)	SURVEY Dip	From – To	Distance D	VERTICAL D Sin. Dip	VERTICAL R.L.	HORIZONTAL D.Cos Dip	HORIZONTAL Proj. Total
COLLAR	-	-55°	0 - 25.0	25.0	20.5	417.1	14.3	14.3
50.0	310°	-56.8°	25.0 - 74.0	49.0	41.0	376.1	26.8	41.1
98.0	310°	-57°	74.0 - 100.8	26.8	22.5	353.6	14.6	55.7

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A.
				AVERAGE WEIGHTED ASSAYS													
	50.7	52.9	2.2	0.01	<0.01	0.06	<0.1	0.6	0.01	<0.01	0.028	0.03	1				
	62.3	63.2	0.9	<0.01	<0.01	0.15	<0.1	0.7	<0.01	0.01	0.052	0.02	<1				
	70.3	73.7	3.4	0.02	<0.01	0.03	<0.1	0.4	<0.01	0.02	0.003	0.02	<1				

NWPS 27344

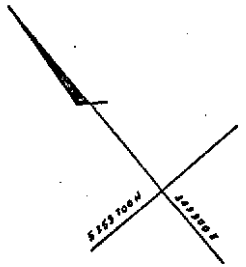
HOLE No FED 15 SCALE 0 10 20 m

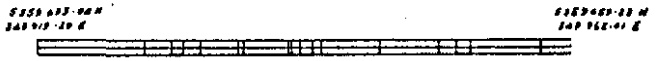
DIAMOND DRILL HOLE PLOT

067

5 cm

PLAN





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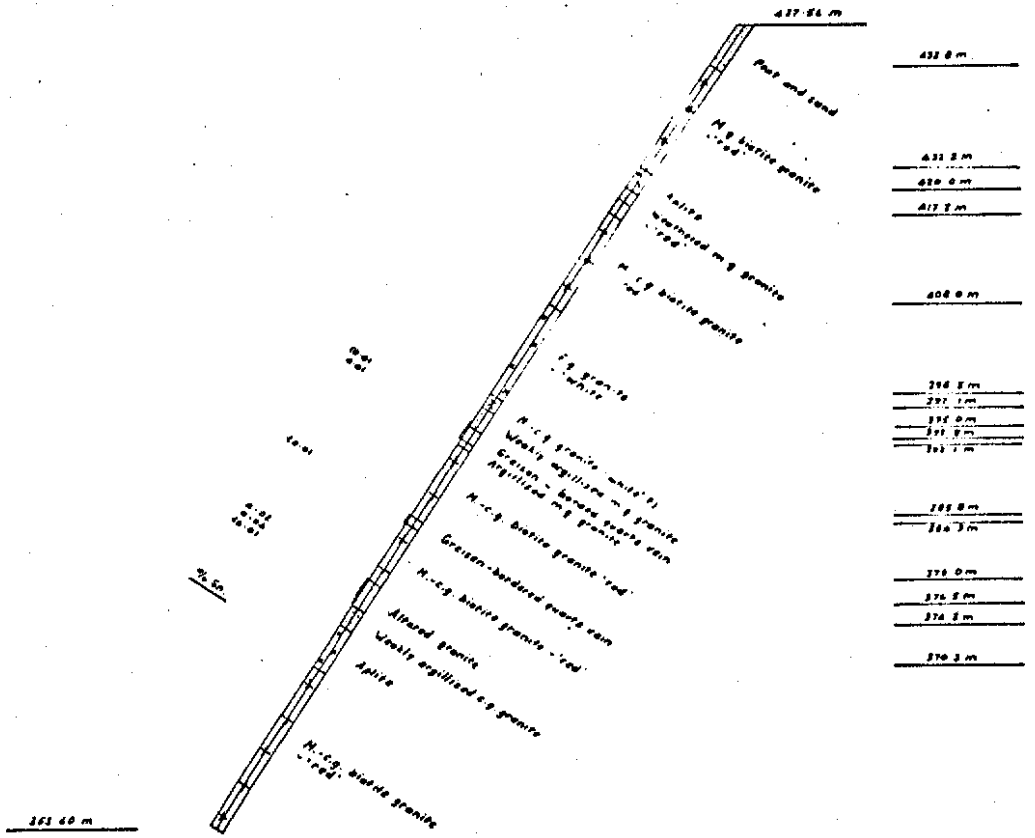


919069

HENISON LIMITED

068

DIAMOND DRILL RECORD

HOLE NUMBER FE 15

LOGGED BY P.R.

NOTES

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn	% Bi.	g/t Ag	% WO.
0.0	5.8	0	0	PEAT AND SAND No core recovered.													
5.8	6.0	0.2	100	GREISEN Quartz, muscovite, minor black tourmaline - greisenized coarse grained granite (?)													
6.0	18.7	6.9	54	BIOTITE GRANITE Pale grey, medium grained, comprising white, pale pink or pale green -yellow feldspars, grey quartz, minor black biotite or chlorite (after biotite). Minor brown iron-staining mostly outward from limonite-coated joints. Rare tourmaline-quartz nodules, very rare pyrite. Broken along few joints, J.C.A.'s variable (0 - 70°). 5.8m core loss, mostly between 6 - 12m, probably granite weathered to sand. Contact sharp, marked by biotite enrichment, contact angle 70° to C.A.													
19.7	21.2	2.5	100	APLITE White, very fine grained (average grainsize ~0.5mm) comprising quartz, feldspars, minor partly chloritized biotite. Few tourmaline and greisen veinlets, V.C.A. 30 - 40°. Lower 10cm porphyritic possibly aplite/medium grained granite mixed zone.													
21.2	24.5	2.6	79	WEATHERED GRANITE White, medium grainted, comprising white and pale yellow argillized feldspars, grey quartz, minor chloritized bitotite. Minor greisenized granite: 22.6-23.0m grey, pyritic, minor black tourmaline, very minor muscovite, 24.4-24.5 grey, muscovite-rich, with tourmaline. Broken to badly broken. 0.7m core loss in strongly weathered/argillized zones particularly 23.1-23.8m.													
24.5	36.0	11.5	100	BIOTITE GRANITE Pale yellow-grey, pale grey, medium to coarse grained, comprising white, yellow (weakly argillized) and pink feldspars, grey quartz, minor black biotite or chlorite (after biotite). Argillization increasing downwards. Broken along joints, J.C.A.'s variable, including some clay-coated joints at ~10° and ~40° to C.A. Contact sharp at ~40° to C.A.													

919070

DIAMOND DRILL RECORD

HOLE NUMBER : FZD15

LOGGED BY : P.R.

069

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO_3
36.0	47.0	11.0	100	FINE GRAINED GRANITE Pale yellow-grey, grainsize 0.5 - 1mm, comprising white and pale yellow (weakly argillized) feldspars, grey quartz, minor black biotite and black tourmaline in small (1-2cm diameter) nodules. Broken along yellow clay-coated joints, JCA's variable. Gradational lower "contact" - phenocrysts rare above 47.0m and becoming abundant downwards.													
47.0	49.6	1.6	100	GRANITE Pale grey, medium to coarse grained. Feldspar- and quartz-porphyritic at top becoming progressively more even grained downwards. Comprising pink, white, yellow (weakly argillized) feldspars, minor black biotite or chlorite (after biotite) but <5% of total. Few joints at 40-60° to C.A.													
46.6	51.2	2.6	100	WEAKLY ARGILLIZED GRANITE Pale yellow, medium grained, weakly quartz- and feldspar - porphyritic comprising yellow (argillized) and white feldspars, grey quartz, minor chlorite (after biotite). Broken along few clay-coated joints. Minor greisenized granite, thicker veins at: 49.6-49.7 Quartz, sericite, muscovite, central pyrite veinlet, VCA 35°.													
				50.7-51.0 Similar to above, also disseminated pyrite, central 1 cm thick vein of green-black tourmaline, VCA 45°. Contact 65° to c.a.		50.7	51.7	<0.01	0.01	0.07	<0.1	1.0	0.02	<0.01	0.020	<1	0.02
51.2	52.9	1.7	100	GREISEN-BORDERED QUARTZ VEIN Quartz (with minor topaz?), very pale grey; greisen grey, comprising quartz, pyrite, minor green-black tourmaline and muscovite, 30cm thick both sides of quartz vein, contacts ~65° to c.a. Tourmaline in 1cm veins, VCA 70° and 45°. Includes 3cm vein of finely micaceous green sericite containing disseminated black tourmaline at 51.9m, VCA ~80°. Lower margin gradational.		51.7	52.9	0.01	<0.01	0.05	< 0.1	0.2	<0.01	<0.01	0.034	1	0.03
52.9	53.5	0.6	100	ARGILLIZED GRANITE Similar to 48.6 - 51.2m, argillization progressively weaker downwards.													
53.5	70.3	16.8	100	BIOTITE GRANITE Pale grey, pale yellow-grey, medium to coarse grained. Feldspars pink, white, yellow (weakly argillized). Biotite black, minor, partly chloritized. Minor greisen. Rare clots coarse grained black tourmaline. Broken along rare, variously oriented joints (JCA commonly ~70°).													

919071

DIAMOND DRILL RECORD

HOLE NUMBER : FED15

LOGGED BY : P.R.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO₃
				55.2 - 55.4 Greisen veins with (lesser) argillized granite. Quartz, minor muscovite, trace pyrite, VCA 60°.													
				62.3 - 63.2 Greisen-bordered quartz vein. Greisen siliceous and pyritic, includes green-black tourmaline-quartz veins (VCA's ~70°). Greisen-quartz contacts irregular, greisen-granite contacts - upper ~30° to c.a., lower ~60° to c.a. Granite near contacts weakly argillized.		62.3	63.2	<0.01	<0.01	0.15	<0.1	0.7	<0.01	0.01	0.052	<1	0.02
				64.3 - 64.5 Quartz, sericite, minor tourmaline greisen. Lower contact ~55° to c.a.													
				67.1 - 67.2 Siliceous greisen, minor pyrite, contacts ~80° to c.a.													
				69.7 - 69.8 Quartz, sericite, minor muscovite greisen. Central tourmaline-quartz vein, VCA 45°.													
70.3	73.7	1.7	50	ALTERED GRANITE		70.3	71.3	0.02	<0.01	0.04	<0.1	1.0	<0.01	<0.01	0.002	<1	0.02
				Greisenized, sericitized and argillized. Greisen - quartz, minor topaz(?) and pyrite, very minor muscovite, and dark green-grey tourmaline in thin veins (VCA ~45°). Sericitized granite grey-green, feldspars converted to sericite and clay. 1.7m core loss.			72.3	0.04	<0.01	0.03	<0.1	<0.1	<0.01	0.05	0.001	<1	0.02
							73.7	<0.01	"	"	"	0.2	"	0.01	0.005	<1	0.02
73.7	76.0	2.3	100	WEAKLY ARGILLIZED GRANITE													
				Pale yellow, coarse grained, feldspars pale yellow (argillized), minor chlorite (after biotite). Broken along clay-coated joints. Contact sharp, 30-40° to c.a.(?) - only part of contact preserved.													
76.0	81.1	5.1	100	APLITE													
				Pale yellow, very fine grained, comprising pale yellow (weakly argillized) feldspars, quartz, very minor chlorite (?). Few quartz phenocrysts. Few thin clay veins. Rare tourmaline in small clots and veinlets with quartz. Broken along smooth clay-coated joints, badly broken 78.6 - 81.1m.													
				76.4 - 76.6 Grey, fine grained quartz-muscovite greisen vein, VCA ~60°. Contact not visible - broken core - probably sharp.													
81.1	100.8	19.7	100	BIOTITE GRANITE													
				Pale yellow-grey, pink-grey, medium to coarse grained. Feldspars pink, white, pale yellow (weakly argillized) or grey-green (sericitized), minor biotite or chlorite (after biotite). Includes few thin greisen veins 5cm. thick (VCA 45-65°), and one thicker vein at 96.8 - 97.1m, consisting of quartz, muscovite, minor tourmaline (VCA ~30°). Broken along few, variously oriented, clay-coated joints.													
				END OF HOLE 100.8m.													

919072

071

HOLE NUMBER	FED 16
PURPOSE	To test the eastern end of the Cross Lode
LOCATION	WEST FEDERATION WORKINGS
COLLAR R.L.	399.45
CO-ORDINATES	5359589.59 N 349888.44 E
LENGTH	110.2m
HOLE SIZE	0 - 3m HQ 3 - 110.2m NQ
DATE DRILLED	27.1.81 - 5.2.81
SIGNIFICANT CORE LOSS ZONES	3.9m loss 7.6 - 31.2m
ORE ZONE GROUND CONDITIONS	
LOGGED BY	P. ROBERTS

SURVEY			From - To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin Dip	R.L.	D.Cos Dip	Prog. Total
(m)	(A.M.G.)							
12.0	033°	- 56°	0.0 - 34.0	34.0	28.2	371.3	19.0	19.0
56.0	033.5°	- 56°	34.0 - 82.0	48.0	39.8	331.5	26.8	45.8
108.0	035°	- 55°	82.0 - 110.2	28.2	23.1	308.4	16.2	62.0

COMMENTS: The hole was designed to test the Cross Lode down-dip from its interpreted intersection with Geasons Lode and below where the Tributers pipe was reported to pinch out. Tourmaline-quartz and sericitized granite at 48.1 - 51.3m are probably the Cross Lode in much reduced form - this indicates that it dips south-west at approximately 65°.

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				
	48.1	51.3	3.2	<0.01	<0.01						0.001	0.02	1				
	57.9	58.8	0.9	0.02	<0.01						0.009	0.02	<1				

NWPS 27344

919073

FED 16

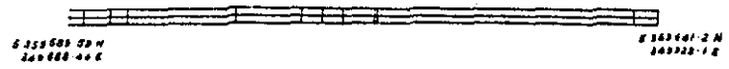
SCALE 0 10 20

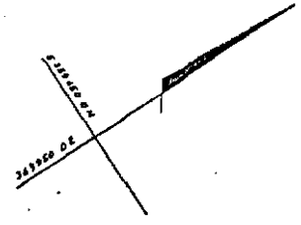
DIAMOND DRILL HOLE PLOT

072

5 cm

PLAN





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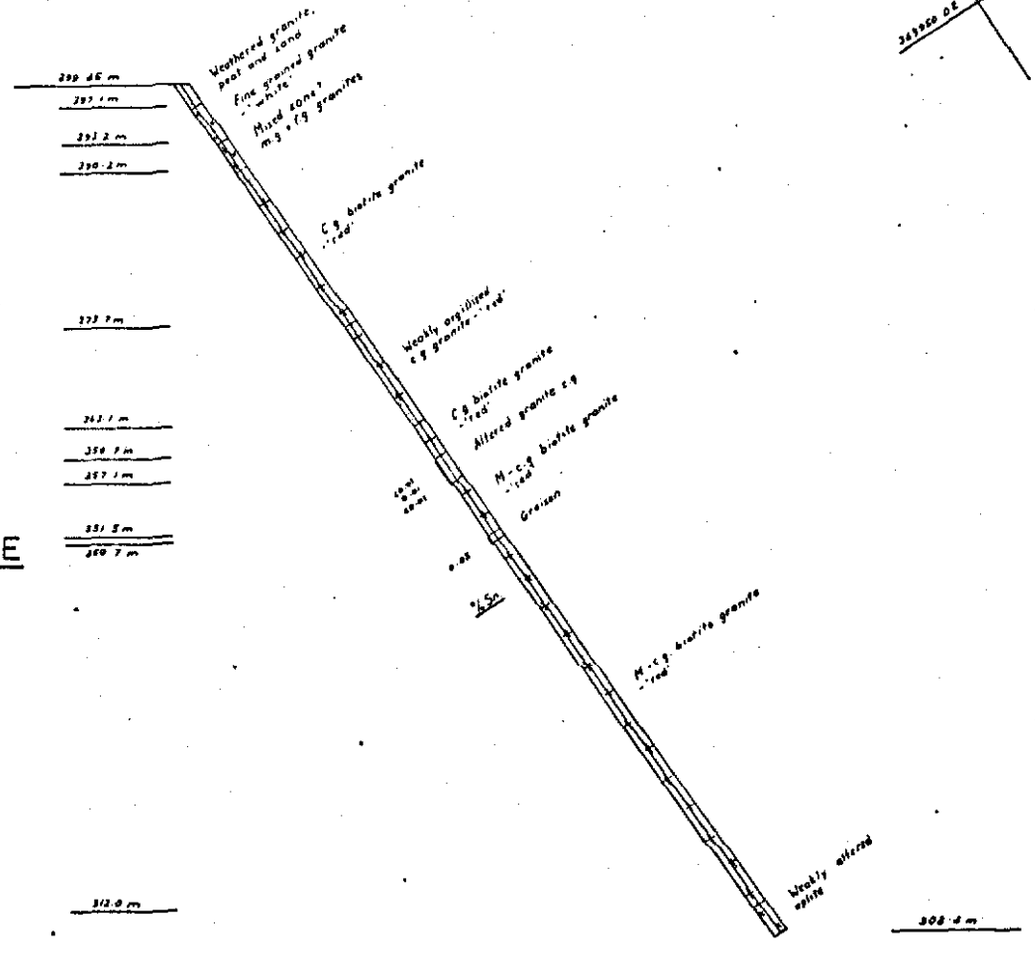


919074

073

DIAMOND DRILL RECORD

HOLE NUMBER : FD 16

LOGGED BY : P.R.

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO
0.0	1.0	0.2	20	PEAT AND SAND													
1.0	3.0	0.5	25	WEATHERED GRANITE Pale yellow-brown, medium to coarse grained, comprising white and pale yellow (weakly argillized) feldspars, quartz, minor biotite. Core losses where granite is weathered to granitic sand(?). Contact not visible (core loss).													
3.0	7.6	3.4	74	FINE GRAINED GRANITE White, grainsize <0.5mm, becoming slightly coarser grained downwards. Minor biotite or chlorite (after biotite). Rare tourmaline veinlets, 15-40° VCA. Becoming porphyritic lower 30 cm. Slightly weathered, friable and broken down to 6.0m, more competent below that point. Few joints, JCA 20-25°. Gradational contact.													
7.6	11.3	3.2	86	MIXED ZONE(?) Patches of fine grained and medium grained granite similar to above granite types. In places appears to consist of medium grained xenoliths in a finer grained matrix, elsewhere appears to be a contact near parallel to c.a. (e.g. 8.0-8.2m). Rare tourmaline veinlets. Several thin (0.5 - 1.0cm) grey-green greisen veins at 11.0m, VCA 35°. Broken along few joints.													
11.3	31.2	16.5	83	BIOTITE GRANITE Pale grey, pink-grey, pale yellow-grey, coarse grained, comprising ~50% feldspars.- white, pink, yellow (argillized) rarely green (sericitized) - ~45% quartz, ~5% black biotite or chlorite after biotite. Rare grey or grey-green greisen veins 1-5cm thick. Broken along joints JCA's 20-40° (some clay coated) and 60-70°. Includes minor soft badly broken zones where a total of 3.4m core loss.													
				12.0 - 12.3 Patch of fine grained granite similar to 7.6 - 11.3m.													
				13.1 - 13.2 Pegmatite vein, 2cm thick comprising quartz, feldspar, black tourmaline, pale green fluorite, VCA 5°.													
				13.8 - 14.1 Central vein of black tourmaline, minor topaz(?) and pyrite, enclosed in quartz-minor tourmaline rock; grey-green greisen at edges. Broken - core losses(?).													
				24.9 - 25.1 Aplite dyke, white, very fine grained, contacts sharp but irregular at ~10° to c.a.													

919075

074

DIAMOND DRILL RECORD

HOLE NUMBER : F[illegible]16

LOGGED BY : P.H.

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi	g/t Ag	% WO.
31.2	44.1	12.3	95	WEAKLY ARGILLIZED GRANITE Essentially same as above except feldspars yellow and argillized, biotite largely converted to chlorite. Broken largely along clayey joints, badly broken in strongly argillized incompetent zones (minor core losses). 41.3 - 41.4 Greisen vein - quartz, muscovite - VCA ~70°. 41.6 - 41.8 Greisen vein as above, VCA ~60°.													
44.1	48.1	4.0	100	BIOTITE GRANITE Same as 11.3 - 31.2m except plagioclase(?) tends to be pale green (sericitized). Yellow and argillized within 30cm of lower contact. Competent core. Gradational contact.													
48.1	51.3	2.9	91	ALTERED GRANITE Grey-green, coarse grained, consisting largely of sericite (after feldspar) and quartz. Minor clay. 49.0 - 50.4 Tourmaline-quartz zone, in places massive tourmaline, quartz partly as vug-filling crystals, minor intensely sericitized granite, trace pyrite. Contacts between tourmaline-quartz and sericitic alteration 35 - 45° to c.a. Badly broken. Gradational lower contact.		48.1	49.1	<0.01	<0.01						0.001	2	0.02
							50.1	0.01	<0.01						0.001	< 1	0.03
							51.3	<0.01	<0.01						0.002	1	0.02
51.3	106.3	54.6	99	BIOTITE GRANITE Essentially the same as 11.3 - 31.2m except medium to coarse grained, with trace tourmaline as isolated grains or clots or in veinlets. Few quartz-muscovite greisen veins, mostly 1-8cm thick (VCA's 40-50°). Few breaks where fresh, broken along clay-coated joints where argillized. Weak argillization in patches, particularly 62.0 - 64.0m, 68.7 - 70.0m, 90.7 - 95.5m (including badly broken zones, minor core losses). 57.7 - 57.9 Pink aplite, sharp upper contact at 45° to c.a., gradational irregular lower contact at ~70° to c.a. 57.9 - 58.8 Quartz-muscovite greisen, fine grained down to 58.3m (i.e. greisenized aplite) and coarser grained below that point. Minor black tourmaline in veinlets and in 3mm vein enclosed in quartz at 58.4m (VCA 20°). Trace disseminated pyrite. Irregular lower contact - apparently near parallel to c.a.		57.9	58.8	0.02	<0.01						0.009	< 1	0.02

919076

DIAMOND DRILL RECORD

HOLE NUMBER FED 16

LOGGED BY P.R.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO_3
				89.5 Aplite vein, 1cm thick, VCA 35°.													
				98.0 - 98.1 Aplite-pegmatite vein. Aplite grainsize <0.5mm, flanked by pegmatite of quartz and feldspar - grainsize 5mm - 2cm. VCA 60°.													
				98.2 - 98.3 Greisen vein, quartz, muscovite, minor disseminated black tourmaline and sericite. VCA ~40°.													
				98.8 - 98.9 Greisen vein; quartz, muscovite, minor tourmaline, VCA ~45°.													
				Contact sharp 45° to c.a.													
106.3	110.2	3.9	100	WEAKLY ALTERED APLITE													
				Grey, greenish white, very fine grained. Feldspars partly argillized or sericitized. Minor biotite or chlorite (after biotite) 106.3 - 107.6m. Few fine grained quartz-black tourmaline nodules 1-4cm diameter, rare greisen and quartz-tourmaline veinlets. Broken along few clayey joints.													
				107.0 - 107.1 Pegmatite vein, quartz interstitial to large feldspar crystals (≥3cm diameter), minor disseminated chloritized biotite flakes (1-2mm). VCA ~45°.													
				107.2 Pegmatite vein as above but 5cm. wide.													
				109.1 - 109.7 Limonite stained, strongly limonitic at 109.5m.													
				109.7 Green clay vein, 3cm thick, VCA ~70°.													
				END OF HOLE 110.2m													

HOLE NUMBER	FED 17
PURPOSE	To test the down-dip extension of alteration intersected in FED 8
LOCATION	EASTERN WORKINGS
COLLAR R.L.	485.95
CO-ORDINATES	5360074.35N 350857.70E
LENGTH	200.0m
HOLE SIZE	0 - 3m HQ 3 - 12.5m NQ 12.5 - 200.0m BQ
DATE DRILLED	6.2.81 - 16.2.81
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	P. ROBERTS
COMMENTS	Interpretation of geological mapping, I.P. and ground magnetics data all suggested that alteration intersected in FED 8 was dipping shallowly northwards. This hole intersected only minor, weak alteration which suggests that either the alteration zone dips shallowly north but pinches out in that direction, or that the zone's orientation is quite different from the interpretation.

SURVEY			From - To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D Sin Dip	R.L.	D Cos Dip	Proj Total
(m)	(A.M.G.)							
COLLAR	-	-70°	0 - 10.5	10.5	9.87	476.08	3.6	3.6
21	195.2	-69°	- 36.5	26.0	24.27	451.81	9.32	12.92
52	196.7	-68.5°	- 76.5	40.0	37.22	414.59	14.66	27.58
101	200.2	-68°	-126.5	50.0	46.4	368.19	18.7	46.28
152	202.2	-67.5°	-176.0	49.5	45.7	322.49	18.9	65.18
200	206.2	-66.5°	-200.0	24.0	22.0	300.49	9.6	74.78

SUMMARY - ASSAY DATA

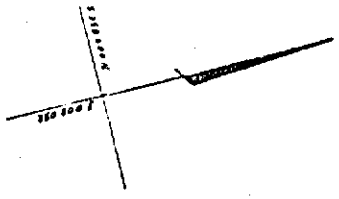
LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A.
				Sn.	* Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

NWPS 27344

919078

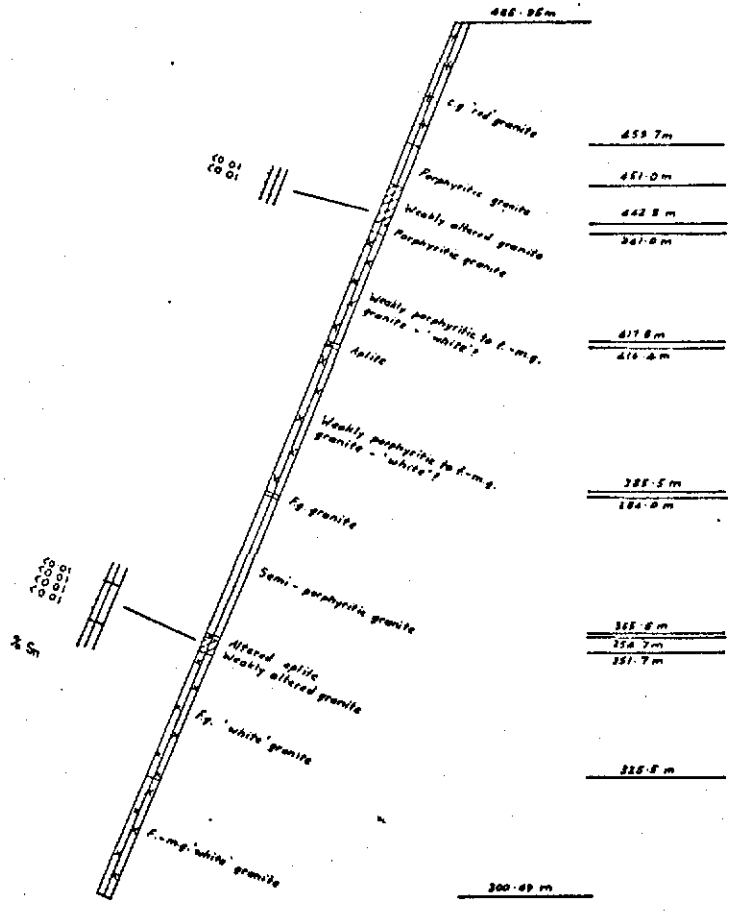
HOLE No FED 17 SCALE

DIAMOND DRILL HOLE PLOT



5 cm

PLAN



DIP PROFILE

077

919079

078

DIAMOND DRILL RECORD

HOLE NUMBER : FED 17

LOGGED BY : P.R.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO.
0.0	28.2	27.3	97	BIOTITE GRANITE													
				Pink-grey, coarse grained comprising 60% feldspars, 30-35% quartz, 5-10% black biotite. Feldspars predominantly pink K-feldspar 5-15mm diameter, lesser pale green sericitized plagioclase 4-10mm. Rarely sericitized rims (plagioclase?) around pink K-feldspar(?) cores. Quartz, grey, 2-8mm. Biotite flakes, 1mm, occasionally chloritized. Very minor black tourmaline in isolated grains or small clots and thin quartz-tourmaline veins. Competent core - rare clay-coated joints.													
				13.2 - 17.5 Slightly more altered cf. above - plagioclases more strongly sericitized, K-feldspars white, biotite chloritized. Includes coarse grained quartz-tourmaline alteration veins at 13.6m (VCA ~10°, 2cm thick), 15.6m (VCA 5°, 1-2cm thick, trace pyrite) and 16.3m (VCA 10°, 4cm thick).													
				22.7 - 22.8 Siliceous greisen, grey-green, coarse grained, trace pyrite, gradational contacts.													
				Sharp contact, irregular, ~80° to c.a.													
28.2	37.7	9.5	100	PORPHYRITIC GRANITE													
				Pink, comprising variable amounts quartz and feldspar phenocrysts, 3-10mm diameter, in fine grained (≤1mm grainsize) groundmass of quartz, feldspars and minor partly chloritized biotite. Feldspars mostly pink K-feldspar, lesser yellow-green argillized/sericitized plagioclase. Texture varies from strongly porphyritic to almost equigranular, fine grained (i.e. few phenocrysts) or medium grained (i.e. many phenocrysts and/or coarser grained groundmass). Broken along few joints (JCA'S 10-30°).													
				Gradational contact.													
37.7	46.6	8.9	100	WEAKLY ALTERED GRANITE				(ppm)									
				Pale grey-green, comprising fine grained (<0.5mm - 1mm), weakly sericitized groundmass - pale green, white and yellow feldspars, quartz, minor chloritized biotite - containing numerous coarse grained (semi-pegmatitic) clots - 2-6mm grainsize, quartz and feldspar, minor tourmaline, fluorite and pyrite, crystals often projecting into a central cavity. Includes few, thin (5-10mm) dark		43.0	44.0	30	<0.01					0.003	1	<0.01
							45.0	20	<0.01						0.001	2	<0.01

919080

079

DIAMOND DRILL RECORD

HOLE NUMBER : FED 17

LOGGED BY : P.R.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g t Ag	% WO.
				olive green alteration veins with trace pyrite, VCA 5-10°, and one thin (1-3mm) tourmaline vein at 43.6m, VCA 5°, with a 3cm thick grey-green greisenous selvedge, trace pyrite. Rare black tourmaline quartz nodules, 1-2.5cm diameter. Broken along few, variously oriented joints, JCA's mostly 10-4.5°.													
				46.5 Fine grained, grey nodule >5cm wide, comprising large white and yellow feldspar phenocrysts (1-15mm across), some with included biotite flakes, in a very fine grained grey groundmass including abundant biotite. Xenolith?													
				Gradational contact.													
46.6	48.6	2.0	100	PORPHYRITIC BIOTITE GRANITE													
				Pink-grey, comprising pink and yellow feldspar (K-feldspar, argillized plagioclase respectively) and lesser grey quartz phenocrysts (2-15mm) set in a finer grained groundmass with abundant (5-10% of total) black biotite. Phenocryst content decreasing downwards. Some pink feldspar phenocrysts rimmed by yellow feldspar. Includes one possible xenolith(?) - 1cm diameter, round, biotite-rich, minor feldspar.													
				Gradational contact.													
48.6	73.7	25.1	100	WEAKLY PORPHYRITIC TO EVEN GRAINED GRANITE													
				Pink-grey, fine to medium grained (grainsize 0.5 - 2mm). Phenocrysts same as above but generally rarer. Mineral content similar to above except biotite less abundant (2-5%). Includes several thin (0.5cm) grey-green tourmaline-quartz veins with thin, siliceous selvedge, VCA 10°. Rare black tourmaline-quartz nodules 1-3cm diameter.													
				Sharp, very irregular contact.													
73.7	74.7	1.0	100	APLITE													
				Pink-grey, very fine grained - almost aphanitic. Comprises feldspars, quartz, minor (<2%) biotite.													
				Gradational, lower contact.													

919081

BENSON LIMITED

DIAMOND DRILL RECORD

HOLE NUMBER : [illegible] 17

LOGGED BY : F.P.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% B.	g/t Ag	% WO.
74.7	108.0	23.3	100	WEAKLY PORPHYRITIC TO EVEN GRAINED GRANITE													
				Pale yellow, rarely pink, fine to medium grained. Same as 48.6 - 73.7 except plagioclases yellow or green-yellow (weakly argillized) and K-feldspar white to pale yellow, quartz-tourmaline nodules slightly more abundant and larger (1 - >5cm diameter), few thin (<1 - 3mm) black tourmaline veins at low angles to c.a. Broken along few, variously oriented joints.												
				91.6 - 94.9 Dark, grey-green alteration, around black clayey, joint with minor pyrite, true thickness 10cm, JCA 15°													
				101.0 - 101.3 Dark, grey-green sericitic alteration vein with trace pyrite, 2-3mm thick, VCA 5°.													
				Sharp contact at ~80° to c.a.													
108.0	108.9	0.9	100	FINE GRAINED GRANITE													
				Pale yellow-grey, grainsize varies from <0.5mm to 3mm, mostly <1mm. Comprises pale yellow, grey-green (weakly argillized, sericitized respectively) feldspars, grey quartz, minor biotite. Graphic texture(?) - fine quartz intergrown with relatively coarse feldspar.												
				Irregular but sharp contact at ~30° to c.a.													
108.9	140.5	31.2	99	SEMI-PORPHYRITIC GRANITE													
				Pale yellow and pink, phenocryst size 3-10mm, groundmass grainsize 1-2mm. Comprising yellow (argillized), pink, white and minor green (sericitized) feldspars, lesser quartz, minor (~5%), mostly chloritized biotite. Pink colouration appears to be secondary. Very minor black tourmaline in veinlets or thin veins (VCA's 0-20°) and rare quartz-tourmaline nodules. Broken along few joints, JCA's 10-30°, some clay-coated.												
				111.0 - 111.3 Alteration vein comprising quartz, sericite, tourmaline, central, thin pyritic, clay seam. True thickness 3-4cm, VCA 5-10°. Increased argillization of granite both sides of vein. Badly broken.													
				115.7 Very irregularly shaped vein(?) of biotite varies from 1mm - 2cm thick. May mark a contact - grainsize													

DIAMOND DRILL RECORD

HOLE NUMBER : FEE 17

LOGGED BY P.E.

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% B.	g/t Ag	% WO
				is finer below cf. above VCA ≈45°.													
				121.0 - 121.3 Black tourmaline-quartz alteration vein, 3cm thick, VCA ~15°.													
				131.9 Aplite vein, grey, very fine grained (almost aphanitic), few feldspar and quartz phenocrysts (average 3mm), 3cm thick, VCA ~50°.													
				139.8 - 139.9 Aplite, yellow-grey, contacts ~70° to c.a.													
				139.9 - 140.1 Black tourmaline-quartz vein with central clayey black seam, 3cm thick, VCA 5°, badly broken.				(ppm)									
140.5	141.3	0.5	63	ALTERED APLITE		140.5	141.5	10	<0.01						0.002	1	<0.01
				Grey-green, very fine grained. Top 10cm feldspars visible, below that point, feldspars replaced by sericite. Quartz preserved. 0.3cm core loss.													
				Gradational contact.													
141.3	144.7	3.4	100	WEAKLY ALTERED GRANITE		141.5	142.5	10	<0.01						0.002	1	<0.01
							143.5	10	<0.01						0.002	1	<0.01
				Pale grey-green and yellow, mottled, same as 37.7 - 46.6m except more black tourmaline, less fluorite and pyrite in coarser grained clots. Broken along rough joints.			144.7	<10	<0.01						0.001	2	<0.01
				Gradational contact.													
144.7	173.0	28.3	100	FINE GRAINED GRANITE													
				Pale grey with slight greenish tinge (weak sericitization?), pale yellow-grey. Grainsize varies: very fine grained 144.7 - 147.5, fine grained 147.5 - 166.0, very fine grained 166.0 - 172.2m. Numerous black tourmaline-quartz nodules and patches, generally in irregular shapes, fine grained, 1-3cm diameter. Broken along few, variously oriented joints. Rare pyrite specks.													
				161.2 - 164.9 Badly broken along several clayey joints near parallel to c.a. Minor tourmaline.													

081

919083

DIAMOND DRILL RECORD

HOLE NUMBER FED 17

LOGGED BY J.R.

082

NNPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g t Ag	% WO
				169.4 - 170.2 Broken along clayey yellow joints near parallel to c.a.													
				Gradational transition to:													
173.0	200.0	27.0	100	FINE TO MEDIUM GRAINED GRANITE													
				Pale grey, pale yellow-grey, fine grained 173.0 - 176.8m, gradational transition to medium grained below 176.8m. Comprises white, pale yellow, pale pink (in medium grained granite) and pale green feldspars, grey quartz, minor (<5%) black biotite or chlorite after biotite. Minor black tourmaline in quartz-tourmaline nodules 1-8cm diameter, tending smaller and less frequent downwards. Several thin (0.5cm) siliceous greisen-style veins ± minor pyrite (VCA's 75° and 60°). Broken along few variously oriented rough joints, some yellow-clay-coated.													
				END OF HOLE 200.0m.													

919084

REMSON LIMITED - DRILL CORE RECORD

083

HOLE NUMBER	FED 18
PURPOSE	To test the Waxman and Westons alteration zone west of FED 5 and FED 12
LOCATION	WAXMAN AND WESTONS
COLLAR R.L.	415.55
CO-ORDINATES	5359575.74N 350800.90E
LENGTH	281.0m
HOLE SIZE	0 - 9m HQ 9- 66.5m NQ 66.5 - 281.0m BQ
DATE DRILLED	17.2.81 - 3.3.81
SIGNIFICANT CORE LOSS ZONES	0 - 33.7m (weathered zone) 19.6m loss 39.6 - 69.9m 9.2m loss 144.3 - 172.7m 5.1m loss
ORE ZONE GROUND CONDITIONS	
LOGGED BY	P. ROBERTS
COMMENTS	The hole intersected sericitized and argillized granite from the surface to 190.7m with minor alteration of fine grained granite below that point. The alteration contains minor hematite between 39.6 and 59.8m and minor pyrite below that point. Traces of molybdenite were observed below 138.8m. This hole confirmed that the alteration zone extends westwards from FED 5 and 12 with little or no decrease in size.

SURVEY Depth (m)	SURVEY Bearing AMG	SURVEY Dip	From - To	Distance D	VERTICAL D Sin Dip	VERTICAL R.L.	HORIZONTAL D Cos D	HORIZONTAL Eng. Line
COLLAR	346.1°	-50°	0 - 15.0	15.0	11.5	404.1	9.6	9.6
30	casing assume 343.6°	-52.5°	- 47.0	32.0	25.4	378.7	19.5	29.1
64	casing assume 340.8°	-53°	- 91.5	44.5	35.5	343.2	26.8	55.9
119	336.2°	-53°	-138.5	47.0	37.5	305.7	28.3	84.2
158	336.2°	-55°	-178.0	39.5	32.4	273.3	22.7	106.9
198	336.2°	-56°	-217.0	39.0	32.3	241.0	21.8	128.7
236	337.2°	-56°	-255.5	38.5	31.9	209.1	21.5	150.2
275	338.2°	-56°	-281.0	25.5	21.1	188.0	14.3	164.5

SUMMARY - ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				B.C.A.

NWPS 27344

919085

HOLE No FED 18

SCALE : 0 20 40

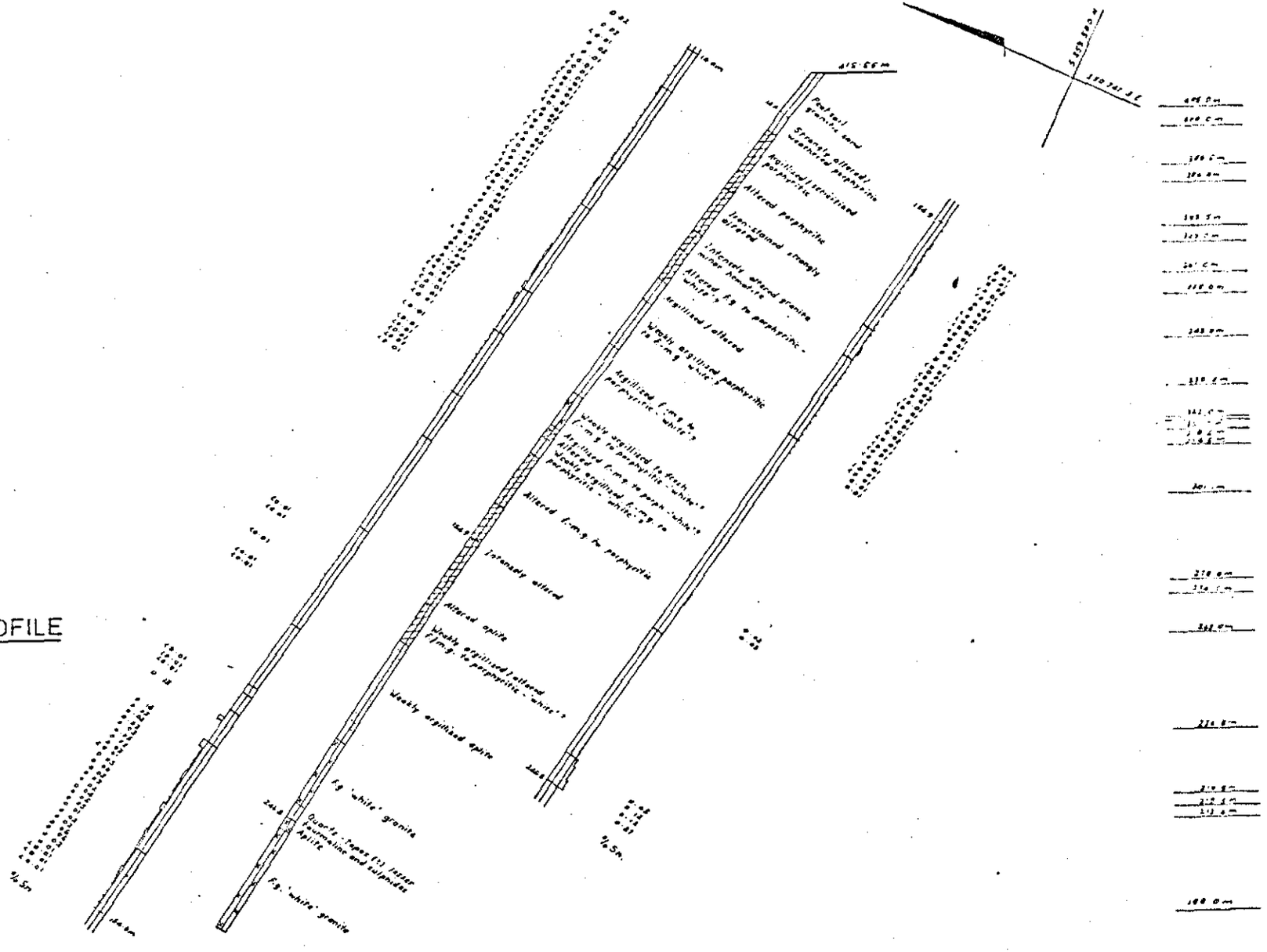
DIAMOND DRILL HOLE PLOT

084

5 cm

PLAN

DIP PROFILE



919086

DIAMOND DRILL RECORD

HOLE NUMBER : [illegible]

LOGGED BY : [illegible]

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu	% As.	% S.	% Pb.	% Zn.	% Bi.	g t Ag	% WO
0.0	14.0	-	-	PEATY SOIL (at top) AND GRANITIC SAND													
				Sand after strongly weathered or altered granite.				(ppm)									
14.0	20.0	1.7	28	STRONGLY WEATHERED AND ALTERED GRANITE		14.0	17.0	160	<0.01					<0.01	0.002	1	<0.01
							19.5	190	"					"	0.003	<1	"
				Green and pink, porphyritic, comprising white (strongly argillized),			20.0	<10	0.01						"	<1	"
				green (sericitized) and pink feldspar, lesser quartz phenocrysts,			21.4	240	"						0.001	<1	"
				sets in a very fine grained argillized/sericitized groundmass.			22.8	190	"						"	<1	"
				Minor fresh black biotite (with pink feldspars). Patchy brown iron			24.0	10	"						"	<1	"
				staining. Badly broken and soft. 4.3m core loss.			25.0	<10	<0.01						"	<1	"
							26.0	"	"						0.001	<1	"
20.0	33.7	12.4	91	ARGILLIZED AND SERICITIZED PORPHYRITIC GRANITE			27.0	"	0.01						0.002	<1	"
							28.0	"	<0.01						"	<1	"
				Mottled green and white, comprising white (argillized K-feldspar) and			29.0	10	"						"	<1	"
				green (sericitized plagioclase) feldspar phenocrysts, 3mm - 1cm			30.0	<10	0.01						0.001	<1	0.01
				diameter, and grey quartz phenocrysts, 3-5mm diameter, set in a			31.0	"	<0.01						"	<1	"
				fine grained groundmass of similar mineralogy. Minor black			32.0	210	"						0.002	1	<0.01
				tourmaline in tourmaline-quartz nodules 2-6cm diameter. Minor quartz			33.0	10	"						"	<1	0.01
				veins, 0.5 - 1cm thick, VCA ~30°. Includes minor, more intense vein-			34.0	"	"						"	<1	"
				like alteration: grey-green, hard and siliceous, comprising quartz													
				and sericite, contacts gradational at 30-40°, at 20.7 - 21.3m, 23.3 -													
				23.5m, 31.2 - 32.5m. 1.2m core loss in soft broken zone at 22.8m.													
				Broken along irregular iron-stained joints.													
33.7	39.6	5.9	100	ALTERED GRANITE		34.0	35.0	30	<0.01						0.002	<1	0.01
							36.0	140	"						0.008	1	"
				Grey-green, more strongly altered than above, porphyritic texture			37.0	50	"						0.004	<1	"
				still apparent but feldspars completely converted to green sericite,			38.0	20	"						0.004	<1	"
				primary quartz remaining. Some silicification(?). Patchy brown,			39.0	<10	"						"	<1	"
				yellow-brown ferruginous staining, strong in places (e.g. 36.8 -			40.0	30	"						"	1	<0.01
				37.1m where texture almost obliterated by staining). Minor black			41.0	40	"						0.005	1	0.01
				tourmaline in small nodules (1-2cm diameter). Broken along rough,			42.0	10	"						0.004	1	"
				clay-coated joints.			43.0	40	0.01						0.015	<1	"
							44.0	60	<0.01						0.051	<1	"
39.6	53.7	9.7	69	IRON-STAINED ALTERED GRANITE			45.0	130	"						0.004	<1	"
							46.0	110	"						0.029	3	"
				Yellow-brown, brown, grey-green, intensely altered. Grey-green			47.0	410	0.02						0.018	<1	"
				patches similar to 33.7 - 39.6m but more silicified and with trace			48.0	570	0.01						0.008	1	"
				pyrite. Yellow-brown and brown patches intensely ferruginized. Minor			49.0	180	<0.01						0.023	<1	"
				patchy specular hematite in thin veins and vug fillings throughout.			50.0	250	"						0.015	1	"
				Minor coarse grained pyrite mineralization 52.7- 53.0m. Generally			51.0	150	"						0.010	5	"
				badly broken on rough iron-stained joints, including very soft and			52.0	60	"						0.004	9	<0.01

919087

086

DIAMOND DRILL RECORD

HOLE NUMBER : PZ 18
LOGGED BY : P.K.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% B.	g/t Ag	% WO
				badly broken clayey zones where a total of 4.4m core loss occurs.				(ppm)									
						52.0	53.0	700	<0.01						0.040	2	0.01
53.7	59.8	5.1	84	ALTERED GRANITE MINOR SPECULAR HEMATITE			54.0	130	"						0.004	<1	"
							55.0	400	"						0.011	3	"
				Grey-green, intensely altered, comprising sericite and green-black			56.0	150	"						0.006	1	<0.01
				chlorite(?). Minor specular hematite throughout (~5% average)			57.0	70	"						0.003	1	0.01
				mostly as vug fillings. Minor yellow clayey pug on joints. Very			58.0	30	"						0.002	<1	<0.01
				minor (« 1%) patchy pyrite, disseminated and in thin veins. Virtually			59.0	60	"						0.003	<1	"
				devoid of quartz 54.2 - 56.1m, elsewhere fine grained quartz present			60.0	20	"						0.002	<1	"
				suggesting that original granite was fine grained also. Alteration													
				banded in places with banding at 15-30° to c.a. Broken to badly													
				broken along irregular, variously oriented joints. 1.0m core loss.													
59.8	69.9	6.3	62	ALTERED GRANITE		60.0	61.0	20	0.01						0.001	<1	<0.01
							62.0	70	<0.01						0.002	1	"
				Grey-green, strongly altered, feldspars converted to sericite, quartz			65.0	30	"						0.002	<1	"
				preserved. Texture fine grained, weakly porphyritic, becoming strongly			66.0	20	"						0.002	<1	"
				porphyritic below 66.0m. Very minor (<1% overall) disseminated			67.0	10	"						0.002	<1	"
				pyrite down to 65.1m. Coarse pyrite euhedra at 66.5m-fallback(?).			68.0	30	"						0.002	<1	"
				Broken to badly broken, becoming more competent lower 1.8m. 3.8m			69.0	<10	"						<0.001	<1	"
				core loss - most of loss around 62.0m core marker.			70.0	"	"						0.001	<1	"
69.9	77.0	7.1	100	ARGILLIZED/ALTERED GRANITE													
				Pale pink-yellow, pale green-yellow, partly porphyritic, transitional													
				variations from fine grained to porphyritic, also partly medium-													
				coarse grained and equigranular, sharp contacts between former and													
				latter suggest an irregular contact near parallel to c.a. Feldspars													
				converted to yellow and pink (!) clay and yellow-green sericite-clay.													
				Minor chloritized biotite, very minor black tourmaline in few quartz-													
				tourmaline nodules, 1-5cm diameter. Few joints, JCA's 30-40° and													
				80-90°.													
77.0	92.0	15.0	100	WEAKLY ARGILLIZED GRANITE													
				Pink-yellow, porphyritic to fine-medium grained. Also patchy coarse													
				grained granite down to 78m but no sharp contact seen. Comprises													
				~60% pink and yellow (argillized) feldspars, ~35% quartz, ~5%													
				chloritized biotite, minor black tourmaline in small (1-2cm) nodules.													
				Varies from fresh to almost as argillized as 69.9 - 77.0m.													

919088

DIAMOND DRILL RECORD

HOLE NUMBER : FED 18

LOGGED BY F.E.

087

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO3
92.0	107.9	12.0	75	ARGILLIZED GRANITE				(ppm)									
				Pale yellow, minor pink-yellow, fine-medium grained to porphyritic. Patches of very fine grained aplite probably intrusive into fine-medium grained granite but contact relationships mostly unclear except aplite at 100.7 - 102.1m has a sharp, visible lower contact at 30° to c.a. Broken on irregular fractures, badly broken in soft, strongly argillized zones. 3.9m core loss.		95.0	96.0	<10	<0.01					0.09	0.001	1	<0.01
							97.0	"	"					0.09	0.001	1	"
						100.0	101.0	<10	<0.01					0.06	0.001	1	<0.01
						103.0	104.0	<10	<0.01					0.07	0.001	2	<0.01
107.9	118.3	10.4	100	WEAKLY ARGILLIZED TO FRESH GRANITE			105.0	"	"					0.05	0.001	1	"
				Pink, pink-yellow, similar to above but feldspars fresher. Minor rimming of K-feldspar by plagioclase. More competent core cf. above, broken along joints, mostly 20-40° to c.a. and clay-coated.													
118.3	119.6	1.3	100	ARGILLIZED GRANITE													
				Yellow, similar to 92.0 - 107.9m													
119.6	122.5	2.1	72	ALTERED GRANITE		119.6	120.6	70	<0.01					0.02	0.001	2	<0.01
							121.6	10	"					0.03	"	1	"
				Grey-green, fine-medium grained 119.6 - 120.3 and 121.0 - 122.5, medium-coarse grained 120.3 - 121.0m. Comprising green sericite after feldspars, primary quartz, patchy, minor disseminated pyrite euhedra. Several rounded pieces of green sericite rock at 122.0m, possibly representative of 0.8m core loss. Broken to badly broken on irregular fractures.			122.5	70	"					0.02	"	2	"
122.5	127.9	5.4	100	WEAKLY ARGILLIZED GRANITE													
				Yellow, pink-yellow, fine-medium grained to porphyritic, feldspars yellow and argillized, rarely pink, biotite chloritized.													
				123.8 - 124.4 Grey-green, altered. Feldspars sericitized, minor disseminated pyrite. Includes irregular veins coarse grained quartz-black tourmaline. Diffuse contacts.		123.8	124.4	1510	<0.01					0.02	0.001	1	<0.01
				125.3 - 125.4 Coarse grained quartz-black tourmaline, irregular contacts.													

019089

DIAMOND DRILL RECORD

HOLE NUMBER FEZ 19

LOGGED BY P.H.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	FROM	TO	% Sn TOTAL	% Sn ACID SOL.	% Cu.	ppm Mo	% S.	% Pb	% Zn	% B	% As	% WO
127.9	144.3	16.4	100	ALTERED GRANITE				(ppm)			ppm Mo						
						127.9	128.9	1480	<0.01		20			0.03	0.001	<1	<0.01
				Grey-green, fine-medium grained, partly porphyritic. Feldspars			129.9	230	"		50			"	0.002	"	"
				largely sericitized, few argillized, quartz preserved. Patchy, very			130.9	230	"		10			0.02	0.001	"	"
				minor disseminated pyrite. Minor black tourmaline in quartz-			131.9	330	"		30			0.01	0.002	"	"
				tourmaline veins 1-30cm thick, VCA's 35-60°; in tourmaline - poor			132.9	280	"		"			"	0.001	"	"
				veins, very minor molybdenite noted (e.g. veins at 138.8 - 138.9,			133.9	520	"		<10			"	0.002	"	"
				139.1, 143.5m). Black tourmaline also in minor irregular nodules			134.9	310	"		10			0.02	0.001	"	"
				with pyrite. Fluorite noted on one joint at 142.5m, BCA 80°. Broken			135.9	320	"		20			0.01	"	"	"
				along few irregular fractures, rare joints.			136.9	80	"		20			0.02	"	"	"
							137.9	290	<0.01		40			0.02	0.001	<1	0.01
				136.2 - 137.0 Relatively unaltered, pink-yellow.			138.9	910	0.01		"			0.01	"	"	<0.01
							139.9	200	"		"			0.03	"	"	"
				139.4 - 140.4 Pale yellow-grey, yellow, weakly argillized.			140.9	290	<0.01		30			"	"	"	"
							141.9	190	"		10			0.02	"	"	"
				140.4 - 141.2 Pale yellow-grey, yellow, weakly argillized, with			142.9	440	<0.01		10			<0.01	0.002	<1	0.01
				dykes(?) or large (<20cm across) fragments of very			143.9	480	"		20			0.02	"	1	<0.01
				fine grained rock (aplite or metasedimentary xenoliths?).			144.9	470	"		80			0.09	"	1	"
				One speck molybdenite noted 140.8m.			145.9	110	"		60			0.05	0.002	1	0.01
							146.9	220	"		70			0.07	0.001	<1	<0.01
				141.7 - 142.6 Possible brecciated textures. Note siliceous, very			147.9	180	<0.01		130			0.04	0.002	<1	"
				fine grained rock fragment at 142.6m.			148.9	470	0.01		130			"	0.002	"	"
							149.9	480	"		20			0.05	0.001	"	0.01
144.3	172.7	23.3	82	INTENSELY ALTERED GRANITE			150.9	250	<0.01		20			0.04	"	"	<0.01
							151.9	120	"		20			0.03	0.002	"	"
				Pale yellow-green, generally coarse grained texture where visible,			152.9	50	"		90			"	"	"	"
				minor very fine grained texture (after aplite intruding the coarse			153.9	10	"		40			0.02	0.002	"	"
				grained granite) with sharp contacts. Comprises sericite and			154.9	60	"		10			0.03	"	2	0.01
				variable amounts of primary quartz (in places completely replaced			155.9	30	"		40			0.13	0.001	1	"
				by sericite?), pale yellow-brown sideritic carbonate, talcose clay			156.9	110	"		20			0.13	"	1	<0.01
				and abundant coarse grained pyrite euhedra (~5% of total). Includes			157.9	10	"		30			0.01	"	<1	"
				one 8mm grain of molybdenite at 167.4m. Very badly broken and soft			158.9	210	"		30			0.20	"	1	"
				where clayey. 5.1m core loss.			159.9	30	"		180			0.11	"	1	"
							160.9	70	"		20			0.20	0.002	1	0.01
				157.4 - 157.6 Altered aplite granite including angular fragments of			161.9	110	"		"			0.21	"	1	<0.01
				coarse grained granite up to 2cm across.			162.9	310	"		40			0.43	"	1	0.01
							163.9	70	"		20			0.10	0.001	1	<0.01
				Sharp, irregular contact ≈60° to c.a.			164.9	50	"		30			0.10	0.002	1	0.01
							165.9	10	"		80			0.06	0.001	<1	<0.01
172.7	177.9	5.2	100	ALTERED APLITE			166.9	30	"		40			0.10	0.002	"	"
							167.9	110	"		10			"	"	"	"
				Pale yellow-green, very fine-grained, almost aphanitic. Including			168.9	130	"		130			0.12	"	"	"
				very fine grained muscovite(?) - greisenized(?). Minor disseminated			169.9	110	"		"			0.20	"	2	0.01

088

919090

089

DIAMOND DRILL RECORD

HOLE NUMBER : FT: 18

LOGGED BY : P.S.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	FROM	TO	% Sn TOTAL (ppm)	% Sn ACID SOL. (ppm)	% Cu	% As (ppm Mo)	% S.	% Pb.	% Zn.	% Bi. (ppm)	g/t Ag	% W.
				and veinlet, fine grained pyrite. Rare specks silver-black mineral (bismuthinite?). Alteration shows colour banding, not perfectly parallel, at 40-70° to c.a. Rare pyrite veins parallel banding.		169.9	170.9	110	<100		10			0.05	10	1	<100
							171.9	40	"		50			0.15	"	1	"
							172.9	140	100		<10			0.28	"	1	"
				175.1 - 176.0 Includes brown, brown-black, green-brown crystals with vitreous lustre, some soft, lining few, hair-thin, open fractures.			173.9	<10	<100		10			0.05	"	1	"
							174.9	90	"		30			0.11	20	2	"
							175.9	200	"		<10			0.07	50	1	"
							176.9	110	"		"			0.06	10	1	"
				Sharp, irregular contact ≈30° to c.a.			177.9	50	"		"			0.05	90	1	"
							178.9	20	"		"			0.05	10	<1	"
	177.9	190.7	12.8	100	WEAKLY ARGILLIZED AND ALTERED GRANITE		179.9	<10	"		"			0.03	"	1	"
							180.9	50	"		"			0.09	20	<1	"
				Pale yellow and yellow-green, fine-medium grained, weakly porphyritic, comprising (where argillized) yellow argillized feldspars, primary quartz, minor chlorite after biotite. Lesser patches of altered granite, pale yellow-green, consisting of sericitized feldspars, primary quartz, usually with central siliceous zones including fine grained, yellow mica, dark green chlorite, minor pyrite and tourmaline; at 179.6 -179.7 , 180.4 - 180.9 (abundant mica), 181.8 - 183.1, 184.2 - 184.5, 184.6 - 185.0 (thin veinlet molybdenite at 184.6m), 185.1 - 185.3 (single crystal of wolfranite? at 185.2m), 185.7 - 185.8, 185.9 - 186.0, 187.1 - 187.9 and 190.4 - 190.7m. Alteration contacts very irregular, veinlet orientations 20-30° and 60-70° to c.a. Few breaks along joints, also 20-30° and ~70° to c.a.			181.9	<10	"		10			0.06	"	1	"
							182.9	150	"		"			0.05	30	2	"
							183.9	20	"		<10			0.03	10	1	"
							184.9	90	"		10			0.09	20	2	"
							185.9	40	"		<10			0.07	20	<1	"
							186.9	20	"		10			0.02	0	1	"
							187.9	100	"		<10			0.03	"	1	"
							188.9	<10	"		"			0.02	"	1	"
							189.9	"	"		"			0.02	"	<1	"
							190.9	100	"		10			"	20	1	"
							192.0	110	"		20			"	40	1	"
				188.9 - 189.1 Porphyry, feldspar-quartz phenocrysts set in an aphanitic matrix, very irregular contacts.													
				Sharp, irregular contact ~45° to c.a.													
	190.7	222.1	31.1	99	WEAKLY ARGILLIZED APLITE												
				Pale yellow, very fine grained, feldspars argillized biotite chloritized(?). Includes grey, green-grey, greisen-style alteration veins (5-10% of total) comprising quartz, mica(?), sericite, minor disseminated pyrite, 1cm-20cm thick, one 45cm thick at 193.3 - 193.75m, with central veinlets of pyrite or quartz crystals filling open joints, VCA'S 40-70° down to 202.6m, low VCA's and fewer veins below that point.												
				197.3 - 197.4 Large, fine grained tourmaline nodule with coarse grained tourmaline crystals at centre.													

919091

090

DIAMOND DRILL RECORD

HOLE NUMBER : FED 18

LOGGED BY : P.B.

NWPS

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb	% Zn	% Bi	g/t Ag	% MO
				199.7 - 204.0 Patchy pink staining(?) of aplite.				(ppm)									
				215.1 - 216.8 Several dark grey-green alteration veins near parallel to c.a., probably <10cm thick, with central thin pyrite veins (2-3mm thick), disseminated pyrite, very minor fluorite in veinlets.		215.0	216.0	170	<0.01					<0.01	0.003	2	<0.01
							217.0	210	"					0.01	0.002	2	"
				218.0 - 219.4 Fine grained granite, grainsize ~0.5mm, relatively coarse grained cf. aplite. Includes one grey-green altered zone 219.2 - 219.4m, with central tourmaline veins, one grain of molybdenite, one open space vein filling of carbonate(?)(not effervescent under acid) and fluorite. Upper contact gradational(?), lower contact sharp, irregular ≈50° to c.a.													
				Sharp contact, irregular ≈45° to c.a.													
222.1	242.6	20.5	100	FINE GRAINED BIOTITE GRANITE													
				Pale grey, average grainsize ~0.5mm, comprising white, pale yellow, rarely pink feldspars, grey quartz, ~5% black biotite or chlorite after biotite, minor tourmaline in small (0.5 - 3cm) nodules and veinlets. Few siliceous, grey grainsen veinlets with trace pyrite, 1-10mm thick, VCA 15-30°, with fluorite in one vein at 225.5m. Rare thin (2-5cm) quartz veins. Broken along few joints, JCA's ~70°, 40-50° and 10-30°, latter often clayey.													
				222.9 Micropegmatite vein, 1cm thick, quartz, green-black biotite in small "books", feldspar, average grainsize 5mm, VCA 75°.													
				228.5 - 229.8 Pink-grey aplite, contacts diffuse(?).													
				230.2 - 230.4 Pink-grey aplite, upper contact marked by numerous parallel tourmaline veinlets, minor pyrite (VCA~20°), lower contact marked by very irregular micropegmatite ~3cm thick, comprising quartz, feldspar and chlorite.													
				232.5 - 232.6 Grey aplite with 0.5 - 1mm feldspar "phenocrysts" set in an aphanitic groundmass, contacts sharp at 30° to c.a.													
				234.4 - 235.1 Aplite-micropegmatite dyke, upper 10cm is quartz-feldspar micropegmatite, contact angle ~30° to c.a.													

919092

DIAMOND DRILL RECORD

HOLE NUMBER: FID 16

LOGGED BY: P.R.

NW75

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn FROM	TO	TOTAL	ACID SOL.	% Cu.	% As	% S.	% Pb.	% Zn.	% B.	g/t Ag	% W.
				Aplite grey, very fine grained to aphanitic, lower contact angle sharp ~70° to c.a.													
				236.8 - 242.6 Aplite, grey, grading to fine grained in places. Upper contact sharp ~50° to c.a. Includes micro-pegmatite 243.1 - 243.2m. Becoming yellow-stained, weakly argillized lower 3m and grey-green, sericitized bottom 30cm.				(ppm)									
242.6	246.8	4.2	100	QUARTZ-TOPAZ(?) LESSER TOURMALINE		242.6	243.6	480	<0.01	0.09	<0.01			0.01	0.013	<1	<0.01
							244.6	1150	"	0.12	0.44			<0.01	0.106	1	0.01
				Grey, hard, very fine grained, comprising grey quartz, white topaz(?) patchy black tourmaline, 5-10% disseminated fine grained sulfides - predominantly pyrite, minor arsenopyrite, trace chalcopyrite(?), latter with 3cm coarse grained quartz-tourmaline-sulfide vein at 243.7m. Sulfide content low bottom 1.4m.			245.6	1210	0.01	0.11	0.46			"	0.036	1	1
							246.8	2660	"	0.06	0.05			"	0.003	1	"
				Lower contact sharp irregular.													
246.8	250.1	3.3	100	APLITE													
				Pale yellow, grainsize <0.5mm, comprising quartz, feldspar, minor tourmaline in thin, fine-grained quartz-tourmaline veins 0.5 - 3cm thick (VCA'S 20-30°, 70°) and in numerous, small clots 1-15mm across. No visible biotite. Gradational contact.													
250.1	281.0	30.9	100	FINE GRAINED GRANITE													
				Grey, pale yellow-grey, grainsize 0.5 - 1mm, comprising ~50% feldspars 40-45% quartz, 2-5% biotite or chlorite after biotite, and the remainder black tourmaline in numerous clots and nodules 2mm-5cm across, and few veins, 5mm - 1cm thick. Few, siliceous grey greisen veins ± trace pyrite, 5mm - 7cm thick, VCA's mostly 20-40°, rarely at low angles to c.a.													
				END OF HOLE 281.0m													

091

919093

APPENDIX 3

PERIPATETIC MINE DATA

093

50/118

919095

PROPOSALS ON DRILLING THE PERIPATETIC TIN PROSPECT, HEEMSKIRK, TASMANIA

E.L.7/68.

by

J.H. RATTIGAN

GEOPHOTO RESOURCES CONSULTANTS

INTRODUCTION

The Peripatetic Tin Mine is situated 12 miles West-North-West of Zeehan and access is reasonable via either Trial Harbour or Granville Harbour along newly constructed unsealed roads.

The deposit is located within granite country and alluvium and colluvium over granite. Little geological data can be gained from the surface geology and old workings are generally inaccessible. However, G. Waller, in the old reports, (Appendix I), gives a description of workings that were available to him and summarises old local mining and government geological knowledge.

This report and the map (Figure I) of Waller enclosed herein are self explanatory. The most interesting points arising from the report are:

1) the excellent Sn grades indicated,
2) the excellent widths indicated,
3) the coarseness of some cassiterite,
4) the strike of one lode is known and the dip direction is indicated.

Other features which make this prospect an excellent target and make for relatively cheap exploration are:

5) accessibility for drilling,
6) accessibility for marketing,
7) shallow testing,
8) water supply for drilling and mining,
9) occurrence of sulphides which, in other West Tasmanian localities, have been shown recently to carry the tin bearing sulphide Stannite in tin lodes wherein it was previously unrecognised and disregarded.

10) if the lode extends the sulphide content of lodes may provide an excellent indicator for SP, EM or IP methods of the lode detection beyond the known workings in otherwise relatively featureless terrain,

11) considerable progress has been made recently in extracting fine tin and tin from sulphides in West Tasmania,

12) a second lode exists and lodes other than those known may also be present.

PROGRAM

It is proposed firstly to site a diamond drill at three positions 100 feet apart on a grid with base line parallel to the Main Lode (Figure I). It is proposed to drill two shallow holes beneath the old workings from each site at different angles of depression (see Table I).

COMMENTS

1. The dip of the lode is uncertain so that the sites, and depressions of holes, may be varied after DDH1 gives information on the lode position and dip.

2. Lode tin deposits (with vein deposits of W and Mo) are notoriously variable in width and grade. In consequence diamond drilling results have to be assessed with this in view.

In Cornwall and elsewhere DDH results are merely used as a guide to the location and existence of tin deposits. Intersections of meagre width are driven on in full expectation that veins will make to ore.

Proposed drill holes and intersections are close spaced to assist in appraisal with this expected width and grade variability in view.

3. This deposit is one of the better lode tin prospects known to be present within our Exploration Licence E.L.7/68. If preliminary exploratory drilling results show interesting widths and values, extensions should be traced by ground geophysics and further drilling.

4. Our aim should be to indicate in the first instance some 1,000,000 tons of tin ore grading near 1% Sn. Such a tonnage could be contained in a block 200 yards length by 150 yards depth by 15 yards width. The value of metal in the ground if such an aim were realised would exceed $A30,000,000 on the present tin market. If the objective were realised it would be a prelude to extensions of exploration for lode tin throughout the Peripatetic area.

Dr. J.H. Rattigan

Minerals Exploration Manager.

TABLE I

Site	DDH No.	Bearing and Depression	Target	* Approx. depth of intersection (and hole depth)	*Vertical depth of intersection	Remarks
1	1	130°, 70°,	Main Lode where good width and values are indicated beneath No. 3 Tunnel	200', (450')	180'	-
	1A	130°, 55°		140', (250')	115'	Contingent on old workings
2	2	130°, 70°,	Main Lode beneath winze, where excellent grade ore is cited	200', (450')	180'	-
	2A	130°, 55°		140', (250')	115'	Contingent on old workings
3	3	130°, 75°	Main lode beneath old shaft	200', (450')	180'	Contingent on intersecting mi eralisatio from Sites 1 and 2.
	3A	130°, 55°		140', (250')	115'	

* Lode dip is uncertain but is presumed to be 80°N.W.

919099

APPENDIX I

Extract from Geol. Survey of Tasmania, Annual Reports 1900-1903 by G. Waller.

THE PERIPATETIC MINE.

Section 5157-93M, 10 acres, charted in the name of G. Smith. This section is situated in the north-western portion of the Heemskirk field. It is a mine which, in the old days, was held in high repute, but, like some other good mines in the district, was abandoned when the boom which was the cause of so much extravagance collapsed. The company owned a stamp battery and concentrator, but I learn from Mr. Con. Curtain, Inspector of Mines at Mount Lyell, who was the then mining manager, that very little stone was crushed. The old mistake was made of erecting the battery and concentrator before developing the mine, and without making provision for unfortunate contingencies, which are almost inseparable from a mining venture of this kind in a new district. From information kindly supplied to me by Mr. Curtain, I conclude that the plant was so inefficient, the consequent loss in dressing the fine tin (aggravated by want of skilled labour) so great, that only the richest ore would pay for treatment, and, under these circumstances, with tin at a very low price, the mine could not pay for its own development, and for want of further capital had to close down. Mr. Curtain tells me that he still has faith in the mine, and that twice since the mine was abandoned he has himself taken up the ground, and tried to get capital into it; unfortunately, without success. Such is in outline the history of the mine about to be described.

Plate III. gives a topographical sketch-map of a portion of the section. The mine workings are situated on the eastern slope of a low spur which separates two small creeks. The surface rubble of the eastern slope of this spur proved to be rich in tin, and some of this has been worked by the present owner of the mine, with satisfactory results. The tin is both coarse and fine, the coarse-grained pieces being often beautifully crystallised. Great difficulty was experienced in saving the fine tin in the streaming-box, and no doubt a large proportion of this was lost.

The underground work has demonstrated the presence of, at least, one tin-bearing vein, striking about 40° E. of N., and dipping towards the north-west. Both the granite in which this vein occurs and the vein-matter itself are much decomposed, and it is often not an easy matter to distinguish between them. Where the tin is richest the matrix consists of a soft iron-stained kaolinic substance, which I think is derived from the decomposition of pinitoid and felspar. I think, therefore, that in depth the vein will turn out to be one of the pinitoid type, but it is too soon yet to speak with

099

919101

certainty. Where I could observe it, the vein has no walls; the decomposed vein-matter simply passes over into the decomposed granite. In one portion of the mine, at least, the granite is not normal. It is fine in the grain, and contains quartz-tourmaline nodules in abundance. In general character it approaches an aplite. On the beach, to the west of the mine, I observed a rock of similar texture, also with quartz-tourmaline nodules, occurring as a distinct dyke in the coarse-grained granite, and I think it is likely that this rock is also a dyke. The rock is one which should be carefully studied, because, as will be seen later, it has to some extent been impregnated with tin ore from the vein.

No. 1 tunnel was started almost from creek-level, on a course of N. 30° E. A fall of earth prevented my making an examination of the workings. It appears that the lode was cut about 75 feet from the mouth of the tunnel, and driven on for 45 feet. At this point a winze was sunk on the lode for a distance of 33 feet. Mr. G. Smith tells me that about seven years ago he bailed out this winze, and found that the lode was 4 feet in width, and contained a seam of almost solid ore 4 inches in thickness, the remainder being decomposed vein-matter, containing fine tin in payable quantities. Mr. Curtain informs me that the rich ore is very patchy, no less than three-makes having been encountered in 33 feet. Below water-level there is a good deal of pyrites present, which probably accounts for much of the difficulty experienced by the old company in treating the ore. No provision was made in those days for roasting, and, in consequence, where pyrites occurred, the lode was considered to be unworkable.

No. 2 tunnel was started about 10 feet (vertically) above No. 1. The lode was cut 30 feet from the entrance, and some ground to the north of it was stoped out and crushed. There is pyrites in the ore, which no doubt gave the company much trouble. The stopes are open and untimbered, and could not be properly examined.

In No. 3 tunnel the lode was cut close to the entrance; it is here 7 feet wide, and consists of decomposed iron-stained kaolinic matter, carrying fair tin. A bulk sample taken by me from the whole of the lode-matter exposed returned 2·5 per cent. metallic tin. A little further in, a second, somewhat irregular, vein was cut, which carries rich tin in patches. A bulk sample across 2 feet of lode-matter yielded 2 per cent. metallic tin. This tunnel continues in the coarse-grained aplite already mentioned, containing abundant quartz-tourmaline nodules, but is blocked up 42 feet

from the entrance by a fall of earth. Up to this point the rock all contains fine tin ore, distributed through it. A large bulk sample, taken outside the veins for a total distance of 30 feet, yielded 0·93 per cent. of metallic tin. With the object of ascertaining the distribution of the tin ore, the following selected samples were taken:—(1) A sample of the quartz-tourmaline nodules; this yielded 0·4 per cent. of metallic tin, or approximately the same as that obtained from these nodules in other parts of the field. (2) White decomposed aplite, or fine-grained granite, which yielded 0·8 per cent. metallic tin. (3) Decomposed aplite, or fine-grained granite, slightly stained with iron-oxide, which yielded 1·6 per cent. of metallic tin. I think these results practically demonstrate that the tin has been derived as an impregnation from the veins. Had the tin been an original constituent of the aplite, we should have expected it to have been concentrated, more or less, in the quartz-tourmaline nodules; the opposite, however, is the case. The nodules contain their normal percentage of tin, while the aplite contains an abnormal amount. The fact that the iron-stained aplite contains a higher percentage than the white aplite, may be accounted for on the assumption that the former has been more affected by the impregnating solutions than the latter, and that, besides more tin, perhaps a little pyrites, or some other iron mineral, has been deposited. Perhaps, also, the cause of the impregnation may be found in the structure of the aplite. Aplites frequently contain numerous minute spaces, known as miarolitic cavities; and assuming that to be so in the case of this aplite, we may readily imagine that the rock would lend itself to impregnation by the stanniferous vapours arising along the vein-channel. Whether this is the case or not, the fact remains that this rock has been impregnated to a much greater extent than the surrounding granite. I tested the granite in other parts of the mine, but nowhere did I obtain more than ¼ per cent. metallic tin.

The bulk samples taken in this mine are, I believe, reliable so far as they go, the nature of the stone permitting a large sample to be easily taken. In each case, from 40 to 50 lbs. of stone was broken, and carefully quartered down. The results, I believe, are satisfactory, and demonstrate the presence of a large formation, carrying tin in payable quantities. The bulk sample from the aplite is, of course, low, but still, considering the extent of the formation, it should be payable; and it must be remembered that this sample is exclusive of the richer stone contained in the veins. If

this be included, we get, as an average of all the stone exposed in the first 39 feet of tunnel, 1·26 per cent. metallic tin. In depth we may expect the tin contents to decrease somewhat, as, owing to the decomposition of the granite, and the consequent removal of a portion of the felspar, the tin becomes to some extent concentrated near the surface. This cause affects the tin contents of the vein-matter to a greater extent than the aplite, because the former is more decomposed; but, on the other hand, none of the rich patches of solid tin ore which were met with in No. 1 tunnel, and the winze below that tunnel, are included in the samples, so that these rich patches may to some extent make up for any decrease in the amount of the finely disseminated tin.

It is impossible to estimate the extent of the tin-bearing aplite at the present time. It is not cut in either of the tunnels further north, and I think it may be a flat dyke dipping to the north, and, therefore, underneath the northern workings. This theory is strengthened by the fact that flat dykes of a similar nature occur on the coast-line to the west of the mine, where a good section is exposed. It is also possible that it is merely a mass produced by segregation in the granite magma. The point can only be definitely decided by underground work.

No. 4 tunnel was started from a small surface-stope, which was made by Mr. G. Smith, on the second vein of tinstone met with in No. 3 tunnel. The stone was thoroughly decomposed, and was treated in a sluice-box. Mr. Smith tells me, however, that the tin ore was so fine that he only succeeded in saving a small proportion. I took a sample from some of the better-class stone exposed, which yielded 4 per cent. of metallic tin. The tunnel is driven through decomposed granite, which contains a little tin. Two samples taken by me along the tunnel from the first 22 feet and the second 22 feet yielded 0·25 and 0·2 per cent. of tin-oxide respectively, showing that, although the granite has been to some extent impregnated with tin ore, this has not taken place to such an extent as in the aplite.

No. 5 tunnel was driven along a flat quartz-tourmaline vein of unfavourable appearance, dipping towards the east. The granite here also contains a very small percentage of tin. This tunnel is too far west to have cut either of the lode formations exposed in the other workings.

I believe the Peripatetic Mine is a thoroughly genuine prospecting show. It presents two propositions, both of which appear to me to be very promising. In the first place, there is the lode, which, so far as I can learn, is pay-

able as far as it has been developed; and, in the second place, there is the impregnation of ore in the aplite, also payable as far as exposed. Further developmental work is, of course, required before the value of the mine can definitely be demonstrated; but, as far as surface indications go, I consider them to be most encouraging. It is to be hoped that, in the event of a mining company being formed, it will not follow the example of so many mines in the district, and erect machinery before testing its mine. Developmental work must precede the erection of machinery; any other course must end in failure.

The Persic Mine.

Section 233M, 40 acres, charted in the names of W. Rodd and D. Sullivan. This section is situated on the St. Dizier Creek, at North Heemskirk. There is a small vein of green tourmaline on this section, striking about 30° W. of N., which carries good tin, and has shed a fair quantity into the rubble at its outcrop. Much of the tin contained in the rubble is in the form of coarse nuggets, and these have also been obtained from a small creek in the vicinity, which has been worked for tin. I think the vein is hardly large enough where exposed to warrant much expenditure, but it would be worth while sinking a prospecting shaft a short distance, to ascertain if any improvement takes place. Some more surface trenching should also be done, to locate any larger veins of the same character which may be present. There is a good deal of tourmaline aplite on the section, some of which is exceptionally rich in tourmaline nodules. These all contain some tin, and I think it would be worth while taking a bulk sample to ascertain if it is present in payable quantities; with the large quantities of stone present, a small percentage would pay.

Wilson and Brampton's Sections.

Sections 178M and 179M, each 40 acres. These are situated north and adjoining the Persic. Near the south-east corner of Section 179M a prospecting shaft has been sunk on a small quartz-tourmaline vein, from which some rich samples of tin have been obtained. The tip has been industriously picked over, and the best of the stone crushed by hand and dollied. I fear that this vein, where exposed, is too small to warrant sinking operations being undertaken,

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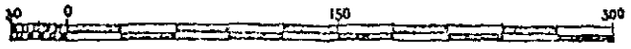
919105

SKETCH PLAN OF THE PERIPATETIC MINE

H.E.MASKIRK

SCALE OF FEET



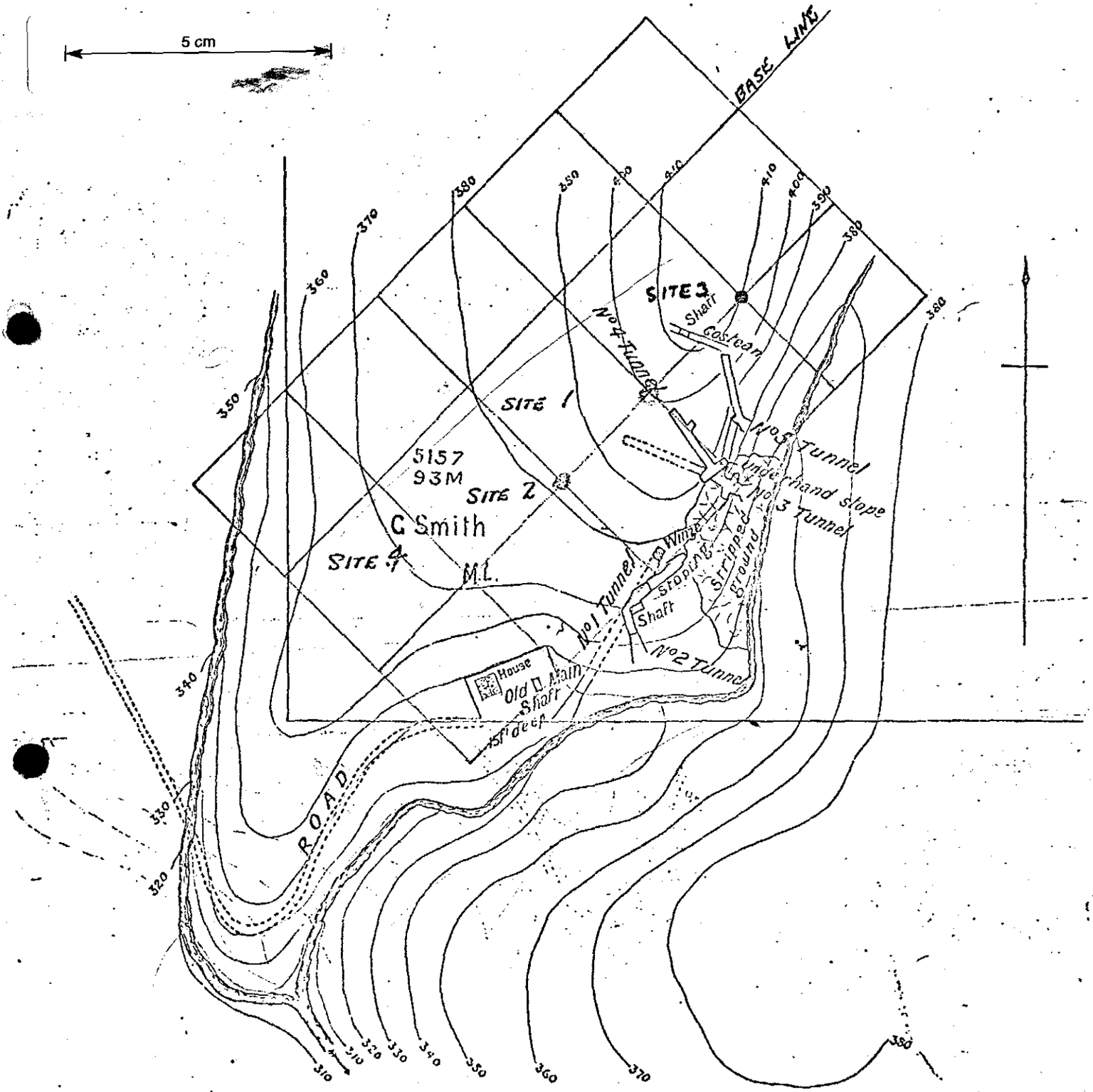


FIGURE 1

104

50/119.

919106

GEOPHOTO MINERALS REPORT NO. 1970/15

COMPLETION REPORT ON DIAMOND DRILLING

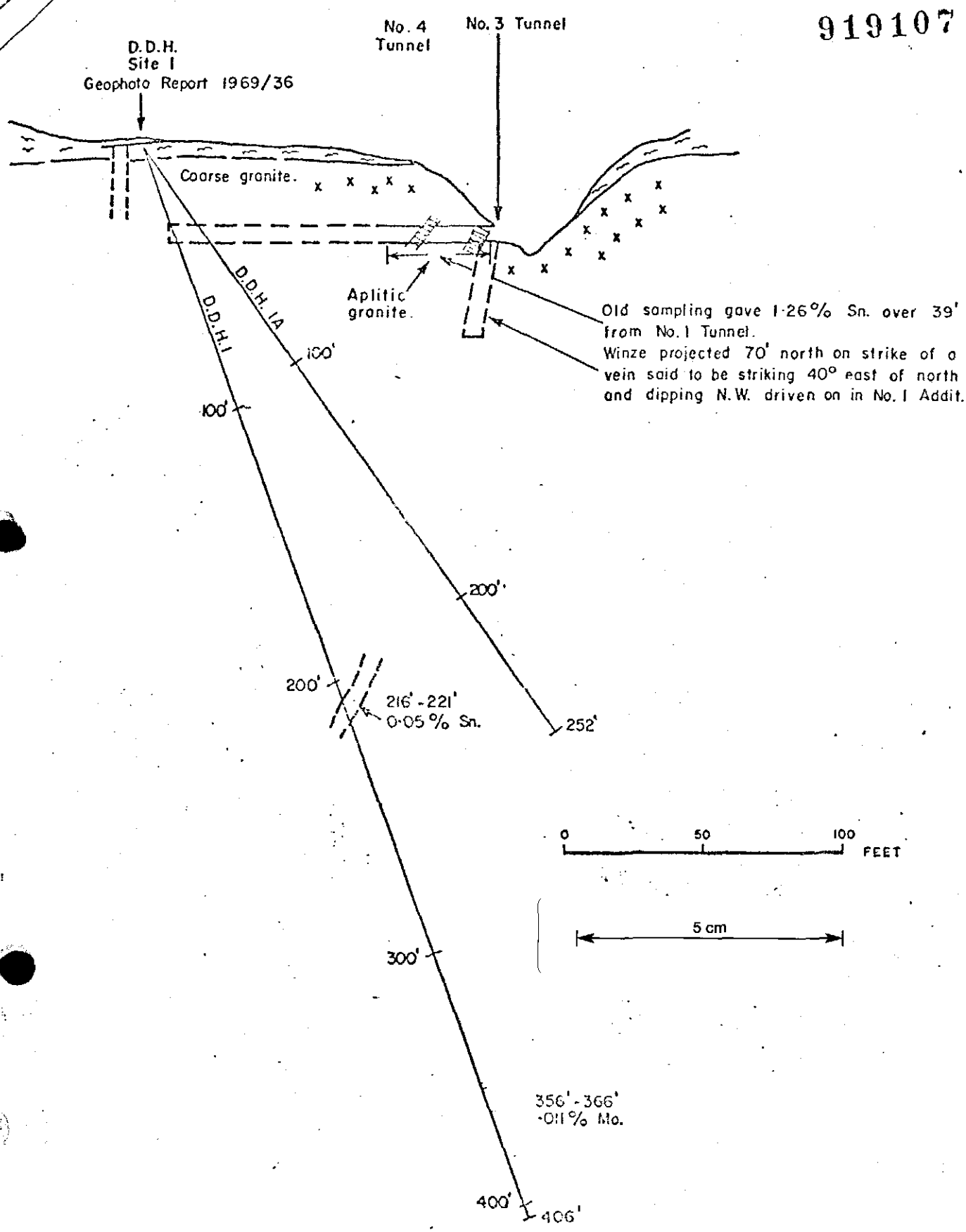
THE PERIPATETIC PROSPECT

WEST TASMANIA, E.L. 7/68.

JUNE, 1970.

105

919107



TEXINS DEVELOPMENT PTY. LTD

E.L. 7/68 HEEMSKIRK DISTRICT TASMANIA

PERIPATETIC DRILLING

DRAWING NO. 1/303

SUMMARY AND RECOMMENDATION

Three diamond drill holes Nos. 1, 1A and 2, totalling 909 ft. were driven beneath old workings in which high grade to moderate grade, and wide, tin sections were reported to have been encountered (Geophoto Minerals Report 1969/36).

No values of significance were encountered in drilling and it is recommended that the option given by Mr. Gray on the Peripateti Lease be not extended.

DRILLING RESULTS

The three holes were sited by R. Paterson as per Holes 1, 1A and 2A suggested in Geophoto Minerals Report No. 1969/36.

Their relationship to the old workings will be obvious from the old Plan (Figure 1 of 1969/36) and the attached section (Drawing No. 1/303).

From old reports high grade and coarse cassiterite was found in veins in granite. One, presumably the main vein division in No. 1 Tunnel, was indicated as dipping north-westerly. It is obvious however that richer veins do not extend downwards at this dip to the position of the drill holes.

Fine cassiterite of moderate grade was also found adjoining veins as disseminations in decomposed granite and aplitic granite. The best records are from No. 3 Tunnel. The old records are not very clear on the mineralised granitic rock type, though decomposed, fine aplitic granite especially an oxidised pyritic type is mentioned as host for disseminated tin.

The attitude of the stanniferous "aplite" is unknown. It is chiefly encountered in No. 3 adit and not in other workings. It is not exposed in the drill holes, though a fine grained "aplitic" granite dyke was intersected at near 400 feet in D.D.H.1.

PROSPECTS OF TIN OCCURRENCE

The drilling revealed that nothing of economic interest lies below, or to the west of, the lodes developed at Peripatetic workings.

It is possible that east dipping veins exist as the block west of the lodes was not tested.

It is also possible that north, but gently dipping veins or aplitic sheets, exist that have not been tested.

However, in view of the facts that (1) the results are not encouraging for vein extensions with depth on the east, and that (2) Gray's Lease boundary (and Texins ground) lies about 300 feet east of the area tested, it is proposed that the option on Gray's Lease be not extended.

J.H. Rattigan.

RENISON LIMITED - DRILL CORE RECORD

108

HOLE NUMBER	PERIPATETIC DDH 1
PURPOSE	To test below the main lode at the Peripatetic Mine beneath No.3 tunnel
LOCATION	
COLLAR R.L.	
CO-ORDINATES	
LENGTH	139.0
HOLE SIZE	BQ?
DATE DRILLED	1970
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	P. ROBERTS
COMMENTS	Briefly examined at Mines Department core store, Hobart, on 20.8.80. All of the core is split which suggests that the entire hole was assayed. Sn mineralization at the Peripatetic Mine is partly associated with an aplitic granite phase, according to Waller (1903?). The absence of significant intersection of aplite in this hole and DDH 1a suggests that both aplite and mineralization dip towards the east.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D Sin Dip	R.L.	D Cos Dip	Prog Total
COLLAR	130° Magnetic	-70°	0-139.0	139.0	130.6		47.5	47.5

SUMMARY – ASSAY DATA

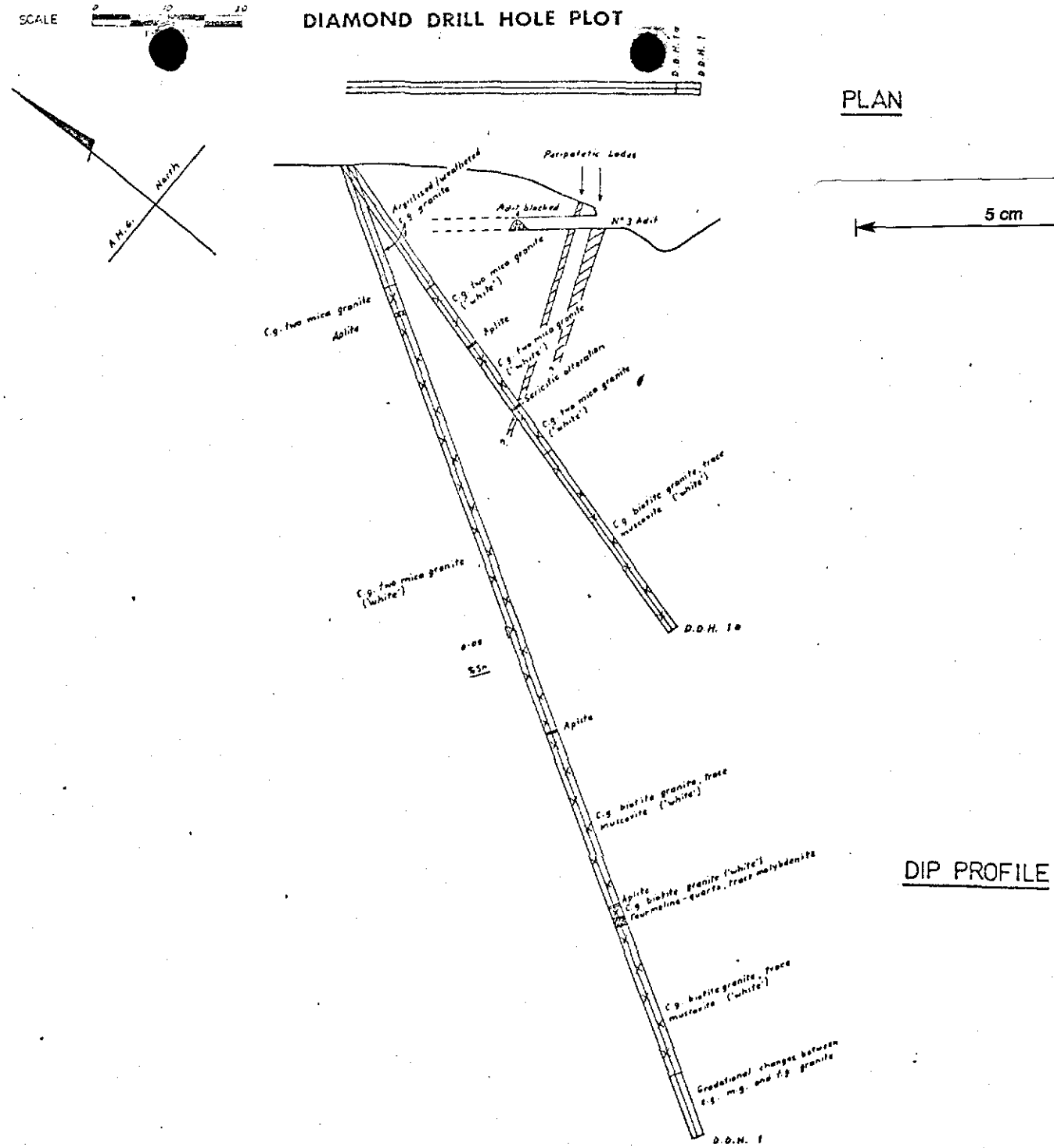
LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													8 C.A.
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

NWPS 27344

919110

HOLE No Peripatetic D.D.H's 1 & 1a SCALE

DIAMOND DRILL HOLE PLOT



109

919111

DIAMOND DRILL RECORD

HOLE NUMBER: Fortgatelle 1

LOGGED BY: P.B.

NW25

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% B.	g/t Ag	% WO_3
0.0	7.9			Granitic sand, after weathered c.g. granite.													
7.9	9.1			Weathered c.g. granite.													
9.1	14.0			Granitic sand, after weathered c.g. granite.													
14.0	14.3			Weathered c.g. granite.													
14.3	17.4			Granitic sand, after weathered c.g. granite.													
17.4	44.5			Granite, c.g. white, two micas - muscovite and biotite, largely biotite, minor black tourmaline in nodules. Slightly weathered. Includes:													
				21.1 - 21.6 aplite dyke.													
44.5	81.1			Granite, c.g. as above but fresh.		65.8	67.4	0.05									
81.1	139.0			Granite, c.g. as above but muscovite very minor. Includes:													
				81.1 - 81.3 microgranite dyke.						% Mo							
				106.1 - 106.6 microgranite dyke.													
				107.9 - 109.1 tourmaline/quartz rock including trace fluorite and molybdenite.		108.5	111.6			0.011							
				130.5 - 137.2 gradational changes from c.g. granite as above to m.g. and f.g. granite ± disseminated tourmaline.													
				END OF HOLE 139.0m.													

KENSON LIMITED - DRILL CORE RECORD

HOLE NUMBER	PERIPATETIC DDH 1a
PURPOSE	To test below the main lode at the Perapatetic Mine beneath No.3 tunnel.
LOCATION	Same as DDH 1.
COLLAR R.L.	
CO-ORDINATES	
LENGTH	76.8m
HOLE SIZE	BQ?
DATE DRILLED	1970
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	P. ROBERTS
COMMENTS	Briefly examined at Mines Department core store, Hobart on 20.8.80. All of the core is split which suggests that the entire hole was assayed.

SURVEY			From - To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D Sin Dip	R.L.	D Cos Dip	Prog. Total
Collar	130° magnetic	-55°	0-76.8	76.8	62.9		44.1	44.1

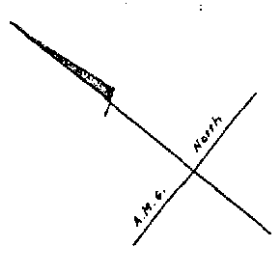
SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													B.C.A
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

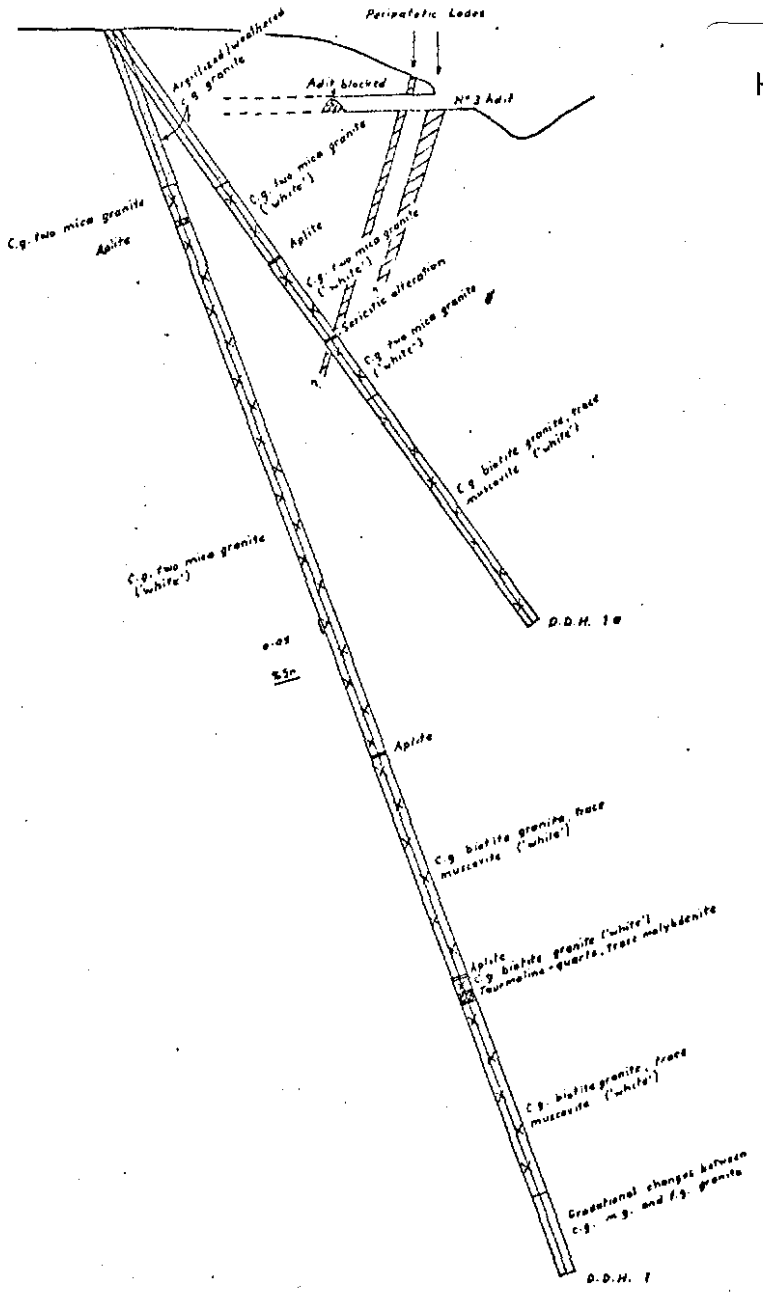
NWPS 27344

HOLE No Peripatetic D.D.H.'s 1 + 1a SCALE 0 10 20

DIAMOND DRILL HOLE PLOT



PLAN



5 cm

DIP PROFILE

113

DIAMOND DRILL RECORD

HOLE NUMBER : PERIHATOTIC 1a

LOGGED BY : P.H.

INTERVAL (m) FROM	TO	RECOVERY m	%	DESCRIPTION	FORM.	% Sn. FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO3
0.0	11.0			Granitic sand, c.g.													
11.0	14.0			Weathered c.g. granite.													
14.0	20.1			Granitic sand, c.g.													
20.1	32.3			Granite, c.g. two mica (biotite and muscovite), minor black tourmaline in nodules. Includes:													
				29.6 - 29.9 aplite dyke, upper contact ~30° to c.a., lower contact ~70° to c.a.													
32.3	47.5			Granite, c.g. two mica (biotite > muscovite), trace pyrite and fluorite. Includes:													
				39.9 - 40.1 sericitic alteration with tourmaline and fluorite.													
47.5	76.8			Granite, c.g. similar to above except muscovite very minor, with minor quartz/tourmaline nodules. Plagioclases becoming argillized lower 6m.													

919115

RENISON LIMITED - DRILL CORE RECORD

114

HOLE NUMBER	PERIPATETIC DDH 2
PURPOSE	To test below the main lode at the Peripatetic Mine.
LOCATION	
COLLAR R.L.	
CO-ORDINATES	
LENGTH	76.5m
HOLE SIZE	BQ?
DATE DRILLED	1970
SIGNIFICANT CORE LOSS ZONES	
ORE ZONE GROUND CONDITIONS	
LOGGED BY	P. ROBERTS
COMMENTS	Briefly examined at Mines Department core store, Hobart on 20.8.80. All of the core is split which suggests that the entire hole was assayed. Several zones of sericitic greisen between 68.6 and 75.0m contain anomalous amounts of Ag but only trace Sn, and possibly are the depth extensions of the main lode.

SURVEY			From – To	Distance D	VERTICAL		HORIZONTAL	
Depth	Bearing	Dip			D.Sin.Dip	R.L.	D.Cos.Dip	Proj. Total
Collar	130° magnetic	-70°	0.0 – 76.5	76.5	71.9		26.2	26.2

SUMMARY – ASSAY DATA

LODE NAME	FROM	TO	LENGTH (m)	AVERAGE WEIGHTED ASSAYS													BCA
				Sn.	Acid Sol. Sn.	Cu.	As.	S.	Pb.	Zn.	Bi.	WO_3	Ag g/t				

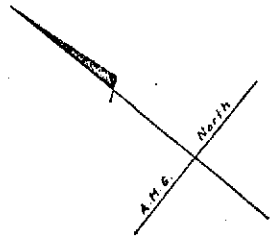
NWPS 27344

919116

HOLE No. Peripatetic D D H 2 SCALE: 10 20 Metres

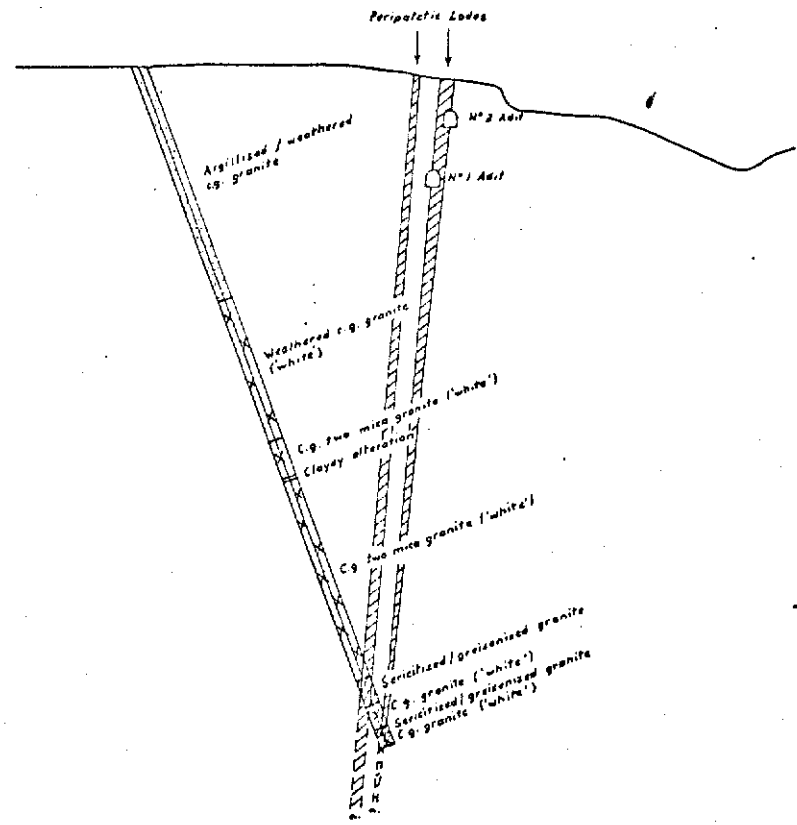
DIAMOND DRILL HOLE PLOT

115



PLAN

5 cm



DIP PROFILE

919117

DIAMOND DRILL RECORD

HOLE NUMBER : [illegible]

LOGGED BY : F.J.

NWPS

INTERVAL (m) FROM	INTERVAL (m) TO	RECOVERY m	RECOVERY %	DESCRIPTION	FORM.	% Sn FROM	% Sn TO	% Sn TOTAL	% Sn ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% WO3
0.0	23.2			Granitic sand, c.g.													
23.2	26.5			Granite, c.g., strongly weathered.													
26.5	42.1			Granite c.g., weathered, bleached.													
42.1	68.6			Granite, c.g., two mica (biotite much more abundant than muscovite). Biotite partly chloritized throughout. Slight argillization of feldspars. Tourmaline/quartz nodules. Trace pyrite, fluorite, possibly chalcopyrite. Includes:													
				46.3 - 46.6 clayey alteration including clay seam (?).													
68.6	71.6			Sericitized and greisenized granite, c.g. consisting of quartz, sericite, minor coarsely crystalline pyrite and fluorite, traces of molybdenite. A chip sample at 68.9m assayed 14 ppm Ag.													
71.6	74.1			Granite c.g. similar to 42.1 - 68.6m.													
74.1	75.0			Sericitized and greisenized granite, f.g., consisting of quartz, sericite, minor pytite and fluorite. A chip sample at 74.7m assayed 47 ppm Ag.													
75.0	76.5			Granite, c.g., pale yellow, similar to 42.1 - 68.6m.													
				END OF HOLE 76.5m.													
				Note: The chip samples referred to above (68.9, 74.7m) were XRF scanned for Sn and only contained trace amounts (<0.1%). The samples were submitted for Sn assay but were accidentally discarded before this was done.													

RENISON LIMITED

APPENDIX 4

REPORT ON GEOLOGICAL MAPPING OF THE HEEMSKIRK GRANITE, BY R.POLTOCK

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919120

E. L. 11/76

Geological mapping in the Heemskirk Granite

March - April 1981

by Roger Poltock

R. Poltock

Contents

Introduction

Geology — Granite types
Alteration and Mineralization
Regional features - structures

References

Appendices (i) Rock samples - 1:5000 Sheet N°s.

(ii) Chip samples - Description - Assays.

Plans 1. Geological field data sheets. scale 1:5,000 NOT PROVIDED

2. Geological Fact - Descriptions/Sample locations. scale 1:25000 NOT PROVIDED

INTRODUCTION

Detailed geological mapping in the Devonian Heemskirk Granite was mainly confined to delineating the "red/white" granite contact.

Eighteen days field work in the period 16th March - 24th April, 1981 carried out, working from bases at Trial Harbour and St. Dizier. This was the first phase of a possible three season mapping program in the granite.

The main contact was located from the Cornwall Mine on the coast in the south, north to the contact with PreCambrian sediments in vicinity of the big "A" prospect. Most extensive traversing was across the "white" granite, this lying between the main contact and access roads.

Data recorded in the field on 1:25000 and/or 1:10000 colour aerial photographs Runs 2 Nos. 0388 - 0392
3 Nos. 0443 - 0446
4 Nos. 0416 - 0420

This information was transferred to 1:5000 topographic sheets Nos. A3 - 2 & 4, A 4 - 1 & 3, C 2 - 1, 2 & 3, for a regional picture the same data omitting some detail was replotted on 1:25,000 sheets. Both these scales derived from the Lands Department 1:15840 sheets.

Locations at which rock types were described and in some cases sampled are numbered 1-250 and plotted on both the 1:5000 and 1:25000 sheets. At 123 of these locations rock samples collected see appendices (i), all samples labelled e.g. HH 11/76
HSK
51
19/3/'81

Of these thirty six were chip samples of alteration and mineralized zones within the granite, these submitted for assay in two batches 6th April and 11th May and were analyzed for Sn, soluble Sn, Ag and WO3, see appendices (ii).

General

For a comprehensive background on the geology of the Heemskirk Granite - descriptions of rock types, relationships between them, styles of alteration and mineralization, regional structures refer to Klominsky 1972, Hoxton Mining - Bosnier 1978 and Wells 1978. The first two giving a regional coverage, the latter a detailed study of the Federation area.

The present mapping program is based on data compiled in these previous reports, particularly Wells 1978 in regards to main granitic types and their interrelations The Federation - Coleman's Montague area taken as the type or reference section.

In this project the rock types have been broadly subdivided into "red - intermediate - white" with further divisions on the basis of grain size, and whether porphyritic or equigranular. The characteristic features used to distinguish each in the field are

- red contains pink-red K feldspars and white plagioclase, tourmalinization generally confined to narrow joint fillings.
- intermediate - features of both red & white
  - occurs between the two main types
- white all feldspars are white
  frequently contains tourmaline nodules and segregations.

From Wells 1978 all types are compositionally similar ranging from true granites - adamellites.

Red Granite

In the area so far mapped this type occupies the stratigraphically - topographically highest position forming the main scarp extending from the Federation to north of Mt. Heemskirk. It is dominated by medium-coarse grained (5-12mm with maximum 20mm) granite e.g. No. 66, 146, 241. The red granite outcrops most extensively south of Federation in Zeehan-Trial Harbour road area. Further north this medium-coarse grained type which overlies the white and intermediate granites lenses out (50m thickness No. 247-248) and is apparently replaced by red porphyritic granite e.g. No. 103, 107, 1 9, 124, 147, 152, 212, 214, 215, 217-222. The porphyries are variable ranging from near equigranular - strongly porphyritic with feldspar phenocrysts to 25mm in a fine groundmass.

Below the main "red/white" contact S.E. of Gap Peak a fine-medium grained granite occurs, and is included with the "red" - presence of both red & white feldspars, but it may have affinities with white and intermediate granite.

Intermediate

This type is closely associated with and underlies the fine-medium grained "red"?, occurs E. and S.E. of Gap Peak, with an isolated outcrop at the S.E. end of the North Heemskirk Spur.

The intermediate granite overlies a fine white granite which is assumed to be the same as that in the Coleman-Montague area.

All feldspars in this type are red with occasional outcrops having a mottled pink-white coloration, contacts with other granites are marked by zones of dense tourmaline nodule concentrations e.g. 95, 64-66, it is usually fine-medium grained. In addition to nodules some outcrops have a pitted surface which may be due to the weathering out of crystal segregations - quartz feldspar?

White

Occurence restricted to the low lying coastal plane immediately west of the Heemskirk range with the exception of prominent outcrops on Gap Peak and North Heemskirk Spur. Through most of the area it underlies the "red - intermediate" types but between St. Dizier and west of the big "H" is in direct contact with the PreCambrian sediments.

Like the red granite it is dominated by medium-coarse grained granite e.g. 41, 137, 132, finer grained types occuring in vicinity of contacts with other granites and sediments. The area south of the Peripatitic is the exception, fine grained granite e.g. 180-181 occurs as flat-shallow dipping sheets? within medium grained, these differentiated from aplites by of thickness, and presence of tourmaline.

Fine and medium grained white granite frequently tends to be porphyritic, these feldspar porphyries don't appear to form extensive outcrops but occur sporadically e.g. North Heemskirk Spur 133, 135, Trial - Granville road 1.5 - 2.0 km. south of Tasman River 189 and North bank of Tasman River 205.

MINOR ROCK TYPES

- Aplites, these are probably scattered throughout the granite but are more easily recognized in the red

granite (more extensive exposure - colour contrast). The aplites are usually 1m. thick, steeply dipping, most trending N.E., and are differentiated from fine white granites - discordant, limited thickness and lack of tourmaline nodules and segregations e.g. 2, 145.

- pegmatites, these composed of pink K feldspar and quartz crystals to 10 cm. occuring as concordant lenses <0.5m. thick in the contact zone between "red - white" granites. See locations 3, 4, 66, 67 and 240.

- xenoliths, seen at Tasman River 205, and Mt. Heemskirk trig 218, both these widely separated occurences are associated with porphyritic granites. They are characterized by very fine grainsize, contain more biotite and have sharp contacts with the enclosing rocks. Although contacts are sharp the xenoliths contain phenocrysts similar to the surrounding rock, the largest of these inclusions occurs at Mt. Heemskirk - 0.8m.

ALTERATION & MINERALIZATION

Throughout the mapped area quartz-tourmaline-topaz, quartz-topaz and quartz-sericite-muscovite alteration zones occur. All of these are apparently steeply dipping, and regionally have a random strike direction but locally occur in one or more sets. Thirty six chip samples collected see appendices (ii).

The alteration "dykes" occur most extensively at Gap Peak - S.E. end of Heemskirk Spur, and 1.5 km S.E. of this location immediately west of the main "red-intermediate contact", this latter area recognised by Boshier 1978 (N.W. of photo centre 3/0443).

Minor iron sulphide - oxide mineralization frequently associated with alteration zones e.g.
- pyrite arsenopyrite and/or bismuth No. 93, 141, 169, 171.

- hematite, specular hematite and magnetite occuring as minor flecks and selvedges e.g. 88, 89, 237, 238 and more massive e.g. 84, 248 and Long's Iron Blow.

Some of these alteration zones have been prospected by shallow pitting the only tunnelling and shafting (excluding Federation - Cornwall, Peripatetic - St. Dizier) was at locations - 128 1.5 km. south of St. Dizier

- 228 and Long's Iron Blow both 3.2 km. S.E. and N.N.E. respectively of St. Dizier.

REGIONAL FEATURES - STRUCTURES

1) The main "red/white" contact extends from the Cornwall - Montague north to the Big "H", this disrupted and difficult to locate immediately north of the Federation area. This due in part to major E-W faulting but also the granitic types change here, to the north the medium-coarse red granite which predominates in the south appears to be largely replaced by porphyritic granites (N. - N.W. of Lake Cumberland)

2) There is a marked regional assymmetry between north and south in regards to the red and white granite distribution. In the southern area the older red granite always occuring between the "white" and the intruded PreCambrian - Cambrian sediments. However in the northern contact zone with sediments between St. Dizier - Big "H" the white graniteiis in direct contact with the Precambrian all phases of the red granite apparently absent.

3) A possible cupola like feature occurs in the "intermediate-red" granites 1.5 k.m. S.E. of Gap Peak. From this location the main granite ("red/white") contact dips shallowly to the North and South, the area is also characterized by the presence of the intermediate red granite, and increased intensity of alteration zones. The thickness of the overlying red granite is in places relatively thin.

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REFERENCES

Klominsky J. 1972 — The Heemskirk Granite Massif, W. Tas. - a study of chemical variability in plutonic rocks Unpub. Ph.D. Thesis, Uni. of Tas.

Boshier F. - Luxton hunting & Assoc. 1978 — A photogeological study of the Heemskirk Granite and the area surrounding Zeehan, Western Tasmania.

Wells K. 1978 — Geology and Mineralization in the South Heemskirk Tinfield, West. Tasmania

Appendices (i) Rock Samples - Sheet Nos.

Sample No.	Sheet No.	Sample No.	Sheet No.
[illegible] 1-5	C2-3	140-142	A4-3
[illegible]	"	144-7	A4-1
[illegible]-33	"	152,155,156	A4-3
35,38	"	161,165	A4-1
41-45	"	167-173	"
46-48	C2-1	176-178	A3-2
50,51	"	179-182	A3-4
54,57,58	"	187	"
60,63-65	"	189	"
67-68	"	201	"
74,78	"	204-5	A3-2
81	A4-3	209	A4-1
83,84,86	"	212,214-215	"
88,89	"	217-229	A4-3
91,93,95	"	231,233	"
97	C2-1	236-278	"
100,1,3,7,9,	C2-2	242,244	"
114	"	246-8	"
124	"	250	A4-1
125,127,128	A4-1		
129	A4-3		
130-131	A4-1		
132-138	A4-3		

Appendices (ii) Chip Samples - Descriptions - Assays

No.	Description	Sn %	WO3 %	Sol Sn %	Ag ppm
HSK 3	Qtz. topaz tourmaline 062.90° up to 5m wide	<0.01	0.01	<0.01	<1
29	Qtz. topaz 192.90°, 1 metre wide, short drive	<0.01	0.01	<0.01	<1
33	Fine grained griezen with minor sulphides 102.90°, shafting 30m west	0.23	0.01	<0.01	<1
42	Griezen veinlets to 3cm 057.90°	0.08	0.01	<0.01	1
43	Qtz. topaz tourmaline	0.01	0.01	<0.01	<1
48	Gossan, shallow pitting	<0.01	0.05	<0.01	41
51	Qtz. topaz minor tourmaline and sulphides, prospect pits	<0.01	0.04	<0.01	1
58	Qtz. tourmaline 022.90, 1-2m wide	0.16	0.05	<0.01	<1
78	Qtz. tourmaline topaz 022.90	<0.01	0.05	<0.01	<1
84	Qtz. tourmaline - hematite 022.90 2-3m wide	0.03	0.11	0.02	2
88	Siliceous alteration with minor tourmaline, flecks of specularite 0.1-0.3m thick	<0.01	0.04	<0.01	1
89	Siliceous alteration, some specular hematite, 022.90	<0.01	0.05	<0.01	1
91	Tourmalinization with minor pyrite 280°	<0.01	0.05	<0.01	1
93	Qtz. topaz - sericite 252.80 shallow pit	0.19	0.06	<0.01	1
95	Tourmaline nodules with iron staining	<0.01	0.04	<0.01	1
107	Siliceous alteration with pyrite 10cm wide, 007.90	0.03	0.04	<0.01	1
128	Quartz tourmaline and argillized granite? 270° 1-2m wide, shafts 10 metres deep.	<0.01	0.01	<0.01	<1

No.	Description	Sn %	WO3 %	Sol Sn %	Ag ppm
132	Tourmaline segregations with Mn. staining?	<0.01	0.01	<0.01	<1
135	Qtz. tourmaline 0.2m wide 067°	<0.01	0.01	<0.01	<1
136	Qtz. tourmaline 2m wide 054°	0.17	0.01	<0.01	<1
137	Qtz. tourmaline topaz float only	<0.01	0.01	<0.01	<1
138	Qtz. tourmaline 1m thick, 357°	<0.01	0.01	<0.01	<1
141	Qtz. tourmaline topaz with minor pyrite, arsenopyrite and/or bismuth 232.90 2 metres wide, shallow pit	0.03	0.09	<0.01	1
142	Qtz. tourmaline, chlorite 2m wide 027° shallow pits	0.08	0.01	<0.01	<1
169	Qtz tourmaline - pyrite 082.90 several narrow veinlets over 1m width, pits 2m deep	0.13	0.01	<0.01	<1
170	Qtz. topaz muscovite 080.90 1-2m wide shallow trenching	<0.01	0.01	<0.01	<1
171	Minor alteration with pyrite arsenopyrite and/or bismuth shallow pit	<0.01	0.06	<0.01	9
172	Qtz. tourmaline 2-3m wide 112° shallow pit	0.71	0.01	<0.01	<1
182	Qtz. minor tourmaline 062°	0.02	<0.01	<0.01	<1
201	Qtz. muscovite - qtz. tourmaline core 0.1-0.2m wide 132.90	<0.01	0.01	<0.01	<1
204	Qtz. tourmaline 334°	<0.01	0.01	<0.01	<1
228	Qtz. tourmaline 2m thick - major drive into this approx 100m west	<0.01	0.01	<0.01	<1
233	Sericitization - minor tourmaline 024.90°	0.06	0.01	<0.01	<1
237	Qtz. tourmaline sericite minor hematite - magnetic	0.01	0.03	<0.01	<1

No.	Description	Sn. %	WO3 %	Sol Sn %	Ag ppm
242	Qtz. sericite - hematite, magnetite selvedge	< 0.01	0.02	< 0.01	< 1
248	Hematite - magnetite minor loose blocks close to outcrop	0.03	0.02	< 0.01	< 1

APPENDIX 5

GLOBE MINE AREA - PRELIMINARY REPORT, BY C. CANNARD

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RENISON LIMITED

S.P.L. 129 - GLOBE MINE AREA

PRELIMINARY REPORT

1980-81

By: COLIN CANNARD,
GRADUATE TRAINEE (C.G.F.A.)

29th May, 1981

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APPENDICES

1. GEOLOGICAL MAPPING SAMPLE ASSAYS
2. GROUND MAGNETICS DATA SHEETS
3. SCINTREX REPORT ON INDUCED POLARISATION SURVEY

LIST OF PLANS

1.	(a)	TD14	Access and Grid	Not provided	1:500
	(b)	TE14	Access and Grid		1:500
2.	(a)	TD14	Factual Geology	Not provided	1:500
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4.		Adit Sampling Results		Not provided	1:100
5.	(a)	Grid Line Profile	Line 00E	Not provided	1:500
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	(e)	Grid Line Profile	Line 160E		1:500
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	(g)	Grid Line Profile	Line 240E		1:500
	(h)	Grid Line Profile	Line 320E		1:500
6.	(a)	TD14	Ground Magnetic Contours	Not provided	1:500
	(b)	TE14	Ground Magnetic Contours		1:500

1. INTRODUCTION

The Globe Mine is situated on the south-eastern slopes of Mt Agnew near Agnew Creek, within S.P.L. 129. The workings consist of three adits, one shaft and a trench. A second trench was located about 100 metres west of the main workings (see plan 1).

Following re-location of the mine workings in 1978-79, preliminary reconnaissance indicated the presence of polymetallic sulphide mineralisation (Ross, 1979; Roberts, 1980). An access track was bulldozed and a grid of approximately 1.7 line kilometres, consisting of 8 lines 40 metres apart, orientated at 025° (AMG) and a baseline orientated at 180° (AMG) was established. The grid lines were pegged at 30 metre intervals.

During February and March 1981, a program of geological mapping, ground magnetics and adit sampling was completed. In addition, Scintrex Pty Ltd was engaged to conduct a gradient array induced polarisation survey over the grid. The purpose of these programs was to better define the type and extent of mineralisation and to locate possible diamond drill hole targets.

2. WORK COMPLETED

2.1. Geological Mapping

Geological mapping was carried out on all cut lines of the Globe grid. A traverse along Agnew Creek in the area of the workings was also made. This data and the mapping of the access track by P. Roberts have been collated and appear on plan 2. Geological mapping of the adits appears on plan 4. Several rock samples were collected and submitted for assay. The assay results and sample locations are included as Appendix 1. Information for the plotting of grid line profiles was also collected at this time.

2.2. Adit Sampling

The three adits were marked at one metre intervals and random chip samples of the walls within these intervals were collected. The poor state of the back near the crosscut in Adit 3 prevented sampling beyond the crosscut. The rock chip samples were analysed by the Renison Assay Laboratory using Standard Method 1. Elements assayed for were Sn, As, Cu, Pb, Zn, S, WO_3 by XRF and Ag, Bi, SSn, Sb by AAS. The assay results are plotted on plan 4.

2.3. Ground Magnetics

A ground magnetic survey over the grid lines and baseline was completed. Total magnetic field intensity readings were taken with a Geometrics G816 Proton Precession Magnetometer (sensor height 2.5 metres) at a spacing of 10 metres. Corrections due to diurnal variation have been applied. The magnetics field sheets with corrected readings are presented in Appendix 2.

2.4. Induced Polarisation

The report by Scintrex on the gradient array induced polarisation survey is presented as Appendix 3.

3. RESULTS

3.1. Geology

The Globe Mine is situated entirely within the Heemskirk Granite. The interpreted geology of the Globe Mine area is shown on plans 3 (a) and (b). It should be noted however that, apart from the bulldozed track and the adits, outcrop is limited to a few scattered occurrences in Agnew Creek. The scant geological information makes geological interpretation very difficult.

Several points however are worth noting.

(i) Existence of a halo of argillic alteration about the quartz-tourmaline alteration.

(ii) Intrusion of the fine-grained "white granite" in the vicinity of the workings in dykes and irregular bodies.

(iii) Structural control of the quartz-tourmaline alteration by a shallow dipping joint plane in Adit 3.

(iv) Large exposure of quartz-tourmaline alteration in the adits, but little surface outcrop of the quartz-tourmaline rock.

(v) Presence of quartz-magnetite-tourmaline alteration at the northern end of line 40E.

The quartz-tourmaline alteration zone seems to be defined in upward extent by a shallow, easterly dipping joint plane. The lack of surface outcrop of the alteration could thus be explained by the easterly dip of the land surface in the area. The lateral extent of the quartz-tourmaline alteration zone is not exposed by the adits but is at least 60 metres x 23 metres.

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3.2. Adit Sampling

The assay results for the sampling of the three adits are presented on plan 4. The results indicate the presence of tin and silver, lead, zinc mineralisation in all three adits.

3.2.1. Adit 1

Significant tin and silver, lead, zinc mineralisation is present in Adit 1 from the face to 20N (and 20S) including the crosscut and two drives. The average grade over 54 metres of working length (99 assays) is 0.11% Sn, 61 g/t Ag, 0.33% Pb, 0.15% Zn, 0.9% S. Contained within this zone is a higher grade tin section, from the face to 4N (4S) with 4 metres (9 assays) of 0.54% Sn, 5 g/t Ag, 1.1% S.

The corresponding acid soluble tin assays are low (generally <0.01% but up to 0.02%). Thus it is likely that the tin is present as cassiterite.

The presence of Sb (up to 0.61%) and Cu (up to 0.38%) corresponding to high silver assays may be indicative of the mineral tetrahedrite (silver-bearing variety : freibergite).

3.2.2. Adit 2

The average grade for all Adit 2 over 10 metres (17 assays) is 0.10% Sn, 3 g/t Ag, 0.11% Pb, 0.09% Zn, 1.7% S. The highest individual Sn assay was 0.41%.

3.2.3. Adit 3

The average grade for Adit 3 over 10 metres from 4N (4S) to 13N (14S) (19 assays) is 0.42% Sn, 12 g/t Ag, 0.22% Pb, 0.69% Zn, 0.7% S. The tin grade was largely due to a single result of 5.0% Sn for 6 - 7N.

3.3. Magnetics

Total magnetic field intensity values have been plotted on line profiles (plan 5) and are contoured on plan 6. The contour map reveals a significant positive anomaly located near the northern end of line 40E. This anomaly is related to magnetite alteration of the granite, which was observed as float in the creek just to the east of the anomaly.

A negative anomaly exists on line 00E near 80N. The significance of this anomaly is not clear.

3.4. Induced Polarisation

Both the resistivity and chargeability results from the I.P. survey have been plotted on the grid line profiles (plan 5). Preliminary results from Scintrex indicate a zone of high chargeability and high resistivity (but a local low) south of the baseline on lines 80E and 120E. The full report of Scintrex was not available at the time of writing.

4. CONCLUSIONS AND RECOMMENDATIONS

The alteration and mineralisation at the Globe Mine is located in the "red" granite, defined in at least one dimension by structural factors, near the site of intruded fine grained "white" granite. The presence of greisen veins in the area is also noted. This style of mineralisation is similar to that in other areas of the Heemskirk Granite (e.g. Sweeney's, Federation).

The tin mineralisation and the silver, lead, zinc mineralisation are distinct, though overlapping, and probably indicate at least two phases of mineralisation.

A zone of quartz-magnetite-tourmaline alteration was located by magnetics and occurrence of float. A sample from this float assayed 0.29% WO_3, 0.05% Sn. This zone warrants further investigation.

The following work is recommended for the Globe Mine area in 1981-82:

(i) Extension of grid lines 00E, 40E, 80E, 120E to 250N. Extension of the baseline 90 metres further west and cutting of two lines (40W and 80W) from the baseline to 250N. This involves about 1.1 kilometres of new lines.

(ii) Follow-up magnetics on all new grid lines established by (i).

(iii) Soil sampling of all grid lines at 10 metre intervals.

(iv) Petrological investigation of selected crushed rejects of adit samples, and geological mapping samples to determine the mineralogy and petrology of the mineralisation and alteration present.

(v) Completion of one diamond drill hole located as follows:

Northing	: 5 359 455
Easting	: 353 365
R.L.	: 318 metres
Bearing	: 280° (AMG)
Dip	: -70°
Est. Length	: 150 metres

situated five metres SSE of survey peg AM849 (RL 317.9). The hole is designed to pass 11 metres below the

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The program is designed to:

(a) Define the magnetic and geochemical anomaly located near line 40E.

(b) Locate further anomalous zones by geophysical and geochemical techniques.

(c) Delineate the alteration and mineralisation zone exposed by the adits.

(d) Assess the mineralogy of the mineralisation located.

Further work will be dependent on the results of the above program.

SAMPLE NO.	Sn	% SSn	Ag (g/t)	% Cu	% Pb	% Zn	% WO_3	% S	% As	% Bi	% Sb	Mo (ppm)
GLR 1	130 ppm	<0.01	209	0.08	7.56	9.90	-	9.1	-	<0.001	0.14	30
GLR 2	460 ppm	<0.01	135	0.11	0.38	0.18	-	0.5	-	0.013	0.19	15
GLR 3	700 ppm	<0.01	12	0.02	0.02	0.09	-	7.7	-	<0.001	0.01	35
GLR 4	470 ppm	<0.01	240	0.24	0.93	0.07	-	0.7	-	0.003	0.48	25
GLR 5	290 ppm	<0.01	74	0.26	2.22	2.50	-	2.5	-	0.006	0.55	30
GMS 1	0.05%	<0.01	<1	0.04	<0.01	<0.01	0.04	<0.1	<0.1	<0.001	0.01	-
GMS 2	0.02%	<0.01	19	0.09	0.42	4.15	0.04	4.3	<0.1	<0.001	0.01	-
GMS 3	<0.01%	<0.01	<1	0.03	<0.01	0.02	0.05	0.1	0.1	0.002	0.01	-
GMS 4	0.05%	<0.01	<1	0.06	<0.01	0.03	0.29	<0.1	<0.1	0.001	0.01	-
GMS 5	0.06%	<0.01	2	0.08	<0.01	0.03	0.06	0.1	<0.1	0.001	0.01	-
GMS 6	0.05%	<0.01	<1	0.03	<0.01	<0.01	0.05	<0.1	<0.1	<0.001	0.01	-

Location

Samples GLR 1 - 5 were spoil from dump below Adit 1 on Agnew Creek.

GMS 1 - collected from trench south of line 00E.

GMS 2 - spoil from dump below Adit 3.

GMS 3 - outcrop from Agnew Creek, 10 metres west of line 80E.

GMS 4 & 5 - float from 5 metres east of line 40E at 120N.

GMS 6 - sample location not known.

APPENDIX 1

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APPENDIX 2.

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PROTON MAGNETOMETER FEILD RECORDINGS

919142

18/3/81 Oporator: C. Cannard Grid Location: Globe Mine

LINE 00 E

Grid Station	Gamma Reading	Time (Am)	Diurnal correction	Corrected Reading
40 S	62301	9.55	+3	62304
30 S	62294		+3	62297
20 S	62291		+3	62294
10 S	62299		+3	62302
BASE LINE	62313		+3	62316
N	62321	10.00	+3	62324
20 N	62277		+3	62280
30 N	62303		+3	62306
40 N	62354		+3	62357
50 N	62318		+3	62321
60 N	62271		+3	62274
70 N	62218		+4	62222
80 N	62192		+4	62196
90 N	62250		+4	62254
100 N	62280		+4	62284
110 N	62320		+4	62324
120 N	62276		+4	62280
130 N	62292	10.10	+4	62296
140 N	62371		+4	62375
150 N	62357		+4	62361
160 N	62333		+4	62337

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919143

PROTON MAGNETOMETER FEILD RECORDINGS

18/3/1981 Operator: C. Cannard Grid Location: Globe Mir LINE 40 E

Grid Station	Gamma Reading	Time (AM)	Diurnal correction	Corrected Reading
50 S	62304	9.05	-1	62303
40 S	62294		-1	62293
30 S	62310		-1	62309
20 S	62285		-1	62284
10 S	62279	9.10	-1	62278
BASELINE	62280		-1	62279
10 N	62283		-1	62282
20 N	62281		-1	62280
30 N	62289		-1	62288
40 N	62284		ZERO	62284
50 N	62285		ZERO	62285
60 N	62308		ZERO	62308
70 N	62322		ZERO	62322
80 N	62305	9.20	ZERO	62305
90 N	62348		ZERO	62348
100 N	62358		ZERO	62358
110 N	62362		-1	62361
120 N	62374		-1	62373
130 N	62550		-1	62549
140 N	62486		-2	62484
150 N	62370	9.30	-2	62368

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919144

PROTON MAGNETOMETER FEILD RECORDINGS

18/3/81 Operator: C. Cannard Grid Location: Globe Min

LINE 80 E

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
55 S	62290	2.25	ZERO	62290
50 S	62288		ZERO	62288
40 S	62280		ZERO	62280
30 S	62280	2.23	ZERO	62280
20 S	62294		ZERO	62294
[illegible] S	62306		ZERO	62306
BASELINE	62276	2.20	ZERO	62276
10 N	62265		ZERO	62265
20 N	62259		ZERO	62259
30 N	62256	2.18	+1	62257
40 N	62238		+1	62239
50 N	62234		+1	62235
60 N	62237	2.15	+2	62239
[illegible] N	62247		+2	62249
80 N	62273		+2	62275
90 N	62269	2.12	+3	62272
100 N	62249		+3	62252
110 N	62245	2.09	+3	62248

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PROTON MAGNETOMETER FEILD RECORDINGS

919145

18/3/81 Operator: C. Cannard Grid Location: Globe Min

LINE 160 E

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
83 S	62266	12.30	+14	62280
75 S	62263		+14	62277
70 S	62258	12.25	+14	62272
60 S	62258		+13	62271
50 S	62254		+13	62267
40 S	62253		+13	62266
30 S	62249		+13	62262
20 S	62243	12.20	+13	62256
10 S	62241		+13	62254
BASELINE	62239		+13	62252
10 N	62243		+13	62256
20 N	62245		+13	62258
30 N	62241		+13	62254
40 N	62236		+13	62249
50 N	62245		+13	62258
60 N	62238		+13	62251
70 N	62226		+12	62238
80 N	62215		+12	62227
90 N	62206		+12	62216
100 N	62202		+12	62214
110 N	62204		+12	62216
120 N	62195		+12	62207
130 N	62209		+12	62221
140 N	62192		+12	62204
150 N	[illegible]			

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919146

PROTON MAGNETOMETER FEILD RECORDINGS

18/3/81 Operator: C Connard Grid Location: Globe Mine

LINE 160 E (cont)

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
160 N	62228	12·10	+12	62240
170 N	62206		+12	62218
180 N	62207		+12	62219
190 N	62205		+12	62217
200 N	62203		+12	62215
210 N	62213		+12	62225
220 N	62213		+12	62225
230 N	62211		+11	62222
240 N	62213		+11	62224
250 N	62213		+11	62224
260 N	62213		+11	62224
270 N	62216		+11	62227
280 N	62203		+11	62214
285 N	62227	12·00	+11	62238

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PROTON MAGNETOMETER FEILD RECORDINGS

919147

18/3/81 Operator: C. Cannard Grid Location: Globe Mine

LINE 200 E

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
90 S	62258		+14	62272
80 S	62259	12:30	+14	62273
70 S	62259		+14	62273
60 S	62255		+14	62269
50 S	62250		+14	62264
40 S	62242		+14	62256
30 S	62242		+13	62255
20 S	62240		+13	62253
10 S	62240		+13	62253
BASE LINE	62239		+13	62252
10 N	62237		+13	62250
20 N	62235		+13	62248
30 N	62230	12:40	+13	62243
40 N	62223		+12	62235
50 N	62219		+12	62231
60 N	62212		+12	62224
70 N	62202		+12	62214
80 N	62201		+12	62213
90 N	62200		+12	62212
100 N	62198		+11	62209
110 N	62194	12:46	+11	62205

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PROTON MAGNETOMETER FEILD RECORDINGS

919148

18/3/81 Operator: C. Cannard Grid Location: Globe Mine

LINE 240 E

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
90 S	62254	11.25	+7	62261
80 S	62248		+7	62255
70 S	62250		+7	62257
60 S	62242		+7	62249
50 S	62239	11.20	+7	62246
40 S	62236		+7	62243
30 S	62232		+7	62239
20 S	62232		+7	62239
10 S	62225		+7	62232
BASE LINE	62231		+6	62237
10 N	62220		+6	62226
20 N	62214		+6	62220
30 N	62210		+6	62216
40 N	62206		+6	62212
50 N	62200		+6	62206
60 N	62190		+5	62195
70 N	62189		+5	62194
80 N	62192		+5	62197
90 N	62189		+5	62194
100 N	62193	11.10	+5	62198

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PROTON MAGNETOMETER FEILD RECORDINGS

919149

Operator:

Grid Location: Globe Min

LINE 320 E

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
BASELINE	62194	12:58	+11	62205
10 N	62190		+11	62201
20 N	62187		+11	62198
30 N	62182		+11	62193
40 N	62181		+11	62192
50 N	62177		+12	62189
60 N	62170		+12	62182
70 N	62166		+12	62178
80 N	62159	1:05	+12	62171
90 N	62153		+12	62165
100 N	62146		+12	62158
110 N	62140		+13	62153
120 N	62132	1:09	+13	62145
130 N	62128		+13	62141
140 N	62120		+13	62133
150 N	62115		+13	62128
160 N	62109		+13	62122
170 N	62098		+13	62111
180 N	62095	1:12	+13	62108

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PROTON MAGNETOMETER FEILD RECORDINGS

919150

18/3/81 Operator: C Cannard Grid Location: Slate Mn

BASELINE

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
00 E	62311	10·20	+5	62316
10 E	62308		+5	62313
20 E	62310		+5	62315
30 E	62295		+5	62300
40 E	62279		+5	62284
50 E	62285		+5	62290
60 E	62306		+4	62310
70 E	62313		+4	62317
80 E	62282		+4	62286
90 E	62284		+4	62288
100 E	62264		+4	62268
110 E	62260	10·30	+4	62264
120 E	62260		+4	62264
130 E	62258		+4	62262
140 E	62253		+3	62256
150 E	62249		+3	62252
160 E	62253	10·40–10·50	+3	62256
170 E	62257		+3	62260
180 E	62249		+3	62252
190 E	62250		+3	62253
200 E	62253		+3	62256
210 E	62247		+4	62251
220 E	62249		+4	62253
230 E	62239		+4	62243
240 E	62[illegible]			

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PROTON MAGNETOMETER FEILD RECORDINGS

919151

18/3/81 Operator: C. Cannard Grid Location: Globe Mine

BASE STATION

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
BASE STATION	62275	1.00	+11	
	62273	1.10	+13	
	62272	1.20	+14	
	62271	1.30	+15	
	62273	1.40	+13	
	62278	1.50	+8	
	62281	2.00	+5	
	62283	2.10	+3	
	62286	2.20	ZERO	
	62286	2.30	ZERO	

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PROTON MAGNETOMETER FEILD RECORDINGS

919152

18/3/81 Operator: C. Cannard Grid Location: Globe Mine

BASE STATION

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
BASE STATION.	62286	9·03	ZÉRO	
	62287	9·10	−1	
	62286	9·20	ZÉRO	
	62288	9·30	−2	
	62285	9·40	+1	
	62283	9·50	+3	
	62283	10·00	+3	
	62282	10·10	+4	
	62281	10·20	+5	
	62282	10·30	+4	
	62283	10·40	+3	
	62283	10·50	+3	
	62281	11·00	+5	
	62281	11·10	+5	
	62279	11·20	+7	
	62279	11·30	+7	
	62278	11·40	+8	
	62277	11·50	+9	
	62275	12·00 NOON	+11	
	62274	12·10	+12	
	62273	12·20	+13	
	62272	12·30	+14	
	—	12·40	—	
	62275	12·50	+11	

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Appendix

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PRIVATE AND CONFIDENTIAL

A REPORT ON GRADIENT ARRAY EIP SURVEY OVER THE GLOBE MINE NEAR ZEEHAN, TASMANIA ON BEHALF OF RENISON LIMITED

BY

G.J. STREET, M.SC., D.I.C.
GEOPHYSICIST

SYDNEY, N.S.W.

JUNE, 1981

TAS-081C

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Data Presentation Page 2

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Appendix 'Gradient Array' Not provided

Plate 1 - Chargeability Contour Plan Renamed Plan 6 (in sleeve)

Plate 2 - Resistivity Contour Plan " Plan 7 (" ")

SCINTREX PTY. LTD.
GEOPHYSICAL CONSULTANTS AND CONTRACTORS

SUMMARY

A small gradient array survey over the Globe Mine area has located a large area of anomalous induced polarization response which is not closed off to the north, south, east or west. It is recommended that the area be repeated using a larger gradient array to better define the anomalous area and the zones within it.

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SCINTREX

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A REPORT ON GRADIENT ARRAY EIP SURVEY OVER THE GLOBE MINE NEAR ZEEHAN, TASMANIA ON BEHALF OF RENISON LIMITED

INTRODUCTION

At the request of Mr. L.A. Newnham, Chief Geologist for Renison Limited, Scintrex Pty. Ltd. executed an electrical induced polarization survey using the gradient array over the Globe Grid, Trial Harbour Road, Zeehan, Tasmania. The work was carried out by a four man crew under the leadership of Mr. I. Newby over two days, 27th and 28th November, 1980.

On-site geological direction was supplied by Renison Limited Geologist, Mr. P. Roberts, while the author and Mr. A.W. Howland-Rose undertook such additional supervision as was required.

METHOD

The gradient array method is briefly described in the attached appendix. On the Globe grid one gradient array was employed for the whole grid, with electrodes at 290N and 250S on 160E.

A Scintrex IPTAA 3 kilowatt time domain transmitter was used for energisation with a current of 1.5 amps. A standard 2 second energising cycle was produced, with a Scintrex IPR-8 to monitor the primary and secondary fields with a three slice

programme.

Only the middle slice (M_3) has been used in the data profiles and contour maps.

A 10 metre potential dipole was employed throughout, and all data was calculated using a programmable HP-97 calculator.

DATA PRESENTATION

The chargeability, in millivolts/volt, and apparent resistivity, in ohm-metres, have been drafted onto standard Renison sheets at the scale of 1:2000. Chargeability and apparent resistivity have also been contoured at 1:5000 on Renison standard map sheets.

DISCUSSION OF RESULTS

Resistivity results show little over the area except to indicate the strike of the rocks to be more or less at right angles to the grid lines. Such a contour plan is partly biassed by the grid lines and spacings.

Chargeability results over the area are generally high and the bulk of the area is considered anomalous. Using the 10 metre potential dipole, a high resolution is obtained. What is seen, therefore, is individual more polarizable zones within the main anomalous region.

Higher polarization is recorded on the southern side of the area compared to the northern side. This may be due to the southern electrode being placed within polarizable material. The anomalous region is not closed off in the south by

this survey and examination of lines 2700 and 2750 on the East Heemskirk grid shows it extends at least towards the south-east. A better 'feel' for the area would be obtained by using a larger array and placing the current electrodes in background material outside the zone of anomalous polarization.

A number of possible linear marker zones are identified by the letter 'A' to 'H'. However, the correlation of these zones is partly due to the line spacings and contouring effects. Geological input is important for such correlation, the mineralisation may indeed be more pod-like and not continue from line to line.

Zone 'A' appears the most continuous, most significant and interesting. This passes through the area of old workings and continues strongly towards the south-east. The zone was picked on the previous gradient array survey on the East Heemskirk grid and is open to the south-east.

Zone 'B' is fairly continuous but the correlation is poor on lines 80E and 120E as the anomalous region has not been closed off on these lines. The zone is possibly continuous with anomalies recorded on the East Heemskirk grid.

Zone 'C' is correlated over four lines, but there appears to be some structural change around 160E. This break is most obvious towards the northern part of the area, but zone 'A' appears to have only a slight displacement.

Zone 'D' is recorded only on line 160E. The polarization sources in this region appear more randomly oriented than elsewhere. This anomaly is not correlated with sources on other lines. The source in this case may not be at right angles to

the grid which would explain the irregular contour pattern in this region.

Zone 'E' is identified from a peak on line 00 at around 55S. It does not appear to have a definite continuation, but anomalously high polarization continues to the south-east, and is recorded again on line 2750N on the East Heemskirk grid.

Zones 'F', 'G' and 'H' are a series of polarization anomalies in the north-east of the area although these anomalies are not as high as those towards the south. The comparison with background is greater. Zone 'F' appears to die out to the east, but 'G' and 'H' are not closed off to the east.

A line by line description follows.

Line 00 ..... A broad zone of high chargeability is recorded between 30S and 100N. Though a low chargeability is recorded at 135N, the zone is not properly closed off to both north and south.

Individual sources are suggested at 5S, 20N, 45N, 75N, 95N, 120N and 150N. Effects of sources overlap so depth calculations are not possible except at 150N where a maximum depth of 20 metres is indicated.

The resistivity profile shows little.

Line 40E ..... A broad zone of high chargeability is recorded over this line. Although chargeability is lower towards the north, this zone is not properly closed off to north or south.

Responses from individual sources overlap and depths cannot be accurately determined. Possible sources occur below 25S, 5S, 15N, 40N and 80N. The source at 40N appears deeper, of the order of 30 to 40 metres, while the rest of the responses suggest shallower 20 metres maxima.

Line 80E ..... Two individual responses stand out on this line at 5S and 45N from sources at depths of 20 metres and 10 metres respectively. Possible other sources occur at south of 40S, 65N and 95N. The source at 5S coincides with a slightly lower resistivity zone centred slightly south at 10S. Sources appear to be steeply dipping.

The chargeability anomaly is not closed off to the south.

Line 120E ..... The major anomaly on this line peaks at around 20S but appears to be due to two sources, one at 20S and one further to the north around 10N. Each of these sources is apparently slightly less resistive as resistivity minima are recorded at 25S and 5N. These are probably the surface expressions of the sources. Depth of the sources is shallow at around a maximum of 20 metres.

Further sources occur at 50N which appears deeper at around a maximum of 40 metres, and at about 65S where the source looks to be at about 25 metres but is not completely resolved.

Line 160E ..... Again on this line the chargeability anomaly is not closed off.

Probable sources occur at 55S at a depth of 10 metres; at about 20S where a zone of high chargeability is not well defined - depth from the northern flank

is indicated at about 10 metres; 10N, a chargeability source at about 20 metres; 40N and 65N where a source at a depth of about 20 metres or more is not completely resolved by these results.

Line 200E ..... A chargeability anomaly on the southern end of this line is not closed off. The source appears to be at 90S or further south. The overall shape of the profile indicates the anomaly may be quite broad and the source deep or dipping to the north.

At 35S a chargeable source occurs at a maximum depth of 20 metres but is not completely resolved.

At 5S a chargeable source whose response is not completely resolved.

At 20N a chargeable source which appears shallow but is not completely resolved.

45N a chargeable source lying at a depth of around 30 metres

85N a chargeable source lies north of the end of the line.

Line 240E ..... The chargeability remains high throughout the area surveyed by this line. A number of individual sources occur at 85S or to the south of the end of the line.

55S a chargeable source which lies at a maximum depth of around 20 metres.

Three sources on the northern end of the line gave lesser responses but are possibly due to deeper sources. These are at 0, 35N and 60N. Although a much lower response than sources to the south, these still give a high chargeability

Line 320E ..... The southern end of this line does not adequately close off the anomalous area. A major source lies somewhere to the south of 5N.

The anomaly due to this has further responses on the flanks at 25N and 45N plus a smaller response at 65N.

The second major anomaly on the line is at 110N from a source at a maximum depth of 25 metres.

A further minor response at 145N is not completely resolved.

CONCLUSIONS

The gradient induced polarization survey has shown the bulk of the area to have a high polarization response. Partly this may be due to the electrodes, or in particular, the southern electrode being placed in a high polarization source.

A number of parallel zones within the overall anomalous area are identified and appear to be fairly continuous from east to west. Some form of dislocation occurs around 160E. Possibly this is a fault and there is some suggestion of a polarizable source which is not at right angles to the line.

The area should be repeated using a larger gradient array but at the same potential dipole spacing. Further lines to the east and west would help define the area

better as would extensions of all lines to the north and south.

Respectfully submitted on behalf of:

SCINTREX PTY. LTD.

G.J. STREET, M.Sc., D.I.C.

GEOPHYSICIST

APPENDIX 6

REPORT ON GEOLOGICAL MAPPING OF THE EAST END S.P.L. 129, BY R.POLTOCK

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SPL 129

GEOLOGICAL MAPPING

COMSTOCK - SWANSEA, SPRAY-NUBEENA DISTRICT

ZEEHAN TASMANIA

Contract geological mapping for Renison Ltd.

Roger Poltock Geological Pty. Ltd.

May-June 1981.

R. Poltock.

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Introduction

Mapping - Rock Sampling

Geology Stratigraphy - PreCambrian Oonah quartzite & slate

Cambrian Crimson Creek Group
- Basic volcanics
- chert
- Conglomerate
- Siltstone - Grit/ conglomerate

Dundas Group
- Greywacke siltstone conglomerate
- Siltstone, sandstone, greywacke limestone

Ordovician Mt. Zeehan Conglomerate

Intrusives Cambrian - Devonian

Structural geology

Mineralization - Ag Pb Zn fissure lodes
- Quartz pyrite minor Ag Pb Zn
- Pyritic horizons
- Nickel

References

Plans 1. Fact Geology
Location of Mines and Rock Samples
Scale 1:5000 NOT PROVIDED

2. Geological Interpretation
Scale 1:5000 NOT PROVIDED

Appendices Rock Samples - Stratigraphic locations

INTRODUCTION

The project involved detailed geological mapping of the eastern block of SPL 129, a 12 km^2 area lying east of 357000E A.M.G. Field work carried out during May-June 1981. Access to the area is via the Zeehan - Trial Harbour Road then along the Comstock tram or via the Spray mine and Grubb's tram.

The area coincides with the S.W. sector of the Zeehan Ag Pb Zn mining district. Geology is dominated by a basal E-W trending highly folded sequence of PreCambrian Oonah quartzite and slates with minor carbonates and spilites which is overlain by infolded-faulted Cambrian basic volcanics, cherts, siltstones, grits, conglomerates, greywacke/silt and minor carbonates belonging to the Crimson Creek and Dundas Groups. To the south these sediments are overlain by the basal ordovician Mt. Zeehan Conglomerate.

The mapped area lies immediately east of the Heemskirk granite contact hornfels aureole, hornfelsed silt, basic volcanics with minor tourmalinization occur near Comstock Creek.

Past Mining - Exploration History

1. Extensive prospecting and mining of Ag Pb Zn fissure lodes, during 1890-1920's, the most prominent being the Spray-Nubeena lodes and Grubb's.

2. 1920 - 1930's prospecting and drilling assistance from Mines Dept. at the Spray, Swansea (McIntosh Reid 1922-25) and North Tasmanian (latter 3 DDH with recovery of 6-8% reported by Placer Prospecting Pty. Ltd. 1966).

3. Zeehan Exploration Pty. Ltd. 1946-1947 diamond drilling at Spray mine associated with Hills 1947 Spray-Nubeena shear zone.

4. R.B. Hills mining and reavaluation of the TLE - Swansea mines reported by Mines Dept. Taylor 1953.

5. Placer Prospecting Pty. Ltd. 1966. Again a concentration on the Spray-Nubeena lode system as outlined by Hills 1947 with several traverses of Ag Pb soil geochemistry.

6. Teneco Pty. Besley 1971. Drilling and underground sampling of the Spray Mine.

7. Renison Ltd. 1975. Limited airborne geophysical survey with follow up of 2 N.E. lines with ground magnetics and Cu Pb Zn Ag Sn soil geochemistry between Nth. Tasmania and TLE Mines.

Mapping

A total of 19 field days between May 11 - June 17 1981 spent mapping, walking access is good, the area mainly open, buttongrass with sedge swamps with patchy teatree thickets with heavy forest in the S.W.

Topography is subdued-rounded even the resistant Oonah quartzite & slate with outcrop limited to streams and mine workings. Quartz, quartzite float from the Oonah, and gravels to 2 metres deep and more locally talus from the Mt. Zeehan conglomerate blanket outcrop.

In the field, data and rock sample locations were recorded on 1:5000 colour aerial photos, these enlargements from the 1:25000 scale, Run Nos. 423-5 give a complete photo coverage of the area.

The data was then transferred to 1:5000 scale topographic transparencies, these sheets enlarged and retraced from the 1:15840 (imperial) Zeehan sheets, the mapped area coincides with the corners of 4 sheets, Nos. D1/1 - D 1/4.

Two problems encountered in data plotting.

a) due to distortion away from the centres of the photographs a 25-50m error in location plotting may have occurred when transfering data to the topographic sheets.

b) although photo control for location was excellent, little topographic contour control could be exerted due to flat lying country, particularly in swampy drainage systems when transferring data to topographic sheets. This compounded problem by (a) particularly away from definite features e.g. trams, dissected stream channels.

ROCK SAMPLING

A total of 105 rock samples were collected See Plan 2 and Appendices and numbered e.g. SPL 129
105
Date collected

Of these a) 30 mineralized mine dump samples (with the exception of 4-7 outside SPL in Comstock-Brittania) were assayed for Cu Pb Zn Ag As Bi Sn & W. These were forwarded for assay in two batches

- 25th May Nos. 2 - 45 not inclusive
- 15th June Nos. 52 - 105 not inclusive

b) many sliced for more positive identification and Nos. 10, 14, 16 - 18, 24 - 26, 28 have been thin sectioned, these with the exception of 10 and 26 were of fine - medium grained volcanics.

GEOLOGY

Stratigraphy

The basal unit in SPL 129 is the PreCambrian Oonah quartzite and slate, which has an apparently faulted or unconformable contact with the overlying sequence of basic volcanics, conglomerate, chert, siltstone, grits, greywackes and minor carbonate which are in turn conform-unconformably overlain in the south by the basal Ordovician Mt. Zeehan Conglomerate.

The intervening volcanics and sediments are dated as Cambrian and are further divided on the basis of change in sedimentation into the Crimson Creek and Dundas Groups. This division is substantiated by the presence of fossils in McLean Creek (Blissett 1962 Dundas group fossiliferous Crimson Creek unfos.). For samples of stratigraphic units see appendices.

PreCambrian Oonah Quartzite - Slate

The sediments generally form positive topography, characterized by rounded hills covered in a mantle of quartz, quartzite float, supporting - button grass with the exception of deep gullies where Baera, Eucalypt, Teatree and Banksia thickets occur.

Outcrop even in this resistant unit is scattered, the best sections exposed in the Comstock tram immediately south of Trial Harbour road, Grubbs Tram and McLean's Creek downstream of Grubb's Shaft.

The Oonah is dominated by indurated, quartz veined black-grey frequently micaceous quartzites with interbeds of dark siltstone and slate. On the surface quartzite appear to be dominant but in widely scattered mines and prospects the true proportion of siltstone and the lack of subordinate rock types become apparent.

In streams and cuttings the quartzites-slates are well bedded, but in weathered surface exposures a weak foliation is the dominant feature, the bedding often difficult to recognize.

No regional internal stratigraphic divisions have been made within the Oonah. Elsewhere in the Zeehan field where normal Oonah-Crimson Creek contacts occur it is characterized by an increased proportion of siltstone and the presence of dolomite and spillites Blissett 1962, King & Blissett 1968. A sequence similar to this may occur just north of the licence in the Comstock mine area where dolmitic limestone outcrops.

The absence of these sediments in the SPL is taken to indicate the faulted and/or unconformable nature of the Crimson Creek - Oonah contact.

Subordinate rock types in the Oonah.

1. Sunshine Mine - Siltstone & Carbonates.

At this location a broad E-W trending valley occurs surrounded by hills of Oonah quartzite and slate. Exposures in the valley floor are poor but black siltstones predominate with a single pale brown carbonate horizon outcropping 75-100m N.W. of the mine workings. This valley is an anomalous topographic feature in the Oonah and may contain significant limestone horizons.

2. Spilite - Pyritic beds 450m S.E. Grubbs Shaft.

These rock types are exposed in an extensive landslip in the headwaters of a small stream.

The spilite is yellow-brown, fine grained and despite it being deeply weathered vesicles are still apparent. It occurs as lenses and pods 0.5m thick within foliated black siltstone and quartzite. King & Blissett 1968 (from Twelvetrees 1910) reports other spilitic rocks in the northern ends of the lower levels of Grubbs Mine and the Spray Mine on No. 2 & 5 levels.

The spilites found in SPL 129 are confined to the above area forming a minor part of the sequence and won't be discussed further. King & Blissett 1968 gives a comprehensive coverage in regards to their intrusive - extrusive nature, thin section descriptions etc. from the Oonah - Queen Hill area.

Approximately 50m downstream from the landslip a shallow tunnel has been driven in the quartzite and slates, exposing massive fine grained pyrite with minor galena. Further downstream immediately above the junction with the main stream a second pyritic horizon 1 - 2m thick occurs within a well bedded quartzite and siltstone sequence. Nowhere else in SPL 129 have similar pyritic and spilitic rocks been seen, the two may be closely associated.

Cambrian

Geological mapping of the Cambrian in this area has previously been confined to broad divisions of Crimson Creek - Dundas Groups and basic - ultrabasic intrusives, with the exception of Taylor 1953, some detailed description of sediments between the T.L.E. & T.L.E. Swansea mines.

The presence of Dundas group sediments has been established by Blissett 1962 on fossiliferous basis in McLeans Creek but defining the non fossiliferous underlying Crimson Creek group is more difficult. Its presence may be doubted due to the fact that argillites characterizing this group elsewhere are absent (i.e. usually grey - chocolate pink tuffaceous wackes and silts with deep clay soil profiles). Crimson Creek? sediments north of the Spray appear to be more like the argillite sequence - contain, greywacke siltstone, dolomitic silts, some volcanic breccias see Rock sample 79.

It may be possible that all Cambrian sediments in the SPL belong to the Dundas group or that a atypical sedimentation took place in a separate basin with deposition of basic volcanics, quartzose grits and clean siliceous silts rather than clayey tuffaceous wackes.

Outcrop of the Cambrain units is poor, better exposures confined to mine workings and tram cuttings between the T.L.E. - Swansea mines (these confined to what shall be considered Crimson Creek Group in this report). Dundas group greywackes are less exposed, most extensive outcrops occurring in McLean's Creek immediately upstream of the Mt. Zeehan Conglomerate.

Crimson Creek Group

A) Basic Volcanics

Throughout the mapped area this unit is the

dominant rock type overlying the Oonah quartzites. They have previously been mapped as i) isolated masses of serpentinite-pyroxenite in vicinity of the TLE and S.W. of the Swansea mine.

ii) being part of the McIvor Hill gabbro in the west near Comstock Creek (from airphotos the gabbro appears to form a different style of outcrop to the S. & S.W. of Comstock Creek outside the mapped area).

More detailed mapping failed to locate any serpentinites the basics are frequently chloritized. The units previously mapped as ultrabasics appear to be part of one extrusive basaltic sequence. Evidence for this is:-

a) outcrops conformable with enclosing sediments

b) contain lenses of siltstone, conglomerate, and are closely associated with cherts.

c) most are fine grained.

d) occurence of pillow lavas, vesicular - amygdaloidal lavas and volcanic breccias.

Best exposures of the basics can be seen

- in the T.L.E. and Stonehenge workings
- hornfelsed sequence near Comstock Creek in the west.
- low hills south of the Swansea mine.

Within this unit considerable local variation occurs, those in the south associated with thick red cherts, in vicinity of the T.L.E. abundant amygdaloidal lavas with only occasional chert lenses, and finally the hornfelsed suite in which pillow lavas, basaltic breccias predominate and cherts are absent.

<u>Basalts</u> - these dark grey - green, fine grained chloritic, weathering to orange brown clay soil. Frequently contain rounded quartzes which in most cases appear to be secondary vesicle fillings. However some quarzes may be primary, some phenocrysts - crystal fragments of feldspar - pyroxenes occur.

<u>Hornfelsed Basalts</u> - Pillow lavas were only located in the hornfelsed zone these may occur more extensively but were only recognized in this area of total outcrop.

Pillows are fine grained basaltic roughly 30cm in diameter, with radiating tension cracks around their rims. Fine grained silty sediment occurs between the pillows.

Hornfelsed Basaltic Breccias - Conglomerates - These are coarse grained (max. 10 cm) composed of angular - subrounded fragments of basaltic - gabbroic material, matrix is a minor component. Scattered lenses of fine tuffaceous greywackes 5cm thick occur through these volcanics.

B) Chert

Red-white cherts are closely associated with basic volcanics as stratigraphic horizons in the south near McLean's Creek and irregular narrow fracture fillings at the T.L.E. mine.

Most extensive outcrops are S.W. of the Swansea forming low ridges with a maximum exposure of 10 metres thickness on the western bank of McLean Creek. Other occurrences are restricted to angular blocks and fragments of chert on ridge tops, it is possible that cherts are more extensive, thin bands not forming defineable outcrops.

Cherts are fine to medium grained (latter with quartzitic granular texture), fractured with irregular quartz fillings, usually massive, bedding not prominent.

Fragments and pebbles of chert are common in the coarse conglomerates of the Crimson Creek group.

C) Conglomerate.

These conglomerates are frequently associated with basic volcanics, often locally overlying the Oonah quartzite. However similar conglomerates occur in the Dundas group differing only in lower chert component.

Outcrops are deeply weathered, the conglomerates not forming positive topography, better exposures occur at the T.L.E. and Tasmanian mines where it overlies the Oonah, with isolated outcrops south of the North Tasmanian. Similar conglomerates seen on the dump at the Silver Duke mine, these would overly the Oonah.

The conglomerate is composed of rounded pebbles - cobbles (max 15cm) of tuffaceous wacke, pink - olive green chert and some quartzite set in a soft tuffaceous matrix. The only unweathered conglomerate occurs on the

Tasmanian shaft dump here the matrix is often carbonate rich, this may be a secondary feature associated with mineralization. The carbonate component may be more widespread but isn't recognized due to weathering, which in turn it may be responsible for.

This unit has previously been mapped as Permian Tillite, but these conglomerates seem to be

- structurally part of the Cambrian sequence
- are cut by narrow Devonian? quartz veins at Hill's workings 250-300m. north of the Swansea.
- lacks the clayey matrix which is typical of the tillites.

D) Siltstone - Grit/Conglomerates

In the Cambrian sequence in vicinity of T.L.E. - Swansea mines this unit is the most prominent feature forming a low strike ridge from the hornfelsed zone to the east. To the south of the Swansea the grits form an insignificant part, associated with and may be replaced by cherts.

The siltstones form the major part of the sequence, with lenses of the coarser material occuring throughout but concentrated on the southern flank of the unit. In previous mapping the grits - siltstones have been given most attention, particularly Taylor 1953, using the grit ridges as marker horizons to locate minor fractures relatedto fissure lodes in vicinity of the T.L.E.

From the T.L.E. to the North Tasmanian the siltstone appears to conformably overly the basic volcanics, the grit conglomerates being confined to the upper part of the silt sequence. The south facing of these sediments is based on graded bedding in grits 400m south of the T.L.E. However Taylor 1953 considered these sediments to face north the coarser sediments at the base fining up through siltstones, these overlain by the volcanics. This is a more logical sequence but the alternative is favoured because of facing in grits, and the volcanics overlying the Oonah would appear to be older than the siltstone between the T.L.E. and North Tasmanian - unless this is a fault contact.

The grits are well sorted, grade from coarse sandstone to pebble conglomerates composed of angular-rounded fragments of black-white chert and quartz. The matrix a minor component is soft and on weathered surfaces the pebbles are prominent, outcrops crumbling easily.

Siltstone are usually fine grained, siliceous pale-dark grey, massive to finely laminated, containing scattered beds of sandstone and grits. Most extensive exposures are in the hornfels zone where they are dark grey, laminated, breaking with a conchoidal fracture.

Dundas Group

This group includes all Cambrian sediments overlying the basic volcanic - chert - conglomerate - silt/grit sequence and underlying the Mt. Zeehan Conglomerate, the upper and lower contacts are at least partly conformable.

The Dundas group is dominated by greywackes, conglomerates and siltstones, all being compositionally similar differing only in grain size and carbonate content. This unit has been mapped in less detail due to the lack of distinctive stratigraphic horizons and the lack of mine-prospect exposures which are confined to the Crimson Creek group. These sediments outcrop south of the T.L.E. and are best exposed S.W. of the Swansea mine in McLean's Creek.

Greywackes are common to all of the Dundas group and it can be divided on basis of the conglomerate, sandstone, carbonate component.

1) Greywacke siltstone and conglomerate.

Best outcrops are scattered S.W. of the Swansea from McLean's Creek to the east. The greywackes are fine-coarse grained with scattered pebbles, composed of angular quartz grains and rock fragments in a clayey matrix, muscovite flakes are common. Most wackes are probably tuffaceous but some are cleaner, better sorted, quartz rich tending to sandstones. The greywackes are massive, bedding only apparent in the sandstone beds and when interbedded with siltstones.

Siltstones form a prominent part of the sequence, as thick units or as interbeds in the greywackes, most are grey to pale green.

Conglomerates occur as scattered lenses? up to 50m thick throughout the silts-greywackes, their lateral extent is difficult to ascertain due to poor outcrop. They range from pebble-cobble conglomerate (max. 15 cm) with varying matrix component. Composed mainly of rounded silt, greywacke,

quartzite and minor chert fragments, the matrix is soft clayey never quartzose like the overlying Mt. Zeehan Conglomerate. Samples of these silt-greywacke and conglomerates were acid tested for carbonates, none detected.

2) Siltstone, Sandstone, Greywacke, Limestone.

This sequence appears to overly the greywackes - conglomerates and to the west of McLean's Creek underlies the Mt. Zeehan Conglomerate. The sediments are distinguished from the rest of the Dundas Group by sandstone and carbonate content, outcropping in a tributary of the Little Henty River in the S.W. corner of the mapped area. This section of the SPL is covered in thick rainforest, access and outcrop is restricted to stream channels.

Although these sediments appear to be part of the Dundas group there may be affinities with

a) the upper Cambrian Tyndal Group which if present would underly the Mt. Zeehan Conglomerate

b) Oonah quartzite and slate, most siltstones are black, weakly foliated and although most sandstones are soft less indurated than the Oonah black micaceous quartzites (see Rock Sample 101) do occur. Some of these sandstones which seem to occur within a greywacke sequence can be traced east and appear to be structurally part of the Oonah.

This problem will only be resolved with more extensive mapping in the N. & W. of this stream system and the tributaries of Comstock Creek furtherwwest.

Several types of carbonates occur in the sequence

a) fine-medium grained greywackes with occassional fragments to 5mm, with a carbonate rich matrix.

b) calcareous siltstones interbedded with a)

c) white fine grained, limestone with a characteristic red brown weathering crust, some of these have a brecciated appearance.

All these carbonate rich sediments occur within 300 metres of each other in a stream running subparallel to the strike, a true thickness of approx. 100 metres.

At the northern most limit of mapping in this stream system blocks of white quartz rich pebble conglomerate occur. These blocks are angular, locally derived have similarities with the Crimson Creek grit conglomerates and Mt. Zeehan Conglomerate?

It is possible that some of this sequence is hornfelsed. (See Rock sample 100).

Ordovician - Mt. Zeehan Conglomerate

These resistant quartzose conglomerates form a prominent outcrop paralleling the southern lease boundary, peaking at Mt. Zeehan in the S.E. corner. The conglomerates in this area are at maximum development in the Zeehan field may reflect late Cambrian fault grabens?

The only outcrops inspected were immediately east and west of where McLean's Creek cuts the conglomerate. Here pink conglomerate composed of rounded quartzite cobbles (max. 20 cm.) in a quartz sandstone matrix conformably overlies the Dundas Group. Further east the conglomerates are unconformable, transgressive onto the Dundas, Crimson Creek Groups and Oonah quartzites.

Approximately 150m up from the base a silty sandstone horizon 100m. wide forms a topographic low within the resistant conglomerate.

Intrusives Cambrian - Devonian

Previous mapping in this area has indicated Cambrian basic-ultrabasic (Mines Dept. Zeehan Sheet) and Devonian granitic intrusives (Twelvetrees & Ward 1910, McIntosh Reid 1922). In this mapping project the only definite intrusives were narrow north trending gabbroic dykes in Dundas Group greywackes in the S.W. corner of the mapped area. These dykes are probably Cambrian and related to the McIvor Hill gabbro.

In McIntosh Reid's 1922 appraisal of the Swansea mine he reports - a feldspar porphyry dyke striking N.W. extending from the Swansea mine to just east of the Tasmanian intruding Crimson Creek and Oonah sediments. No evidence of this intrusive was seen, but the exposures in the Swansea weren't investigated.

- a narrow pyroxenite to the S.W. of the Swansea, this intrusive wasn't located, outcrop of Oonah quartzite and slate in this area is quite good. It is suggested that the location was misplotted and should be located further south where possible dolomitized basics occur see location

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Twelvetrees & Ward 1910 reported blocks of granitic quartz feldspar porphyry near Brennan's shaft 450m. west of the junction of Grubb's and Comstock trams. This location lies just to the north of the SPL in the Balstrup Fault zone, it was briefly visited but no evidence of the granitic rocks was seen.

Serpentinite and pyroxenite masses on the Mines Dept. 1":1 mile Zeehan sheet near the T.L.E. - Stonehenge mines and south of the Swansea, after detailed mapping can be shown to be part of a sequence of basic volcanics belonging to the Crimson Creek group. The section of the McIvor Hill gabbro lying within the mapped area is also part of the suite. The gabbro may be intrusive into it occuring further S. & S.W. of Comstock Creek.

King 1968 discusses the Oonah spilites, differentiating extrusive and a later intrusive phase. Similar intrusives may occur in the SPL acting as feeders for the lower Cambrian Crimson Creek basic volcanics?

STRUCTURAL GEOLOGY

Regionally this part of S.P.L. 129 is located in the S.W. flank of the Heemskirk Anticlinorium a feature recognized by Carey 1953. The core of this structure has been intruded by the Devonian Heemskirk granite, the eastern contact of which is located 2.5km west of the hornfels's in Comstock Creek.

Structure in the area is dominated by E-W strikes in both the Oonah and overlying Cambrian-Ordovician sediments. Elsewhere in Zeehan field Blissett 1962 reports a more or less conformable sequence from the Oonah to Ordovician, all deformation the result of the Late Devonian Tabberabberan Orogeny. However in the mapped area although strikes are subparallel throughout, the PreCambrian quartzite and slates appear to have an unconformable contact with the overlying sediments - and have been more intensly deformed than the Cambro - Ordovician rocks i.e.

:- steeply dipping, some tight fold cores 5 - 10 metre wave length suggesting isoclinal folding.

:- indurated quartzites, frequently quartz veined, weak foliation in both quartzite and slates.

The Cambro-Ordovician is in part conformable but the conglomerates are transgressive from overlying the Dundas Group to the Crimson Creek and Oonah quartzites east of McLean's Creek. A locally thick sequence of basal Ordovician conglomerate at Mt. Zeehan suggests late Cambrian Tyennan movements, with related faulting and deformation.

Major fold trends in the area are outlined by the Cambrian-PreCambrian contact and horizons in the Crimson Creek group. Internal structure of the Oonah quartzites and slates isn't apparent due to the lack of regional changes in stratigraphy. It is assumed that most contacts between the Oonah and the Cambrian are normal, faulting is restricted to decollement - bedding plane slip movement between the two units. The interpretation of fold trends is in part dependent on the affinities of sandstone quartzite ridges in the central and S.W. sector of the mapped area, it will be assumed here that they belong to the Oonah.

Fold trends are E-W, a synclinal zone extending west from the Swansea mine with the North Tasmanian, T.L.E. mines on the northern flank, this feature plunges west, near the Tasmanian mine, the syncline is constricted by a northerly crossfold in the Oonah.

The Cambrian sequence in this interpretted fold structure has a marked assymmetry in regards lithologies when comparing N. & S. limbs. An alternative interpretation is that the southern limit of the Cambrian sediments is faulted against the Oonah.

This possible syncline of Cambrian is seperated from similar sediments:-

(a) in the Zeehan district to the north by a broad ridge of Oonah which may in part be anticlinal and part fault emplaced, the Balstrup and the Tenth Legion faults bounding it to the N. & S.

(b) in the McLeans Creek area south of the Swansea by a narrow zone of Oonah quartzites. This has at least one tightly infolded basin of Cambrian sediments and may contain a broader enclosure further west underlying a swamp, although in this area there is uncertainty in regards sandstone - quartzite ages.

Locally Cambrian - Oonah contacts are variable in regards to overturning and/or thrusting.

a) North Tasmanian - possibly overturned contact with the volcanics, steep dips in the Crimson Creek grits and

silts, some of these northerly dipping, under the Oonah. This substantiated by ground magnetics profile from the Comstock Eastern line, Renison R975 the magnetic high occurring over Oonah quartzites suggesting the presence of underlying basic volcanics.

b) At the Swansea Crimson Creek grits dip to the south trending under Oonah quartzite suggesting a thrust fault contact.

As mentioned the major faults are the E.S.E. trending Balstrup and the Tenth Legion the latter a mapable feature in the west, but east of the T.L.E. displacement is lost in the volcanics, or fades out. All previous mine reports mention fault zones e.g. T.L.E., Tasmanian. Swansea between Oonah and Cambrian, none of these are mapable on the present scale, and are probably local thrust movements related to folding. Further north post Permian normal and thrust faults occur these locateable only in areas of Permian outcrop.

Negative linear topographic features cross cutting the strike of sediments are common, striking N. to E.N.E. There is no apparent displacement, most Ag. Pb. Zn. fissure lode workings are located in close proximity to these but themselves not apparently mineralized. The fissure lodes - fractures aren't prominent topographic features trend N. - N.N.W. includes those from T.L.E. - Swansea, and the Spray-Nubeena system.

The major fractures and faults don't appear to be mineralized, none of the prospects (with the possible exception of Grubb's) appear to be located on them.

MINERALIZATION

Little emphasis given to this aspect of the geology in the present mapping project, and was restricted to collection of mineralized dump samples in all mines and prospects located. These assayed for Cu Pb Zn As Ag Bi Sn & W., complete data isn't available at present, won't be discussed further.

Numerous detailed reports exist on mines and prospects in the SPL. Early writers include Waller 1903, Twelvetrees and Ward 1910, McIntosh Reid 1922, most information collected while mining andpprospecting was still in progress.

During the 1940's - 50's period of renewed exploration with detail mainly in the Spray-Nubeena lodes Hills 1947 and T.L.E. - Swansea mines Taylor 1953.

Since the 1960's most exploration concentrated on the Spray Mine. - Placer Prospecting 1966 and Teneco 1971 with regional coverage of the field by -

- Blissett 1962 general description of geology and mines

- King & Blissett 1968 more detailed account of geology related to mineralization, particularly host rock association.

- Bothe & Williams 1971 descriptive mineralogy.

From present observations mineralization in this section of SPL 129 has been divided into:-

a) Ag Pb Zn fissure lodes, these trend N.N.W. throughout the area and can be further divided on the basis of the associated host rock

- Oonah quartzite and slate, this unit contains the major metal producers, includes the Spray - Nubeena Mines and Grubb's shaft.

- Crimson Creek grits, silts and basic volcanics include the T.L.E. - Swansea mines, all of these located adjacent to the Oonah but not apparently extending into it.

Extensive sideritic and dolomitic alteration is associated with some prospects, particularly Grubb's, the Tasmanian (carbonate rich conglomerate, - primary or secondary) and in vicinity of the Silver Duke.

b) Quartz pyrite with minor Ag. Pb. Zn, this style of mineralization appears to be of little consequence in regards Ag. Pb. Zn. production, except in the Comstock area N.W. of the S.P.L.

This mineralization is confined to the Oonah black siltstone in a zone extending from the Sunshine mine on Grubb's tram west to locations 36 and 94. The quartz pyrite occurs in more diffuse, less well defined lode channels often associated with siliceous gossand.

c) pyritic horizons - located S.E. of Grubb's Shaft in the Oonah quartzite, siltstone with minor spilite.

Ag. Pb. Zn. content seems to be minor, these may be similar to the pyritic Bradshaw's and Clarke's lodes at the Conan and Queen Hill mines. But from Blissett's 1962 descriptions of these lodes it isn't possible to determine whether they are fissure fillings or strataform.

d) Nickel? - McIntosh Reid 1922 reported nickel bearing sulphides associated with dolomitized pyroxenites in vicinity of the Silver Duke mine. This probably corresponds to location 85 approx 250m west of the above prospect, here dolomitized basics belonging to the Crimson Creek with minor blebs of sulphides have been trenched.

In all reports of prospects within S.P.L. 129 minor tin has only been recorded in the Spray Mine Teneco Besley 1971. Both & Williams 1971 record rare inclusions of gold in ore and quartz rich gangue from the Nubeena Mine.

The presenceoof both tin and gold appear to be of little economic significance, nowhere were alluvial stream workings located, with the exception of shallow prospect pits sunk in gravels derived from the Zeehan conglomerate south of the Swansea mine.

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Appendices: Rock samples - stratigraphic location

Unit	Sample No.
Oonah quartzite	3, 30, 39, 56, 101
slate	4-7, 9, 11 35-36, 41, 80, 83, 94
carbonates	8, 10, 37, 81
spilite & pyritic beds	69, 70
Crimson Creek Group	
volcanics	14, 16-18, 24-26, 28, 29, 31, 39 40, 42, 53, 55, 61, 63, 65, 66, 79, 85, 91, 95.
volcanics hornfelsed	48-51
chert	60-62
siltstone	19, 26, 29, 46, 47, 52
grit conglomerate	1, 2, 13, 20, 22, 38, 54, 57, 88,104
conglomerate	15, 21, 23, 27, 31, 34, 38, 58, 84
Dundas Group	
silt-greywacke-conglomerate	32, 33, 43, 45, 59, 64, 86, 87, 89 90, 99, 100, 103
sandstone	93
carbonates	96-98
Gabbro	92, 102.

APPENDIX 7

KELVIN AND MAYNES WORKINGS - MEMORANDUM, OCTOBER 1980

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RENISON LIMITED

INTRA-OFFICE MEMORANDUM

TO: SENIOR EXPLORATION GEOLOGIST

FROM: EXPLORATION GEOLOGIST

DATE: 9TH OCTOBER 1980

SUBJECT: OPTION TO PURCHASE AGREEMENT OVER KELVIN AND MAYNES WORKINGS, S.P.L. 129

1. RECOMMENDATION

An option to purchase agreement should be negotiated with the leaseholder of two M.L's (90M/72 and 4M/73) which cover Kelvin and Maynes Workings. An option period of at least two years is recommended to allow complete evaluation of the prospect.

2. INTRODUCTION

Kelvin and Maynes Workings were developed to exploit Sn mineralization discovered at the turn of the century. The prospect is currently covered by two mine leases, 90M/72 and 4M/73, with a total area of 32.4 ha. They are located near the Trial Harbour road, south of Mt. Agnew. Recently Renison has been approached by the leaseholder, Mr. F. Griffiths, who has indicated some interest in negotiating an option to purchase agreement.

3. GEOLOGY AND MINERALIZATION

The property yielded approximately 220 tonnes of Sn concentrate from alluvials and tourmaline veins. Most of the production (200 tonnes) came from Maynes Mine which is a series of shallow open cuts. The workings all lie in indurated and tourmalinized Oonah Quartzite and Slate near the southern contact of the Heemskirk Granite.

Primary mineralization occurred in irregular, tourmaline-rich veins, particularly in large bulges or "vugs" within those veins. The "vugs" were preferentially developed at the intersection of flat dipping and steeply dipping veins (Waterhouse, 1916). The main vein concentration appears to be at Maynes Mine, 250m south of the granite contact. Sn occurs as cassiterite, some of which formed in large botryoidal nuggets with a texture similar to that of wood tin.

The workings were briefly examined on September 30th, 1980. Eleven rock chip samples were taken (see attached plan for locations) with the following results:

Sample No.	Description	%Sn	% Sol.Sn	%Zn	%Ag	%WO_3
K/M 1	Brecciated black tour./ quartz - spoil	0.08	0.01	<0.01	1	0.01
2a	Quartz/minor tour. veining in quartzite	0.04	<0.01	<0.01	1	0.01
2b	Green tour.-veined quartzite	0.03	0.01	<0.01	1	0.01
3	Soft. clayey brown-black rock with pyrite	0.09	0.01	<0.01	2	0.03
4	Banded tourmalinized quartzite	0.06	0.01	<0.01	1	0.01
5	Mauve-brown altered quartzite-dense?	0.02	0.01	<0.01	2	0.01
6a	Very coarse grained green mica rock	0.01	0.01	<0.01	1	0.02
6b	Medium/coarse grained mica/ tremolite (?) rock	<0.01	0.01	0.02	2	0.02
7	Fine grained green tour. + tourmalinized quartzite - spoil	1.05	0.01	<0.01	<1	0.02
8	Black tour. veined grey quartzite - spoil	0.04	0.01	<0.01	2	<0.01
9	Green-black tour. rich (vein?) rock + dissem. pyrite - spoil	0.02	0.01	0.01	7	0.02

4. DISCUSSION

The area of maximum interest is in the immediate vicinity of Maynes Mine where there is potential for two types of mineralizatio:

(1) VEIN STOCKWORK

Water house's description suggests that much of the Sn occurred in flat-dipping veins. Hence there is potential for concealed mineralization beneath the workings. It is possible that the vein concentration increases with depth, thus permitting the existence of a moderate tonneage at moderate overall grade, particularly if the rock chip Sn assays - excluding K/M 6a, 6 and 7 - are representative of host rock between the veins.

(2) CONTACT GREISEN

Diamond drilling on the Area D grid east of these workings (D.D.H. TH1) showed that the granite contact dips outwards at 30 - 40°. It is possible, however, that the vein mineralization on this prospect reflects a granite cupola centred below Maynes Mine. Given that the Heemskirk Granite is stanniferous and the unreactive nature of the country rocks, there is definite potential for stanniferous greisen within such a cupola.

In addition there may be potential for stanniferous sulphide mineralization in the south-east corner of M.L. 90M/72. Here a N.N.E. trending fault has brought Crimson Creek Formation rocks into contact with Oonah Quartzite. Several samples of "gossan" float from this area (on line 20E) assayed 1.44% and 2.47% Sn.

REFERENCE

Waterhouse, L.L. 1916 : The South Heemskirk Tinfield. Tas. Geol. Survey Bull. 21

P.A. ROBERTS

APPENDIX 8

AGNEW GRID - SOIL SAMPLE DESCRIPTIONS

188

919190

00 → N

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 00 → N DATE OBS

STATION	SAMPLE No.	DEPTH CMS	DESCRIPTION
00		50	Black soil & grit
30N		50	Black grit & veg.
		50	" " & "
90N		50	" " & "
		50	" " & "
150N		50	" gritty soil.
		50	Grey grit.
210N		60	Brownish sandy clay.
		50	Grey brown grit.
270N		30	Brown fine gritty mud.
		50	Grey grit.
330N		50	Fine creamy grey grit.
		50	" Brown soil.
390N		50	Grey gritty soil.
		40	Grey brown grit.
450N		50.	Brown mud & grit.
		30	Dark brown soil & grit.
510N		45	light brown soil & mud? field notes hard to read.
		50	Fine gritty soil ? " " " "
570N		35	Grey grit & some clay ? " " " "
		50	Black soil.
630N	on Rock.	50	Brown soil
	on Rock.	50	" grit & weathered rock.
690N		50	Fine brown grit & clay.
		50	Brown Soil & fine grit.

Line 00 → N.

	Depth	Description.
780N	50 cms	Gritty clay.
810N	50	Brown grit.
840N	60	Brown clayey grit.
870N	60	Fine grey grit.

190

00 → N

919192

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 00 → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.		DESCRIPTION
780N		50		Gritty clay
810N		50		Brown grit
840N		60		Brown clayey grit
870N		60		Fine grey grit

191

919193

00 → S.

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 00 → S DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
30S		50cm	Black gritty soil
60S		50cm	Black fine grit & veg.
90S		50cm	Black gritty soil
120S		50cm	" muddy " & veg.
150S		50cm	Grey grit
180S		50cm	Black grit & veg.
210S		40cm	Grey grit
240S		40cm	Black soil & fine grit & veg.
270S		35cm	Black grit & veg.
300S		40cm	" " & "
330S		40cm	" coarse grit & soil.
360S		50cm	Grey grit
390S		40cm	Black gritty soil
420S		50cm	" " & veg.
450S		50cm	Grey grit
480S		30cm	" " & veg.
510S		50cm	Black grit
540S		40cm	Grey grit
570S		40cm	" "
600S		50cm	" "
630S		50cm	" "
660S		45cm	" "
690S		50cm	Brown "
720S		50cm	" soil.
~~750~~			

192

919194

100E → N
(1)

Form No. 69/69

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Gro. TRAVERSE Line 100E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION	
00		1'3"-1'6"	Black Soil with Granite grit.	
30N		"	" " " " "	
60N		"	Grey " " " "	
90N		"	" " " " "	
120N		"	" " " "	
150N	small creek crossing line 3 metres N with peg.	"	" " " " "	
180N	small creek @ 177N	1'3"-1'6"	" " " " " Scree chips.	
210N	Peg in creek.	"	" Brown " " " "	sampled @ 207N
240N		"	Grey Granite grit.	
270N		"	" " "	
300N		"	" Soil & " "	
330N	creek @ 333N	"	Brown clayey Soil.	
360N		"	Grey granite grit	
390N		"	" " "	
420N		"	" " " & Brown Clay.	+3'6"
450N		1'-1'3"	" " " & chips.	+15'
480N		1'3"-1'6"	" " " & soil.	+3'
510N		"	Brown clayey soil.	+3'
540N		"	" " "	+3'
570N		"	" " " & granite chips.	+15'
600N		"	Grey gritty soil & clay.	+42'
630N		"	" " " & "	+42'
660N	next to old Diguna 67E + 01N	"	Grey Soil & chips.	+31'
690N	creek @ 675N	"	Grey clay.	+20'
720N		"	" gritty clay	+21'

193

~~919195~~

100E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Grid. TRAVERSE Line 100E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION	slope corrections added.
780N		1'-1'3"	Grey clay.	+ 30'
810N		1'-1'3"	Grey gritty clay.	+ 11'
840N		1'-1'3"	" " "	+ 15'
870N		1'-1'3"	" Clay.	+ 7'
900N		1'-1'3"	" "	+ 11'
930N		1'-1'3"	" "	+ 30'
960N		9"-1'0"	Black Soil on Granite outcrop.	+ 15'
990N	10'N 3'W is Peg 600E 1080N	9"-1'0"	Grey gritty Soil " " "	30'
1020N		9"-1'0"	Black gritty soil " "	+ 1'0"
1050N		1'-1'3"	Black Soil.	+ 11'
1080N		1'-1'3"	" " & Veg.	+ 1'6"
~~1110~~N		End	of line.	
~~1140~~N				
~~1170~~N				
~~1200~~N				

194

919196

100 E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 100 E → S DATE OBS

STATION	SAMPLE No.	DEPTH CMS	DESCRIPTION
30 S		50 cm	Grey gritty soil.
		45 cm	" " "
90 S		50 cm	" " "
		50	" " "
150 S		50	" " "
		50	" Brown " "
210 S	6 mile west of Peg	50	Beige brown gritty clay.
		35	Brown gritty soil.
270 S		45	" " "
		50	Grey " "
330 S		50	" " "
		50	Brown gritty clayey soil.
390 S		50	Brown grey " " "
		50	Beige brown " " "
450 S		50	Brown gritty soil.
		40.	" " " & weathered rock.
510 S		35	" beige " " & " "
		50	Grey gritty soil.
570 S		45	Beige brown " "
		50	Brown " "
630 S		40	Beige " " " & weathered rock.
		50	Grey gritty soil.
690 S		40 cm	Beige brown gritty clayey soil.

195

~~91919~~

200E → N

(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA AGNEW GRID TRAVERSE LINE 200E → N DATE OBS

STATION	SAMPLE No.	DEPTH TO Bottom hole	DESCRIPTION
00		75cm	Gritty beige Soil.
30N		50cm	" " "
60N		30cm	Black Soil on outcrop.
90N		75cm	Gritty beige soil
120N		50cm	" " "
150N	154N creek.	75cm	" " "
180N		50cm	" " "
210N		50cm	" " "
240N		50cm	" " "
270N		75cm	" " "
300N		75cm	" " "
330N		75cm	" " clay.
360N		50cm	" " soil
390N		50cm	" " "
420N		50cm	" " "
450N		60cm	" " "
480N		75cm	" " clay.
510N		75cm	" " clay or weathered granite (Iron rich?)
540N		50cm	" " Soil.
570N	Top of Hill.	40cm	" " " on outcrop.
600N		75cm	Grey Clay.
630N		20cm	Black Soil & Veg on outcrop.
660N		50cm	Gritty beige Soil.
690N		25cm	Beige clay on outcrop.
720N		50cm	Gritty beige clay.
750N		50cm	

196

919198

200E → N.

②

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 200E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
780N		70cm	Beige Gritty Soil.
810N		~~70~~ 50cm	Brown ~ ~
840N		50cm	Beige ~ ~ & weathered Granite
870N		50cm	~ ~ ~
[illegible]N		75cm	~ ~ ~
930N		70cm	~ ~ ~
960N		75cm	~ ~ ~
990N		75cm	~ ~ ~
1020N		50cm	~ ~ ~
1050N		90cm	~ ~ ~
1080N		75cm	~ ~ ~
~~1~~ 1110N		90cm	~ ~ ~
1140N		70cm	~ ~ ~
[illegible]70N		70cm	~ ~ ~

197

919199

200E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 200E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms		DESCRIPTION
30S		50		Coarse brown grit near vines bank.
		50		Black soil & grit
90S		50		" " & "
		50		" " & "
150S		50		Black clayey soil.
		50		Black soil, brown & grey grit & rock chips.
210S		50		Grey grit
		50		Grey " & black soil.
270S		50		" " & " "
		50		Fawn & grey grit
330S		50		" & " "
		50		" & " "
390S		40		Fawn grit & clay.
		40		black soil & grey grit & chips.
450S		50		brown gritty soil over black grit.
		50		Fawn gritty soil.
510S		40		" " "
		50		Brown gritty clay.
570S		50		black gritty soil & brown clay.
		50		Dark brown gritty soil.
630S		30		Grey soil & weathered rock.
		50		black gritty soil & chips.
690S		50		" " " & "

198

919200

300E → N

(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt AGNEW TRAVERSE 300E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
00		70cm	Beige Gritty Soil
30N		50cm	~ ~ ~
60N		50cm	Grey ~ ~
90N		55cm	Beige ~ ~
120N		70cm	~ ~ ~
150N		60cm	~ ~ ~
180N		70cm	~ ~ ~
210N		60cm	~ ~ + weathered Granite
240N		80cm	" ~ ~
270N		50cm	~ ~ ~
300N		70cm	~ ~ ~
330N	Unable	to	Sample (creek)
360N		80cm	Beige Gritty Soil
390N		50cm	~ ~ ~
420N		60cm	~ ~ ~
450N		50cm	~ ~ " + weathered Granite
480N		35cm	~ ~ ~ on outcrop.
510N		15cm	Brown Soil + Veg ~ ~
540N		70cm	Beige Gritty Soil
570N		50cm	~ ~ ~
600N		70cm	~ ~ ~
630N		70cm	~ ~ ~
660N		65cm	~ ~ ~
690N		80cm	~ ~ ~
720N		75cm	~ ~ Clay.
750N		[illegible]	[illegible]

199

919201

300E → N
②

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA MT AGNEW TRAVERSE 300E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
780N		80cm	Orange beige gritty clay.
810N		70cm	Beige gritty soil.
840N		80cm	" " "
870N		80cm	" " "
[illegible]00N		50cm	" " "
930N		70cm	" " "
960N		30cm	" " " on outcrop.
990N		50cm	" " "
1020N		70cm	" " "
1050N		70cm	" " "
1080N		50cm	" " "
1110N		50cm	Black Soil & veg on outcrop.
1140N		50cm	Grey gritty soil.

200

919202

300 E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 300 E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms		DESCRIPTION
30 S		50		Brown soil + grit
		50		" " + "
90 S		50		Brown grit
		50		fine grey grit
150 S		50		" " "
		50		" " "
210 S		50		" " "
		55		Dark chocolate soil.
270 S		45		Grey grit
		40		" "
330 S		60		Dark chocolate soil + grit
		45		Grey grit
390 S		45		Brown soil + grit
		45		" " + "
450 S		35		" " + "
		50.		Fine sand.
510 S		50		Brown soil + grit
		50		Brown grit
570 S		50		Grey soil + grit
		50		Fine grey grit
630 S		50		Brown soil + grit
		50		Brown soil
690 S		50		Black soil
720 S		50.		Sand.

201

919203

400E → N

(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 400E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
00	Sampled 4m north of flag	70cm	Black gritty soil
30N		65cm	Beige " "
60N		60cm	" " "
90N		65cm	" " "
[illegible]N		40cm	" " on outcrop
150N		40cm	" " " "
180N		70cm	" " "
210N		60cm	" " "
240N		75cm	" " "
270N		85cm	" " "
300N		70cm	" " "
330N		75cm	" " " & weathered Granite.
360N		70cm	" " "
[illegible]0N		65cm	" " "
420N		65cm	" " "
450N		70cm	" " "
480N		60cm	" " " & weathered granite.
510N		50cm	" " " on outcrop.
540N		80cm	Khaki beige clay Sampled 6m north of flag.
570N		40cm	Beige gritty soil on outcrop.
600N		50cm	" " "
630N		60cm	" " "
660N		60cm	" "
690N		40cm	" " " on outcrop
720N		70cm	" " clay

202

919204

400N → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt AGNEW TRAVERSE Line 400E → N DATE OBS

STATION	SAMPLE No.	DEPTH		DESCRIPTION
780N		25cms		Beige gritty soil & veg on outcrop.
810N		60cms		" " "
840N		70cm		" " "
870N	in creek	80cm		" clay.
900N		80cm		" gritty clay
930N		80cm		" " soil.
960N		25cm		" " " on outcrop.
990N		75cm		" " "
1020N		75cm		" " "
1050N		50cm		" " " on outcrop.
1080N		30cm		Black Soil & Veg on outcrop.
1110N		35cm		Beige gritty soil " "
1140N		50cm		" " " " "
1170N		80cm		Black gritty soil "
			End	of line

203

919205

400E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 400E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms		DESCRIPTION
30S		60		Black grit
		50		" "
90S		50		" "
		50		" "
150S		50		" "
		50		brown grit
210S		50		~~black grit~~ grey grit
		50		" "
270S		40		black grit
		30		" "
330S		50		Grey "
		50		black "
390S		50		" "
		50		" "
450S		40		" "
		40		" "
510S		30		" "
		50		Sandy soil
570S		45		Grey grit
		50		black soil
630S		40		Grey gritty soil
		50		Grey grit
690S		50		" "
720S		50		" "

204

919206

500E → N
①

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt AGNEW TRAVERSE Line 500E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
00		75cm	Beige Gritty Soil.
30N		65cm	" " "
60N		70cm	" " "
90N		70cm	" " "
120N		75cm	" " "
150N		75cm	" " "
180N		75cm	" " "
210N		70cm	" " "
240N		60cm	" " "
270N		60cm	" " " & weathered granite.
300N	? no notes.		
330N		50cm	Course grey grit.
360N		50cm	" " "
390N		45cm	" " "
420N		50cm	" " "
450N		50cm.	Tan brown clay.
480N		50cm	Course grey grit.
510N		50cm	" " "
540N		50cm	" " "
570N		50cm	" " " & weathered granite.
600N		50cm	" " " & " " ?
630N		30cm	" " "
660N		50cm	" " "
690N		50cm	~~Khaki clayey Soil & grit~~ Course grey grit.
720N		50cm.	Khaki clayey Soil & Grit.
750N		50cm.	

205

919207

500E → N

(2)

Tm No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

EA Mt Agnew TRAVERSE Line 500E → N DATE OBS

ION	SAMPLE No.	DEPTH	DESCRIPTION
780N			Not Sampled Rock Outcrop, no Soil.
810N		30cm	Grey Grit.
840N		45cm	Brown Grit & weathered granite.
870N		50cm	Grey grit.
900N		50cm	Brown gritty Soil.
930N		50cm	Grey grit.
960N		40cm	" " & weathered granite.
990N		50cm	Beigy brown grit.
1020N		50cm	" " " & weathered granite.
1050N		50cm	" " "
1080N		55cm	" " "
1110N		35cm	Black Soil & grit.
1140N		40cm	" " & "

206

919208

500E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE line 500E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
30S		50	black grey gritty soil.
		50	grey " "
90S		50	" grit
		50	" "
150S	5 mtr west of Peg	40	Black grey gritty soil
		50	Grey grit
210S		50	" "
		60	Black Mud - roots.
270S		50	Grey brown gritty soil.
		50	Grey " "
330S		40	Brown " "
	10 mtr west of Peg	50	Grey " "
390S		50	" " "
		50	" " " Rubbish in vicinity.
450S		35	Beige brown grit - weathered rock.
		35	" " " " " "
510S		50	Grey gritty soil.
		50	~~Brown~~ ~~very black~~ " Grey black gritty soil.
570S		50	~~rubbish~~ " Brown gritty soil.
		50	Brown gritty soil.
630S		50	black gritty soil.

207

919209

600 E → N.

600 E → N

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Cid. TRAVERSE Line 600 E → N. DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
00		50cm	Black gritty soil.
30N		50cm	Grey " "
60N		50cm	" " " (coarse)
90N		80cm	Beige brown Soil & grit.
[illegible]0N		40cm	Grey brown " & " (coarse)
150N		50cm	" " " & "
180N		50cm	Grey " & "
210N	200N small creek.	60cm	" " & "
240N		50cm	" " & "
270N		50cm	" " & "
300N		50cm	" " & "
330N		50cm	" " & "
360N		50cm	Grey soil.
[illegible]90N		50cm	" " & fine grit.
420N		50cm	Grey gritty soil.
450N		50cm	Tan brown Soil.
480N		40cm	Grey gritty soil (coarse)
510N		50cm	" " "
540N		70cm	" " " (coarse)
570N		50cm	" " "
600N		50cm	" " "
630N		50cm	" " "
660N		40cm	" " " & weathered granite.
690N		60cm	" " "
720N		50cm	Tan brown clayey. gritty soil.
[illegible]		[illegible] cm	[illegible]

-08

919210

600E → N. (2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE line 600E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
780N		45cm	Grey brown soil, gritty.
810N		50cm	Grey gritty soil.
840N		50cm	Brown Soil.
870N	860N creek.	35cm	Tan brown clay.
900N		50cm	" " "
930N		50cm	Brown Soil & fine grit.
960N		50cm	Beige brown clayey gritty soil.
990N		50cm	" " " " "
1020N		50cm	" " " " "
1050N		50cm	Grey gritty soil.
1080N		50cm	Veg & some grey grit. on outcrop.
1110N		45cm	Grey gritty soil.
1140N		50cm	Black brown gritty soil.

209

919211

600E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 600E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
30S		50	Brown gritty soil
		50	black " "
90S		~~40~~ 50	" " "
		~~30~~ 40	" " "
150S		50	brown sandy grit (clayey)
		50	black gritty soil
210S		50	Fawn " "
		50	black soil
270S		40	Tan brown clay.
		50	Grey gritty clayey.
330S		40	Brown sandy grit.
		40	Fawn grit
390S	3min South of Pg	40	Brown soil
		~~40~~ 50	Black gritty soil + weathered rock.
450S		50.	Black soil + grit
		50.	" " + "
510S		~~30~~ 40	Grey grit + weathered rock.
540S		30.	Fawn grit + chips.

210

919212

700E → N

(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 700E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
00		50	black grey gritty soil.
30N		50	" " " "
		50	Grey grit.
90N		50	" "
		50	" gritty soil.
150N		80	" " "
		50	" grit.
210N		50	" "
		50	" "
270N		40	" "
		50	" gritty soil.
330N		60	Black & brown gritty soil.
		60	Grey grit.
390N		40	" "
		45	" "
450N		55	Grey & brown fine gritty soil.
		50	" " " "
510N		50	Grey grit
		50	" "
570N		50	light brown gritty soil.
		50	beige brown gritty soil.
630N		50	" " " "
		50	light brown " "
690N		50	" " " "
		50	" " " "
[illegible]		[illegible]	" " " "

211

919213

700E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 700E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
780N		50	beige brown soil.
		50	Orange clay near old workings.
840N		40	" clayey soil.
		50	beige " "
900N		50	Orange " "
		50	" " "
960N		50	beige clayey soil.
		50	Brown soil.
1020N		50	beige clayey soil.
		60	" soil & fine grit.
1080N		40	Grey " & " "
		50	Brown gritty soil.
1140N		30	Grey gritty soil.
1170N		40	" " "

212

919214

700E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 700E → S DATE OBS

STATION	SAMPLE No.	DEPTH Cms.	DESCRIPTION
30S		50	Grey grit
		60	Dark brown soil & grit
90S		60	brown grit & clay
		45	brown soil & grit
150S		50	" " & "
		55	" " & "
210S		40	Brown grit
		60	Dark grey soil & grit
270S		50	Brown " & "
		50	" " & "
330S		35	" " & clay.
		50	black soil & clay.
390S		50	Grey grit
		50	" "
450S		50	" "
		65.	" "
510S		45	" "
		50	" "
570S		50	Brown "

213

919215

800E → N

(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew. TRAVERSE Line 800E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
00		50	Grey grit
30N		50	Brown gritty soil
		50	" " "
90N		60	black mud & grit
		50	beige brown granite.
150N		55	Grey grit & brown soil
		50	beige brown grit.
210N		50	brown gritty soil
		50	" " " & weathered granite
270N		50	Grey grit
		50	beige brown grit
330N		50	Grey grit & weathered granite.
	4m South of Peg	50	Brown soil & fine grit
390N		50	fawn grit
		50	" "
450N		50.	" " & weathered grit
		50	fawn gritty sand.
510N		40.	" grit & weathered rock.
		50	Grey & fawn grit.
570N		50	" & " "
		50	Grey grit.
630N		50	Tan brown gritty clay / weathered rock
		50	" " " "
690N		50	" " " "
		50	" " " "
750N		20	Brown soil / Weathered rock.

.14

919216

800E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 800E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
780N		50	Khaki clay.
		50	Tan brown clay & grit
840N		50	Mustard clay.
		50	Orange brown soil / weathered rock.
900N		50	Beige clay.
		50	Khaki fine gritty clay.
960N		50	light Mustard clay.
		50	brown sandy gritty soil / weathered rock.
1020N		50	Fawnbrown sandy grit
		60	Dark grey soil & grit
1080N		50	Grey fine gritty soil.
		50	Brown gritty soil.
1140N		30	Black gritty soil.

215.

919217

800E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew. TRAVERSE 800E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms		DESCRIPTION
30S		60		Black Muo.
		50		Sandy soil
90S		50		black soil
		50		Grey grit
50S		50		brown soil
		50		grey grit
210S		50		black "
		50		Grey "
270S		50		black soil & fine grit
		50		black grit
330S		50		brown grit
		50		Grey grit
390S		50		black grit
		50		Grey grit
450S		50		Grey gritty soil.
		40.		Grey fine gritty soil.
510S		40		black gritty soil.
		50		" " "
570S		50		black grit.
		50		" "
630S		50		" "

216

919218

900E → N

(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 900E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
00		50	Black grit.
30N	10m north of peg.	50	Grey clayey soil.
		40	Brown " "
90N		50	" gritty "
		50	Brown soil.
150N		40	" "
		50	" gritty "
210N		50	Brown soil.
		50	" gritty "
270N		30	Grey gritty soil.
		30	" " "
330N	10m north of peg	50	Brown " "
	10m north of peg.	50	Grey " "
390N		50	Brown " "
		45	Grey " "
450N		30	Yellow " "
		40	Grey " "
510N		50	Yellow " "
		50	" " "
570N		50	" " "
		50	" " clay
630N		50	" " soil.
		50	" " "
690N		40	" " clay.
		50	white " soil.
750N		50	" " " (muddy)

217

919219

900E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 900E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
780N ~~870N~~		50	White gritty muddy soil.
810N		50	" " " "
		50	cream beige clay.
870N		50	" orange soil.
		40	white gritty soil.
930N		50	" " "
		50	" " "
990N		50	" " "
		40	Grey " "
1050N		50	" " "
		30	" " "
1110N		50	Tan " "
1140N		40.	Brown soil.
~~1170N~~			
~~1230N~~			

218

919220

900E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 900E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms		DESCRIPTION
30S		50		Black gritty soil
		50		" " "
90S		50		" " "
		50		black grey grit
150S		50		brown gritty soil
		50		black grey gritty soil
210S		45		brown gritty soil
		50		black grey " "
270S		50		black " "
		50		Grey grit
330S		50		" "
		50		black gritty soil
390S		45		brown " "
		50		Grey grit
450S		50		" " + roots
		50.		Tan brown soil + grit
510S		50		black soil + grit.
		60		Grey black gritty soil.
570S		50		" " " "
		50		" " "
630S		50		" " " "
		50		Brown gritty clayey soil.
690S		50		Brown grey gritty soil.

219

1000E → N

①

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnes TRAVERSE 1000E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
00		40	Beige gritty Soil
30N		50	Black soil & grit
		50	" " & "
90N		50	" " & "
		50	" " & "
150N		50	Brown sandy mud & grit & veg.
		50	" " " & " & "
210N		50	Brownish grey gritty soil
		50	Brown gritty clayey soil
270N		50	Khaki clay & grit
		50	" " & "
330N		50	Brown gritty soil
		50	" " "
390N		50	Coarse fawn grit
	3m North of Peg	40	" "
450N		50.	" " "
		50	Brown Soil & grey grit
510N		40	" " & "
		40	Grey grit & weathered rock.
570N		40	Brownish grey grit
		50	Khaki clay & grit
630N		40	Grey gritty soil
		50	Brown " "
660N		50	" " "
		50	" Sandy Soil
750N		50	Brown Soil & Veg on outcrop Poor Sample.

220

919222

1000E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1000E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
780N		40	Brownish gritty soil & chips.
		40	Khaki & tan gritty clay.
840N		40	Grey gritty soil & chips.
		50	Grey fine gritty soil
900N		50	Beigy grit
		50	Khaki clay.
960N		35	Beige soil & veg.
		30	" " " "
1020N		50	Brown veg / humus. poor sample.
		30	Beige Soil & Veg.
1080N		30	Brown Muddy grit
		30	Grey grit
1140N		50	" "

221

919223

1000E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew. TRAVERSE 1000E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
30S		40	Brown weathered rock.
		50	black soil & grit
90S		40	brown weathered rock.
		50	black soil & grit
150S		80	Black mud & grit & veg.
		40	Fawn grit
210S		50	black soil & grit
		50	" " " "
270S		50	" " " " & weathered rock.
		40	" " " "
330S		40	Fawn clayey grit
		20	" grit on outcrop.
390S		50	Black gritty soil.
		50	Grey " "
450S		50	Black gritty soil.
		50.	" " "
510S		50	" " "
		50	" " "
570S		50	" " "
		50	" " "
630S		50	" " "
		50	" " "
690S		50	" " "
		50	Brown " "
750S		50	" " "

222

919224

1100E → N

(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1100E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
00		50	Brown clayey grit
30N		35	Grey grit & weathered granite.
		55	Greyish grit.
90N		50	Grey gritty soil
		50	Grey grit
150N		50	" "
		50	Brown grit slightly clayey.
210N		50	Grey grit
		55	" "
270N		30	Beige clay & fine grit
		45	" " & grit
330N		50	" " & "
		50	" " & "
390N		50	Brown clayey soil.
		50	Brown soil.
450N		50.	fine brown grit.
		40	Brown veg on bedrock.
510N		50	Beige grit.
		40	" " on bedrock.
570N		40	light brown veg " "
		35	Grey grit on bedrock.
630N		35	" " "
		50	Beige grit
690N		50	light brown soil.
		60	Beige clay.
750N		30	Brown Mud on bedrock.

223

919225

1100 E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1100 E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
780N		60	Khaki clay.
		55	Orange clay.
840N		55.	Khaki clay.
	no field notes.		
900N		50	Beige gritty clay.
		50	" " "
960N		50	" " "
		Unable	to sample on outcrop.
1020N		50	Brown soil & veg.
		40	Grey sandy soil.
1080N		50	Brown Muddy soil & veg.
		50	" " " & "
1140N		50	Grey grit
1170N		40	Brown muddy veg.

224

919226 1100E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1100E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms.		DESCRIPTION
30S		70		Grey grit
		40		light brown soil
90S		50		Grey grit
		50		" "
150S		50		Brown soil
		60		" "
210S		50		Grey grit
		50		chocolate soil & grit
270S		35		Brown soil & grit
		50		Grey grit
330S		45		light brown soil
		50		Grey grit
390S		50		" "
		60		" "
450S		65		" " & clay
		50.		" " & "
510S		50		chocolate brown soil
		50		" " "
570S		50		Grey grit
		50		" "
630S		70		Black soil
		50		Brown grit
690S		30		light brown soil.
		50		Grey grit
750S		30		" "
780S		50	see	" " overs.

225

1100c → 5 · continued.

919227

810s Depth 50cms Grey grit.

220

919228 1100E → S

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Grid TRAVERSE 1100E → S DATE OBS

STATION	SAMPLE No.	DEPTH (cm)		DESCRIPTION
810S		50		Grey grit

22'

919229 1200E → N

(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1200E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
00		50	Black Soil & Veg.
30N		40	Grey grit
		50	Brown soil & grey sandy grit
90N		50	Grey grit
		50	Fawn sandy soil.
150N		50	beige clayey grit
		40	" " "
210N		50	Grey gritty soil.
		40	Beige clay.
270N		40	Brown clayey grit
		50	Brown soil.
330N		50	Brown clayey grit
		30	Brown soil on outcrop.
390N		30	Grey sandy & gritty soil.
		40	Brown Soil & roots.
450N		50.	Brown gritty soil.
		40	Khaki gritty clay.
510N		45	Fawn grit.
		40	Brown Soil
570N		50	Tan Orange clay.
		50	" " "
630N		50	Beige Soil.
		50	" clayey soil.
690N		40	" " "
		40	" " "
750N		40	" " " & weathered rock.

228

919230 1200E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1200E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
780N		50	Beige gritty clay.
		40	Khaki " "
840N		40	Grey grit & weathered rock.
		30	" " on outcrop.
900N		40	Beige clayey soil.
		40	Grey grit
960N		30	" " & weathered rock.
		30	" " & " "
1020N		20	Brown grit & " "
		50	Khaki clay.
1080N		50	Grey grit.
		50	" "
1140N		50	" "
1200W			

229

919231 1200E → S.

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 1200E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
30S		50	Black grit
60S		50	Grey "
90S		70	" "
		50	Brown "
150S		50	" "
		50	Fine grit & veg.
210S		50	" " "
		50	Black grit
270S		50	" "
		50	" " & Mus.
330S		55	" "
		30	Grey "
390S		50	Fine grit & veg
		50	Black grit
450S		50	" "
		45.	" " & Veg.
510S		30	Grey grit
		30	" "
570S		40	" "
		50	Brown grit
630S		50	" "
		30	" "
690S		50	" "
		50	Black grit
750S		50	Grey "
780S		50.	see over Grey Grit

230

919232

line 1200E → S.

	Depth	Description
810S	40 cms.	Grey grit.
840S	50	" "
870S.	50.	" "

231

919233 1200E → S (2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Grid TRAVERSE Line 1200E → S DATE OBS

STATION	SAMPLE No.	DEPTH (cm.)		DESCRIPTION
810S		40		Grey grit
840S		50		" "
870S		50		" "

232

919234 1300 E → ①

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1300 E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
00		50	Black grit
30 N		50	" Mus.
		50	Grey muddy grit
90 N		50	Grey grit
		50	" "
150 N		50	" "
		50	Brown gritty soil.
210 N		30	Beige grit
		50	" "
270 N		20	" soil
		55	" clayey grit
330 N		40	Brown grit
		50	" soil
390 N		30	Grey grit
		50	Beige Soil
450 N		30.	Grey Soil.
		30	Brown veg. poor sample.
510 N		45	Grey grit
		55	beige clay.
570 N		40	Grey grit on outcrop.
		50	Beige grit
630 N		50	Brown veg.
		30	Sandy soil & veg on outcrop.
690 N		50	brown veg " "
		60	Beige gritty clay.
750 N		60	" " "

233

919235 1300E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1300E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
780N		50	Yellowish Soil.
		50	Brown veg.
840N		30	Brown mud on outcrop.
		55	Brown clay.
900N		40	Grey clay on outcrop.
		50	Beige clay.
960N			Unable to sample (outcrop)
		55	Beige clay.
1020N		30	" " on outcrop.
		45	" " " "
1080N		30	" " alleg " "
		30.	" " agrit " "
1140N			?
1170N			?

234

919230 1800 → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1300E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
30S		50	Black grit & veg.
		50	Brown " " & "
90S		50	Black Muo & "
		50	" " & "
150S		50	Black brown grit
		50	Black grit
210S		50	Grey black clayey fine grit
		50	black grit & some brown clay.
270S		50	Grey loam.
		50	Grey sandy loam.
330S		50	Grey brown grit
		40	brown clay / weathered granite.
390S		50	Grey & black sandy mud. in creek depression.
		50	Brownish grit
450S		50	Black grit
		40.	Grey grit & brown weathered granite.
510S		50	" " & " " "
		50	? " & " " " ? (notes missing)
570S		60	Brown clayey soil & grey grit.
		50	Grey grit & black soil
630S		50	Black soil
		50	Grey grit & black soil
690S		45	" " & mud in creek depression.
		40	black & brown grit & Qtz frags.
750S		50	black grit
780S		45	see over. black grit, brown clay / weathered granite

235

1300E → S

919237

	Depth cms	
810S	40	Black grit brown clay/weathered granite.
840S	40	" " " " / " "
870S	30	Black soil & grit & granite chips.
900S.	50.	" " & "

236

919250 1300E

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Grid TRAVERSE 1300E → S DATE OBS

STATION	SAMPLE No.	DEPTH (cm)	DESCRIPTION
810S		40	Black grit, brown clay/weathered granite
840S		40	" " " " " "
870S		30	Black soil & grit & granite chips
900S		50	" " " " "

237

919239

1400E → N
(1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1400E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
00		50	Brown grit
30N		30	" soil
		30	Grey grit
90N		50	" "
		50	" "
150N		35	Brown "
		40	Grey "
210N		50	" "
		50	" "
270N		50	" "
		50	" "
330N		40	Brown Soil
		30	" "
390N		40	white grit
		40	" "
450N		40.	" "
		50	Grey "
510N		50	white "
		30.	Brown veg.
570N		30	Grey soil & veg.
		50	Tan grit
630N		40	Brown Soil & veg.
		50	Grey grit
690N		35	fine brown grit.
		50	Grey grit
750N		35	Brown grit

238

913240

1400E → N

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew - TRAVERSE 1400E → N DATE OBS

STATION	SAMPLE No.	DEPTH CMS.	DESCRIPTION
780N		50	Grey grit
		50	Tan grit
840N		60	Grey clay.
		50	Grey grit
900N		50	" "
		50	white grit & veg.
960N		50	" "
		50	" " & mud.
1020N		50	" "
		50	Beige "
1080N			Unable to Sample (outcrop)
1110N ~~1140~~		50	Grey grit
1140N		50	Beige grit & Mud.
1170N		20.	Tan grit.
	walking track @		1140N peg.

23

919241 1400E→S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1400E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
30S		50	Grey Sand.
		50	Brown grit
90S		40	" "
		50	" soil
150S		50	" clay.
		60	" sand
210S		60	" clay
		50	" soil
270S		50	" sand
		50	" sand
330S		70	" soil
		50	" soil
390S		40	light " "
		40	" " "
450S		40	Black Soil
		60.	" "
560S		50	Grey grit
		40	Grey - Brown grit
570S		35	" - " "
		50	Grey grit
630S		40	Brown grit
		40	" "
690S		35	Grey grit
		40	" "
750S		60	Brown Sand
780S		50	see over. Grey grit

240

810 s	Depth cms 50	1400 - Every grit
840 s	50	" "

919242

241

919243 1400E → S

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1400E → S DATE OBS

STATION	SAMPLE No.	DEPTH (cm)	DESCRIPTION
810S		50	Grey grit
840S		50	" "

242

919244

(1)

Form No. 69/69

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA MT AGNEW TRAVERSE 1500 E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
00 N		45	Brown Sandy Soil and Weathered rock
30 N		20	Brown Soil, Vegetation & Weathered roc
60 N		50	Brown Gritty Soil & Vegetation
90 N		25	Brown grit & veg on alluvial workings
120 N		45	Brown Soil & Vegetation on rock
150 N		40	Brown Gritty Soil & Vegetation on roc
180 N		30	Creek " " " " " "
210 N		55	Brown muddy Grit
240 N		40	Brown Soil & Vegetation
270 N		50	Grey Grit
300 N		35	" " on rock
330 N		50	Grey Grit
360 N		40	Brown Soil & Vegetation on rock
390 N		50	on rock Grey Grit
420 N		—	unsampled lake outcrop?
450 N		50	Grey Grit
480 N		60	Brown muddy Grit
510 N		50	Beige, Sandy Soil
540 N		50	Beige Grit
570 N		60	Brown Sandy Soil & Vegetation
600 N		40	Grey Sandy Soil
630 N		50	" " "
660 N		50	Brown Sandy Soil & Vegetation
690 N		50	Grey Gritty Soil
720 N		50	" " "
750 N		50	Brown Gritty Soil

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919245

(2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt AGNEW TRAVERSE 1500 E → N. DATE OBS

STATION	SAMPLE No.	DEPTH cms		DESCRIPTION
780 N		50		Grey Gritty Soil
810 N		80		Brown Mud
840 N				?
870 N		60		Brown Gritty Soil
900 N		50		Grey fine grit
930 N		50		Fawn " "
960 N		50		" " "
990 N		30		Grey grit & weathered rock
1020 N		50		Fawn grit
1050 N		50		Khaki clay & grit
1080 N		50		Brownish clayey grit
1110 N		50		Fawn grit
1140 N		50		" " & soil
1170 N		50		Brown grit

244

919246

1500E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew . TRAVERSE 1500E → S DATE OBS

STATION	SAMPLE No.	DEPTH CMS	DESCRIPTION
30S		50	Beige brown Soil
		50	" " "
90S		50	brown soil & yellow sand
		50	Black grey soil
150S	4m South of Peg.	40	Black grey gritty soil.
		40	Yellow sand (weathered granite?)
210S	4m west of Peg	35	Grey gritty soil
	4m west of Peg.	50	Mud & Veg.
270S		50	Brown soil Yellow sand.
		35	Beige brown soil & weathered rock.
330S		50	" " " & " "
		50	Tan beige brown weathered rock.
390S		50	Brown gritty soil
		50	Grey " "
450S		50	" brown " "
		50	Grey " "
450S		40	" " "
		50	Brown soil & grit.
570S		35	Grey grit
		40	Black grey gritty soil.
630S		40	Grey brown " "
660S		40	" " " "
690S		50	" " " "
720S		40	Grey " "
750S		50.	" " "

245 919247 1600E→N (1)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 1600E→N DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
00		30	Brown Sandy Soil.
30N		30	" Gritty "
		30	Tan Brown soil & grey grit.
90N		40	Grey gritty soil.
		40	" " "
150N		55	Coarse grey grit.
		55	Grey grit.
210N		50	Grey grit & Tan brown clay.
		50	Brown gritty clay.
270N		55	Grey grit
		55	Fawn grit & soil.
330N		55	Grey grit
		30	Brown Soil & grit
390N		50	Brown gritty Soil.
		50	" " "
450N		45	Fine grey soil.
		40	Grey gritty soil.
510N		50	" " "
		50	Grey brown gritty soil.
570N		40	Brown soil & grit.
		40	Grey brown gritty soil.
630N		50	Grey gritty soil.
		50	" " "
660N		50	" " "
		50	" " "
720N		50	Brown Soil & Grit.

246

919248

1600E → N (2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE Line 1600E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
750N		40	Brown grey grit
780N		50	Brown soil & grey grit
810N		45	Grey gritty soil.
		50	Fine grey soil.
870N		50	" " " gritty.
		50	Grey gritty soil.
930N		50	" " "
		50	Fine grey-brown soil.
990N		40	Gritty brown clay.
		50	Grey gritty soil.
1050N		50	Brown grey grit.
		50	Brown soil.
1110N		40	Grey grit.
		50	" "
1170N		50	" "
1200N		50	Brown grey grit.

241

919249 1600E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1600E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms		DESCRIPTION
30S		40		Brown Sandy soil & veg on outcrop.
		50		" " "
90S		30		" " " & weathered rock.
		30		Grey " " & " "
150S	10m South of Pg.	50		fine sandy soil.
		20		" " " & weathered rock.
210S		40		Mustard " " (" " ?)
		40		fine sandy grit & brown weathered rock.
270S		40		Orange weathered rock.
		30		brown gritty soil & " "
330S		40		Orangy brown " "
		50		Fine grey grit
390S		50		Grey grit & brown weathered granite
		50		black soil, fine grit & roots.
450S		50		Grey grit & weathered rock
		50		" " & " "
510S		50		" " & " "
		50		Black clay & weathered rock on roadside.
570S		50		Black soil & grit.
		50		Brown gritty soil.
630S		50		Black " "
		50		" " "
690S		50		" " "
720S		40		Grey grit & rock chips.

248

915230 1700 →

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Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt AGNEW TRAVERSE 1700 E → N DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
00 N		50	Grey brown soil.
30 N		40	Brown grey grit.
60 N		45	~~Grey Brown soil~~ Grey grit.
90 N		50	Fine Grey Grit
120 N		40	~~Fine grey Grit~~ Brown Grey grit.
150 N		45	~~Brown & Grey Grit~~ Fine grey grit
180 N		35	Grey Soil
210 N		50	Fine Grey Grit
240 N		50	Grey Grit
270 N		50	" "
300 N		50	" "
330 N		50	" "
360 N		50	" "
390 N		40	Brown & Grey Grit
420 N		50	Grey Grit
450 N		40	Light Grey fine soil
480 N		40	Brown Soil & Grey Grit
510 N		40	Grey Grit
540 N		45	Brown & Grey Soil
570 N		45	Black Soil
600 N		50	Grey Grit
630 N		35	Grey Grit
660 N		50	redish Brown Soil & Grey Grit
690 N		40	Grey Grit
720 N		40	" "
750 N		35	" "

249

913251 1700 E → N. (2)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA MT AGNEW. TRAVERSE 1700 E → N. DATE OBS

STATION	SAMPLE No.	DEPTH cms	DESCRIPTION
780 N		50	Grey Grit
810 N		50	Fine " "
840 N		50	Grey Grit
870 N		40	Fawn Grit
900 N		50	" " Clayish
930 N		50	" " "
960 N		50	Dark Brown Clayish Soil
990 N		50	Grey Grit
1020 N		50	Brown Course Grit
1050 N		40	" " "
1080 N		30	Grey Grit (R.O) poor sample
1110 N		30	Brown Gritty soil
1140 N		50	Brown Clayish Soil
~~1170 N~~			

250

919252

1700E → S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1700E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
30S		50	Brown weathered rock.
		50	Black gritty soil.
90S		50	Black gritty mud in Marsh.
		50	Beige soil & weathered rock.
150S		50	" " & " "
		40	" " & " "
210S		50	Black " & " "
		50	Brown grit
270S		50	" "
		50	weathered rock.
330S		20	" " on outcrop.
		15	" " " "
390S		20	Grey soil & fine grit.
		50	" " & " "
450S		50	" " & " "
		50	Brown gritty soil & weathered granite.
510S		55	Black " " & " "
		45	Fine Brown grit.
570S		50	Black soil & grit.
		50	" " & "
630S		50	Black soil & roots, poor Sample.
660S		40	" " & grit & rock chips.

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919253 1800 E → N

Form No. 69/89

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RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt. Agnew TRAVERSE 1800 E → N DATE OBS

STATION	SAMPLE No.	DEPTH CM	DESCRIPTION
.00		10	Grey sandy soil on Rock.
30N		50	Black muddy soil
60N		50	Grey Sandy Soil
90N		25	Black soil & veg. on Rock.
120N		20	Black soil & veg. on Rock.
150N		45	Brown Grit on Rock.
180N		30	GREY SOILY GRIT
210N		25	BROWN SOILY VEG. & GRIT ON ROCK.
240N		20	BROWN soily VEG. ON ROCK.
270N		35	BEIGH SOIL & VEG ON ROCK.
300N		50	BEIGH GRITTY SOIL.
330N		40	BEIGH GRIT ON ROCK.
360N		50	GREY GRIT.
390N		45	GREY SANDY SOIL.
420N		45	CREAM FINE SOILY GRIT.
450N		50	WEATHERED ROCK.
480N		50	GREY FINE GRIT.
510N		60	GREY GRIT.
540N		50	GREY SOILY GRIT.
570N		45	GREY SOILY GRIT ON ROCK.
600N		45	" " "
630N		40	GREY SOILY SAND ON ROCK.
660N		50	GREY SOILY GRIT
690N		50	" " "
720N		~~35~~ 30	BROWN CLAYEY SOIL ON ROCK.
750N		55	BROWN SOIL & VEG.

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Form No. 69/89

RENISON LIMITED

(2)

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt. Agnew TRAVERSE 1800E → N DATE OBS

STATION	SAMPLE No.	DEPTH CM	DESCRIPTION
780N		50	BEIGH SANDY SOIL.
810N		20	GREY GRITTY SOIL ON ROCK.
840N		20	" " "
870N		50	BEIGH GRITTY CLAY
900N		45	BEIGH GRITTY SOIL ON ROCK.
930N		50	GREY MUDDY GRIT.
960N		50	BEIGH GRITTY CLAY
990N		50	GREY GRITTY SOIL.
1020N		60	ORANGE CLAY.
1050N		55	MUSTERED SOILY CLAY.
1080N		50	BEIGH GRITTY SOIL.
1110N		45	BEIGH SANDY CLAY ON ROCK.
1140N		50	BROWN CLAY.

255 919255 1800E→S

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1800E → S DATE OBS

STATION	SAMPLE No.	DEPTH CMS		DESCRIPTION
30S		25		Grey soil
		50		" "
90S	4m west of Peg.	50		Mus & roots.
		50		Grey gritty soil
150S		50		fine grey grit.
		50		" " "
210S		30		Brown gritty soil
		50		Black gritty soil.
270S		40		Tan brown clay.
		40		" " "
330S		60		Mus & roots.
		50		Grey gritty soil.
390S		45		Brown " "
		50		Grey Brown " "
450S		50		Beige Brown clayey soil.
		40.		" " soil.
510S		50		" " gritty soil.
		40		Brown soil.
570S	6m west of Peg.	45		Brown grit.
		45		Grey grit.
630S	25m west of Peg.	50		Grey soil & grit.
660S		45		" " & "

PROJECT Mt Agnew TRAVERSE Line 1900E → N DATE OBS

919256

STATION	SAMPLE NO.	DEPTH cms	DESCRIPTION
00		10 cms	Grey gritty soil & veg on outcrop.
30N		30	Black Muck & veg " "
		50	Grey sandy grit
90N		50	" " "
		50	" " "
150N		45	" " "
		45	Grey gritty soil & veg.
210N		35	" sandy grit on rock.
		50	" " "
270N		50	" " "
		50	Beige Sandy soil.
330N		50.	" " "
		40	Brown Sandy soil & veg on rock.
390N		40	Beige gritty soil on rock.
		40	Grey Sandy Soil & veg on rock.
450N		50	Grey grit.
		35	Grey Sandy soil on rock.
510N		50	Beige grit
		55	Beige clay & veg.
570N		55	Khaki Sandy soil
		10	Grey grit on rock.
630N		55	Beige grit
		50	Beige fine gritty soil.
690N		50	Brown clayey Muck on rock.
		50	Beige gritty clay.
750N		20	Grey gritty clay on rock.
		45	Beige grit on rock.
810N		20	Brown soil on rock.
840N		50	Brown Soil & veg.
870N		50	Beige gritty soil

255

FIELD SHEET FOR GEOCHEMICAL SURVEY

(2) N

AREA Mt Agnew TRAVERSE Line 1900E → N DATE OBS

919257

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
900N		50cms	Grey gritty soil.
930N		50	Beige gritty clay.
		50	Brown fine gritty soil.
990N		50	" " " "
		50	Beige Brown " "
1050N		55	" " fine " "
		50	" " " " Muo.
1110N		48	Beige fine grit.
		40	Grey clayey grit.
1170N.		50.	Beige gritty soil.

256

1900E → S

Form No. 69/89

RENISON LIMITED

919258

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE 1900E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms.	DESCRIPTION
30S		30	Grey grit, black Soil & Qtz frags.
		30	" " " & "
90S		30	" " & "
		50	Grey grit
150S		25	weathered granite.
		30	Brown clay,
210S		45	" "
		40	" " & grit
270S		30	" " / weathered granite
		30	Black Soil & chips.
330S		15	Brown clay & "
		40	black & brown gritty soil.
390S		15	black brown clayey grit / weathered granite
		25	brown clay / " "
450S		35	Black soil & granite chips.
		20.	brown weathered granite.
510S		50	Grey grit
		50	" "
570S		50	" "
		50	" "
630S		30	Brown clay / weathered granite.
		30	Grey black grit & Qtz frags.
690S		50	Grey sandy soil.

257

2000E → N

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919259

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Grid. TRAVERSE 2000E → N DATE OBS

TION	SAMPLE No.	DEPTH	DESCRIPTION
00		50cm	Beige brown Soil & weathered granite.
30N		50cm	Brown Soil & coarse grit.
60N		50cm	Black soil & grit.
90N		35cm	" " fine " & roots.
120N		35cm	Brown Soil & grit.
150N		50cm	Black " " & granite chips
180N		50cm	light brown soil & fine grit.
210N		40cm	Black " " & " "
240N		30cm	Gray clayey grit.
270N		40cm	Brown " "
300N		30cm	" gritty soil.
330N		45cm	Brown grey clay & weathered granite.
360N		50cm	Beige brown grit & " "
390N	395N creek.	50cm	Coarse brown grit.
420N		50cm	" " "
450N		50cm	Gritty beige soil.
480N		40cm	Coarse grey grit.
510N		40cm	" " "
540N		50cm	" " "
570N		45cm	" " "
600N	creek 620N	50cm	" " "
630N		40cm	Brown soil & fine grit.
660N		50cm	" coarse grit.
690N		50cm	Brown Soil & beige coarse grit.
720N		50cm	" " & " " "
750N		50cm	" " & " " "

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2000E → N

(2)

Form No. 69/89

RENISON LIMITED

919260

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Grid. TRAVERSE 2000E → N. DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
780N		30cm	Brown Soil & beige course grit.
810N		50cm	" " " " " "
840N	on ob block	50cm	beige brown Soil & grit.
870N		40cm	Brown " & "
900N		40cm	" clayey soil.
930N		50cm	Khaki brown clayey soil & fine grit.
960N		50cm	Brown Soil & fine grit.
990N		40cm	Khaki Brown soil & " "
1020N		50cm	Tan Brown clayey soil.
1050N		50cm	Beige brown Soil.
1080N		30cm	Brown Soil & granite chips.
1110N		30cm	Khaki brown fine grit.
1140N		30cm	" " " "

259

2100 (W)

Form No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

919261

AREA Agnew Grid. TRAVERSE 2100E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
00		50cm	Beigy Orange Clay.
30N		40cm	Black Soil & Veg + some coarse grit.
60N		50cm	" "
90N		25cm	Weathered Granite (at start of adit)
120N		50cm	Coarse grey grit.
150N		50cm	Brown muddy grit & granite frags.
180N		45cm	Coarse grey grit. " " "
210N		50cm	" " "
240N		50cm	" " "
270N		40cm	Black Soil.
300N		50cm	Beigy clay.
330N		40cm	Coarse grey grit.
360N		50cm	" " "
390N		40cm	" " "
420N		40cm	" " "
450N		45cm	" " "
480N		50cm	" " "
510N		30cm	" " "
540N		50cm	Bluish Clay.
570N		20cm	Grey Soil on outcrop.
600N		30cm	Brown Soil & Veg.
630N		45cm	Grey " " & fine grit.
660N		45cm	Brown " & " "
690N		30cm	" " & Coarse grit.
720N		40cm	Khaki brown Soil & weathered granite.
750N		50cm	" " " & Coarse grit.

260

2100E → N
(2)

Form No. 69/89

RENISON LIMITED

919262

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Agnew Lake TRAVERSE 2100E → N DATE OBS

STATION	SAMPLE No.	DEPTH	DESCRIPTION
780N		45cm	Brown gritty Soil.
810N		25cm	" " "
840N		30cm	" " "
870N		50cm	Khaki brown soil + fine grit.
900N		30cm	" " "
930N		25cm	Brown Soil on outcrop.
960N		20cm	" " + grit
990N		50cm	Khaki brown soil + course grit.
1020N		45cm	Brown Soil + Roots.
1050N		50cm	" " + course grit
1080N		20cm	Brown Soil + veg on outcrop.
1110N		45cm	Khaki brown soil
1140N		45cm	" " "

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2100 E → S.

Form No. 69/89

RENISON LIMITED

919263

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE line 2100 E → S DATE OBS

STATION	SAMPLE No.	DEPTH cms.		DESCRIPTION
30S		50		Grey grit
60S		50		" "
90S		50		" "
		50		" "
150S		50		Black Soil
		50		" " & Veg.
240S		50		Black gritty soil.
		50		Brown Soil & Veg.
270S		50		Grey soil.
		55		" "
330S.		50		Brown "
360S		50		" " veg.

264

2200 → N

919264

orm No. 69/89

RENISON LIMITED

FIELD SHEET FOR GEOCHEMICAL SURVEY

REA Agnew Grid TRAVERSE Line 2200E → N DATE OBS

TION	SAMPLE No.	DEPTH		DESCRIPTION
00			50cm	Black Soil.
30N			50cm	Grey gritty soil.
60N			60cm	Brownish " ".
90N			35cm	Grey sandy soil + Granite chips.
120N			70cm	Tan clay + brownish soil.
150N			60cm	Grey sandy soil.
180N			60cm	" " ".
210N			50cm	" grit.
240N			35cm	Brown " + Soil.
270N		45cm		Grey Coarse gritty soil.
300N		40cm		Grey gritty soil.
330N		65cm		" " "
360N		65cm.		Grey brown clayey soil.
390N		40cm		Brown gritty soil. 2nd North of Peg.
420N		50cm		Khaki gritty soil.
450N		40cm.		Brown grey soil.
480N		20cm.		Grey coarse gritty soil.
510N		20cm.		" " " "
540N		50cm.		" " grit + weathered granite.
570N		20cm		Greenish coarse grit + granite frags.
600N		20cm		Greenish grey coarse grit
630N		20cm.		Grey grit + brown weathered granite.
660N		20cm		Reigy coarse grit
690N		50cm		Brown soil + grit.
720N		50cm.		" " " "
750N		50cm.		Tan brown soil.

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Form No. 69/89

RENISON LIMITED

919265

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew Cr. TRAVERSE Line 2200E → N DATE OBS

STATION	SAMPLE No.	DEPTH		DESCRIPTION
780N		50cm	30cm	Brown gritty soil.
810N		40cm	50cm	light grey gritty soil 3m south of Peg.
840N		45cm	40cm	Brown soil & grit & pebbles.
870N		40cm	45cm	Brown Soil & granite grit.
900N		50cm	40cm	" " & " "
930N		50cm	50cm	Tan brown clayey soil.
960N		35cm	50cm	Brown soil & grit. 3m south of peg.
990N		50cm	35cm	Brown soil & veg on bedrock.
1020N		40cm	50cm	" " & Roots.
1050N		35cm	40cm	" " & "
1080N		5	25cm	" " & Veg on bedrock.
1110N	line 3000N E 1095N.		50cm	Tan brown clayey soil & grit.
1140N			25cm	" " " " & "

This line crosses 3000N line @ 1095N.

" " Hits 3000N line @ 325W.

264

2200E → S.

Form No. 69/89

RENISON LIMITED

919266

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Mt Agnew TRAVERSE line 2200E → S DATE OBS

STATION	SAMPLE No.	DEPTH cm	DESCRIPTION
30S		50	Tan clay
60S		50	white grit
90S		50	Brown soil & veg.
		30	white grit.
150S		40	Grey grit.
		50	" "
210S		45	" "
		30	" " & veg on bedrock.
270S		50	Brown Soil
		40	Grey soil
330S		40	Brown grit & Mus.
360S		50	Brown Mus & veg.

260 2000 →

Form No. 69/89

RENISON LIMITED

919267

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA MT AGNEW TRAVERSE 1 + 2300E N DATE OBS

TION	SAMPLE No.	DEPTH	DESCRIPTION
00		6"-8"	Black Soil + Veg + Granite chips
30N	creek @ 25N	1'-1'3"	Brown sandy grit (alluvial)
60N		2'-2'3"	Brown clay + granite flags.
90N		1'-1'3"	Beige clay + weathered granite
120N		1'6"-1'9"	Granite grit + flags.
150N		1'-1'3"	~ ~ ~
180N		9"-1'0"	~ ~ ~
210N		6"-9"	Brown soil + veg + Granite flags
240N		1'6"-1'9"	Grey gritty clay.
270N		6"-9"	Brown soil + veg on old workings.
300N	Sampled is "north of Peg."	1'9"-2'0"	Grey sandy soil (clayey)
330N	–	6"-9"	Tan beige clayey soil + fine grit.
360N		9"-1'0"	Brown soil + veg + Granite chips
390N		1'6"-1'9"	Grey clay + ~~[illegible]~~ rpts. + granite chips.
420N	on side of track.	6"-9"	Brownish gritty soil on side of track.

APPENDIX 9

AGNEW GRID - SOIL SAMPLE ANALYSES

267

919269

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

Area: AGNEW GRID
Grid Line: 00E
Date:

	Sn	As	Cu	Pb	Zn
00N	70	< 10	15	10	25
30	230	< 10	5	<10	10
60	55	< 10	5	10	10
90	40	< 10	<5	<10	10
120	25	< 10	15	<10	25
150	10	< 10	5	<10	50
180	215	10	<5	10	15
210	85	10	<5	30	10
240	55	35	10	20	20
270	20	<10	5	30	25
300	30	<10	10	<10	20
330	20	<10	<5	<10	10
360	20	10	10	20	30
390	100	10	5	20	10
420	80	20	15	20	15
450	70	10	5	20	10
480	<10	<10	20	<10	30
510	45	<10	60	150	140
540	115	15	<5	10	10
570N	<10	<10	15	<10	20
600N	215	<10	20	20	60
630N	~~75~~ 715	10	10	40	50
660N	25	10	10	30	65
690N	150	25	30	25	60
720N	30	<10	35	10	50
750N	<10	10	10	10	20
780N	<10	<10	10	20	20
810N	10	10	5	10	10
840N	165	<10	10	10	20

268

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919270

Area: AGNEW GRID
Grid Line: 00E
Date:

	Sn	As	Cu	Pb	Zn
870 N	<10	<10	5	<10	10
~~00~~30 S	65	< 10	15	<10	15
60 S	35	< 10	<5	<10	10
90 S	185	< 10	15	<10	25
120 S	40	10	5	<10	10
150 S	30	< 10	5	<10	10
180 S	<10	< 10	5	<10	10
210 S	10	< 10	5	<10	10
240 S	15	< 10	20	<10	35
270 S	20	< 10	10	"	15
300 S	<10	< 10	10	"	15
330 S	10	< 10	10	"	15
360 S	20	< 10	5	"	10
390 S	<10	< 10	35	"	35
420 S	< 10	< 10	<5	"	10
450 S	< 10	< 10	5	"	10
480 S	< 10	< 10	<5	"	10
510 S	25	<10	<5	"	5
540 S	25	< 10	<5	"	5
570 S	10	< 10	<5	"	10
600 S	50	< 10	5	"	10
630 S	20	< 10	<5	"	10
660 S	25	< 10	20	"	20
690 S	15	< 10	<5	<10	10
720 ~~N~~S	15	< 10	<5	<10	10

269

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919271

Area: Agnew Grid
Grid Line: 100E
Date:

	Sn	As	Cu	Pb	Zn	
00	50	<10	10	10	25	
30 N	30	<10	<5	10	10	
60 N	80	<10	<5	10	10	
90 N	130	10	<5	10	20	
120 N	40	10	5	10	35	
150 N	60	<10	<5	10	10	
180 N	180	50	5	20	35	
2[illegible] N	<10	<10	5	20	20	
240 N	20	<10	<5	10	55	
270 N	30	<10	<5	10	10	
300 N	60	20	<5	10	15	
330 N	<10	350	5	10	10	
360 N	<10	10	<5	<10	20	
390 N	30	<10	<5	10	10	
420 N	20	<10	<5	10	10	
450 N	30	10	<5	10	10	
4[illegible] N	10	<10	<5	10	5	
5[illegible] N	<10	<10	<5	10	10	
540 N	10	<10	5	20	10	
570 N	<10	<10	5	10	10	
600 N	20	<10	<5	10	10	
630 N	<10	<10	5	10	15	
660 N	<10	<10	5	10	15	
690 N	10	<10	5	10	15	
720 N	20	<10	5	10	10	
750 N	20	<10	5	<10	10	
780 N	10	<10	<5	10	5	
810 N	10	<10	5	<10	5	
840 N	20	<10	5	<10	10	

270

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919272

Area: Agnew Grid
Grid Line: 100E
Date:

	Sn	As	Cu	Pb	Zn
870 N	10	<10	5	<10	5
900 N	<10	<10	5	10	15
930 N	<10	<10	<5	10	5
960 N	<10	<10	450	190	520
990 N	10	<10	5	10	10
1020 N	10	10	5	10	15
1050 N	<10	<10	55	20	55
[illegible] N	20	<10	5	<10	10
30 S	85	< 10	5	<10	10
60 S	90	< 10	5	<10	5
90 S	<10	< 10	<5	<10	<5
120 S	25	< 10	<5	<10	10
150 S	40	< 10	<5	<10	<5
180 S	40	< 10	<5	<10	5
210 S	55	< 10	5	<10	10
240 S	60	< 50	<5	<10	10
270 S	75	< 10	<5	<10	5
300 S	590	< 10	<5	<10	<5
330 S	150	< 10	<5	<10	<5
360 S	40	< 10	<5	<10	<5
390 S	45	< 10	<5	<10	10
420 S	15	< 10	<5	10	5
450 S	10	< 10	5	10	10
480 S	20	< 10	<5	10	5
510 S	10	<10	<5	<10	<5
540 S	45	<10	<5	<10	20
570 S	10	<10	<5	20	15

271

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919273

Area: AGNEW GRID
Grid Line: 100E
Date:

	Sn	As	Cu	Pb	Zn
600 S	10	< 10	5	<10	10
630 S	<10	< 10	<5	<10	<5
660 S	25	< 10	<5	<10	<5
690 S	20	< 10	<5	10	5

272

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919274

Area: Agnew Grid
Grid Line: 200E
Date:

	Sn	As	Cu	Pb	Zn	
00	30	<10	5	10	10	
30N	<10	<10	5	10	10	
60N	<10	<10	40	20	40	
90N	10	<10	5	<10	15	
120N	40	<10	5	60	10	
150N	160	<10	<5	10	10	
180N	90	10	5	10	15	
[illegible]	40	<10	10	10	15	
240N	40	10	5	<10	10	
270N	10	<10	10	10	20	
300N	10	<10	5	<10	10	
330N	100	10	5	<10	10	
360N	110	10	5	10	10	
390N	30	<10	5	10	10	
420N	30	10	5	10	10	
450N	10	10	5	<10	10	
[illegible]	<10	<10	5	20	10	
510N	<10	<10	5	10	5	
540N	<10	<10	5	<10	10	
570N	<10	<10	5	10	10	
600N	<10	<10	<5	10	15	
630N	<10	<10	<5	10	25	
660N	10	<10	<5	<10	5	
690N	<10	<10	<5	<10	5	
720N	10	10	<5	<10	5	
750N	<10	10	<5	<10	5	
780N	10	<10	<5	10	5	
810N	<10	<10	<5	10	10	
840N	10	10	5	10	20	

275

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919275

Area: Agnew Grid
Grid Line: 280E
Date:

	Sn	As	Cu	Pb	Zn
870N	10	<10	<5	<10	10
900N	10	<10	<5	<10	5
930N	<10	10	<5	<10	5
960N	<10	<10	<5	<10	5
990N	<10	10	<5	10	5
1020N	<10	<10	5	10	5
1050N	<10	<10	<5	<10	5
[illegible]	<10	<10	<5	<10	5
1110N	10	10	<5	<10	10
1140N	20	<10	<5	<10	15
1170N	10	10	<5	<10	10
30 S	870	25	5	30	20
60 S	60	50	5	<10	25
90 S	30	<10	5	"	20
120 S	65	<10	10	"	15
150 S	50	<10	<5	"	5
180 S	65	<10	5	"	22
210 S	120	<10	5	"	10
240 S	90	50	5	"	15
270 S	110	<10	10	"	15
300 S	145	<10	<5	"	5
330 S	190	<10	5	"	25
360 S	130	<10	5	"	15
390 S	205	<10	<5	"	10
420 S	255	<10	<5	<10	10
450 S	65	35	10	110	60
480 S	75	<10	10	<10	20

274

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919276

Area: AGNEW GRID
Grid Line: 200E
Date:

	Sn	As	Cu	Pb	Zn
510 S	40	< 10	<5	<10	10
540 S	75	< 10	<5	<10	10
570 S	20	< 10	<5	10	5
600 S	25	< 10	<5	<10	5
630 S	10	< 10	5	20	15
660 S	10	< 10	5	<10	5
690 S	35	< 10	5	<10	10

275

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919277

Area: AGNEW GRID
Grid Line: 300E
Date:

	Sn	As	Cu	Pb	Zn
00	20	10	<5	<10	10
30N	<10	<10	<5	<10	5
60N	<10	<10	<5	<10	10
90N	40	<10	<5	<10	10
120N	80	<10	5	<10	10
150N	<10	10	<5	10	5
180N	20	<10	10	<10	10
210N	20	<10	<5	<10	10
240N	70	20	<5	10	15
270N	10	10	<5	10	5
300N	20	<10	<5	10	10
330N					
360N	30	20	<5	<10	10
390N	90	10	<5	10	10
420N	30	<10	<5	20	5
450N	120	10	5	20	10
480N	20	<10	5	20	15
510N	<10	20	15	20	50
540N	10	10	<5	10	5
570N	<10	<10	5	<10	5
600N	<10	20	<5	<10	5
630N	<10	10	10	<10	15
660N	10	10	5	<10	5
690N	<10	<10	5	<10	10
720N	10	<10	5	10	10
750N	10	10	5	20	15
780N	10	<10	5	10	20
810N	<10	<10	<5	<10	5
840N	10	<10	<5	<10	5

276

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919278

Area: Agnew Grid
Grid Line: 300E
Date:

	Sn	As	Cu	Pb	Zn
870N	20	10	<5	<10	5
900N	10	<10	5	<10	10
930N	<10	<10	<5	10	5
960N	<10	<10	5	<10	10
990N	10	<10	5	<10	10
1020N	10	<10	5	<10	5
1050N	<10	<10	5	<10	5
[illegible]N	10	10	<5	<10	5
1110N	160	10	15	20	15
1140N	10	10	5	<10	5
30S	85	<10	5	<10	10
60S	155	<10	5	<10	15
90S	15	<10	5	<10	10
120S	40	<10	<5	<10	10
150S	260	<10	5	<10	10
180S	50	<10	5	<10	5
210S	25	<10	<5	<10	10
240S	40	<10	<5	<10	10
270S	30	<10	5	<10	10
300S	10	<10	<5	<10	10
330S	25	<10	10	10	15
360S	105	<10	5	<10	10
390S	45	<10	10	<10	10
420S	85	<10	10	<10	13
450S	185	10	5	<10	15
480S	185	15	<5	10	10
510S	196	10	5	20	20
540S	140	<10	5	<10	10

277

919279

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

rea: Agnes Grid
rid Line: 300E
ate:

	Sn	As	Cu	Pb	Zn
570S	65	<10	15	<10	25
600S	45	<10	<5	<10	10
630S	25	<10	<5	<10	5
660S	20	10	5	<10	10
690S	125	<10	5	10	10
720S	170	10	<5	20	10

278

919280

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

Area: Agnew Grid
Grid Line: 400E
Date:

	Sn	As	Cu	Pb	Zn	
00	20	<10	5	10	10	
30N	20	10	<5	<10	5	
60N	170	<10	<5	10	5	
90N	<10	"	<5	<10	10	
120N	10	10	5	10	15	
150N	10	<10	<5	10	5	
180N	10	<10	<5	10	10	
[illegible]	30	<10	<5	<10	10	
240N	50	<10	<5	<10	5	
270N	20	<10	<5	<10	5	
300N	30	10	<5	20	15	
330N	10	<10	<5	20	20	
360N	70	10	<5	<10	5	
390N	20	<10	<5	<10	5	
420N	30	<10	<5	<10	5	
450N	10	10	<5	<10	5	
[illegible]	10	<10	5	10	(15)	
[illegible]	<10	<10	<5	10	5	
540N	10	<10	<5	10	5	
570N	10	10	<5	<10	5	
600N	<10	<10	<5	10	5	
630N	<10	<10	<5	<10	5	
660N	10	<10	25	10	10	
690N	<10	<10	<5	<10	5	
720N	<10	<10	5	10	10	
750N	20	10	5	<10	5	
780N	<10	<10	5	10	10	
810N	<10	<10	5	10	5	
840N	10	10	5	10	10	

279

919281

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

Area: Agnew Grid
Grid Line: 400E
Date:

	Sn	As	Cu	Pb	Zn
870N	50	<10	5	30	15
900N	<10	<10	<5	10	5
930N	<10	<10	5	10	5
960N	<10	<10	<5	10	10
990N	<10	<10	<5	10	5
1020N	10	10	<5	10	5
1050N	10	10	<5	10	<5
[illegible]N	<10	<10	25	20	25
1110N	<10	<10	5	10	5
1140N	<10	<10	10	10	10
1170N	10	<10	5	10	5
30S	<10	10	5	<10	15
60S	15	<10	15	<10	25
90S	<10	<10	5	<10	20
120S	15	<10	<5	<10	10
150S	<10	<10	15	10	20
180S	105	<10	5	10	10
210S	20	<10	5	10	10
240S	<10	<10	5	10	10
270S	10	<10	10	<10	15
300S	15	<10	10	10	15
330S	60	<10	5	10	5
360S	75	<10	10	10	20
890S	45	<10	5	<10	10
4200S	50	<10	10	<10	25
4500S	105	<10	20	10	30
4800S	100	<10	5	10	10
5100S	145	<10	<5	10	10

280

REMSON LIMITED

GEOCHEMICAL ASSAY RESULTS

919282

rea: Agnew Grid
rid Line: 400E
ate:

	Sn	As	Cu	Pb	Zn	
540S	100	<10	5	10	20	
570S	240	<10	<5	<10	10	
600S	360	<10	<5	10	15	
630S	400	<10	<5	<10	10	
660S	150	<10	5	<10	15	
690S	60	<10	<5	<10	5	
720S	200	<10	<5	<10	10	

281

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919283

Area: Agnew Grid
Grid Line: 500E
Date:

	Sn	As	Cu	Pb	Zn	WO_3
00N	10	<10	<5	5	5	<20
30N	<10	<10	<5	<5	15	<20
60N	10	<10	<5	<5	5	<20
90N	<10	<10	<5	5	15	<20
120N	<10	<10	<5	5	15	<20
150N	<10	<10	<5	<5	10	<20
180N	<10	<10	<5	<5	10	<20
210N	10	10	<5	<5	10	20
240N	20	20	<5	10	10	<20
270N	<10	<10	<5	50	25	<20
300N	10	10	5	5	15	40
330N	20	20	<5	5	10	<20
360N	10	10	5	10	10	<20
390N	10	10	<5	<5	5	<20
420N	40	40	<5	<5	10	<20
450N	10	10	5	10	15	50
480N	<10	<10	<5	5	10	<20
510N	10	10	5	5	5	<20
540N	<10	<10	<5	10	10	<20
570N	<10	50	5	10	10	<20
600N	<10	<10	<5	<10	10	
630N	<10	<10	<5	<10	5	
660N	<10	<10	5	10	20	
690N	<10	<10	<5	<10	15	
720N	<10	<10	<5	<10	5	
750N	no sample					
780N	<10	<10	5	10	20	
810N	<10	<10	<5	10	25	
840N	15	<10	<5	<10	15	

28

GEOCHEMICAL ASSAY RESULTS

919284

rea: Agnew Grid
rid Line: 500E
ate:

	Sn	As	Cu	Pb	Zn
870N	no sample				
900N	20	<10	<5	<10	20
930N	45	<10	<5	<10	40
960N	<10	10	<5	<10	25
990N	15	<10	<5	<10	10
1020N	<10	<10	<5	<10	10
1050N	15	<10	<5	<10	5
1080N	<10	<10	<5	<10	10
1110N	<10	<10	<5	<10	10
1140N	<10	<10	<5	<10	10
30S	45	<10	<5	<10	15
60S	20	<10	<5	<10	5
90S	20	<10	5	<10	10
120S	<10	<10	5	<10	10
150S	<10	<10	10	<10	15
180S	<10	<10	<5	<10	5
210S	<10	<10	5	<10	10
240S	50	50	5	<10	5
270S	35	<10	<5	<10	<5
300S	45	<10	<5	<10	5
330S	85	<10	<5	10	5
360S	<10	<10	<5	<10	5
390S	55	<10	5	<10	10
420S	60	<10	<5	<10	<5
450S	135	<10	<5	<10	<5
480S	15	<10	<5	50	<5
510S	60	<10	<5	<10	5
540S	65	<10	5	<10	10

283

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919285

Area: Agnes Grid
Grid Line: 500E
Date:

	Sn	As	Cu	Pb	Zn
570S	60	<10	5	<10	10
600S	20	<10	30	<10	25
630S	<10	<10	30	<10	55

28

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919286

Area: Agnew Grid
Grid Line: 600E
Date:

	Sn	As	Cu	Pb	Zn	WO_3
00	<10	<10	20	10	15	<20
30N	<10	<10	<5	5	5	<20
60N	120	20	10	10	10	<20
90N			10	15	20	
120N	<10	<10	<5	<5	20	<20
150N	30	<10	5	<5	30	<20
180N	20	<10	<5	<5	25	30
210N	10	<10	<5	5	30	<20
240N	30	<10	~~150~~ 5	~~30~~ <5	~~60~~ 25	<20
270N	10	<10	<5	<5	25	<20
300N	10	<10	<5	<5	25	<20
330N	10	10	5	5	25	<20
360N	<10	<10	5	5	30	<20
390N	10	<10	5	<5	30	<20
420N	20	<10	<5	5	25	20
450N	40	<10	5	15	30	20
480N	30	10	<5	10	20	<20
510N	<10	<10	<5	10	25	<20
540N	30	<10	10	10	30	20
570N	70	10	10	10	45	20
600N	100	10	<5	<5	25	40
630N	<10	<10	5	<5	30	20
660N	10	<10	<5	15	35	20
690N	<10	<10	<5	<5	30	<20
720N	<10	<10	5	20	45	<20
750N	10	<10	5	10	35	<20
780N	<10	<10	<5	15	35	<20
810N	<10	<10	5	5	50	<20
840N	20	<10	5	10	45	<20

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GEOCHEMICAL ASSAY RESULTS

919287

Area: Agnew Grid
Grid Line: 600E
Date:

	Sn	As	Cu	Pb	Zn	WO_3
870N	800	200	100	95	300	20
900N	1220	230	30	120	350	20
930N	1820	10	10	45	75	<20
960N	550	<10	5	15	50	20
990N	150	10	10	30	95	<20
1020N	30	<10	5	30	40	<20
1050N	20	<10	<5	5	25	80
1080N	<10	<10	25	30	45	<20
1110N	<10	<10	5	<5	25	<20
1140N	<10	<10	10	10	35	<20
30S	15	<10	10	<10	15	
60S	<10	<10	10	10	25	
90S	20	<10	10	<10	30	
120S	20	<10	5	<10	10	
150S	60	20	<5	20	15	
180S	<10	<10	5	<10	15	
210S	20	<10	<5	<10	10	
240S	<10	<10	5	<10	15	
270S	<10	<10	<5	10	5	
300S	35	<10	<5	<10	5	
330S	<10	<10	5	30	20	
360S	50	65	15	300	225	
390S	110	20	5	30	30	
420S	170	<10	5	10	10	
450S	25	<10	10	<10	15	
480S	100	<10	5	<10	10	
510S	135	<10	<5	10	10	
540S	395	<10	<5	<10	<5	

286

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919288

Area: Agnew Grid
Grid Line: 700E
Date:

	Sn	As	Cu	Pb	Zn	
00	420	<10	<5	15	35	<20
30N	10	10	<5	10	20	<20
60N	20	<10	<5	10	25	<20
90N	10	<10	<5	10	20	<20
120N	20	<10	5	15	40	<20
150N	10	<10	<5	10	30	<20
180N	10	<10	<5	10	20	<20
210N	20	<10	<5	10	20	<20
240N	20	<10	<5	10	20	<20
270N	30	<10	<5	10	25	<20
300N	30	<10	<5	5	20	<20
330N	30	<10	5	15	30	<20
360N	10	<10	5	10	30	<20
390N	180	<10	<5	10	30	<20
420N	30	10	<5	<5	30	<20
450N	290	<10	<5	10	35	20
480N	10	<10	<5	10	30	<20
510N	60	<10	5	10	50	<20
540N	110	20	5	10	60	<20
570N	30	<10	<5	10	75	<20
600N	10	<10	<5	10	45	<20
630N	10	10	<5	5	35	20
660N	10	<10	<5	10	35	<20
690N	20	<10	<5	10	50	40
720N	10	<10	<5	5	50	20
750N	<10	<10	<5	<5	70	40
780N	30	<10	5	40	65	40
810N	170	160	45	60	145	<20
840N	850	190	30	100	400	20

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RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919289

Area: MT AGNEW GRID
Grid Line: 700E
Date:

	Sn	As	Cu	Pb	Zn	WO_3
870 N	830	160	30	90	500	30
900 N	1370	850	95	190	600	30
930 N	740	250	30	80	350	20
960 N	1000	110	25	30	115	<20
990 N	70	<10	10	50	60	<20
1020 N	50	<10	10	50	75	<20
1050 N	50	<10	<5	10	35	<20
1080 N	120	<10	<5	<5	45	<20
1110 N	60	<10	<5	10	30	30
1140 N	50	<10	5	25	30	<20
1170 N	50	<10	5	<10	25	20
30S	35	<10	20	<10	25	
60S	60	<10	<5	<10	35	
90S	50	10	5	20	25	
120S	25	<10	15	<10	20	
150S	10	<10	15	<10	20	
180S	<10	<10	25	<10	30	
210S	<10	<10	25	<10	50	
240S	<10	<10	5	<10	10	
270S	<10	<10	10	<10	25	
300S	<10	<10	5	10	10	
330S	<10	<10	10	<10	10	
360S	<10	<10	<5	<10	5	
390S	30	10	<5	<10	<5	
420S	15	10	5	<10	20	
450S	45	<10	<5	<10	5	
480S	55	<10	5	<10	15	
510S	250	<10	<5	<10	10	

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GEOCHEMICAL ASSAY RESULTS

919290

rea: Agnew Grid
rid Line: 700E
ate:

	Sn	As	Cu	Pb	Zn	
540S	90	10	<5	<10	15	
570S	80	<10	10	<10	10	

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RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919291

Area: AGNEW GRID
Grid Line: 800E
Date:

	Sn	As	Cu	Pb	Zn
00N	145	<10	10	<10	25
30N	130	<10	<5	<10	20
60N	110	<10	15	<10	25
90N	35	30	10	<10	15
120N	20.	<10	5	<10	15
150N	<10	<10	5	<10	15
180N	50	<10	10	<10	15
210N	<10	<10	10	<10	15
240N	<10	<10	5	20	15
270N	<10	<10	5	<10	15
300N	10	30	10	10	25
330N	10	10	10	<10	20
360N	170	<10	15	30	75
390N	<10	<10	5	15	15
420N	"	<10	5	10	40
450N	"	<10	10	10	30
480N	"	<10	5	10	50
510N	40	<10	5	20.	80
540N	<10	<10	<5	<10	110
570N	10	10	15	<10	70
600N	30	<10	<5	15.	40
630N	10	<10	10	90	100
660N	<10	<10	10	20	45
690N	<10	<10	15	25	95
720N	30	<10	10	30	95
750N	<10	<10	10	30	140
780N	20	<10	10	80	110
810N	40	<10	10	65	170
840N	<10	<10	5	40	100

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RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919292

Area: AGNEW GRID
Grid Line: 800E
Date:

	Sn	As	Cu	Pb	Zn
870N	50	<10	5	35	90
900N	<10	<10	10	20	30
930N	<10	<10	10	10	25
960N	50	40	10	30	60
990N	20	<10	10	20	25
1020N	<10	<10	5	10	20
1050N	<10	<10	<5	10	20
1080N	10	10	5	<10	20
1110N	60	<10	10	10	40
1140N	<10	<10	10	15	40
30S	80	<10	<5	10	5
60S	65	<10	<5	20	5
90S	<10	<10	5	<10	15
120S	15	<10	10	<10	15
150S	<10	<10	10	20	15
180S	15	<10	30	<10	30
210S	10	<10	10	<10	20
240S	<10	<10	5	<10	10
270S	<10	<10	30	10	30
300S	10	<10	45	30	70
330S	10	<10	15	10	25
360S	10	<10	5	<10	<5
390S	15	<10	5	<10	20
420S	20	<10	10	<10	15
450S	<10	<10	10	10	15
480S	<10	<10	5	<10	5
510S	35	<10	10	<10	15
540S	50	<10	15	<10	25

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RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919293

rea: Agnew Grid
rid Line: 800E
ate:

	Sn	As	Cu	Pb	Zn
570S	<10	<10	15	10	25
600S	85	<10	5	<10	30
630S	45	<10	15	<10	20

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RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919294

Area: AGNEW GRID
Grid Line: 900E
Date:

	Sn	As	Cu	Pb	Zn
00 N	50	< 10	5	20	60
30 N	80	< 10	5	20	40
60 N	160	< 10	10	20	55
90 N	<10	< 10	10	10	30
120 N	140	< 10	15	15	50
150 N	<10	< 10	INSUFFICIENT SAMPLE		
180 N	<10	< 10	5	<10	20
210 N	<10	< 10	10	<10	20
240 N	10	< 10	5	<10	30
270 N	10	< 10	<5	<10	25
300 N	10	< 10	5	10	30
330 N	20	< 10	<5	<10	20
360 N	30	< 10	<5	<10	25
390 N	<10	< 10	10	<10	25
420 N	20	< 10	10	10	40
450 N	20	< 10	10	20	30
480 N	<10	< 10	10	30	40
510 N	20	< 10	10	25	55
540 N	20	< 10	10	100	110
570 N	<10	< 10	5	35	40
600 N	100	< 10	5	35	60
630 N	20	< 10	5	20	45
660 N	10	< 10	5	25	95
690 N	10	< 10	5	20	90
720 N	<10	< 10	5	10	60
750 N	<10	< 10	5	20	45
780 N	20	< 10	5	20	55
810 N	180	< 10	<5	10	30
840 N	<10	< 10	5	15	30

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RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919295

Area: AGNEW GRID
Grid Line: 900E
Date:

	Sn	As	Cu	Pb	Zn
870N	< 10	<10	10	25	30
900N	< 10	< 10	5	10	20
930N	< 10	<10	<5	<10	15
960N	< 10	< 10	<5	<10	20
990N	200	50	<5	<10	20
1020N	<10	<10	<5	10	45
1050N	20	10	<5	10	20
1080N	<10	< 10	5	10	20
1010N	<10	<10	10	25	40
1140 N	<10	<10	5	<10	15
30 S	<10	< 10	15	10	10
60 S	10	< 10	10	< 10	10
90 S	10	< 10	10	<10	15
120 S	20	< 10	5	<10	5
150 S	40	< 10	<5	<10	10
180 S	35	< 10	<5	<10	10
210 S	15	< 10	5	<10	10
240 S	<10	< 10	10	<10	15
270 S	20	< 10	10	<10	5
300 S	20	< 10	5	<10	5
330 S	30	< 10	10	<10	15
360 S	25	< 10	10	<10	20
390 S	45	< 10	<5	10	5
420 S	<10	< 10	15	<10	15
450 S	30	< 10	20	<10	20
480 S	10	< 10	10	<10	10
510 S	<10	< 10	10	<10	15
540 S	50	< 10	5	<10	5

294

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919296

rea: AGNEW GRID
rid Line: 900E
ate:

	Sn	As	Cu	Pb	Zn	
570 S	25	<10	5	<10	10	
600 S	40	<10	10	<10	10	
630 S	30	<10	15	<10	20	
660 S	45	<10	5	<10	5	
690 S	70	<10	<5	<10	5	

295

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919297

Area: AGNEW GRID
Grid Line: 1000E
Date:

	Sn	As	Cu	Pb	Zn
00 N	10	<10	5	15	25
30 N	140	<10	10	<10	20
60 N	10	<10	5	<10	20
90 N	<10	<10	5	<10	25
120N	<10.	<10	15	<10	30
150N	10	<10	5	<10	15
180 N	<10	<10	5	<10	20
210N	<10	<10	5	<10	25
240N	<10	<10	<5	<10	25
270N	<10	<10	<5	<10	20
300N	<10	<10	5	<10	25
330N	<10	<10	10	<10	25
360N	10	<10	10	<10	30
390N	<10	<10	5	<10	25
420N	<10	<10	10	<10	20
450N	<10	<10	10	<10	25
480N	<10	<10	10	10	30
510N	<10	<10	10	<10	25
540N	<10	<10	15	20	35
570N	<10	<10	5	10	20
600 N	<10	50	10	15	30
630N	20	20	10	10	25
660N	20	<10	5	<10	25
690 N	<10	<10	10	10	30
720 N	<10	<10	10	<10	20
750 N	<10	<10	25	20	45
780 N	<10	<10	15	15	35
810 N	<10	<10	10	10	25
840 N	<10	<10	10	<10	30

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RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919298

Area: AGNEW GRID
Grid Line: 1000 E
Date:

	Sn	As	Cu	Pb	Zn
870 N	10	40	5	<10	20
900 N	<10	50	10	< 10	30
930 N	<10	< 10	10	< 10	25
960 N	<10	< 10	10	< 10	20
990 N	<10	< 10	10	<10	20
1020 N	180	< 10	20	10	50
1050 N	<10	< 10	10	<10	15
1080 N	10	< 10	10	15	25
1110 N	<10	< 10	5	<10	~~15~~ 15
1140 N	20	< 10	5	10	15
30 S	<10	< 10	5	20	20
60 S	< 10	< 10	15	10	30
90 S	< 10	< 10	10	10	20
120 S	20	< 10	10	<10	20
150 S	<10	< 10	5	<10	20
180 S	<10	< 10	10	20	30
210 S	<10	60	10	<10	25
240 S	<10	<10	15	20	30
270 S	<10	<10	15	<10	25
300 S	50	<10	10	20	20
330 S	<10	10	5	10	15
360 S	<10	<10	10	10	25
390 S	<10	<10	10	< 10	20
420 S	~~[illegible]~~ <10	<10	10	< 10	20
450 S	~~10~~ 20	<10	5	< 10	10
480 S	~~20~~ 10	<10	15	< 10	35
510 S	~~30~~ 30	<10	10	<10	20

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919299

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

Area: AGNEW GRID
Grid Line: 1000E
Date:

	Sn	As	Cu	Pb	Zn
540 S	20	<10	10	<10	20
570 S	<10	<10	10	<10	25
600 S	10	<10	10	<10	20
630 S	20	10	25	<10	30
660 S	80	<10	10	<10	20
690 S	650	40	15	10	20
720 S	10	<10	220	60	20
750 S	<10	<10	5	10	15

298

RENISON . LIMITED

GEOCHEMICAL ASSAY RESULTS

919300

rea: AGNEW GRID
rid Line: 1100E
ate:

	Sn	As	Cu	Pb	Zn
00	< 10	< 10	5	20	20
30N	< 10	< 10	<5	<10	5
60N	< 10	< 10	<5	<10	15
90N	< 10	< 10	5	10	15
120N	< 10	< 10	5	<10	10
150N	< 10	< 10	<5	10	15
180N	< 10	< 10	<5	10	10
210N	<10	< 10	20	20	20
240N	10	< 10	< 5	< 10	10
270N	<10	< 10	< 5	< 10	10
300N	40	< 10	< 5	< 10	25
330N	<10	< 10	< 5	< 10	10
360N	40	< 10	< 5	< 10	15
390N	10	< 10	< 5	< 10	10
420N	10	< 10	< 5	< 10	10
450N	35	< 10	< 5	<10	10
480N	<10	< 10	5	10	25
510N	20	< 10	<5	<10	15
540N	<10	< 10	5	10	15
570N	<10	< 10	10	10	20
600N	<10	< 10	<5	10	20
630N	10	< 10	10	<10	20
660N	25	<10	5	<10	20
690N	<10	< 10	5	10	20
720N	20	10	<5	20	25
750N	30	10	15	70	70
780N	10	<10	5	25	40
810N	<10	<10	<5	20	25
840N	<10	<10	10	30	25

299

ALNISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919301

Area: AGNEW GRID
Grid Line: 1100E
Date:

	Sn	As	Cu	Pb	Zn
870N	< 10	<10	<5	<10	10
900N	< 10	<10	<5	<10	5
930N	< 10	<10	<5	10	10
960N	< 10	<10	<5	10	15
990N	~~<10~~ MISSING				
1020N	< 10	50	35	40	80
1050N	< 10	<10	<5	<10	10
1080N	< 10	<10	5	<10	10
1110N	25	<10	<5	<10	10
1140N	55	<10	5	<10	10
1170N	<10	<10	15	<10	20
30S	<10	<10	10	<10	30
60 S	<10	<10	<5	10	15
90 S	<10	<10	5	10	10
120 S	40	10	< 5	<10	5
150 S	<10	<10	< 5	10	15
180 S	15	<10	10	10	25
210 S	<10	<10	5	< 10	25
240 S	<10	< 10	< 5	< 10	20
270 S	40	< 10	< 5	10	<5
300 S	15	< 10	< 5	< 10	5
330 S	<10	< 10	< 5	< 10	5
360 S	<10	< 10	5	< 10	5
390 S	<10	< 10	10	< 10	10
420 S	25	< 10	<5	< 10	5
450 S	<10	< 10	5	30	15
480 S	<10	< 10	10	~~20~~ 20	~~20~~ 15
510 S	<10	< 10	25	~~20~~ 10	25

300

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919302

rea: AGNEW GRID
rid Line: 1100 E
ate:

	Sn	As	Cu	Pb	Zn	
540 S	15	< 10	15	<10	15	
570 S	45	< 10	10	"	15	
600 S	<10	< 10	20	"	25	
630 S	<10	< 10	15	"	20	
660 S	70	< 10	10	"	25	
690 S	<10	< 10	5	"	15	
720 S	10	< 10	10	"	15	
750 S	<10	< 10	10	"	30	
780 S	120	< 10	15	"	35	
810 S	70	< 10	15	<10	30	
~~840~~						

301

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919303

Area: AGNEW GRID
Grid Line: 1200E
Date:

	Sn	As	Cu	Pb	Zn
00N	40	< 10	<5	<10	20
30 N	30	< 10	<5	<10	20
60 N	10	< 10	<5	<10	20
90 N	30	< 10	< 5	<10	20
120 N	50.	< 10	< 5	<10	20
150 N	30	< 10	< 5	<10	30
180 N	20	< 10	< 5	<10	20
210 N	<10	< 10	5	<10	30
240 N	20	< 10	5	20	20
270 N	<10	< 10	15	10	40
300N	40	< 10	5	< 10	20
330N	<10	< 10	< 5	< 10	15
360N	< 10	< 10	< 5	< 10	15
390 N	< 10	< 10	< 5	10	20
420N	< 10	< 10	< 5	10	20
450N	< 10	<10	< 5	< 10	20
480 N	40	10	< 5	< 10	20
510 N	40	< 10	< 5	<10	30
540N	40	< 10	5	40	55.
570N	10	20	< 5	<10	35
600N	20	20	< 5	40	50
630 N	10	<10	5	30	50
660 N	<10	50	< 5	20	40
690 N	<10	30	< 5	20	85
720N	20	30	< 5	20	40
750 N	20	<10	< 5	20	50
780 N	20	<10	5	10	65
810 N	20	<10	< 5	10	35
840 N	60	<10	5	10	35

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RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919304

Area: AGNEW GRID
Grid Line: 1200E
Date:

	Sn	As	Cu	Pb	Zn
870 N	<10	< 10	< 5	<10	20
900 N	10	< 10	< 5	<10	20
930 N	10	40	< 5	<10	20
960 N	<10	<10	< 5	10	20
990 N	10	40	5	10	30
1020 N	150	<10	10	10	35
1050 N	20	<10	10	<10	20
1080 N	10	<10	<5	<10	20
1110 N	<10	<10	<5	<10	25
1140 N	<10	<10	5	<10	20
30 S	<10	< 10	10	10	30
60 S	<10	< 10	5	<10	25
90 S	<10	< 10	10	<10	30
120 S	<10	< 10	10	10	30
150 S	<10	< 10	15	20	30
180 S	40	< 10	15	10	25
210 S	20	< 10	10	10	30
240 S	10	< 10	20	< 10	35
270 S	60	< 10	20	< 10	155
300 S	<10	< 10	10	< 10	25
330 S	20	< 10	10	< 10	20
360 S	200	<10	10	< 10	20
390 S	170	70	10	< 10	15
420 S	150	< 10	15	< 10	30
450 S	140	< 10	30	< 10	80
480 S	<10	< 10	15	< 10	30
510 S	40	< 10	5	< 10	20

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RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919305

Area: AGNEW GRID
Grid Line: 1200E
Date:

	Sn	As	Cu	Pb	Zn
540 S	90	< 10	5	< 10	20
570 S	10	< 10	10	< 10	10
600 S	10	10	15	10	15
630 S	<10	< 10	15	< 10	35
660 S	<10	< 10	20	< 10	25
690 S	<10	< 10	15	< 10	30
720 S	20	< 10	20	< 10	25
750 S	80	< 10	5	< 10	15
780 S	10	< 10	10	< 10	25
810 S	360	< 10	5	< 10	15
840 S	60	< 10	10	< 10	25
870 S	90	< 10	10	< 10	20

304

ALNISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919306

rea: AGNEW GRID
rid Line: 1300E
ate:

	Sn	As	Cu	Pb	Zn
00N	25	<10	20	<10	30
30N	10	<10	5	<10	15
60N	<10	<10	<5	<10	<5
90N	15	10	<5	<10	<5
120N	<10	<10	~~<5~~ <5	<10	~~<5~~ 10
150N	20	<10	<5	<10	<5
180N	<10	10	<5	<10	45
210N	10	<10	<5	<10	<5
240N	<10	<10	<5	<10	~~10~~ <5
270N	<10	<10	<5	10	10
300N	<10	<10	5	10	5
330N	<10	<10	<5	<10	5
360N	<10	<10	5	<10	5
390N	<10	<10	<5	<10	<5
420N	<10	<10	<5	<10	5
450N	<10	<10	<5	<10	<5
480N	10	<10	<5	<10	5
510N	10	<10	<5	<10	5
540N	<10	<10	<5	<10	<5
570N	<10	<10	<5	<10	5
600N	<10	<10	5	<10	<5
630N	<10	10	15	20	25
660N	20	<10	5	<10	10
690N	<10	<10	10	10	35
720N	105	10	<5	10	10
750N	<10	<5	<5	10	35
780N	<10	40	<5	20	45
810N	<10	<10	<5	<10	10
840N	85	30	<5	<10	10

305

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919307

rea: AGNEW GRID
rid Line: 1300E
late:

	Sn	As	Cu	Pb	Zn
870N	235	<10	<5	<10	<5
900N	500	<10	<5	<10	<5
930N	20	<10	<5	10	<5
960N	MISSING		INSUFFICIENT SAMPLE		
990N	<10	<10	5	10	<5
1020N	<10	<10	<5	<10	25
1050N	15	<10	<5	<10	5
1080N	<10	<10	<5	<10	<5
1110N	<10	<10	<5	<10	5
1140N	<10	<10	<5	<10	5
30 S	300	<10	15	10	20
60 S	60	10	10	<10	15
90 S	75	15	5	10	10
120 S	20	<10	5	10	15
150 S	10	<10	10	10	15
180 S	15	<10	5	10	10
210 S	10	<10	<5	<10	<5
240 S	30	<10	<5	<10	15
270 S	65	20	<5	50	5
300 S	75	25	<5	<10	10
330 S	130	<10	<10	<10	10
360 S	<10	<10	<5	10	<5
390 S	85	<10	10	10	10
420 S	20	<10	20	10	15
450 S	10	<10	10	10	15
480 S	40	<10	<5	10	5
510 S	15	<10	5	10	20
540 S	<10	<10	25	10	35

306

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919308

Area: AGNEW GRID
Grid Line: 1300E
Date:

	Sn	As	Cu	Pb	Zn
570 S	60	< 10	10	< 10	10
600 S	15	< 10	10	< 10	10
630 S	<10	< 10	10	< 10	15
660 S	20	< 10	5	< 10	20
690 S	10	< 10	<5	< 10	5
720 S	160	< 10	10	10	10
750 S	10	< 10	10	< 10	15
780 S	<10	< 10	< 5	< 10	5
810 S	<10	< 10	<5	< 10	<5
840 S	15	< 10	< 5	< 10	10
870 S	<10	< 10	<5	< 10	5
900 S	75	<10	10	<10	10

307

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919309

rea: AGNEW GRID
rid Line: 1400E
ate:

	Sn	As	Cu	Pb	Zn
00	50	< 10	15	< 10	25
30N	30	< 10	<5	< 10	10
60N	40	< 10	30	< 10	25
90N	<10	< 10	20	< 10	15
120N	<10	< 10	10	< 10	10
150N	30	< 10	5	< 10	10
180N	10	< 10	<5	< 10	<5
210N	190	< 10	<5	< 10	5
240N	<10	< 10	<5	10	10
270N	<10	< 10	<5	< 10	<5
300N	10	< 10	<5	< 10	10
330N	<10	< 10	5	< 10	5
360N	<10	< 10	5	< 10	10
390N	<10	< 10	<5	< 10	5
420N	<10	< 10	<5	< 10	<5
450N	10	< 10	<5	< 10	10
480N	10	10	<5	15	10
510N	20	<10	<5	<10	<5
540N	<10	< 10	25	20	30
570N	< 10	< 10	<5	< 10	5
600N	< 10	< 10	<5	<10	5
630N	< 10	< 10	<5	10	5
660N	<10	< 10	<5	<10	5
690N	< 10	< 10	<5	<10	15
720N	<10	< 10	10	<10	15
750N	<10	<10	<5	<10	30
780N	630	110	<5	130	17
810N	320	420	20	180	20
840N	520	90	5	100	10

30b

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919310

rea: AGNEW GRID
rid Line: 1400E
ate:

	Sn	As	Cu	Pb	Zn
870N	90	<10	<5	30	10
900N	20	<10	<5	<10	10
930N	<10	~~420~~ <10	<5	<10	10
960N	<10	~~90~~ <10	<5	<10	~~10~~ 5
990N	<10	<10	<5	<10	~~5~~ 5
1020N	<10	<10	15	<10	40
1050N	<10	<10	<5	15	10
1080N	MISSING				
1110N	<10	<10	25	30	25
1140N	<10	<10	<5	10	5
1170N	<10	<10	<5	10	10
30~~N~~S	60	<10	<5	<10	5
60~~N~~S	<10	<10	5	<10	10
90~~N~~S	10	<10	5	<10	10
120~~N~~S	20	<10	5	<10	10
150~~N~~S	20	<10	5	<10	5
180~~N~~S	70	<10	15	<10	20
210~~N~~S	10	<10	5	30	10
240~~N~~S	50	<10	15	10	20
270~~N~~S	90	<10	10	<10	10
300~~N~~S	40	<10	<5	<10	40
330~~N~~S	40	<10	5	<10	20
360~~N~~S	<10	<10	5	<10	5
390~~N~~S	<10	<10	15	<10	15
420~~N~~S	<10	<10	10	<10	10
450~~N~~S	<10	<10	5	<10	15
480~~N~~S	60	<10	<5	<10	5
510~~N~~S	<10	<10	15	<10	25

309

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919311

rea: AGNEW GRID
rid Line: 1400E
ate:

	Sn	As	Cu	Pb	Zn
540 S	10	< 10	10	50	55
570 S	<10	< 10	15	<10	15
600 S	<10	< 10	15	<10	20
630 S	<10	< 10	10	<10	10
660 S	<10	< 10	5	<10	10
690 S	~~<10~~ 20	< 10	10	<10	15
720 S	<10	< 10	10	<10	25
750 S	<10	< 10	10	<10	25
780 S	20	< 10	15	<10	35
810 S	<10	< 10	10	<10	15
840 S	20	< 10	5	<10	10

310

919312

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

rea: AGNEW GRID
rid Line: 1500E
ate:

	Sn	As	Cu	Pb	Zn
00N	10	<10	<5	20	10
30N	<10	<10	<5	<10	15
60N	20	<10	<5	<10	5
90N	<10	<10	20	<10	20
120N	<10	<10	<5	<10	5
150N	<10	<10	5	<10	10
180N	<10	<10	5	<10	15
210N	<10	<10	5	<10	20
240N	<10	<10	10	20	20
270N	<10	10	<5	<10	5
300N	10	<10	5	<10	10
330N	<10	<10	<5	<10	10
360N	<10	<10	10	<10	15
390N	10	<10	5	<10	10
420N	MISSING				
450N	20	<10	<5	<10	10
480N	50	<10	<5	<10	5
510N	20	<10	<5	<10	5
540N	20	<10	<5	<10	5
570N	<10	<10	<5	<10	15
600N	50	<10	<5	<10	10
630N	240	<10	<5	<10	15
660N	50	<10	<5	10	10
690N	10	<10	<5	<10	20
720N	20	<10	<5	<10	20
750N	20	<10	<5	10	30
780N	30	20	5	<10	25
810N	120	30	5	30	20
840N	50	<10	5	20	15

311

919313

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

Area: AGNEW GRID
Grid Line: 1500E
Date:

	Sn	As	Cu	Pb	Zn
870N	20	<10	5	<10	5
900N	<10	<10	5	<10	10
930N	20	10	<5	<10	5
960N	10	10	<5	<10	10
990N	10	<10	<5	<10	10
1020N	20	10	<5	<10	10
1050N	<10	<10	<5	10	5
1080N	<10	<10	<5	<10	15
1110N	20	<10	<5	10	15
1140N	20	10	<5	<10	10
1170N	50	<10	<5	20	15
30 S	20	<10	5	<10	5
60 S	10	<10	5	10	5
90 S	<10	<10	5	10	5
120 S	<10	<10	5	30	10
150 S	20	<10	10	10	5
180 S	20	50	5	20	5
210 S	<10	<10	5	<10	5
240 S	<10	<10	5	<10	5
270 S	<10	10	10	10	5
300 S	140	<10	5	10	20
330 S	40	<10	<5	10	5
360 S	30	<10	10	10	25
390 S	30	<10	10	<10	10
420 S	70	<10	15	<10	25
450 S	<10	<10	10	20	15
480 S	<10	<10	20	<10	20
510 S	<10	<10	10	<10	10

312

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919314

Area: AGNEW GRID
Grid Line: 1500E
Date:

	Sn	As	Cu	Pb	Zn
540 S	<10	<10	5	20	10
570 S	<10	<10	10	<10	10
600 S	<10	<10	25	<10	35
630 S	<10	<10	10	<10	10
660 S	<10	<10	5	<10	10
690 S	140	<10	5	<10	5
720 S	<10	<10	5	<10	10
750 S	<10	<10	<5	<10	<5
~~780~~					
~~810~~					

313

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919315

Area: AGNEW GRID
Grid Line: 1600E
Date:

	Sn	As	Cu	Pb	Zn
00	20	<10	<5	<10	5
30N	<10	<10	<5	<10	5
60N	10	<10	<5	10	<5
90N	20	<10	<5	<10	<5
120N	120	10	<5	<10	<5
150N	30	<10	5	<10	5
180N	20	10	<5	<10	5
210N	10	<10	<5	10	10
240N	40	<10	<5	10	10
270N	30	10	<5	<10	<5
300N	20	<10	<5	<10	5
330N	40	20	<5	<10	5
360N	20	<10	<5	<10	10
390N	20	10	<5	<10	<5
420N	10	10	<5	20	5
450N	20	<10	<5	<10	5
480N	10	<10	<5	"	10
510N	20	<10	<5	"	15
540N	30	40	5	"	35
570N	<10	<10	5	"	15
600N	<10	<10	<5	"	15
630N	30	10	<5	"	10
660N	60	<10	<5	"	10
690N	30	10	<5	"	5
720N	20	<10	10	"	5
750N	70	<10	<5	"	15
780N	<10	<10	<5	"	10
810N	20	<10	<5	"	<5
840N	10	<10	<5	"	<5

314

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919316

rea: AGNEW GRID
rid Line: 1600E
ate:

	Sn	As	Cu	Pb	Zn
870N	20	10	<5	<10	5
900N	10	10	<5	<10	<5
930N	30	<10	<5	<10	<5
960N	40	<10	<5	20	<5
990N	120	20	<5	20	5
1020N	70	<10	<5	<10	<5
1050N	60	<10	<5	10	<5
1080N	<10	<10	5	<10	<5
1110N	10	<10	10	60	20
1140N	40	<10	<5	<10	<5
1170N	20	<10	<5	<10	10
~~1200~~ 1205 N	<10	10	<5	<10	10
30 S	<10	<10	<5	<10	15
60 S	<10	<10	<5	<10	10
90 S	60	<10	<5	<10	<5
120 S	<10	<10	<5	<10	5
150 S	<10	<10	<5	<10	10
180 S	<10	<10	<~~10~~5	<10	<5
210 S	30	<10	5	<10	10
240 S	<10	<10	<5	<10	10
270 S	40	<10	5	20	10
300 S	10	10	5	10	5
330 S	10	<10	5	10	5
360 S	10	<10	<5	<10	5
390 S	70	<10	<5	<10	10
420 S	<10	<10	<5	<10	10
450 S	<10	<10	20	<10	25
480 S	30	<10	5	<10	10

315

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919317

Area: AGNEW GRID
Grid Line: 1600E
Date:

	Sn	As	Cu	Pb	Zn	
570 S	70	10	<5	<10	5	
540 S	<10	<10	<5	20	15	
570 S	<10	<10	10	<10	15	
600 S	<10	<10	5	<10	10	
630 S	10	<10	5	<10	5	
660 S	<10	<10	<5	<10	<5	
690 S	20	<10	10	<10	15	
720 S	30	<10	15	10	15	

316

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919318

rea: AGNEW GRID
id Line: 1700E
ate:

	Sn	As	Cu	Pb	Zn
00	<10	<10	<5	<10	5
30N	<10	<10	5	20	10
60N	20	<10	10	<10	10
90N	10	<10	<5	<10	<5
120N	20	<10	<5	<10	10
150N	10	<10	<5	<10	<~~10~~5
180N	10	<10	<5	<10	10
210N	10	<10	<5	<10	5
240N	30	<10	15	<10	25
270N	20	<10	5	<10	5
300N	30	<10	10	<10	15
330N	40	<10	5	<10	10
360N	30	<10	5	<10	10
390N	20	<10	10	<10	20
420N	10	<10	5	<10	10
450N	30	<10	<5	<10	5
480N	~~10~~ 30	<10	5	10	15
510N	~~40~~ 30	<10	5	<10	10
540N	~~60~~ 30	<10	5	<10	10
570N	~~10~~ <10	<10	5	<10	15
600N	~~<10~~ 60	<10	5	<10	15
630N	~~40~~ 10	<10	15	<10	20
660N	80 <10	<10	5	<10	20
690N	<10	<10	25	<10	30
720N	80	<10	10	<10	15
750N	30	<10	5	<10	15
780N	30	<10	5	<10	10
810N	60	30	5	10	15
840N	130	20	20	<10	25

317

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919319

rea: AGNEW GRID
rid Line: 1700E
ate:

	Sn	As	Cu	Pb	Zn
870N	40	210	10	<10	20
900N	1240	430	10	130	10
930N	170	20	<5	<10	5
960N	60	<10	5	<10	10
990N	80	10	5	10	15
1020N	160	<10	5	<10	15
1050N	50	<10	5	<10	10
1080N	50	<10	15	<10	25
1110N	130	<10	5	<10	15
1140N	20	<10	5	<10	10
1170N	20	<10	<5	<10	5
30S	<10	<10	5	<10	10
60S	20	<10	5	<10	20
90S	20	<10	<5	<10	10
120S	<10	<10	5	<10	15
150S	10	<10	5	<10	15
180S	10	<10	<5	10	5
210S	<10	<10	5	10	<5
240S	<10	<10	5	<10	10
270S	10	20	<5	20	10
300S	80	<10	5	<10	5
330S	10	<10	5	<10	5
360S	<10	<10	<5	<10	<5
390S	<10	<10	5	<10	10
420S	80	<10	<5	<10	5
450S	<10	<10	<5	<10	<5
480S	<10	<10	<5	20	5
510S	<10	<10	10	10	25

318

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919320

Area: AGNEW GRID
Grid Line: 1700 E
Date:

	Sn	As	Cu	Pb	Zn
540S	20	<10	5	20	10
570 S	<10	<10	5	<10	10
600 S	50	40	10.	<10	20
630 S	40	<10	<5	<10	20
660 S	10	<10	5.	<10	10

315

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919321

rea: AGNEW GRID
rid Line: 1800 E
ate:

	Sn	As	Cu	Pb	Zn
00N	90	<10	<5	<10	<5
30	150	"	<5	<10	5
60	200	"	10	<10	5
90	100	"	5	<10	5
120	130	"	40	10	35
150	100	"	5	10	10
180	140	"	5	<10	10
210	80	"	15	<10	15
240	290	"	10	10	10
270	340	"	5	10	10
300	130	"	10	<10	10
330	120	"	5	<10	5
360	100	"	5	<10	10
390	80	"	10	<10	15
420	130	<10	<5	<10	5
450	40	10	10	10	20
480	110	<10	5	<10	25
510	110	20	10	10	15
540	60	<10	5	<10	10
570	70	"	5	<10	10
600	60	"	10	<10	15
630	<10	"	15	<10	20
660	50	"	5	<10	5
690	50	"	10	<10	10
720	60	"	10	20	15
750	<10	"	10	10	15
780	90	"	5	<10	10
810 N	<10	"	20	10	30
840 N	50	<10	5	10	10

320

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919322

rea: AGNEW GRID
rid Line: 1800E
ate:

	Sn	As	Cu	Pb	Zn
870N	120	<10	<5	<10	10
900N	230	20			
930N	90	<10	15	10	25
980N	230	90	10	80	25
990N	200	<10	5	<10	5
1020N	100	20	5	40	35
1050N	60	20	15	50	35
1080N	150	<10	10	20	15
1110N	40	<10	5	80	10
1140N	40	30	15	60	30
30S	60	<10	5	<10	10
60S	40	<10	5	<10	10
90S	60	<10	<5	<10	25
120S	130	<10	<5	<10	<5
150S	180	<10	5	30	<5
180S	<10	<10	5	20	10
210S	400	<10	5	10	10
240S	20	<10	5	<10	20
270S	50	10	25	20	15
300S	60	60	65	20	25
330S	20	<10	5	<10	10
360S	10	<10	5	<10	10
390S	<10	<10	5	<10	10
420S	10	<10	<5	<10	10
450S	80	<10	5	10	20
480S	<10	<10	5	10	20
510S	<10	<10	10	10	15
540S	<10	<10	5	10	5

321

ALNISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919323

rea: ALNEW GRID
id Line: 1800E
ate:

	Sn	As	Cu	Pb	Zn
570S	140	<10	10	20	30
600S	<10	<10	<5	<10	<5
630S	MISSING				
660S	50	<10	<5	<10	35

324

GEOCHEMICAL ASSAY RESULTS

919324

Area: AGNEW GRID
Grid Line: 1900E
Date:

	Sn	As	Cu	Pb	Zn
00 N	160	<10	15	<10	10
30 N	240	<10	10	10	10
60 N	60	<10	25	<10	15
90 N	70	<10	25	<10	20
120 N	130	<10	15	<10	15
150 N	170	10	25	<10	20
180 N	50	<10	10	<10	10
210 N	60	<10	5	<10	10
240 N	20	<10	5	<10	5
270 N	50	<10	10	<10	10
300 N	60	<10	10	<10	10
330 N	80	20	10	10	10
360 N	50	<10	15	10	15
390 N	130	<10	10	<10	10
420 N	90	<10	10	10	10
450 N	140	<10	10	10	10
480 N	90	10	5	<10	15
510 N	~~1470~~ 140	<10	<5	<10	5
540 N	70	<10	10	<10	15
570 N	180	10	<5	<10	15
600 N	110	<10	15	10	20
630 N	80	<10	25	10	30
660 N	150	10	5	<10	15
690 N	20	<10	5	<10	5
720 N	100	10	5	10	10
750 N	110	<10	5	<10	5
780 N	110	10	5	<10	10
810 N	200	<10	10	<10	10

323

ALNISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919325

Area: AGNEW GRID
Grid Line: 1900
Date:

	Sn	As	Cu	Pb	Zn
840 N	60	<10	10	<10	10
870 N	80	<10	10	<10	15
900 N	60	<10	15	<10	20
930 N	30	10	5	20	15
960 N	90	<10	20	20	40
990 N	110	20	5	30	15
1020 N	60	10	10	30	20
1050 N	100	30	5	30	20
1080 N	140	20	5	40	15
1110 N	230	10	5	20	10
1140 N	420	<10	<5	10	15
1170 N	250	10	15	20	70

324

GEOCHEMICAL ASSAY RESULTS

919326

Area: AG NEW
Grid Line: 1900
Date:

	Sn	As	Cu	Pb	Zn
30S	310	<10	5	<10	15
60	220	"	5	10	10
90	30	"	10	<10	25
120	50	"	5	<10	10
150	<10	10	<5	10	5
180	20	<10	<5	<10	5
210	<10	"	<5	10	5
240	"	"	<5	10	5
270	"	"	<5	10	5
300	"	"	15	<10	40
330	"	"	10	10	10
360	"	"	20	<10	15
390	"	"	5	<10	10
420	10	"	5	<10	10
450	20	<10	<5	<10	10
480	160	10	"	"	15
510	40	<10	"	"	5
540	<10	"	5	"	15
570	30	"	<5	"	15
600	10	"	"	"	15
630	<10	"	"	"	10
660	100	10	"	<10	10
690	100	<10	<5	<10	10

320

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919327

Area: AGNEW GRID
Grid Line: 2000E
Date:

	Sn	As	Cu	Pb	Zn
00N	20	<10	5	10	20
30N	100	<10	5	<10	20
60N	90	<10	<5	<10	20
90N	110	<10	<5	<10	20
120N	650	30	<5	<10	15
150N	40	<10	5	10	20
180N	70	<10	<5	<10	20
210N	50	<10	10	<10	25
240N	440	20	5	10	20
270N	30	<10	10	15	25
300N	50	<10	INSUFFICIENT SAMPLE		
330N	<10	50	15	20	35
360N	30	40	15	30	30
390N	50	<10	20	20	25
420N	120	<10	10	40	25
450N	10	25	5	50	10
480N	130	10	<5	<10	15
510N	180	<10	<5	<10	20
540N	190	15	5	15	25
570N	420	10	<5	50	25
600N	880	<10	<5	40	20
630N	120	<10	<5	<10	20
660N	50	15	<5	<10	20
690N	50	<10	10	<10	30
720N	40	<10	10	<10	20
750N	40	<10	5	<10	10
780N	80	<10	5	<10	<5
810N	120	<10	<5	<10	20
840N	160	<10	<5	<10	20

326

RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919328

Area: AGNEW GRID
Grid Line: 2000E
Date:

	Sn	As	Cu	Pb	Zn
870N	130	<10	<5	<10	10
900N	50	10	<5	15	20
930N	60	<10	<5	10	10
960N	70	20	<5	20	15
990N	90	15	5	10	10
1020N	60	50	5	35	40
1050N	10	<10	<5	10	10
1080N	50	<10	<5	20	10
1110N	30	<10	5	30	20
1140N	10	<10	<5	<10	15
30S	570	<10	<5	<10	5
60S	<10	<10	<5	<10	<5
90S	370	<10	<5	<10	<5
120S	<10	<10	5	<10	30
150S	70	<10	20	<10	30
180S	40	<10	25	<10	25
210S	<10	10	80	10	75
240S	<10	<10	10	30	20
270S	<10	<10	5	<10	10
300S	<10	<10	10	10	10
330S	<10	<10	10	10	20
360S	<10	<10	5	<10	5
390S	<10	<10	5	30	20
420S	<10	<10	5	20	55
450S	70	<10	5	<10	10
480S	20	<10	<5	<10	5
510S	160	<10	<5	<10	5
540S	10	<10	<5	<10	10

32'

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919329

rea: AGNEW GRID
rid Line: 2000E
ate:

	Sn	As	Cu	Pb	Zn
570 S	30	< 10	70	10	65
600 S	80	< 10	< 5	< 10	5
630 S	30	< 10	< 5	< 10	15
660 S	20	< 10	< 5	< 10	10
690 S	30	< 10	15	20	20

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RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919330

Area: AGNEW GRID
Grid Line: 2100E
Date:

	Sn	As	Cu	Pb	Zn
00N	<10	<10	<5	20	5
30N	130	<10	<5	<10	5
60N	130	<10	<5	<10	<5
90N	30	<10	<5	<10	<5
120N	180	<10	<5	<10	<5
150N	90	<10	5	30	15
180N	30	<10	5	10	5
210N	50	<10	<5	<10	<5
240N	90	<10	<5	<10	5
270N	150	<10	<5	10	5
300N	110	90	<5	110	5
330N	130	<10	<5	10	5
360N	90	<10	<5	<10	5
390N	60	<10	<5	<10	10
420N	180	<10	<5	10	15
450N	210	<10	<5	40	15
480N	390	<10	<5	80	20
510N	620	<10	<5	70	<5
540N	830	10	<5	140	5
570N	470	35	<5	50	<5
600N	90	<10	<5	20	5
630N	110	<10	<5	70	20
660N	110	<10	<5	10	10
690N	270	<10	<5	20	10
720N	1340	<10	<5	70	15
750N	1600	<10	<5	60	10
780N	40	<10	<5	10	10
810N	80	<10	<5	20	15
840N	20	<10	<5	10	5

529

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919331

Area: AGNEW GRID
Grid Line: 2100E
Date:

	Sn	As	Cu	Pb	Zn
870N	50	<10	<5	<10	10
900N	90	<10	<5	10	5
930N	30	<10	<5	<10	15
960N	<10	30	<5	<10	10
990N	40	10	<5	<10	15
1020N	30	<10	<5	<10	10
1050N	<10	<10	<5	10	10
1080N	130	10	<5	20	10
1110N	170	10	<5	30	10
1140N	<10	<10	<5	30	15
30 S	150	<10	10	10	30
60 S	140	<10	<5	<10	5
90 S	~~70~~ 710	<10	15	20	35
120 S	50	<10	5	<10	5
150 S	100	<10	10	10	15
180 S	<10	<10	10	<10	25
210 S	<10	<10	5	<10	10
240 S	190	<10	5	<10	15
270 S	30	<10	5	5?	15
300 S	10	10	10	50	85
330 S	<10	20	10	<10	10
360 S	<10	<10	5	<10	10

330

RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919332

Area: AGNEW GRID
Grid Line: 2200E
Date:

	Sn	As	Cu	Pb	Zn
00N	35	<10	<5	<10	<5
30 N	30	<10	<5	<10	<5
60 N	55	<10	<5	<10	<5
90 N	150	<10	<5	10	10
120 N	<10.	50	<5	<10	10
150 N	475	10	5	10	5
180 N	110	<10	5	<10	5
210 N	120	<10	<5	30	<5
240 N	50	<10	<5	<10	5
270 N	100	<10	<5	<10	<5
300 N	220	<10	<5	<10	<5
330 N	285	<10	<5	10	<5
360 N	110	<10	<5	20	10
390 N	90	<10	<5	10	15
420 N	150	<10	<5	<10	5
450 N	110	<10	<5	10	15
480 N	260	<10	<5	20	10
510 N	280	<10	5	40	10
540 N	320	50	10	150	20
570 N	1340	<10	<5	30	<5
600 N	2450	10	5	340	<5
630 N	90	<10	<5	40	30
660 N	180	<10	<5	50	20
690 N	120	<10	<5	20	30
720 N	70	<10	<5	10	60
750 N	75	<10	<5	30	40
780 N	20	<10	<5	<10	40
810 N	80	<10	<5	"	15
840 N	25	<10	<5	"	10

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RENISON LIMITED

GEOCHEMICAL ASSAY RESULTS

919333

Area: AGNEW GRID
Grid Line: 2200E
Date:

	Sn	As	Cu	Pb	Zn
870N	<10	<10	<5	<10	10
900N	20	< 10	<5	"	5
930N	340	< 10	<5	"	5
960N	35	< 10	<5	"	25
990N	30.	< 10	<5	20	20
1020N	<10	< 10	5	30	15
1050N	<10	< 10	<5	30	15
1080N	<10	< 10	5	10	20
1110N	20.	< 10	<5	20	20
1140N	10	< 10	<5	10	10
30S	<10	<10	<5	<10	5
60S	70	<10	<5	<10	10
90S	<10	20	55	10	50
120S	60	<10	<5	<10	25
150S	40	<10	<5	<10	5
180S	20	<10	15	<10	35
210S	<10	<10	20	20	15
240S	10	<10	30	30	30
270S	40	<10	20	10	15
300S	170	40	10	30	15
330S	340	20	& 15	25	15
360S	140	<10	10	20	15

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RENISON LIMITED
GEOCHEMICAL ASSAY RESULTS

919334

Area: AGNEW GRID
Grid Line: 2300E
Date:

	Sn	As	Cu	Pb	Zn
00N	50	<10	10	<10	10
30 N	2800	20	5	20	15
60 N	25	< 10	<5	20	5
90 N	10	< 10	<5	40	5
120 N	30	< 10	<5	<10	<5
150N	50	< 10	<5	10	<5
180 N	75	< 10	<5	<10	<5
210 N	25	< 10	5	<10	5
240 N	<10	< 10	<5	<10	30
270 N	<10	20	10	<10	15
300N	50	<10	<5	<10	5
330 N	30	<10	<5	40	10
360 N	40	<10	<5	<10	5
390N	25	<10	<5	<10	<5
420N	50	<10	5	210	5

APPENDIX 10

AGNEW GRID - GROUND MAGNETICS DATA

334

000E NORTH

Fixed base reading: 62458

PROTON MAGNETOMETER FEILD RECORDINGS

te: 10/12/80 Operator: BUDDY DOYLE, MICHEAL NARDELLA. Grid Location: Mt Agnew

919336

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
000E 000N	62470	8:50 a.m	+18	62488
000E 010N	62500		" "	62518
000E 020N	62478		" "	62496
000E 030N	62449		" "	62467
000E 040N	62428		" "	62446
000E 050N	62427	9.00 a.m.	+18	62445
000E 060N	62435		+18	62453
000E 070N	62437		+18	62455
000E 080N	62430		+18	62448
000E 090N	62429		+18	62447
000E 100N	62435		+19	62454
000E 110N	62441		+19	62460
000E 120N	62438		+19	62457
000E 130N	62438		+19	62457
000E 140N	62450		+19	62469
000E 150N	62467	9.10 a.m.	+19	62486
000E 160N	62450		+19	62469
000E 170N	62451		+19	62470
000E 180N	62453		+19	62472
000E 190N	62483		+20	62503
000E 200N	62465		+20	62485
000E 210N	62453		+20	62473
000E 220N	62450	9.20 a.m.	+20	62470
000E 230N	62450		+20	62470
000E 240N	62445		+20	62465
000E 250N	62443		+20	62463

335

FORM NO. 75/209 RENISON LIMITED

Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

te: 10/12/80 Operator: BUDDY DOYLE MICHEAL NARDCHA Grid Location: Mt Agnew

919337

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
000E 260N	62456		+21	62477
000E 270N	62448		+21	62469
000E 280N	62430		+21	62451
000E 290N	62432		+22	62454
000E 300N	62422	9·30	+22	62444
000E 310N	62417		+22	62439
000E 320N	62427		+22	62449
000E 330N	62430		+22	62452
000E 340N	62426		+22	62448
000E 350N	62456		+21	62477
000E 360N	62445		+21	62466
000E 370N	62417		+21	62438
000E 380N	62431		+21	62452
000E 390N	62441	9·40	+21	62462
000E 400N	62425		+21	62446
000E 410N	62421		+21	62442
000E 420N	62415		+22	62437
000E 430N	62414		+22	62438
000E 440N	62440		+22	62462
000E 450N	62457		+23	62480
000E 460N	62428		+23	62451
000E 470N	62473	9·50	+23	62496
000E 480N	62489		+24	62513
000E 490N	62481		+25	62506
000E 500N	62476	10·10	++27	62503
000E 510N	62432		+27	62459

336

919338

PROTON MAGNETOMETER FEILD RECORDINGS

te: 10/12/86 Operator: Buddy Doyle, Mucheal Nardella Grid Location: Mt Agnew

(FIXED) CORRECTED BASE READING = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
000E 520N	62428		+27	62455
000E 530N	62433		" "	62460
000E 540N	62451		" "	62478
000E 550N	62438		" "	62465
000E 560N	62441		" "	62468
000E 570N	62483		" "	62510
000E 580N	62491		" "	62518
000E 590N	62450		" "	62477
000E 600N	62484		" "	62511
000E 610N	62446		" "	62473
000E 620N	62372		" "	62499
000E 630N	62446		" "	62473
000E 640N	62438		" "	62465
000E 650N	62451		" "	62478
000E 660N	62441	10:20	+27	62468
000E 670N	62445		" "	62472
000E 680N	62441		" "	62468
000E 690N	62440		" "	62467
000E 700N	62447		+28	62475
000E 710N	62345		+28	62373
000E 720N	62494		+28	62522
000E 730N	62438	10:30	+29	62466
000E 740N	62420		+29	62449
000E 750N	62466		+30	62496
000E 760N	62365		+30	62395
000E 770N	62458		+29	62487

337

FIXED BASE READING = 62458

PROTON MAGNETOMETER FEILD RECORDINGS

ate: 10/12/80 Operator: Buddy Doyle, Micheal Nardella Grid Location: Mt Agnew

919339

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
000E 780N	62453		+29	62482
000E 790N	62423		+28	62451
000E 800N	62456	10·50	+27	62483
000E 810N	62454		+27	62481
000E 820N	62447		+27	62474
000E 830N	62441		+27	62468
000E 840N	62441		+26	62468
000E 850N	62428		+26	62454
000E 860N	62409		+26	62435
000E 870N	62407	10·55	+26	62433

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LIMITED

PROTON MAGNETOMETER FEILD RECORDINGS 62458 Bar

te: 10/12/80 Operator: BUDDY DOYLE MICHEAL NARDELLA Grid Location: MT AGNEW

919340

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
FEDERATION GRID				
600E 1080S	62525	11.30 a.m	+ 38	62563
0100E 000 N	62396	1.10 p.m	+ 46	62442
100E 010 N	62400		+ 46	62446
100E 020 N	62402		+ 46	62448
100E 030 N	62395		+ 46	62441
100E 040 N	62381		+ 45	62426
100E 050 N	62378		+ 45	62423
100E 060 N	62382		+ 45	62427
100E 070 N	62399		+ 44	62443
100E 080 N	62428		+ 44	62472
100E 090 N	62416		+ 44	62460
100E 100 N	62404		+ 43	62447
100E 110 N	62416		+ 43	62459
100E 120 N	62449		+ 43	62492
100E 130 N	62422		+ 42	62464
100E 140 N	62400	1.00 p.m	+ 42	62442
100E 150 N	62410		+ 42	62452
100E 160 N	62375		+ 42	62417
100E 170 N	62380		+ 42	62422
100E 180 N	62370		+ 42	62412
100E 190 N	62423		+ 41	62464
100E 200 N	62400		+ 41	62441
100E 210 N	62400		+ 41	62441
100E 220 N	62404		+ 40	62444
100E 230 N	62403		+ 40	62443

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1000 NORTH

~~62458~~ Base
62419
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PROTON MAGNETOMETER FEILD RECORDINGS

ate: 10/12/80 Operator: BUDDY DOYLE MICHEAL MARDELLA Grid Location: Mt Agnew

919341

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
100E 240N	62400		+40	62440
100E 250N	62419		+39	62458
100E 260N	62416		+39	62455
100E 270N	62412		+39	62449
100E 280N	62411	12-50 p.m	+39	62450
100E 290N	62390		" "	62429
100E 300N	62387		" "	62426
100E 310N	62357		" "	62396
100E 320N	62394		" "	62433
100E 330N	62391		40+	62431
100E 340N	62398		40+	62438
100E 350N	62405		40+	62445
100E 360N	62414		40+	62454
100E 370N	62419	12-40 p.m	40+	62459
100E 380N	62452		40+	62492
100E 390N	62424		40+	62464
100E 400N	62411		40+	62451
100E 410N	62402		41+	62443
100E 420N	62395		41+	62436
100E 430N	62460		41+	62501
100E 440N	62432		42+	62474
100E 450N	62444		42+	62486
100E 460N	62427		42+	62469
100E 470N	62420		43+	62463
100E 480N	62420		43+	62463
100E 490N	62432		43+	62475

34c

PROTON MAGNETOMETER FEILD RECORDINGS

62458 Base

Date: 10/12/80 Operator: BUDDY DOYLE MICHEAL NARDELLA Grid Location: MT AGNEW

919342

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
100E 500N	62424	12:30	+44	62468
100E 510N	62427		+44	62471
100E 520N	62435		+45	62480
100E 530N	62421		+45	62466
100E 540N	62419		+46	62465
100E 550N	62419		+46	62465
100E 560N	62378		+47	62425
100E 570N	62464		+47	62511
100E 580N	62436		+48	62484
100E 590N	62517	12:20	+48	62565
100E 600N	62590		+48	62638
100E 610N	62452		+47	62499
100E 620N	62502		+46	62548
100E 630N	62520		+45	62565
100E 640N	62506		+44	62550
100E 650N	62426		+43	62469
100E 660N	62409	12:10	+42	62451
100E 670N	62409		" "	62451
100E 680N	62428		" "	62470
100E 690N	62403		" "	62445
100E 700N	62400		" "	62442
100E 710N	62383		" "	62425
100E 720N	62400		" "	62442
100E 730N	62397		" "	62439
100E 740N	62402		" "	62444
100E 750N	62418	12:00	+42	62460

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PROTON MAGNETOMETER FEILD RECORDINGS

100E NORTH
Base 62458

Date: 10/12/80 Operator: Buddy Doyle, Micheal Nardella Grid Location: Mt Agnew

919343

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
100E 760N	62424		+42	62466
100E 770N	62411		+41	62452
100E 780N	62424		+41	62465
100E 790N	62418		+40	62458
100E 800N	62423		+40	62463
100E 810N	62431		+39	62470
100E 820N	62431		+39	62470
100E 830N	62462		+38	62500
100E 840N	62481		+38	62519
100E 850N	62492		+37	62529
100E 860N	62478		+37	62515
100E 870N	62476	11.50 a.m	+36	62512
100E 880N	62470		+36	62506
100E 890N	62450		+36	62486
100E 900N	62399		+35	62434
100E 910N	62326		+35	62361
100E 920N	62498		+35	62533
100E 930N	62510		+34	62544
100E 940N	62500		+34	62534
100E 950N	62473	11.40	+34	62507
100E 960N	62446		+35	62481
100E 970N	62476		+36	62510
100E 980N	62530		+37	62567
100E 990N	62551	11.30	+38	62589
100E 1000N	END	100E — wrong!		
100E				

3rd

PROTON MAGNETOMETER FEILD RECORDINGS

ate: 10/12/80 **Operator:** ~~BUDDY~~ MICK NARDELLA **Grid Location:** AGNEW

919344

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
200E 00 N	62394	2·50	+17	62411
200E 10 N	62406		+17	62423
200E 20 N	62426		+17	62443
200E 30 N	62426		+18	62444
200E 40 N	62433		+18	62451
200E 50 N	62443		+19	62462
200E 60 N	62469		+19	62488
200E 70 N	62470		+19	62489
200E 80 N	62466		+20	62486
200E 90 N	62475		+20	62495
200E 100 N	62466		+21	62487
200E 110 N	62471		+21	62492
200E 120 N	62474		+22	62496
200E 130 N	62492		+22	62514
200E 140 N	62389	3·00	+22	62411
200E 150 N	62396		+22	62418
200E 160 N	62430		+22	62452
200E 170 N	62442		+22	62464
200E 180 N	62439		+22	62461
200E 190 N	62465		+22	62487
200E 200 N	62469	~~3·10~~	+22	62491
200E 210 N	62414		+23	62437
200E 220 N	62437		+23	62460
200E 230 N	62444		+23	62467
200E 240 N	62455		+23	62478
200E 250 N	62460		+23	62483

343

Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

ate: 10/12/80 Operator: MICK NARDELLA Grid Location: AGNEW

919345

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
00E 260 N	62457	3·10	+23	62480
00E 270 N	62482		+23	62505
00E 280 N	62502		+23	62525
00E 290 N	62429		+23	62462
00E 300 N	62479		+23	62502
2[illegible] 310 N	62415		+23	62438
200E 320 N	62429		+23	62452
200E 330 N	62423		+22	62445
200E 340 N	62420		+22	62442
200E 350 N	62427		+22	62449
200E 360 N	62418		+22	62440
200E 370 N	62423		+22	62445
200E 380 N	62431	3·20	+ 22	62453
200E 390 N	62432		+ 22	62454
20[illegible] 400 N	62427		+21	62448
00E 410 N	62416		+21	62437
00E 420 N	62426		+20	62446
00E 430 N	62471		+20	62491
00E 440 N	62486		+19	62505
00E 450 N	62469		+19	62488
00E 460 N	62468		+18	62486
00E 470 N	62460		+18	62478
00E 480 N	62469		+17	62486
00E 490 N	62479		+17	62496
00E 500 N	62502		+16	62518
00E 510 N	62452	3·30	+15	62467

344

PROTON MAGNETOMETER FEILD RECORDINGS

919346

ate: 10/12/80 **Operator:** MICK NARDELLA **Grid Location:** AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
200E 520 N	62446		+15	62461
200E 530 N	62427		+15	62442
200E 540 N	62482		+14	62496
200E 550 N	62463		+14	62477
200E 560 N	62509		+13	62522
200E 570 N	62553		+13	62566
200E 580 N	62541		+12	62553
200E 590 N	62531		+12	62543
200E 600 N	62479		+11	62490
200E 610 N	62415	3.40	+ 11	62426
200E 620 N	62403		+11	62414
200E 630 N	62438		+11	62449
200E 640 N	62445		+10	62455
200E 650 N	62449		+10	62459
200E 660 N	62471		+9	62480
200E 670 N	62465		+9	62476
200E 680 N	62460		+8	62468
200E 690 N	62495	3.50	+8	62503
200E 700 N	62509		+8	62517
200E 710 N	62510		+8	62518
200E 720 N	62488		+8	62496
200E 730 N	62480		+8	62488
200E 740 N	62468		+8	62476
200E 750 N	62451		+8	62459
200E 760 N	62476		+8	62484
200E 770 N	62475		+8	62483

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PROTON MAGNETOMETER FEILD RECORDINGS

919347

Date: 10/12/80 Operator: MICK NARDELLA Grid Location: AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
200E 780N	62468		+8	62476
200E 790N	62453		+8	62461
200E 800N	62311		+8	62319
200E 810N	62524		+8	62532
200E 820N	62542	4·00	+8	62550
200E 830N	62544		+8	62552
200E 840N	62535		+8	62543
200E 850N	62503		+9	62512
200E 860N	62513		+9	62522
200E 870N	62478		+9	62487
200E 880N	62466		+10	62476
200E 890N	62466		+10	62476
200E 900N	62485		+11	62496
200E 910N	62466		+11	62477
200E 920N	62482		+11	62493
200E 930N	62471		+12	62483
200E 940N	62502	4·10	+12	62514
200E 950N	62482		+12	62494
200E 960N	62511		+12	62522
200E 970N	62535		+12	62547
200E 980N	62526		+11	62537
200E 990N	62522		+11	62533
200E 1000N	62498	4·20	+11	62509
200E 1010N	62452		+10	62462
200E 1020N	62543		+9	62552
200E 1030N	62499		+7	62506

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Box 62458
919348

PROTON MAGNETOMETER FEILD RECORDINGS

ate: 10/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
200E 1040N	62503	~~+6~~	+6	62509
200E 1050N	62480	~~+5~~ 4.30	+5	62485

3A

300E NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

919349

Date: 11/12/80

Operator: BUDDY DOYLE, MICHEAL NARDELLA

Grid Location: MT AGNEW

F.B.R - 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
300E 000N	62468	10:00am	+12	62480
300E 010N	62451		+12	62463
300E 020N	62453		+12	62465
300E 030N	62452		+12	62464
300E 040N	62432		+12	62444
300E 050N	62425		+12	62437
300E 060N	62426		+12	62418
300E 070N	62416		+13	62429
300E 080N	62419		+13	62432
300E 090N	62416		+13	62429
300E 100N	62421		+13	62434
300E 110N	62402		+13	62415
300E 120N	62408		+13	62421
300E 130N	62430		+14	62444
300E 140N	62422		+14	62436
300E 150N	62447		+14	62461
300E 160N	62453		+14	62467
300E 170N	62475		+14	62489
300E 180N	62458	10:10 am.	+14	62472
300E 190N	62467		+14	62481
300E 200N	62477		+15	62492
300E 210N	62448		+15	62463
300E 220N	62446		+16	62462
300E 230N	62436		+16	62452
300E 240N	62452		+17	62469
300E 250N	62442		+17	62459

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PROTON MAGNETOMETER FEILD RECORDINGS

300 E NORTH
919350

Date: 11/12/80 Operator: BUDDY DOYLE, MICHEAL NARDELLA Grid Location: Mt Agnew

F.B.R - 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
300E 260N	62445		+18	62463
300E 270N	62423		+18	62441
300E 280N	62401		+19	62420
300E 290N	62451		+20	62471
300E 300N	62409	10:20	+21	62430
300E 310N	62353		+21	~~624~~ 62374
300E 320N	62439		+21	62460
300E 330N	62437		+21	62458
300E 340N	62455		+21	62476
300E 350N	62433		+21	62454
300E 360N	62456		+21	62477
300E 370N	62427		+21	62448
300E 380N	62417		+21	62438
300E 390N	62425		+21	62446
300E 400N	62434		+21	62455
300E 410N	62429		+21	62450
300E 420N	62420		+21	62441
300E 430N	62391		+21	62412
300E 440N	62442		+21	62463
300E 450N	62472	10:30	+21	62493
300E 460N	62443		+22	62465
300E 470N	62389		+23	62412
300E 480N	62389		+24	62413
300E 490N	62362		+25	62387
300E 500N	62422		+26	62448
300E 510N	62445	10:40	+26	62471

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PROTON MAGNETOMETER FEILD RECORDINGS

919351

Date: 11/12/80 Operator: BUDDY DOYLE, MICHEAL NARDELLA Grid Location: Mt Hynew

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
300E 520N	62396		+26	62422
300E 530N	62436		+26	62462
300E 540N	62449		+27	62476
300E 550N	62450	10:50	+27	62477
300E 560N	62420		+27	62447
300E 570N	62400		+27	62427
300E 580N	62404		+27	62431
300E 590N	62416		+27	62443
300E 600N	62418		+28	62446
300E 610N	62432		+28	62460
300E 620N	62533		+28	62561
300E 630N	62530		+28	62558
300E 640N	62529	11:00	+28	62557
300E 650N	62491		+28	62519
300E 660N	62491		+28	62519
300E 670N	62485		+28	62513
300E 680N	62519		+28	62547
300E 690N	62481		+29	62510
300E 700N	62468		+29	62495
300E 710N	62418		+29	62447
300E 720N	62417		+29	62446
300E 730N	62440		+30	62470
300E 740N	62458		+30	62488
300E 750N	62410		+30	62440
300E 760N	62433		+30	62463
300E 770N	62454	11:10	+30	62484

32.

PROTON MAGNETOMETER FEILD RECORDINGS

300E NORTH
919352

Date: 11/12/80 Operator: BUDDY DOYLE, MICHEAL NARDELLA Grid Location: MT AGNEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
300E 780N	62453		+30	62483
300E 790N	62454		+30	62484
300E 800N	62470		+30	62500
300E 810N	62465		+30	62495
300E 820N	62454		+31	62485
300E 830N	62470		+31	62501
300E 840N	62477		+31	62508
300E 850N	62466		+31	62497
300E 860N	62493		+32	62525
300E 870N	62490		+32	62522
300E 880N	62481		+32	62513
300E 890N	62444		+32	62476
300E 900N	62458	11.20	+32	62490
300E 910N	62485		+32	62517
300E 920N	62484		+32	62516
300E 930N	62459		+32	62491
300E 940N	62445		~~+32~~ +33	62478
300E 950N	62443		+33	62476
300E 960N	62448		+33	62481
300E 970N	62435		+33	62468
300E 980N	62436		+33	62469
300E 990N	62446		+34	62450
300E 1000N	62480		+34	62514
300E 1010N	62469		+34	62503
300E 1020N	62473	11.30	+34	62507
300E 1030N	62475		+34	62509

35.

SEE. NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

919353

Date: 11/12/80 Operator: BUDDY DOYLE, MICHEAL NARDELLA Grid Location: PIT AENEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
300E 1040N	62489		+35	62524
300E 1050N	62496		+36	62532
300E 1060N	62502		+37	62539
300E 1070N	62519	11.40	+38	62557
300E 1080N	62501		+38	62539
300E 1090N	62460		+38	62498
300E 1100N	62449		+38	62487
300E 1110N	62409		+38	62447
300E 1120N	62432		+38	62470
300E 1130N	62444		+38	62482
300E 1140N	62434	11.45	+38	62472
~~300E 1150N~~				
300				

919354

PROTON MAGNETOMETER FEILD RECORDINGS

ate: 11/12/80 Operator: MICK NARDELLA Grid Location: AGNEW

FIXED BASE READING : 62458

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
400E	00 N	62403	2·10	+29	62432
400E	10 N	62388		+29	62417
400E	20 N	62439		+29	62468
400E	30 N	62460		+29	62489
400E	40 N	62462		+30	62492
400E	50 N	62442		+30	62472
400E	60 N	62405		+30	62435
400E	70 N	62410		+30	62440
400E	80 N	62455		+30	62485
400E	90 N	62470		+31	62501
400E	100 N	62475		+31	62506
400E	110 N	62470		+31	62501
400E	120 N	62421	2·00	+31	62452
400E	130 N	62420		+31	62451
400E	140 N	62413		+31	62444
400E	150 N	62420		+31	62451
400E	160 N	62417		+31	62448
400E	170 N	62414		+31	62445
400E	180 N	62432		+32	62464
400E	190 N	62441		+32	62473
400E	200 N	62434		+32	62466
400E	210 N	62444		+32	62476
400E	220 N	62450		+32	62482
400E	230 N	62457		+32	62489
400E	240 N	62462		+33	62495
400E	250 N	62444		+33	62477

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919355

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 11/12/80 Operator: MICK NARDELLA Grid Location: AGNEW

F.B.R 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
400 E 260 N	62459		+33	62492
400 E 270 N	62464		+33	62497
400 E 280 N	62454		+33	62487
400 E 290 N	62455		+33	62488
400 E 300 N	62459	1.50	+33	62492
400 E 310 N	62450		+33	62483
400 E 320 N	62440		+33	62473
400 E 330 N	62431		+33	62464
400 E 340 N	62419		+33	62452
400 E 350 N	62437		+33	62470
400 E 360 N	62451		+33	62484
400 E 370 N	62449		+33	62482
400 E 380 N	62443		+33	62476
400 E 390 N	62450		+32	62482
400 E 400 N	62451		+32	62483
400 E 410 N	62434		+32	62466
400 E 420 N	62446		+32	62478
400 E 430 N	62434		+32	62466
400 E 440 N	62423		+32	62455
400 E 450 N	62447		+32	62479
400 E 460 N	62435	1.40	+32	62467
400 E 470 N	62404		+32	62436
400 E 480 N	62388		+32	62420
400 E 490 N	62439		+32	62471
400 E 500 N	62451		+32	62483
400 E 510 N	62437		+32	62469

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919356

PROTON MAGNETOMETER FEILD RECORDINGS

Date: ~~11/12~~ 11/12/80 Operator: MICK NARDELLA Grid Location: AGNEW

62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
400 E 520 N	62462		+32	62494
400 E 530 N	62483		+32	62515
400 E 540 N	62525		+32	62557
400 E 550 N	62479	1:30	+32	62501
400 E 560 N	62430		+32	62462
400 E 570 N	62428		+32	62460
400 E 580 N	62379		+32	62411
400 E 590 N	62401		+32	62433
400 E 600 N	62468		+32	62500
400 E 610 N	62405		+32	62437
400 E 620 N	62410		+31	62441
400 E 630 N	62443		+31	62474
400 E 640 N	62426		+31	62457
400 E 650 N	62408		+31	62439
400 E 660 N	62432		+31	62463
400 E 670 N	62468		+31	62499
400 E 680 N	62467	1:20	+31	62498
400 E 690 N	62515		+31	62546
400 E 700 N	62462		+31	62493
400 E 710 N	62426		+31	62457
400 E 720 N	62427		+31	62455
400 E 730 N	62446		+31	62477
400 E 740 N	62439		+30	62469
400 E 750 N	62445		+30	62475
400 E 760 N	62446		+30	62476
400 E 770 N	62405		+30	62435

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PROTON MAGNETOMETER FEILD RECORDINGS

919357

Date: 11/12/80 Operator: M. NARDELLA Grid Location: AGNEW

62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
400 E 780 N	62457		+30	62487
400 E 790 N	62447		+29	62476
400 E 800 N	62455		+29	62484
400 E 810 N	62447		+29	62476
400 E 820 N	62440		+29	62469
400 E 830 N	62454		+29	62483
400 E 840 N	62475	1·10pm	+29	62504
400 E 850 N	62483		+29	62512
400 E 860 N	62468		+29	62497
400 E 870 N	62457		+29	62486
400 E 880 N	62445		+29	62474
400 E 890 N	62442		+29	62471
400 E 900 N	62424		+29	62453
400 E 910 N	62421		+28	62449
400 E 920 N	62416		+28	62434
400 E 930 N	62437		+28	62465
400 E 940 N	62452		+28	62480
400 E 950 N	62443		+28	62471
400 E 960 N	62473		+28	62501
400 E 970 N	62516	1·00pm	+28	62544
400 E 980 N	62506		+28	62534
400 E 990 N	62495		+28	62523
400 E 1000 N	62481		+28	62509
400 E 1010 N	62487		+28	62515
400 E 1020 N	62450		+28	62478
400 E 1030 N	62433		+29	62462

356

PROTON MAGNETOMETER FEILD RECORDINGS

919358

Date: 11/12/80 Operator: M. NARDELLA Grid Location: AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
400E 1040 N	62416		+29	62445
400 E 1050 N	62407		+29	62438
400E 1060 N	62386		+29	62415
400E 1070 N	62401		+29	62430
400E 1080 N	62452		+29	62481
400E 1090 N	62466	12.50	+29	62495
400E 1100 N	62449		+29	62478
400E 1110 N	62413		+29	62442
400E 1120 N	62435		+30	62465
400E 1130 N	62437		+30	62467
400E 1140 N	62475		+30	62505
400E 1150 N	62454		+31	62485
400E 1160 N	62427		+31	62458
400E 1170 N	62428	12.40	+31	62459

357

500 E NORTH

919359

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 11/12/80 Operator: BUDDY DOYLE MICHEAL NARDELLA Grid Location: MT AGNEW

F.B.R 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
500E 000N	62420		+29	62449
500E 010N	62431		+29	62460
500E 020N	62437	2.20 p.m	+29	62466
500E 030N	62434		" "	62463
500E 040N	62439		" "	62468
500E 050N	62435		" "	62464
500E 060N	62428		" "	62457
500E 070N	62433		" "	62462
500E 080N	62419		" "	62448
500E 090N	62432		" "	62461
500E 100N	62486		+28	62514
500E 110N	62482		" "	62510
500E 120N	62481		" "	62509
500E 130N	62472		" "	62500
500E 140N	62472		" "	62500
500E 150N	62478		" "	62506
500E 160N	62508	2.30 p.m	+28	62536
500E 170N	62475		" "	62503
500E 180N	62459		" "	62487
500E 190N	62512		" "	62540
500E 200N	62468		" "	62496
500E 210N	62466		" "	62494
500E 220N	62468		" "	62496
500E 230N	62469		" "	62490
500E 240N	62466		" "	62494
500E 250N	62469		" "	[illegible]

358

500E NORTH

919360

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 11/12/80 Operator: BUDDY DOYLE MICHEAL NARDELLA Grid Location: MTAGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
500E 260N	62439		" "	62467
500E 270N	62462		" "	62490
500E 280N	62453		" "	62481
500E 290N	62442		" "	62470
500E 300N	62428	2.40	+28	62456
500E 310N	62408		" "	62436
500E 320N	62435		" "	62463
500E 330N	62441		" "	62469
500E 340N	62452		+27	62479
500E 350N	62457		+27	62484
500E 360N	62464		+27	62491
500E 370N	62466		+27	62493
500E 380N	62471		+26	62497
500E 390N	62489		+26	62515
500E 400N	62494		+26	62520
500E 410N	62496		+26	62522
500E 420N	62492		+25	62517
500E 430N	62487		+25	62512
500E 440N	62480		+25	62505
500E 450N	62462	2.50	+25	62487
500E 460N	62469		" "	62494
500E 470N	62447		" "	62472
500E 480N	62442		" "	62467
500E 490N	62443		" "	62468
500E 500N	62436		" "	62461
500E 510N	62427		" "	62452

359.

500E NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

919361

Date: Operator: Grid Location:

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
500E	520N	62436		" "	62461
500E	530N	62420		+24	62444
500E	540N	62416		+24	62440
500E	550N	62461		" "	62485
500E	560N	62467		" "	62491
500E	570N	62462		" "	62486
500E	580N	62500		" "	62524
500E	590N	62508		" "	62532
500E	600N	62496	3:00	+24	62520
500E	610N	62513		" "	62537
500E	620N	62499		" "	62523
500E	630N	62495		" "	62519
500E	640N	62464		" "	62488
500E	650N	62465		" "	62489
500E	660N	62460		" "	62484
500E	670N	62458		" "	62482
500E	680N	62479		" "	62503
500E	690N	62480		" "	62504
500E	700N	62465		" "	62489
500E	710N	62464		" "	62488
500E	720N	62480		" "	62504
500E	730N	62487		" "	62511
500E	740N	62506		" "	62530
500E	750N	62515		" "	62539
500E	760N	62564	3:10	+24	62588
500E	770N	62533		" "	62557
500E	780N	62500		" "	62524

360

500E NORTH

919362

PROTON MAGNETOMETER FEILD RECORDINGS

Date: Operator: Grid Location:

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
500E 790N	62513		" "	62537
500E 800N	62606		" "	62630
500E 810N	62453		" "	62477
500E 820N	62448		+23	62471
500E 830N	62430		" "	62453
500E 840N	62428		" "	62451
500E 850N	62424		" "	62447
500E 860N	62477		" "	62500
500E 870N	62485	3:20	+23	62508
500E 880N	62487		+23	62510
500E 890N	62484		+23	62507
500E 900N	62482		+23	62505
500E 910N	62477		+22	62499
500E 920N	62476		+22	62498
500E 930N	62470		+22	62492
500E 940N	62460		+22	62482
500E 950N	62460		+21	62481
500E 960N	62476		+21	62497
500E 970N	62483		+21	62504
500E 980N	62471		+21	62492
500E 990N	62479		+20	62499
500E 1000N	62477		+20	62497
500E 1010N	62473		+20	62493
500E 1020N	62475	3:30	+20	62495
500E 1030N	62466		+20	62486
500E 1040N	62461		+20	62481

361

PROTON MAGNETOMETER FEILD RECORDINGS

919363

Date: 11/12/80 Operator: BUDDY DOYLE MICHEAL NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
500E 1050N	62447		+19	62466
500E 1060N	62450		+19	62469
500E 1070N	62442		+19	62461
500E 1080N	62424		+19	62443
500E 1090N	62430		+18	62448
500E 1100N	62471		+18	62489
500E 1110N	62482	3:40	+18	62500

362

600E NORTH

919364

PROTON MAGNETOMETER FEILD RECORDINGS

NOTE DATE

Date: 12/12/80

Operator: BUDDY DOYLE, MICHEAL NARDELLA

Grid Location: MT AGNEW

F.B.R 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
600E 000N	62433	2·25	+14	62447
600E 010N	62434		+14	62448
600E 020N	62434		+14	62448
600E 030N	62437		+14	62451
600E 040N	62440		+14	62454
600E 050N	62445		+13	62458
600E 060N	62446		+13	62459
600E 070N	62474		+13	62487
600E 080N	62475	2·30	+13	62488
600E 090N	62440		+13	62453
600E 100N	62495		+13	62508
600E 110N	62453		+13	62466
600E 120N	62436		+12	62448
600E 130N	62436		+12	62448
600E 140N	62444		+12	62456
600E 150N	62451		+12	62463
600E 160N	62449		+11	62460
600E 170N	62446		+11	62457
600E 180N	62491		+11	62502
600E 190N	62479	2·40	+11	62490
600E 200N	62429		+11	62440
600E 210N	62431		+11	62442
600E 220N	62419		+11	62430
600E 230N	62428		+11	62439
600E 240N	62449		+10	62459
600E 250N	62537		+10	62447

363

600E. NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

BUDDY DOYLE

919365

Date: 12/12/80 Operator: MICHEAL NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
600E 260N	62490		+10	62500
600E 270N	62492		+10	62502
600E 280N	62506	2.50	+10	62516
600E 290N	62526		+10	62536
600E 300N	62565		+10	62576
600E 310N	62523		+9	62532
600E 320N	62522		+9	62531
600E 330N	62521	2.55	+9	62530

364

000 E NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

919366

ate: 11/12/80 Operator: BUDDY DOYLE Grid Location: AGNEW

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
600 E	340 N	62506	4.50	+20	62526
600 E	350 N	62519		+20	62539
600 E	360 N	62513		+20	62533
600 E	370 N	62505		+20	62525
600 E	380 N	62493		+20	62513
600 E	390 N	62481		+21	62502
600 E	400 N	62477		+21	62498
600 E	410 N	62487		+21	62508
600 E	420 N	62474	4.40 pm	+21	62495
600 E	430 N	62463		+21	62484
600 E	440 N	62450		+21	62471
600 E	450 N	62455		+21	62476
600 E	460 N	62450		+21	62471
600 E	470 N	62448		+21	62469
600 E	480 N	62452		+21	62473
600 E	490 N	62460		+21	62481
600 E	500 N	62463		+22	62485
600 E	510 N	62479		+22	62501
600 E	520 N	62478		+22	62500
600 E	530 N	62467		+22	62489
600 E	540 N	62482		+22	62514
600 E	550 N	62459		+22	62481
600 E	560 N	62431	4.30	+22	62453
600 E	570 N	62432		+22	62454
600 E	580 N	62437		+22	62459
600 E	590 N	62438		+22	62460

365

600E NORTH

919367

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 11/12/80 Operator: BUDDY DOYLE Grid Location: MT AGNEW

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
600E	600N	62452		+22	62474
600E	610N	62449		+22	62471
600E	620N	62437		+22	62459
600E	630N	62433		+22	62455
600E	640N	62433		+22	62455
600E	650N	62430		+23	62453
600E	660N	62431		+23	62454
600E	670N	62438		+23	62461
600E	680N	62434		+23	62457
600E	690N	62452		+23	62475
600E	700N	62447		+23	62470
600E	710N	62467		+23	62490
600E	720N	62460	4-20	+23	62483
600E	730N	62460		+23	62483
600E	740N	62451		+23	62474
600E	750N	62455		+23	62478
600E	760N	62455		+22	62477
600E	770N	62468		+22	62490
600E	780N	62480		+22	62502
600E	790N	62485		+22	62507
600E	800N	62455		+21	62476
600E	810N	62460		+21	62481
600E	820N	62465		+21	62486
600E	830N	62450		+21	62471
600E	840N	62465		+20	62485
600E	850N	62437		+20	62457

366

000E NORTH

919368

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 11/12/80 Operator: BUDDY DOYLE Grid Location: MT AGNE

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
600 E 860 N	62431	4·10	+20	62451
600E 870 N	62431		+20	62451
600 E 880 N	62431		+20	62451
600 E 890 N	62437		+20	62457
600 E 900 N	62443		+20	62463
600 E 910 N	62447		+20	62467
600 E 920 N	62455		+19	62474
600 E 930 N	62450		+19	62469
600 E 940 N	62445		+19	62464
600 E 950 N	62452		+19	62471
600 E 960 N	62443		+19	62462
600 E 970 N	62446		+19	62465
600 E 980 N	62443		+18	62461
600 E 990 N	62443		+18	62461
600 E 1000 N	62438		+18	62456
600 E 1010 N	62435		+18	62453
600 E 1020 N	62433		+18	62451
600 E 1030 N	62427		+18	62445
600 E 1040 N	62433	4·00	+18	62451
600 E 1050 N	62438		+18	62456
600 E 1060 N	62436		+18	62454
600 E 1070 N	62411		+18	62429
600 E 1080 N	62447		+18	62465
600 E 1090 N	62481		+18	62499
600 E 1100 N	62469		+19	62488
600 E 1110 N	62477		+19	62496

367

PROTON MAGNETOMETER FEILD RECORDINGS

919369

Date: 11/12/80 Operator: BUDDY DOYLE Grid Location: MT. AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
600 E 1120N	62467	~~3:50~~	+19	62486
600 E 1130N	62458		+19	62477
600 E 1140N	62460	3:50 pm	+19	62479

368

PROTON MAGNETOMETER FEILD RECORDINGS

919370

Date: 15/12/80 Operator: MICK NARDELLA + BUDDY DOYLE. Grid Location: MT. AGNEW

F.B.N. = 62458

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
700E	00 N	62427	9.40am	+25	62452
700E	10 N	62430		+25	62455
700E	20 N	62429		"	62454
700E	30 N	62423		"	62448
700E	40 N	62432		"	62457
700E	50 N	62456		"	62481
700E	60 N	62458		"	62483
700E	70 N	62468		"	62493
700E	80 N	62469		+24	62493
700E	90 N	62448		"	62472
700E	100 N	62486		"	62510
700E	110 N	62358		"	62382
700E	120 N	62410		"	62434
700E	130 N	62396		"	62420
700E	140 N	62448	9.50am	+24	62472
700E	150 N	62463		+24	62487
700E	160 N	62440		+24	62464
700E	170 N	62490		+24	62514
700E	180 N	62506		+24	62530
700E	190 N	62511		+24	62535
700E	200 N	62513		+24	62537
700E	210 N	62506		+24	62530
700E	220 N	62477		+23	62500
700E	230 N	62481		+23	62504
700E	240 N	62460		+23	62483
700E	250 N	62451		+23	62474

369

PROTON MAGNETOMETER FEILD RECORDINGS

919371

Date: 15/12/80 Operator: MICK NARDELLA + BUDDY DOYLE Grid Location: MT AGNEW

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
700E	260N	62453		+23	62476
700E	270N	62466		+23	62489
700E	280N	62466		+23	62489
700E	290N	62499		+22	62521
700E	300N	62521		+22	62543
700E	310N	62533	10·00	+22	62555
700E	320N	62505		+22	62527
700E	330N	62469		+22	62491
700E	340N	62500		+22	62522
700E	350N	62498		+22	62520
700E	360N	62517		+21	62538
700E	370N	62512		+21	62533
700E	380N	62433		+21	62454
700E	390N	62456		+21	62477
700E	400N	62434	10·10	+21	62465
700E	410N	62452		+21	62473
700E	420N	62459		+21	62480
700E	430N	62474		+21	62495
700E	440N	62465		+20	62485
700E	450N	62454		+20	62474
700E	460N	62452		+20	62472
700E	470N	62449		+20	62469
700E	480N	62433		+19	62452
700E	490N	62441		+19	62460
700E	500N	62434		+19	62453
700E	510N	62436	10·20	+19	62455

370

PROTON MAGNETOMETER FEILD RECORDINGS

919372

Date: 15/12/80 Operator: B. DOYLE M. NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
700 E 520 N	62440		+19	62459
700 E 530 N	62438		+19	62457
700 E 540 N	62423		+18	62441
700 E 550 N	62416		+18	62434
700 E 560 N	62425	10·25 am	+18	62423
700 E 570 N	62433	12·30 pm	+24	62457
700 E 580 N	62427		+24	62461
700 E 590 N	62419		+24	62443
700 E 600 N	62429		+23	62452
700 E 610 N	62439		+23	62462
700 E 620 N	62447		+22	62469
700 E 630 N	62445		+22	62467
700 E 640 N	62477		+21	62498
700 E 650 N	62494		+21	62515
700 E 660 N	62479	12·40	+21	62500
700 E 670 N	62474		+21	62495
700 E 680 N	62439		+22	62461
700 E 690 N	62437		+22	62459
700 E 700 N	62440		+23	62463
700 E 710 N	62452		+24	62476
700 E 720 N	62447		+25	62472
700 E 730 N	62487		+26	62513
700 E 740 N	62476		+26	62502
700 E 750 N	62469		+27	62496
700 E 760 N	62455	1·00	+27	62482
700 E 770 N	62509		+28	62537

371

PROTON MAGNETOMETER FEILD RECORDINGS

919373

Date: 15/12/80 Operator: B. DOYLE M. NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
700E 780N	62455		+28	62483
700E 790N	62450		+29	62479
700E 800N	62443		+30	62473
700E 810N	62429	1:10	+30	62459
700E 820N	62429		+30	62459
700E 830N	62426		+30	62456
700E 840N	62426		+31	62457
700E 850N	62425		+31	62456
700E 860N	62430		+32	62462
700E 870N	62435		+32	62467
700E 880N	62435		+32	62467
700E 890N	62435		+33	62468
700E 900N	62433		+33	62466
700E 910N	62433		+34	62467
700E 920N	62437		+34	62471
700E 930N	62444	1·20 pm	+34	62478
700E 940N	62434		+34	62468
700E 950N	62441		+34	62485
700E 960N	62437		+34	62471
700E 970N	62437		+35	62472
700E 980N	62435		+35	62470
700E 990N	62433		+35	62468
700E 1000N	62432		+36	62468
700E 1010N	62426		+36	62462
700E 1020N	62434	1·30	+36	62470
700E 1030N	62437		+36	62473

37c

PROTON MAGNETOMETER FEILD RECORDINGS

919374

Date: 15/12/80 Operator: B DOYLE M. NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
700E 1040N	62443		+36	62479
700E 1050N	62430		+36	62466
700E 1060 N	62448		+37	62485
700E 1070 N	62446		+37	62483
700E 1080 N	62456		+37	62493
700E 1090 N	62450	1.40	+37	62487
700E 1100 N	62443		+37	62480
700 E 1110 N	62441		+38	62478
700 E 1120 N	62468		+38	62506
700E 1130 N	62474		+38	62512
700E 1140 N	62477		+39	62516
700E 1150 N	62478		+39	62517
700E 1160 N	62473		+39	62512
700E 1170 N	62469		+40	62509
700E 1180 N	62467		+40	62507
700E 1190 N	62476	1.50	+40	62516
700E 1200 N	62476		+40	62516

373

919375 800E
North

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Eddy Doyle, Micheal Tiardello Grid Location: Mt Agnes

BASE READING 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
800E 000N	62416	9.00	+28	62444
800E 010N	62416		+28	62444
800E 020N	62414		"	62442
800E 030N	62418		"	62446
800E 040N	62423		"	62451
800E 050N	62419		"	62447
800E 060N	62422		"	62450
800E 070N	62426		+28	62454
800E 080N	62426		+27	62453
800E 090N	62429		"	62457
800E 100N	62426		"	62453
800E 110N	62428		"	62455
800E 120N	62467		"	62494
800E 130N	62500		"	62527
800E 140N	62468		+27	62495
800E 150N	62463		+26	62489
800E 160N	62458		"	62484
800E 170N	62463		"	62489
800E 180N	62493		"	62519
800E 190N	62496		"	62522
800E 200N	62471		"	62497
800E 210N	62478		"	62504
800E 220N	62511	9.10	+26	62537
800E 230N	62492		+26	62518
800E 240N	62498		+26	62524
800E 250N	62502		+26	62528
800E 260N	62492		+26	62518

374

919376 OWE north

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Dagle, Michael Mandella Grid Location: Mt Agnew

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
800E 270N	62 512		+26	62528
800E 280N	62 521		+27	62548
800E 290N	62 490		+27	62517
800E 300N	62 492		+27	62519
800E 310N	62 539		+27	62566
800E 320N	62 485		+28	62513
800E 330N	62 496		+28	62524
800E 340N	62 489		+28	62517
800E 350N	62 479	9.20	+28	62507
800E 360N	62 516		"	62544
800E 370N	62 457		"	62485
800E 380N	62 437		"	62465
800E 390N	62 425		"	62453
800E 400N	62 403		"	62431
800E 410N	62 465		+28	62493
800E 420N	62 440		"	62468
800E 430N	62 426		"	62454
800E 440N	62 441		"	62469
800E 450N	62 456		"	62484
800E 460N	62 424		"	62452
800E 470N	62 417		"	62445
800E 480N	62 428	9.30	+28	62456
800E 490N	62 449		"	62477
800E 500N	62 461		"	62489
800E 510N	62 468		"	62496
800E 520N	62 452		"	62480
800E 530N	62 474			62502

375

919377 800E north

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Doyle, Michael Nardella Grid Location: Mt Agnew

Corrected Base station value = 62,456

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
800E 540N	62486		+28	62514
800E 550N	62483		"	62511
800E 560N	62476		"	62504
800E 570N	62481	9:35	+28	62509

370

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 15/12/80 Operator: Buddy Dayle, Michael Nardella Grid Location: Mt Agnew

CORRECTED READING = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
800E 580N	62457		+44	62501
800E 590N	62449		+44	62493
800E 600N	62450	2.50	+44	62494
800E 610N	62445		"	62489
800E 620N	62441		"	62485
800E 630N	62440		"	62484
800E 640N	62436		"	62480
800E 650N	62423		"	62467
800E 660N	62423		"	62467
800E 670N	62412		+44	62456
800E 680N	62417		"	62461
800E 690N	62411		"	62455
800E 700N	62410		"	62454
800E 710N	62406		"	62450
800E 720N	62410	2.40	+44	62454
800E 730N	62408		"	62452
800E 740N	62417		"	62461
800E 750N	62418		"	62462
800E 760N	62425		"	62469
800E 770N	62438		"	62482
800E 780N	62449		"	62493
800E 790N	62448		"	62492
800E 800N	62451		+44	62495
800E 810N	62458		"	62502
800E 820N	62457		"	62501
800E 830N	62552		"	~~65~~ 62596
800E 840N	62449		"	62493

377

919379 800E North

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 15/12/80 Operator: Buddy Doyle, Michael Nardella Grid Location: Mt Agnew

CORRECTED BASE VALUE - 62458

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
800E	850N	62443		"	62487
800E	860N	62437	2.30	+44	62481
800E	870N	62433		"	62477
800E	880N	62432		"	62476
800E	890N	62433		"	62477
800E	900N	62435		"	62479
800E	910N	62430		"	62474
800E	920N	62425		+44	62469
800E	930N	62428		+45	62473
800E	940N	62434		"	62479
800E	950N	62434		"	62479
800E	960N	62435		"	62480
800E	970N	62433		"	62478
800E	980N	62441		"	62486
800E	990N	62440	2.20	+45	62485
800E	1000N	62451		"	62496
800E	1010N	62454		"	62499
800E	1020N	62446		"	62490
800E	1030N	62441		+45	62486
800E	1040N	62465		+44	62509
800E	1050N	62467		"	62511
800E	1060N	62455		"	62499
800E	1070N	62453		"	62497
800E	1080N	62447		+44	62491
800E	1090N	62461	2.10	+44	62505
800E	1100N	62432		"	62476

378

919380 800E north

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 15/12/86 Operator: Buddy Doyle, Micheal Nardella Grid Location: Mt Agnew

CORRECT BASE VALUE = 62.458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
800E 1110N	62443		+44	62487
800E 1120N	62428		+44	62472
800E 1130N	62428		+44	62472
800E 1140N	62430	2.15	+44	62474

37

919381

900E North

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Doyle, Micheal Nardella Grid Location: Mt Agnew

F.B.R. 61458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
900E 00N	62405	9·50	+27	62432
900E 010N	62405		+27	62432
900E 020N	62403		"	62430
900E 030N	62400		"	62427
900E 040N	62400		"	62427
900E 050N	62403		+28	62431
900E 060N	62401		"	62429
900E 070N	62402		"	62430
900E 080N	62407		"	62435
900E 090N	62407		"	62435
900E 100N	62410		"	62438
900E 110N	62406		+29	62435
900E 120N	62405		"	62434
900E 130N	62412		"	62441
900E 140N	62415		"	62444
900E 150N	62425	10·00	+29	62454
900E 160N	62432		"	62461
900E 170N	62437		"	62466
900E 180N	62433		"	62462
900E 190N	62425		"	62454
900E 200N	62426		"	62455
900E 210N	62415	10·10	+29	62444
900E 220N	62417		"	62446
900E 230N	62421		"	62450
900E 240N	62415		"	62444
900E 250N	62423		"	62452

380

REWISON LIMITED

919382 900E NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Gayle Grid Location: Mt Agnew

F.B.R. = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
900E 260N	62414		"	62443
900E 270N	62415		"	62444
900E 280N	62419		"	62448
900E 290N	62417		+29	62446
900E 300N	62415		"	62444
900E 310N	62417		"	62446
900E 320N	62409		"	62438
900E 330N	62420		"	62449
900E 340N	62447		"	62496
900E 350N	62458		"	62487
900E 360N	62453		"	62482
900E 370N	62444		"	62473
900E 380N	62457		"	62486
900E 390N	62468		"	62497
900E 400N	62447	10.20	+29	62476
900E 410N	62441		"	62470
900E 420N	62444		"	62473
900E 430N	62417		"	62446
900E 440N	62419		"	62448
900E 450N	62413		"	62442
900E 460N	62415		"	62444
900E 470N	62404		"	62433
900E 480N	62430		"	62459
900E 490N	62405		"	62434
900E 500N	62414	10.30	+29	62443
900E 510N	62409		"	62438

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919383 900E NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Doyle Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
900E 520N	62409		"	62438
900E 530N	62410		"	62439
900E 540N	62414		"	62443
900E 550N	62416		+29	62445
900E 560N	62416		+30	62446
900E 570N	62408		"	62438
900E 580N	62409		"	62439
900E 590N	62408		"	62438
900E 600N	62412		"	62442
900E 610N	62420		+31	62451
900E 620N	62422		"	62453
900E 630N	62425		"	62456
900E 640N	62425		"	62456
900E 650N	62421		"	62452
900E 660N	62423	10:40	+31	62454
900E 670N	62418		"	62449
900E 680N	62417		"	62448
900E 690N	62418		"	62449
900E 700N	62417		"	62448
900E 710N	62414		"	62445
900E 720N	62420		"	62451
900E 730N	62432		+31	62463
900E 740N	62435		+32	62467
900E 750N	62426		"	62458
900E 760N	62429		"	62461
900E 770N	62435		"	62467

382

919384 900E NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Doyle Grid Location: Mt Agnew

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
900E 780N	62436		"	62468
900E 790N	62433		"	62465
900E 800N	62431		"	62463
900E 810N	62431	10.50	+32	62463
900E 820N	62446		"	62478
900E 830N	62437		"	62469
900E 840N	62438		"	62470
900E 850N	62434		"	62466
900E 860N	62435		"	62467
900E 870N	62430		"	62462
900E 880N	62430		+32	62462
900E 890N	62433		"	62465
900E 900N	62434		"	62468
900E 910N	62437		"	62469
900E 920N	62439		"	62471
900E 930N	62445		"	62478
900E 940N	62443		"	62475
900E 950N	62428		"	62470
900E 960N	62433	11.06	+32	62455
900E 970N	62411		"	62443
900E 980N	62458		"	62490
900E 990N	62430		"	62462
900E 1000N	62436		"	62468
900E 1010N	62437		"	62469
900E 1020N	62438		"	62470
900E 1030N	62438		+32	62470

383

919385 900E NORTH

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Doyle Grid Location: Mt Algrew

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
900E 1040N	62442		+33	~~+33~~ 62475
900E 1050N	62442			" 62475
900E 1060N	62438			" 62471
900E 1070N	62444			62477
900E 1080N	62442			62475
900E 1090N	62446			62479
900E 1100N	62437		+33	~~+33~~ 62470
900E 1110N	62433	11.10	+33	~~+33~~ 62466
900E 1120N	62447		"	~~+33~~ 62480
900E 1130N	62440		+34	~~+34~~ 62473
900E 1140N	62440	11-15	+34	~~+34~~ 62473

384

919386 1000E north

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Doyle Grid Location: Mt Agnew

F.B.N = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1000E 000N	62389		+35	62424
1000E 010N	62402		"	62437
1000E 020N	62402		"	62437
1000E 030N	62400		"	62435
1000E 040N	62400		"	62435
1000E 050N	62398		"	62433
1000E 060N	62397		+35	62432
1000E 070N	62404		"	62439
1000E 080N	62407		"	62442
1000E 090N	62414		"	62449
1000E 100N	62414		+34	62448
1000E 110N	62415		+34	62449
1000E 120N	62406	1.00	+34	62440
1000E 130N	62401		"	62435
1000E 140N	62407		"	62441
1000E 150N	62397		"	62431
1000E 160N	62401		"	62435
1000E 170N	62392		"	62426
1000E 180N	62390		+34	62424
1000E 190N	62398		+35	62433
1000E 200N	62398		"	62433
1000E 210N	62395		"	12430
1000E 220N	62397		"	62432
1000E 230N	62382		"	62417
1000E 240N	62402		"	62437
1000E 250N	62397		+36	62433

385

919387 1000E north

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17-12-80 Operator: Buddy Doyle Grid Location: mt Agnes

FBR= 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1000E 260N	62401		+36	62437
1000E 270N	62403		"	62439
1000E 280N	62404		"	62440
1000E 290N	62410		"	62446
1000E 300N	62412	12.50	+36	62448
1000E 310N	62401		"	62437
1000E 320N	62412		"	62448
1000E 330N	62407		"	62443
1000E 340N	62412		"	62448
1000E 350N	62410		"	62446
1000E 360N	62405		"	62441
1000E 370N	62406		"	62442
1000E 380N	62404		"	62440
1000E 390N	62404		+36	62440
1000E 400N	62402		+37	62439
1000E 410N	~~62402~~ 62398		"	62435
1000E 420N	62402		"	62439
1000E 430N	62394		"	62431
1000E 440N	62405		"	62442
1000E 450N	62388		"	62425
1000E 460N	62418		"	62455
1000E 470N	62399		"	62436
1000E 480N	62411	12.40	+37	62448
1000E 490N	62411		"	62448
1000E 500N	62413		"	62450
1000E 510N	62408		"	62445

386

919388 1000E

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17/12/80 Operator: BUDDY DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1000 E 520 N	62413		"	62450
1000 E 530 N	62410		"	62447
1000 E 540 N	62411		"	62448
1000 E 550 N	62433		+37	62470
1000 E 560 N	62432		+37	62470
1000 E 570 N	62430		"	62468
1000 E 580 N	62416		"	62454
1000 E 590 N	62407		"	62445
1000 E 600 N	62422		"	62460
1000 E 610 N	62420		"	62458
1000 E 620 N	62422		"	62460
1000 E 630 N	62421		"	62459
1000 E 640 N	62434	12:30	+38	62474
1000 E 650 N	62418		"	62456
1000 E 660 N	62415		"	62453
1000 E 670 N	62414		"	62452
1000 E 680 N	62421		+38	62459
1000 E 690 N	62412		+37	62449
1000 E 700 N	62423		"	62460
1000 E 710 N	62418		"	62455
1000 E 720 N	62413		+37	62450
1000 E 730 N	62426		+36	62462
1000 E 740 N	62426		"	62462
1000 E 750 N	62428		"	62464
1000 E 760 N	62429		"	62465
1000 E 770 N	62432		+35	62467

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17/12/80 Operator: B. DOYLE Grid Location: Mt AGNEW

F.B.R 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1000 E 780 N	62436	12·20	+35	62471
1000 E 790 N	62431		"	62466
1000 E 800 N	62431		"	62466
1000 E 810 N	62442		"	62477
1000 E 820 N	62445		"	62480
1000 E 830 N	62436		"	62471
1000 E 840 N	62423		"	62458
1000 E 850 N	62426		+36	62462
1000 E 860 N	62424		"	62460
1000 E 870 N	62433		"	62469
1000 E 880 N	62447		"	62483
1000 E 890 N	62425		"	62461
1000 E 900 N	62419	12·10	+36	62455
1000 E 910 N	62425		"	62461
1000 E 920 N	62417		"	62453
1000 E 930 N	62422		+36	62458
1000 E 940 N	62380		+37	62417
1000 E 950 N	62396		"	62433
1000 E 960 N	62449		"	62486
1000 E 970 N	62437	12·00	+37	62474
1000 E 980 N	62417		"	62454
1000 E 990 N	62410		"	62447
1000 E 1000 N	62394		"	62431
1000 E 1010 N	62383		"	62420
1000 E 1020 N	62389		"	62426
1000 E 1030 N	62413	11·50	+37	62450

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919390

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17/12/80 Operator: B DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1000E 1040N	62445	1	+37	62483
1000E 1050N	62430		"	62467
1000E 1060N	62440		"	62477
1000E 1070N	62457		"	62494
1000E 1080N	62464		"	62501
1000E 1090N	62476		"	62513
1000E 1100N	62467		"	62564
1000E 1110N	62474		"	62511
1000E 1120N	62490		"	62527
1000E 1130N	62448		"	62485
1000E 1140N	62465	11.40	+37	62502

389

PROTON MAGNETOMETER FEILD RECORDINGS 919391

Date: 17/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1100 E 00 N	62393	1·20	+35	62428
1100 E 10 N	62394		"	62429
1100 E 20 N	62391		"	62426
1100 E 30 N	62389		"	62424
1100 E 40 N	62389		"	62424
1100 E 50 N	62388		"	62423
1100 E 60 N	62386		"	62421
1100 E 70 N	62383		"	62418
1100 E 80 N	62386		"	62421
1100 E 90 N	62396		"	62431
1100 E 100 N	62420		"	62455
1100 E 110 N	62404		"	62439
1100 E 120 N	62394		"	62429
1100 E 130 N	62389		"	~~62439~~ 62424
1100 E 140 N	62404		"	62439
1100 E 150 N	62414		"	62449
1100 E 160 N	62380		"	62415
1100 E 170 N	62391		"	62426
1100 E 180 N	62392		"	62427
1100 E 190 N	62406		"	62441
1100 E 200 N	62389	1·30	+35	62424
1100 E 210 N	62423		"	62458
1100 E 220 N	62432		"	62467
1100 E 230 N	62424		"	62459
1100 E 240 N	62419		"	62454
1100 E 250 N	62411		"	62446

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PROTON MAGNETOMETER FEILD RECORDINGS

919392

Date: 17/12/80 Operator: M.NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1100 E 260 N	62415		+34	62449
1100 " 270 "	62399		"	62433
1100 " 280 "	62419		"	62453
1100 " 290 "	62416		"	62450
1100 " 300 "	62425		"	62459
1100 " 310 "	62425		+33	62458
1100 " 320 "	62401		"	62434
1100 E 330 N	62408		"	62441
1100 " 340 "	62420		"	62453
1100 " 350 "	62422	1.40	+33	62455
1100 " 360 "	62419		"	62452
1100 " 370 "	62427		"	62460
1100 " 380 "	62413		"	62446
1100 " 390 "	62406		"	62439
1100 E 400 N	62409		"	62442
1100 " 410 "	62411		"	62444
1100 " 420 "	62427		+33	62460
1100 " 430 "	62411		+32	62443
1100 " 440 "	62435		"	62467
1100 " 450 "	62438		"	62470
1100 E 460 N	62425		"	62457
1100 " 470 "	62403		"	62435
1100 " 480 "	62413		"	62445
1100 " 490 "	62418		"	62450
1100 " 500 "	62415	1.50	+32	62447
1100 E 510 N	62424		"	62456

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PROTON MAGNETOMETER FEILD RECORDINGS

919393

Date: 17/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1100E 520N	62421		+32	62453
1100E 530N	62429		"	62461
1100E 540N	62423		+31	62454
1100E 550N	62429		"	62460
1100E 560N	62424		"	62455
1100E 570N	62436		+30	62466
1100E 580N	62428		"	62458
1100E 590N	62440		"	62470
1100E 600N	62425		+29	62454
1100E 610N	62418		"	62447
1100E 620N	62416		"	62445
1100E 630N	62432		+28	62460
1100E 640N	62430		"	62458
1100E 650N	62433		+27	62460
1100E 660N	62431	2:00	+27	62458
1100E 670N	62433		~~+26~~ "	62460
1100E 680N	62429		"	62456
1100E 690N	62429		"	62456
1100E 700N	62428		"	62455
1100E 710N	62420		"	62447
1100E 720N	62425		"	62452
1100E 730N	62426		"	62453
1100E 740N	62430		"	62457
1100E 750N	62436		+27	62463
1100E 760N	62427		+26	62453
1100E 770N	62425		"	62451

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919394

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
1100 E	780 N	62430		+26	62456
1100	790	62425		"	62451
1100	800	62433		"	62459
1100	810	62424		"	62450
1100	820	62425		"	62451
1100 E	830 N	62430		"	62456
1100	840	62430		"	62456
1100	850	62431	2.10	+26	62457
1100	860	62432		"	62458
1100	870	62424		"	62450
1100	880	62426		"	62452
1100 E	890 N	62428		"	62454
1100	900	62418		"	62444
1100	910	62417		+26	62443
1100	920	62419		+24	62443
1100	930	62416		"	62440
1100	940	62407		"	62431
1100	950	62416		"	62440
1100 E	960 N	62435		"	62459
1100	970	62435		"	62459
1100	980	62429		"	62453
1100	990	62444	2.20	+24	62468
1100	1000	62434		"	62458
1100	1010	62443		"	62467
1100	1020	62447		"	62471
1100 E	1030 N	62452		+24	62475

393

PROTON MAGNETOMETER FEILD RECORDINGS

919395

Date: 17/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1100 E 1040 N	62446		+23	62469
1100 1050	62442		"	62465
1100 1060	62441		"	62464
1100 1070	62449		"	62472
1100 1080	62468		"	62491
1100 E 1090 N	62445		+22	62467
1100 1100	62444		"	62466
1100 1110	62460		"	62482
1100 1120	62467		"	62489
1100 1130	62458		"	62480
1100 1140	62436	2.30	+22	62458
1100 1150	62441		"	62463
1100 1160 N	62473		"	62495
1100 E 1170 N	62449		"	62471

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1200E

919396

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 19/12/80 Operator: B.DOYLE Grid Location: MT AGNEW

F.B.R = 62458

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
1200 E	00 N	62385	8·10 am	+43	62428
1200 E	10 N	62380		"	62423
"	20 N	62373		"	62416
"	30 N	62375		"	62418
"	40 N	62378		"	62421
"	50 N	62375		"	62418
"	60 N	62378		"	62421
"	70 N	62372		"	62415
"	80 N	62373		"	62416
1200 E	90 N	62362		+43	62405
"	100 N	62370		"	62413
"	110 N	62371		"	62414
"	120 N	62374		"	62417
"	130 N	62370		"	62413
"	140 N	62374		"	62417
"	150 N	62400		"	62443
"	160 N	62380		"	62423
1200 E	170 N	62376		"	62419
"	180 N	62377		"	62420
"	190 N	62375		"	62418
"	200 N	62384		"	62427
"	210 N	62383	8·20 am	+43	62426
"	220 N	62384		"	62427
"	230 N	62386		"	62429
"	240 N	62391		"	62434
1200E	250 N	62388		"	62431

395

PROTON MAGNETOMETER FEILD RECORDINGS

919397

te: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
200 E 260 N	62398		+43	62441
200 E 270 N	62387		"	62430
" 280 N	62387		"	62430
" 290 N	62390		+42	62432
" 300 N	62385		"	62427
" 310 N	62391		"	62433
" 320 N	62394		"	62436
" 330 N	62395		"	62437
" 340 N	62399		"	62441
1200E 350 N	62410		"	62452
" 360 N	62403	8.30am	+42	62445
" 370 N	62402		"	62444
" 380 N	62393		"	62435
" 390 N	62398		"	62440
" 400 N	62396		"	62438
" 410 N	62403		"	62445
" 420 N	62402		"	62444
200E 430 N	62404		"	62446
" 440 N	62400		+41	62441
" 450 N	62404		"	62445
" 460 N	62400		"	62441
" 470 N	62416		"	62457
" 480 N	62400		"	62441
" 490 N	62403		"	62444
" 500 N	62400		"	62441
120E 510 N	62401	8.40	+41	62442

396

1200E

PROTON MAGNETOMETER FEILD RECORDINGS

919398

ate: 19/12/80 Operator: B. DOYLE Grid Location: FIT. AGNEW

F.B.R = 62458

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
200E	520 N	62403		+41	62444
200E	530 N	62409		"	62450
"	540 N	62410		"	62451
"	550 N	62405		+40	62445
"	560 N	62407		"	62447
"	570 N	62406		"	~~62451~~ 62446
"	580 N	62404		+39	62443
"	590 N	62401		"	62440
"	600 N	62404		"	62443
200E	610 N	62402		"	62441
"	620 N	62398		+38	62436
"	630 N	62395		"	62433
"	640 N	62402		"	62440
"	650 N	62403		"	62441
"	660 N	62403	8.50	+ 38	62441
"	670 N	62402		"	62440
"	680 N	62400		"	62438
200E	690 N	62392		"	62430
"	700 N	62398		"	62436
"	710 N	62403		"	62441
"	720 N	62401		"	62439
"	730 N	62402		"	62440
"	740 N	62404		"	62442
"	750 N	62403		"	62441
"	760 N	62404		+38	62442
1200E	770 N	62408		+37	62445

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PROTON MAGNETOMETER FEILD RECORDINGS

919399

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

F.B.R = 62458

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
200E	780N	62401		+37	62438
200E	790N	62402		"	62439
"	800N	62400		"	62437
"	810N	62404		"	62441
"	820N	62400		"	62437
"	830N	62398		"	62435
"	840N	62400		"	62437
"	850N	62400		"	62437
"	860N	62410		"	62447
200E	870N	62400	9.00	+37	62437
"	880N	62419		"	62456
"	890N	62409		"	62446
"	900N	62415		+36	62452
"	910N	62405		"	62442
"	920N	62411		"	62448
"	930N	62418		+35	62455
"	940N	62410		"	62447
200E	950N	62412		"	62439
"	960N	62414	9.10	+35	62451
"	970N	62415		"	62452
"	980N	62430		"	62465
"	990N	62430		"	62465
"	1000N	62425		"	62460
"	1010N	62442		"	62477
"	1020N	62426		+34	62460
200E	1030N	62444		"	62479

398

PROTON MAGNETOMETER FEILD RECORDINGS

919400

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
200E 1040N	62429		"	62462
" 1050N	62425		"	62458
" 1060N	62421		"	62454
" 1070N	62421		"	62454
" 1080N	62408		+33	62441
" 1090N	62435		"	62468
" 1100N	62410		"	62443
00E 1110N	62416		"	62449
" 1120N	62441	9-20	+33	62474
" 1130N	62435		"	62468
" 1140N	62435		"	62468
1200E 1150N	62427		"	62460

399

PROTON MAGNETOMETER FEILD RECORDINGS

919401

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

F.B. R = 62458

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
300E	00N	62371	11·05am	+37	62408
300E	10	62369		"	62406
"	20	62368		"	62405
"	30	62369		"	62406
"	40	62375		"	62412
"	50	62378		"	62415
"	60	62371	11·00	+37	62408
"	70	62373		"	62410
"	80	62372		"	62409
300E	90	62368		"	62405
"	100	62371		"	62408
"	110	62373		"	62410
"	120	62385		"	62422
"	130	62374		"	62411
"	140	62380		"	62417
"	150	62374		"	62411
"	160	62374		"	62411
300E	170	62373		"	62410
"	180	62374		"	62411
"	190	62372		"	62409
"	200	62378		"	62415
"	210	62376		"	62413
"	220	62376		"	62413
"	230	62382		"	62419
"	240	62372	10·50	+37	62409
300E	250	623390		"	62427

400.

PROTON MAGNETOMETER FEILD RECORDINGS

919402

te: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
300E 260N	62387		+37	62424
300E 270N	62380		"	62417
" 280N	62384		"	62421
" 290N	62388		"	62425
" 300N	62386		"	62423
" 310N	62387		"	62424
" 320N	62387		+36	62423
" 330N	62384		"	62420
" 340N	62382		"	62418
300E 350N	62403		"	62439
" 360N	62412		"	62448
" 370N	62419		"	62455
" 380N	62425		"	62461
" 390N	62388	10.40	+36	62424
" 400N	62396		"	62432
" 410N	62397		"	62433
" 420N	62411		"	62437
300E 430N	62331		"	62467
" 440N	62478		+35	62413
" 450N	62405		"	62440
" 460N	62402		"	62437
" 470N	62402		"	62437
" 480N	62409	10.30	+35	62444
" 490N	62400		"	62435
" 500N	62404		"	62439
300E 510N	62388		"	62423

401

PROTON MAGNETOMETER FEILD RECORDINGS

919403

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1300E 520N	62382		+35	62417
1300E 530 N	62403		"	62438
" 540 N	62393		"	62428
" 550 N	62390		"	62425
" 560 N	62390		"	62425
" 570 N	62473		"	62508
" 580 N	~~62406~~ 62398		"	62433
" 590 N	~~62370~~ 62406		"	62441
" 600 N	62370	10·20	+35	62405
300E 610 N	62411		"	62446
" 620 N	62390		"	62425
" 630 N	62400		"	62435
" 640 N	62420		"	62455
" 650 N	62370		"	62405
" 660 N	62400		"	62435
" 670 N	62450		+35	62485
300E 680 N	62406		+34	62440
" 690 N	62398		"	62432
" 700 N	62394		"	62428
" 710 N	62437		"	62471
" 720 N	62432		"	62466
" 730 N	62430		"	62464
" 740 N	62430		"	62464
" 750 N	62437		+33	~~62470~~ 62470
" 760 N	62430		"	62463
300E 770 N	62423		"	62456

402

PROTON MAGNETOMETER FEILD RECORDINGS

919404

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

F.B.R = 62658

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1300E 780N	62412		+33	62445
1300E 790N	62412		"	62445
" 800N	62424		"	62457
" 810N	62430	10·00	+33	62463
" 820N	62410		+33	62443
" 830N	62429		+33	62462
" 840N	62413		+33	62446
" 850N	62417		+33	62450
" 860N	62413		+33	62446
1300E 870N	62420		+33	62453
" 880N	62416		+34	62450
" 890N	62420		+34	62454
" 900N	62436		"	62470
" 910N	62420		"	62454
" 920N	62415		"	62449
" 930N	62431		"	62465
" 940N	62428		"	62462
" 950N	62422	10·00	+34	62456
1300E 960N	62410		"	62444
" 970N	62408		"	62442
" 980N	62410		"	62444
" 990N	62402		+33	62435
" 1000N	62410		"	62443
" 1010N	62414		"	62447
" 1020N	62416		+32	62448
1300E 1030N	62420		+32	62452

403

PROTON MAGNETOMETER FEILD RECORDINGS

919405

ate: 19/12/80 Operator: B.DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1300E 1040N	62404		+32	62436
" 1050 N	62421		+31	62452
" 1060 N	62406		+31	62437
" 1070 N	62416	9.50	+31	62447
" 1080 N	62419		"	62450
" 1090 N	62418		"	62449
1300E 1100N	62439		"	62470
" 1110 N	62449		"	62480
" 1120 N	62433		"	62464
" 1130 N	62436		"	62467
" 1140 N	62424	9.40	+31	62455
~~1150 N~~				

404

PROTON MAGNETOMETER FEILD RECORDINGS

919406

te: 17/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
400E 00N	62388	4·25	+12	62400
00E 10N	62381		"	62393
" 20N	62383		"	62395
" 30N	62385		"	62397
" 40N	62397		"	62409
" 50N	62392		"	62404
" 60N	62389		"	62401
" 70N	62385		"	62397
" 80N	62383		"	62395
400E 90N	62386	4·20	+12	62398
" 100N	62385		"	62397
" 110N	62389		"	62401
" 120N	62386		"	62398
" 130N	62392		"	62404
" 140N	62389		"	62401
" 150N	62390		"	62402
" 160N	62389		+12	62401
400E 170N	62403		"	62415
" 180N	62401		"	62413
" 190N	62408		"	62420
" 200N	62362		"	62374
" 210N	62399		"	62411
" 220N	62398		"	62410
" 230N	62391		"	62403
" 240N	62383		"	62395
400E 250N	62388		+12	62400

405

PROTON MAGNETOMETER FEILD RECORDINGS

919407

ate: 17/12/80 Operator: M.NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1400E 260N	62397	4·10	+12	62409
1400E 270N	62397		"	62409
" 280N	62410		"	62422
" 290N	62381		"	62393
" 300N	62361		"	62373
" 310N	62401		"	62413
" 320N	62401		"	62413
" 330N	62387		"	62399
" 340N	62414		"	62426
1400E 350N	62408		"	62420
" 360N	62416		"	62428
" 370N	62400		"	62412
" 380N	62397		"	62409
" 390N	62411		"	62423
" 400N	62409		"	62421
" 410N	62408		"	62420
" 420N	62392	4·00	+12	62406
1400E 430N	62401		"	62413
" 440N	62402		"	62414
" 450N	62408		"	62420
" 460N	62390		"	62402
" 470N	62392		"	62404
" 480N	62404		"	62416
" 490N	62419		+13	62432
" 500N	62402		"	62415
1400E 510N	62412		"	62425

406

PROTON MAGNETOMETER FEILD RECORDINGS

919408

ate: 17/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
400E 520N	62410		+13	62423
400E 530N	62392		"	62405
" 540N	62385	3.50	+13	62398
" 550N	62420		"	62433
" 560N	62410		"	62423
" 570N	62392		+12	62404
" 580N	62462		"	62474
" 590N	62413		+11	62424
" 600N	62420		"	62431
1400E 610N	62470		+10	62480
" 620N	62437		"	62447
" 630N	62457		"	62467
" 640N	62497	3.40	+10	62507
" 650N	62593		"	62603
" 610N	62452		"	62462
" 670N	62468		"	62478
" 680N	62469		"	62479
1400E 690N	62446		+11	62457
" 700N	62443		"	62454
" 710N	62440		"	62451
" 720N	62441		"	62452
" 730N	62472		+12	62484
" 740N	62475		"	62497
" 750N	62440		"	62452
" 760N	62443		"	62455
1400E 770N	62435		"	62457

407

PROTON MAGNETOMETER FEILD RECORDINGS

919409

ate: 17/12/80 Operator: M.NARDELLA Grid Location: MT AGNEW

Grid Station		Gamma Reading	Time	Diurnal correction	Corrected Reading
1600E	780N	62423		+13	62436
1600E	790N	62421		"	62434
"	800N	62430		"	62443
"	810N	62425		"	62438
"	820N	62436	3·30	+13	62449
"	830N	62427		"	62440
"	840N	62436		"	62449
"	850N	62417		"	62430
"	860N	62428		"	62441
1400E	870N	62427		"	62440
"	880N	62420		+14	62464
"	890N	62412		"	62426
"	900N	62398		"	62412
"	910N	62399		"	62413
"	920N	62426		"	62438
"	930N	62428		+15	62443
"	940N	62408		"	62433
1400E	950N	62427		"	62442
"	960N	62409		"	62424
"	970N	62413		"	62428
"	980N	62410	3·20	+15	62425
"	990N	62409		"	62424
"	1000N	62414		"	62429
"	1010N	62418		"	62431
"	1020N	62403		"	62418
1600E	1030N	62433		"	62448

408

PROTON MAGNETOMETER FEILD RECORDINGS

919410

ate: 17/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1400E 1040N	62426		+15	62441
1400E 1050N	62432		+14	62446
" 1060N	62434		"	62448
" 1070N	62417		"	62431
" 1080N	62429		"	62443
" 1090N	62430		"	62444
" 1100N	62432		"	62446
" 1110N	62436	3.10	+14	62450
1400E 1120N	62448		"	62462
" 1130N	62448		"	62462
" 1140N	62442		"	62456
" 1150N	62435		"	62459
" 1160N	62436		"	62460
1400E 1170N	62441	3.05	+14	62455

409

PROTON MAGNETOMETER FEILD RECORDINGS

919411

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

F.B. R=62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1500E 00N	62337	1150	+39	62376
1500E 10N	62352		"	62391
" 20N	62351		"	62390
" 30N	62347		"	62386
" 40N	62347		"	62386
" 50N	62351		"	62390
" 60N	62360		"	62399
" 70N	62356		"	62395
" 80N	62358		+40	62398
1500E 90N	62346		"	62386
" 100N	62354		"	62394
" 110N	62351		"	62391
" 120N	62358		"	62398
" 130N	62365		"	62405
" 140N	62354		"	62394
" 150N	62356	12·00	+40	62396
" 110N	62365		"	~~62406~~ 62405
500E 170N	62366		"	62406
" 180N	62354		"	62394
" 190N	62359		"	62399
" 200N	62362		"	62402
" 210N	62356		"	62396
" 220N	62366		"	62406
" 230 N	62363		"	62403
" 240 N	62363		"	62403
1500E 250 N	62363		+40	62403

410

PROTON MAGNETOMETER FEILD RECORDINGS

919412

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1500E 210N	62361		+40	62401
1500E 270N	62366		"	62406
" 280N	62366		"	62406
" 290N	62362		"	62402
" 300N	62366	12·10	+40	62406
" 310N	62366		"	62406
" 320N	62363		"	62403
" 330N	62373		"	62413
" 340N	62362		"	62402
500E 350N	62368		"	62408
" 360N	62358		"	62398
" 370N	62364		+39	62403
" 380N	62360		"	~~62400~~ 62399
" 390N	62367		"	62406
" 400N	62361		"	62400
" 410N	62365		"	62404
" 420N	62369	12·20	+39	62408
500E 430N	62375		"	62414
" 440N	62372		"	62411
" 450N	62376		"	62415
" 460N	62372		"	62411
" 470N	62375		"	62414
" 480N	62373		"	62412
" 490N	62362		+40	62402
" 500N	62389		"	62429
500E 510N	62372		"	62412

919413

PROTON MAGNETOMETER FEILD RECORDINGS

ate: 19/12/80 Operator: B.DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1500E 520N	62377		+40	62417
1500E 530N	62382		+40	62422
" 540N	62377	12·30	+40	62417
" 550N	62373		"	62413
" 560N	62377		"	62417
" 570N	62384		+40	62424
" 580N	62375		+39	62414
" 590N	62446		"	62485
" 600N	62412		"	62451
500E 610N	62416		"	62455
" 620N	62400		+38	62438
" 630N	62403		"	62441
" 640N	62398		"	62436
" 650N	62403		"	62441
" 660N	62408	12·40	+38	62446
" 670N	62395		"	62433
" 680N	62405		"	62443
1500E 690N	62398		"	62436
" 700N	62413		"	62451
" 710N	62410		"	62448
" 720N	62411		"	62449
" 730N	62398		"	62436
" 740N	62398		+37	62435
" 750N	62400		"	62437
" 760N	62405		"	62442
1500E 770N	62407		"	62444

412

PROTON MAGNETOMETER FEILD RECORDINGS

919414

ate: 14/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1500E 790N	62400		+37	62437
1500E 790 N	62397		"	62434
" 800N	62397		"	62434
" 810 N	62401	12:50	+37	62438
" 820N	62404		"	62441
" 830 N	62398		"	62435
" 840 N	62407		"	62444
" 850N	62416		"	62453
" 860 N	62432		+36	62468
1500E 870 N	62398		"	62434
" 880 N	62394		"	62430
" 890 N	62390		"	62426
" 900 N	62391		"	62427
" 910 N	62462		+35	62497
" 920 N	62395		"	62430
" 930N	62411		"	62446
" 940 N	62407		"	62442
1500E 950N	62408		"	62443
" 960N	62406	1·00	+35	62441
" 970N	62403		"	62438
" 980 N	62418		"	62453
" 990 N	62416		"	62451
" 1000N	62412		"	62447
" 1010N	62403		+36	62439
" 1020N	62401		"	62437
1500E 1030N	62403		"	62439

413

PROTON MAGNETOMETER FEILD RECORDINGS

919415

ate: 19/12/80 Operator: B.DOYLE Grid Location: MT. AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1500E 1060 N	62397		+36	62433
" 1050 N	62411	1.10	+36	62447
" 1060 N	62398		"	62434
" 1070 N	62398		"	62434
" 1080 N	62392		"	62428
" 1090 N	62405		"	62441
1500E 1100 N	62405		"	62441
" 1110 N	62401		"	62437
" 1120 N	62410		+35	62445
" 1130 N	62405		"	62440
" 1140 N	62412		"	62447
" 1150 N	62417		"	62452
" 1160 N	62415		"	62450
" 1170 N	62415		"	62450
1500E 1180 N	62414	1.20	+35	62449

414

PROTON MAGNETOMETER FEILD RECORDINGS

919416

Date: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1600E 00N	62352	3·10	+23	62375
1600E 10 N	62351		"	62374
" 20 N	62348		"	62371
" 30 N	62351		"	62374
" 40 N	62350		"	62373
" 50 N	62347		"	62370
" 60 N	62350		"	62373
" 70 N	62352		"	62375
" 80 N	62353		"	62376
1600E 90 N	62351		"	62374
" 100 N	62348		"	62370
" 110 N	62~~48~~ 53		"	62376
" 120 N	62350		"	62373
" 130 N	62362		"	62385
" 140 N	62357		"	62380
" 150 N	62353	3·00	+23	62376
" 160 N	62352		"	62375
1600E 170 N	62358		+24	62382
" 180 N	62359		"	62383
" 190 N	62353		+25	62378
" 200 N	62357		"	62382
" 210 N	62354		+26	62380
" 220 N	62361		"	62387
" 230 N	62359		+27	62386
" 240 N	62355		"	62382
600E 250 N	62358		+28	62386

415

PROTON MAGNETOMETER FEILD RECORDINGS

919417

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT. AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
600E 260N	62362		+28	62390
1600E 270 N	62355	2:50	+28	62383
" 280 N	62352		"	62380
" 290 N	62358		"	62386
" 300 N	62364		"	62392
" 310 N	62349		"	62377
" 320 N	62356		"	62384
" 330 N	62362		"	62390
" 340 N	62363		+29	62392
1600E 350 N	62360		"	62389
" 360 N	62363		"	62392
" 370 N	62337		"	62367
" 380 N	62363		"	62392
" 390 N	62353	2.40	+29	62382
" 400 N	62378		"	62407
" 410 N	62402		"	62431
" 420 N	62393		+30	62423
600E 430 N	62390		"	62420
" 440 N	62392		"	62423
" 450 N	62386		"	62416
" 460 N	62384		+31	62415
" 470 N	62386		"	62417
" 480 N	62394		"	62425
" 490 N	62392		"	62423
" 500 N	62382	2.30	+31	62413
160E 510 N	62385		+31	62416

416

PROTON MAGNETOMETER FEILD RECORDINGS

919418

ate: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
600E 520N	62385		+31	62416
600E 530N	62386		+32	62418
" 540N	62386		"	62418
" 550N	62378		"	62410
" 560N	62378		+33	62411
" 570N	62382		"	62415
" 580N	62379		"	62412
" 590N	62378		+34	62412
" 600N	62387		"	62421
600E 610N	62380		"	62414
" 620N	62380		"	62414
" 630N	62384	2-20	+34	62418
" 640N	62380		"	62414
" 650N	62386		"	62420
" 660N	62385		"	62419
" 670N	62382		+35	62417
" 680N	62385		"	62420
600E 690N	62385		"	62420
" 700N	62393		+36	62429
" 710N	62391		"	62427
" 720N	62380		"	62416
" 730N	62387		+37	62424
" 740N	62386		"	62423
" 750N	62369		"	62406
" 760N	62390	2-10	+37	62427
600E 770N	62405		+37	62442

417

1600E

PROTON MAGNETOMETER FEILD RECORDINGS

919419

Date: 19/12/80 Operator: B. DOYLE Grid Location: MT AGNEW

F.B.R = 62458

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
600E 780N	~~620~~ 62409		+37	62446
600E 790N	62401		"	62438
" 800N	62388		"	62425
" 810N	62388		+38	62426
" 820N	62388		"	62426
" 830N	62390		"	62428
" 840N	62387		"	62425
" 850N	62401		+39	62440
" 860N	62392		"	62431
600E 870N	62387		"	62426
" 880N	62394		"	62433
" 890N	62398	2·00	+39	62437
" 900N	62393		"	62432
" 910N	62401		"	62440
" 920N	62392		"	62431
" 930N	62400		"	62439
" 940N	62395		+38	62433
600E 950N	62390		"	62428
" 960N	62395		"	62433
" 970N	62393		"	62431
" 980N	62390		"	62428
" 990N	62381	1·50	+38	62419
" 1000N	62399		"	62417
" 1010N	62~~405~~ 392		"	62420
" 1020N	62386		+37	62423
600E 1030N	62405		"	62442

418

PROTON MAGNETOMETER FEILD RECORDINGS

919420

te: 19/12/80 Operator: B. DOYLE Grid Location: MT. AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
600E 1040N	623.94		+36	62430
600E 1050N	62390		+36	62426
" 1060N	62389		"	62425
" 1070N	62400	1.40	+36	62436
" 1080N	62408		"	62444
" 1090N	62416		"	62452
600E 1100N	62393		"	62429
" 1110N	62406		"	62442
" 1120N	62411		"	62457
" 1130N	62405		"	62441
" 1140N	62406		"	62442
" 1150N	62409		"	62445
" 1160N	62401		"	62437
600E 1170N	62407	1.35	+36	62443

419

PROTON MAGNETOMETER FEILD RECORDINGS

Base 62458
919421

e: 17-1-81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1700E 00N	62342	9.10am	+18	62360
10N	62337		+18	62355
20N	62338		+18	62356
30N	62343		+18	62361
40N	62343		+18	62361
50N	62345		+18	62363
60N	62344		+18	62362
70N	62345		+18	62363
80N	62346		+17	62363
90N	62347		+17	62364
100N	62346		+17	62363
110N	62346		+17	62363
120N	62348		+17	62365
130N	62349		+17	62366
140N	62351	9.20a.m.	+17	62368
150N	62353		+17	62370
160N	62356		+17	~~62369~~ 62373
170N	62350		+17	62367
180N	62358		+17	62375
190N	62353		+17	62370
200N	62359		+18	62377
210N	62355		+18	62373
220N	62358		+18	62375
230N	62364		+18	62382
240N	62355		+18	62373
250N	62359		+19	62378

420

919422 Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

1700E

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1700E 260N	62355		+19	62374
270N	62357		+19	62376
280N	62356		+19	62375
290N	62360		+19	62379
300N	62356	9.30	+19	62375
310N	62359		+19	62378
320N	62357		+19	62376
330N	62359		+19	62378
340N	62360		+19	62379
350N	62358		+19	62377
360N	62361		+20	62381
370N	62366		+20	62386
380N	62364		+20	62384
390N	62356		+20	62376
400N	62357		+20	62377
410N	62358	9.40	+20	62378
420N	62362		+20	62382
430N	62361		+20	62381
440N	62367		+20	62387
450N	62376		+20	62396
460N	62387		+20	62407
470N	62384		+21	62405
480N	62378		+21	62399
490N	62384		+21	62405
500N	62372		+21	62393
510N	62371	9.50	+21	62392

421

919423 · Box 02 170

PROTON MAGNETOMETER FEILD RECORDINGS

: 17/1/81

Operator: M. NAROELLA

Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1700E 520N	62365		+21	62386
530 N	62376		+21	62397
540 N	62378		+22	62400
550 N	62374		+22	62396
560N	62383		+23	62406
570N	62373		+24	62397
580N	62376		+25	62401
590N	62378		+25	62403
600N	62378		+26	62404
610 N	62382		+26	62408
620 N	62376		+27	62403
630 N	62369	10:00	+27	62396
640 N	62373		+27	62400
650N	62374		+27	62401
660	62367		+27	62394
670N	62395		+27	62422
680N	62388		+27	62415
690 N	62387		+27	62414
700N	62377		+28	62405
710N	62373		+28	62401
720N	62365		+28	~~624~~ 62393
730N	62364		+28	62392
740N	62369		+28	62397
750N	62369		+28	62397
760N	62372	10:10am	+28	62400
770N	62377		+28	62405

Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1700E 780N	62377		+28	62405
790N	62380		+28	62408
800N	62369		+29	62398
810N	62381		+29	62410
820N	62384		+29	62413
830N	62388		+29	62417
840N	62386		+30	62416
850N	62380		+30	62410
860N	62381		+30	62411
870N	62384	10·20	+30	62414
880N	62376		+30	62406
890N	62376		+31	62407
900N	62375		+31	62406
910N	62374		+32	62406
920N	62380		+32	62412
930N	62378		+33	62411
940N	62392		+33	62425
950N	62386	10·30am	+33	62419
960N	62385		+33	62418
970N	62391		+33	62424
980N	62399		+33	62432
990N	62389		+33	62422
1000N	62397		+34	62431
1010N	62395		+34	62429
1020N	62391		+34	62425
1030N	62390		+34	62424

919425

Base 62458

423

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81

Operator: M. NARDELLA

Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1700E 1040N	62386		+35	62421
1050N	62380		+35	62415
1060N	62386		+35	62421
1070N	62388		+35	62423
1080N	62396	10.40	+35	62431
1090N	62394		+35	62429
1100N	62395		+35	62430
1110N	62391		+35	62426
1120N	62393		+35	62428
1130N	62391		+36	62427
1140N	62392		+36	62428
1150N	62404		+36	62440
1160N	62399		+36	62435
END 1170N	62402	10.50	+36	62438

A2

PROTON MAGNETOMETER FEILD RECORDINGS

Base 62458

e: 17/1/81

Operator: M. NARDELLA

Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1800E 00N	62289	12·15	+35	62324
10N	62293		+35	62328
20N	62297		+35	62332
30N	62296		+35	62331
40N	62299		+35	62334
50N	62298		+35	62333
60N	62301		+35	62336
70N	62301		+35	62336
80N	62302		+35	62337
90N	62305		+35	62340
100N	62306		+35	62341
110N	62306	12·10	+35	62341
120N	62306		+35	62341
130N	62309		+35	62344
140N	62312		+35	62347
150N	62310		+35	62345
160N	62310		+36	62346
170N	62313		+36	62349
180N	62314		+36	62350
190N	62311		+36	~~62357~~ 62347
200N	62306		+36	62342
210N	62311		+36	62347
220N	62314		+37	62351
230N	62318		+37	62355
240N	62318		+37	62355
250N	62319		+37	62356

425

PROTON MAGNETOMETER FEILD RECORDINGS

Base 62458

te: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1800E 260N	62320		+37	62357
270N	62319		+37	62356
280N	62324	12·00 NOON	+37	62367
290N	62327		+37	62364
300N	62326		+37	62363
310N	62327		+37	62364
320N	62326		+37	62363
330N	62328		+37	62365
340N	62329		+37	62366
350N	62331		+37	62368
360N	62332		+38	62370
370N	62329		+38	62367
380N	62333		+38	62371
390N	62334		+38	62372
400N	62333		+38	62371
410N	62335		+38	62373
420N	62336		+38	62372
430N	62341		+38	62379
440N	62339	11·50	+38	62377
450N	62341		+38	62379
460N	62338		+38	62376
470N	62339		+38	62377
480N	62335		+38	62373
490N	62341		+38	62379
500N	62331		+38	62369
510N	62337		+39	62376

A2

PROTON MAGNETOMETER FEILD RECORDINGS

Base 62458

Date: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1800E 520N	62341		+39	62380
530N	62345		+39	62384
540N	62344		+39	62383
550N	62340		+39	62379
560N	62339		+39	62378
570N	62340	11.40	+39	62379
580N	62342		+39	62381
590N	62347		+39	62386
600N	62349		+39	62388
610N	62351		+39	62390
620N	62354		+39	62393
630N	62354		+39	62393
640N	62352		+39	62391
650N	62359		+40	62399
660N	62346		+40	62386
670N	62351		+40	62391
680N	62351		+40	62391
690N	62353		+40	62393
700N	62346		+40	62386
710N	62352		+40	62392
720N	62349		40	62389
730N	62350	11.30	+40	62390
740N	62358		+40	62398
750N	62356		+40	62396
760N	62354		+40	62394
770N	62352		+40	62392

427

919429 Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

te: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1800E 780N	62356		+40	62396
790N	62355		+40	62395
800N	62354		+40	62394
810N	62352		+39	62391
820N	62350		+39	62389
830N	62348		+39	62387
840N	~~62354~~ 62347		+39	62386
850N	62354		+39	62393
860N	62351		+39	62390
870N	62359	11:20	+39	62398
880N	62364		+39	62403
890N	62354		+39	62393
900N	62357		+39	62396
910N	62353		+39	62392
920N	62357		+39	62396
930N	62353		+39	62392
940N	62354		+39	62393
950N	62366		+39	62405
960N	62365		+39	62404
970N	62364		+39	62403
980N	62361	11:10	+39	62400
990N	62365		+39	62404
1000N	62365		+39	62404
1010N	62365		+39	62404
1020N	62364		+39	62403
1030N	62361		+39	62400

1428

919450

Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81

Operator: M. NARDELLA

Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1800E 1040N	62368		+39	62407
1050N	62376		+39	62416
1060N	62367		+38	62405
1070N	62368		+39	62406
1080N	62364		+38	62402
1090N	62364		+38	62402
1100N	62372		+38	62410
1110N	62374		+38	62412
1120N	62366		+38	62404
1130N	62367		+38	62405
END 1140N	62368	11:00am	+38	62406

429

313451 Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1900E 00N	62277	12.45	~~+22~~ +36	62313
10N	62279		~~+22~~ +36	62315
20N	62280		~~+22~~ +36	62316
30N	62281		~~+22~~ +36	62317
40N	62284		~~+23~~ +36	62320
50N	62284		~~+2~~ +36	62320
60N	62285		+35	62320
70N	62289		+35	62324
80N	62290		+35	62325
90N	62291		+35	62326
100N	62293	12.50	+35	62328
110N	62298		+35	62327
120N	62295		+35	62330
130N	62297		+35	62332
140N	~~62297~~ 62301		+35	62336
150N	62302		+35	62337
160N	62304		+35	62339
170N	62303		+35	62335
180N	62299		+35	62334
190N	62313		+36	62349
200N	62313		+36	62349
210N	62312		+36	62348
220N	62306		+36	62342
230N	62307		+36	62343
240N	62310		+36	62346
250N	62311		+36	62347

430

013432

Base 62453

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17/1/81 Operator: M. NARDELLA Grid Location: MGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1900E 260N	62313		+36	62349
270N	62313		+36	62349
280N	62312	1:00 pm	+36	62348
290N	62306		+36	62342
300N	62314		+36	62350
310N	62315		+36	62351
320N	62316		+36	62352
330N	62315		+36	62351
340N	62317		+37	62354
350N	62322		+37	62359
360N	62328		+37	62365
370N	62326		+37	62363
380N	62324		+37	62361
390N	62325		+37	62362
400N	62326	1:10	~~+35~~ +37	62363
410N	62324		+37	62361
420N	62324		+37	62361
430N	62327		+37	62364
440N	62326		+37	62363
450N	62328		+38	62364
460N	62330		+38	62368
470N	62329		+38	62367
480N	62328		+38	62366
490N	62332		+39	62371
500N	6 334		+39	62373
510N	62332		+37	62371

J13455 Base 62453

431

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1900E 520N	62334		+39	62373
530N	62338		+39	62377
540N	62337		+40	62377
550N	62338		+40	62378
560N	62339		+40	62379
570N	62341		+40	62381
580N	62349		+40	62389
590N	62340		40	62380
600N	62339	1-20	+40	62379
610N	62337		+40	62377
620N	62335		+40	62375
630N	62341		+40	62381
640N	62335		+41	62376
650N	62339		+41	62380
660N	62339		+41	62380
670N	62339		+42	62381
680N	62342		+42	62384
690N	62337	1-30 pm	+42	62381
700N	62340		+42	62382
710N	62340		+42	62382
720N	62346		+42	62388
730N	62345		+42	62387
740N	62347		+42	62389
750N	62341		+42	62383
760N	62339		+42	62381
770N	62339		+42	62381

013434 Base 62405

432

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81 Operator: M. NARDELLA Grid Location: MT AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1900E 780N	62343		+42	62385
790N	62343		+42	62385
800N	62344	1.40	+42	62388
810N	62344		+42	62386
820N	62339		+42	62381
830N	62346		+42	62388
840N	62347		+42	62389
850N	62347		+42	62389
860N	62337		+41	62378
870N	62343		+41	62384
880N	62344		+41	62385
890N	62342		+41	62383
900N	62348		+41	62389
910N	62351		+41	62392
920N	62352	1.50	+41	62393
930N	62349		+41	62390
940N	62352		+41	62393
950N	62380		+41	~~62401~~ 62421
960N	62322		+41	62363
970N	62367		+41	62408
980N	62359		+41	62400
990N	62355		+41	62396
1000N	62351		+41	62392
1010N	62351		+41	62392
1020N	62362		+41	62403
1030N	62365		+41	62406

433

919435

Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
1900E 1040N	62360		+41	62401
1050N	62372	2:00	+41	62413
1060N	62375		+41	62416
1070N	62368		~~+42~~ +40	62408
1080N	62359		~~+42~~ +40	62399
1090N	62364		~~+42~~ +40	62404
1100N	62367		~~+43~~ +39	62407
1110N	62372		~~+43~~ +39	~~62410~~ 62411
1120N	62372		~~+44~~ +38	~~62410~~ 62410
1130N	62373		~~+44~~ +38	62411
1140N	62380		~~+45~~ +37	62417
1150N	62375		~~+45~~ +37	62412
1160N	62376		~~+46~~ +36	62412
END 1170N	62374	2:10	+36	62410
~~1180N~~				
~~1190N~~				
~~END 1200N~~				

919436

Base 6245

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81

Operator: M. NARDELLA

Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2000E. 00N.	62257	3.56 pm	+25	62282
10N	62255		+25	62280
20N	62256		+25	62281
30N	62260		+25	62285
40N	62261		+25	62286
50N	62262		+25	62287
60N	62263		+25	62288
70N	62267		+25	62292
80N	62278		+25	62303
90N	62272	3.50	+25	62297
100N	62287		+25	62312
110N	62279		+25	62304
120N	62282		+25	62307
130N	62285		+25	62310
140N	62285		+26	62311
150N	62286		+26	62312
160N	62288		+26	62314
170N	62291		+26	62317
180N	62291		+26	62317
190N	62290		+27	62317
200N	62295		+27	62322
210N	62298		+27	62326
220N	62300		+27	62327
230N	62298	3.40	+27	62325
240N	62302		+27	62329
250N	62297		+27	62324

919437

Base 62458

435

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
200E 260N	62302		+27	62329
270N	62298		+27	62325
280N	62296		+27	62323
290N	62297		+28	62325
300N	62305		+28	62333
310N	62307		+28	62335
320N	62313		+28	62341
330N	62308		+28	62336
340N	62315		+28	62343
350N	62314	3.30	+28	62342
360N	62316		+28	62344
370N	62316		+28	62344
380N	62316		+28	62344
390N	62314		+28	62342
400N	62317		+29	62346
410N	62308		+29	62337
420N	62308		+29	62337
430N	62309	3.20	+29	62338
440N	62311		+29	62340
450N	62307		+29	62336
460N	62315		+29	62344
470N	62316		+29	62345
480N	62314		+30	62344
490N	62319		+30	62349
500N	62326		+30	62356
510N	62319		+30	62349

436

919438

Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81

Operator: M. NARDECCIA

Grid Location: ACME N GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2000E 520N	62320		+31	62351
530N	62319		+31	62350
540N	62316		+31	62347
550N	62323		+31	62354
560N	62327	3:10	+31	62358
570N	62321		+31	62352
580N	62322		+31	62353
590N	62327		+32	62359
600N	62321		+32	62343
610N	62323		+32	62354
620N	62305		+33	62338
630N	62329		+33	62362
640N	62323	3:00	+33	62356
650N	62326		+33	62359
660N	62327		+33	62360
670N	62327		+33	62360
680N	62327		+33	62360
690N	62330		+33	62363
700N	62329		+33	62362
710N	62329		+33	62362
720N	62329		+33	62362
730N	62328		+33	62361
740N	62331		+33	62364
750N	62332		+33	62365
760N	62333		+33	62366
770N	62336		+33	62369

919439

Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81 Operator: M.NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2000E 780N	62335	2.50	+33	62368
790N	62335		+33	62368
800N	62335		+33	62368
810N	62335		+33	62368
820N	62339		+33	62372
830N	62343		+33	62376
840N	62338		+33	62371
850N	62340		+34	62374
860N	62341		+34	62375
870N	62343		+34	62377
880N	62341		+34	62375
890N	62340		+34	62374
900N	62340		+34	62374
910N	62335		+34	62369
920N	62332	2.40	+34	62366
930N	62335		+34	62369
940N	62338		+34	62372
950N	62349		+34	62383
960N	62348		+34	62382
970N	62346		+34	62380
980N	62348		+33	62381
990N	62343		+33	62376
1000N	62350		+33	62383
1010N	62350		+33	62383
1020N	62355		+33	62388
1030N	62359		+33	62392

438

919440

NORTH

Part 2458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 17/1/81 Operator: M. NARDELLA Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2000E 1040	62351	2.30	+33	62384
1050	62351		+33	62384
1060	62360		+33	62393
1070	62362		+34	62396
1080	62363		+34	62397
1090	62363		+35	62398
1100	62369		+35	62404
END 1110	62368	2.23	+35	62403

919441

Base 6245

439

e: 18/1/81

PROTON MAGNETOMETER FEILD RECORDINGS

Operator: B. DOYLE **Grid Location:** AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2400E 00N	62214	10:05	+20	62234
10N	62222		+20	62242
20N	62227		+20	62247
30N	62230		+20	62250
40N	62235		+20	62255
50N	62236		+21	62257
60N	62242		+21	62263
70N	62240		+21	62261
80N	62247	10:10	+21	62268
90N	62238		+21	62259
100N	62243		+21	62264
110N	62245		+21	62266
120N	62247		+22	62269
130N	62252		+22	62274
140N	62253		+22	62275
150N	62260		+23	62283
160N	62264		+23	62287
170N	62267		+23	62290
180N	62267		+24	62291
190N	62270		+24	62294
200N	62277		+24	62301
210N	62275	10:20	+24	62299
220N	62280		+24	62304
230N	62282		+24	62306
240N	62283		+24	62307
250N	62286		+24	62310

919442 Base 62658

440

PROTON MAGNETOMETER FEILD RECORDINGS

Date: 18/1/81 Operator: B. DOYLE Grid Location: AGNEW

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2100E 260N	62289		+24	62313
270N	62287		+25	62312
280N	62297		+25	62322
290N	62299		+25	62324
300N	62296		+25	62321
310N	62292		+25	62317
320N	62298		+25	62324
330N	62295	10·30	+25	~~62330~~ 62320
340N	62296		+25	62321
350N	62300		+25	62325
360N	62300		+25	62325
370N	62303		+25	62328
380N	62299		+25	62324
390N	62306		+26	62332
400N	62306		+26	62332
410N	62307		+26	62333
420N	62309		+26	62335
430N	62308		+26	62334
440N	62310		+26	62336
450N	62311	10·40	+26	62337
460N	62314		+26	62340
470N	62315		+26	62341
480N	62316		+26	62342
490N	62315		+27	62342
500N	62318		+27	62345
510N	62318			62345

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919443 Base 62458

PROTON MAGNETOMETER FEILD RECORDINGS

e: 18/1/81 Operator: B. DOYLE Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2100E 520N	62320		+28	62348
530N	62320		+28	62348
540N	62319	10.50	+28	62347
550N	62325		+28	62353
560N	62322		+28	62350
570N	62322		+28	62360
580N	62340		+28	62368
590N	62347		+29	62376
600N	62323		+29	62352
610N	62323		+29	62352
620N	62325		+29	62354
630N	62327		+30	62357
640N	62326		+30	62356
650N	62324		+30	62354
660N	62320		+30	62350
670N	62320	11.00am	+30	62350
680N	62323		+30	62353
690N	62320		+30	62350
700N	62320		+30	62350
710N	62319		+31	62350
720N	62326		+31	62357
730N	62326		+31	62357
740N	62325		+31	62356
750N	62324		+32	62356
760N	62324		+32	62356
770N	62334			

919444 Base 62458

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PROTON MAGNETOMETER FEILD RECORDINGS

e: 18/1/81 Operator: B. DOYCE Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2100E 780N	62328	11.10 am	+32	62360
790N	62323		+32	62355
800N	62327		+32	62359
810N	62323		+32	62355
820N	62330		+32	62362
830N	62337		+32	62369
840N	62335		+33	62368
850N	62331		+33	62364
860N	62328		+33	62361
870N	62326		+33	62359
880N	62313		+33	62346
890N	62332		+34	62368
900N	62349		+34	62383
910N	62343		+34	62377
920N	62343		+34	62377
930N	62344	11.30	+34	62378
940N	62344		+34	62378
950N	62340		+34	62374
960N	62348		+34	62382
970N	62351		+34	62385
980N	62358		+34	62392
990N	62350	11.40	+34	62384
1000N	62355		+34	62389
1010N	62		+34	
1020N	62356		+34	62390
1030N	62355		+20	62209

443

919445

Base 62456

PROTON MAGNETOMETER FEILD RECORDINGS

e: 18/1/81 Operator: B. DOYLE Grid Location: AGNEW GRID

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
2100E 1040N	62350		+34	62384
1050N	62372		+34	62406
1060N	62360		+34	62394
1070N	62355		+34	62389
1080N	62353	11.50	+34	62387
1090N	62347		+34	62381
1100N	62344		+34	62378
1110N	62344		+35	62379
1120N	62343		+35	62378
1130N	62344		+36	62380
END 1140N	62345		+36	62381

S.STN LOC: 450E 90S

444

PROTON MAGNETOMETER FEILD RECORDINGS

919446

ate:

Operator: M. NARDELLA + B. DOYLE

Grid Location: MT AGNEW

BASE STATION READINGS

Grid ~~Station~~	Gamma Reading	Time	Diurnal correction	Corrected Reading
10/12/80				
TIME			TIME	READING
9·00 am	62440		1·00	62418
9·10	62439		1·10	62412
9·20	62438		1·20	62411
9·30	62436		1·30	62416
9·40	62437		1·40	62418
9·50	62435		1·50	62418
10·00	62432		2·00	62421
10·10	62431		2·10	62428
10·20	62431		2·20	62436
10·30	62429		2·30	62442
10·40	62427		2·40	62440
10·50	62431		2·50	62441
11·00	62432		3·00	62436
11·10	62426		3·10	62435
11·20	62421		3·20	62436
11·30	62420		3·30	62443
11·40	62424		3·40	62447
11·50	62422		3·50	62450
12·00	62416		4·00	62450
12·10	62416		4·10	62446
12·20	62410		4·20	62447
12·30	62414		4·30	62453
12·40	62418		4·40	62457
12·50	62419		4·50	62451

445

919447

PROTON MAGNETOMETER FEILD RECORDINGS

ate: 11/12/80 Operator: M. NARDELLA + B DOYLE Grid Location: MT AGNEW

BASE STN READINGS

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
11./12/80			TIME	READING (γ)
TIME			1·10	62429
9·10	62451		1·20	62427
9·20	62451		1·30	62426
9·30	62451		1·40	62426
9·40	62449		1·50	62425
9·50	62448		2·00	62427
10·00	62446		2·10	62429
10·10	62444		2·20	62429
10·20	62437		2·30	62430
10·30	62437		2·40	62430
10·40	62432		2·50	62433
10·50	62431		3·00	62434
11·00	62430		3·10	62434
11·10	62428		3·20	62435
11·20	62426		3·30	62438
11·30	62424		3·40	62440
11·40	62420		3·50	62439
11·50	62421		4·00	62440
12·00	62423		4·10	62438
12·10	62423		4·20	62435
12·20	62426		4·30	62436
12·30	62425		4·40	62437
12·40	62427		4·50	62438
12·50	62429		5·00	62438
1·00	62430			

STN LOC: 450E 90S

446

919448

PROTON MAGNETOMETER FEILD RECORDINGS

ate: 12/12/80 **Operator:** M. NARDELLA & B. DOYLE **Grid Location:** MT AGNEW

BASE STN READINGS

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
TIME	READING		TIME	READING
8.40	62436		1.00	62432
8.50	62435		1.10	62436
9.00	62445		1.20	62436
9.20	62441		1.30	62438
9.30	62439		1.40	62434
9.40	62407		1.50	62435
9.50	62427		2.00	62436
10.00	62436		2.10	62439
10.10	62437		2.20	62442
10.20	62438		2.30	62445
10.30	62441		2.40	62447
10.40	62452		2.50	62448
10.50			3.00	62449
11.00			3.10	62448
11.10			3.20	
11.20			3.30	
11.30			3.40	
11.40			3.50	
11.50			4.00	
12.00			4.10	
12.10			4.20	
12.20				
12.30	62425			
12.40	62427			
12.50	62433			

STN COC^N 450E 90S

447

PROTON MAGNETOMETER FEILD RECORDINGS

919449

ate: 15/12/80 Operator: M. NARDELLA + B. DOYLE Grid Location: MT AGNEW

BASE STN READINGS

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
TIME	READING		TIME	READING
9·20	62434		1·30	62422
9·30	62433		1·40	62421
9·40	62433		1·50	62418
9·50	62434		2·00	62416
10·00	62436		2·10	62414
10·10	62437		2·20	62413
10·20	62439		2·30	62414
10·30	62440		2·40	62414
10·40	62440		2·50	62414
10·50	62440		3·00	62414
11·00	62440		3·10	62414
11·10	62440		3·20	62414
11·20				
11·30				
11·40	62437			
11·50	62438			
12·00	62439			
12·10	62436			
12·20	62436			
12·30	62434			
12·40	62437			
12·50	62435			
1·00	62431			
1·10	62428			
1·20	62424			

3.SIN LOG. 450E 905

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PROTON MAGNETOMETER FEILD RECORDINGS

919450

Date: 17/12/80 Operator: M.NARDELLA + B. DOYLE Grid Location: MT ALNEW

BASE STN READINGS

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
TIME	READING		TIME	READING
8.40	62430		12.50	62422
8.50	62430		1.00	62424
9.00	62430		1.10	62423
9.10	62432		1.20	62423
9.20	62430		1.30	62423
9.30	62430		1.40	62425
9.40	62431		1.50	62426
9.50	62431		2.00	62431
10.00	62429		2.10	62432
10.10	62429		2.20	62434
10.20	62429		2.30	62436
10.30	62429		2.40	62438
10.40	62427		2.50	62440
10.50	62426		3.00	~~62434~~ 62443
11.00	62426		3.10	62444
11.10	62425		3.20	62443
11.20	62423		3.30	62445
11.30	62422		3.40	62448
11.40	62421		3.50	62445
11.50	62421		4.00	62446
12.00	62421		4.10	62446
12.10	62422		4.20	62446
12.20	62423			
12.30	62420			
12.40	62421			

449

PROTON MAGNETOMETER FEILD RECORDINGS

919451

te: 19/12/80 Operator: M. NARDELLA Grid Location: MT AGNEW

BASE STN READINGS

Grid Station	Gamma Reading	Time	Diurnal correction	Corrected Reading
TIME	READING		TIME	READING
7.50	62415		12.00	62418
8.00	62416		12.10	62418
8.10	62415		12.20	62419
8.20	62415		12.30	62418
8.30	62416		12.40	62420
8.40	62417		12.50	62421
8.50	62420		1.00	62423
9.00	62421		1.10	62422
9.10	62423		1.20	62423
9.20	62425		1.30	62422
9.30	62427		1.40	62422
9.40	62427		1.50	62420
9.50	62427		2.00	62419
10.00	62425		2.10	62421
10.10	62424		2.20	62424
10.20	62423		2.30	62427
10.30	62423		2.40	62429
10.40	62422		2.50	62430
10.50	62421		3.00	62433
11.00	62421		3.10	62433
11.10	62420			
11.20	62419			
11.30	62422			
11.40	62421			
11.50	62419			

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PROTON MAGNETOMETER FEILD RECORDINGS

919452

e: 17/1/81 Operator: B. DOYLE Grid Location: AGNEW GRID

BASE STATION READINGS

Grid ~~Station~~	~~Gamma~~ Reading	Time	Diurnal ~~correction~~	Corrected Reading
TIME	READING	TIME	READING	
9.10	62440	1.30	62416	
9.20	62441	1.40	62416	
9.30	62439	1.50	62417	
9.40	62438	2.00	62417	
9.50				
10.00	~~62437~~ 62431	2.10	62422	
10.10	~~62431~~ 62430	2.20	62423	
10.20	~~6243~~ 62428	2.30	~~62~~ 62425	
10.30	62425	2.40	62424	
10.40	62423	2.50	62425	
10.50	62422	3.00	62425	
11.00	62420	3.10	62427	
11.10	62419	3.20	62429	
11.20	62419	3.30	62430	
30	62418	3.40	62431	
11.40	62419	3.50	62433	
11.50	62420	~~3.00~~		
12.00 NOON	62421			
12.10	62423			
12.20	62423			
12.30	62422			
12.40	62422			
12.50	62423			
~~12.00~~ 1.00	62422			
1.10	62421			
1.20	62418			

45c

18/1/81

PROTON MAGNETOMETER FEILD RECORDINGS

919453

Operator: M. NARDELLA **Grid Location:** ACNEN GRID

BASE STATION

Grid ~~Station~~	~~Gamma~~ Reading	Time	~~Diurnal correction~~	Corrected Reading
TIME	~~62439~~		READING	
10.0 am	62439			
10.10	62437			
10.20	62434			
10.30	62433			
10.40	124302			
10.50	62430			
11.00	62428			
11.10	62426			
11.20	62425			
11.30	62424			
11.40	62424			
11.50	62424			
~~1.6~~ 1200	62421			
12.10	62420			
12.20	62419			
12.30	62419			
12.40	62418			
12.50	62416			
1.00	62412			
1.10	62409			
1.20	62407			
1.30	62407			

APPENDIX 11

PROGRESS REPORT - EVALUATION OF GEOPHYSICS, FEDERATION GRID, BY J. BISHOP

July 14, 1981

MEMORANDUM TO: P.A. Roberts, Renison Ltd.

FROM: J.R. Bishop

SUBJECT: Progress report on evaluation of the geophysics over Federation Grid

The comments expressed below should be regarded as preliminary, since some areas have to be re-examined more thoroughly (e.g. comparison of results from the different IP arrays). This memorandum is unstructured and contains brief comments on some salient features resulting from the evaluation to date.

IP was undoubtedly the most appropriate method for initial ground reconnaissance (the possible use of airborne methods and other ground techniques is mentioned later). The gradient array survey yielded several, mostly weak, anomalies. And, in so far as the best gradient anomaly (of those with complementary multi-separation array coverage) coincides with the best dipole-dipole pseudo-section, the gradient array results may be said to be quite adequate. The fact that the follow-up dipole-dipole and pole-dipole surveys have mostly shown the gradient anomalies so tested to be near-surface poor anomalies, has not negated the gradient surveys. Rather the opposite; the gradient coverage has defined zones of potential interest which may be subsequently tested by a multi-separation array. However, a comparison of the two array types suggests that the gradient penetration is not very deep (perhaps equivalent to n=1 of the dipole-dipole results) and the follow-up dipole-dipole surveys have (necessarily) been fairly detailed (using a 30m. dipole spacing). That is, exploration so far has probably looked at the near-surface, although a likely target is a large volume of altered granite at depth (?). (The limited coverage of the dipole-dipole surveys to date is evident from those surveys over drill holes, e.g. Fed. 18 on 550E; the IP 'sees' about one third the depth of the drill hole). But this is perhaps of no immediate concern, when there are still several anomalies to follow up from the existing data. (The original gradient surveys were presumably designed to detect a Sweeney's-type deposit; and as such, the survey parameters, with possibly the exception of too coarse a line spacing, were quite suitable.)

The use of the 'geophysical axes' is considered an inadequate way of incorporating the geophysical results into 'working' maps of the Federation grid. Although the composite profiles would obviously be examined when planning drill hole targets, more information can be obtained by either contouring of set values(s) or interpreting anomalous *zones*. A combination of these allows a priority of anomalies: this has been done, and alternative (or further) areas for detailed coverage are recommended (e.g. 500W to 200W, 300S to 600S).

As a mapping tool, the geophysics is at variance with the petrological classifications. The resistivity and chargeability contour maps show a definite division of the Federation grid into two areas: the boundary line trends 50°-55° west of north and intersects the baseline at about 200W. The area to the NE is of lower resistivity and chargeability, that to the SW is of higher resistivity and chargeability. It is noted that the area to the north-east contains the larger proportion of mines and old workings. It is postulated that this area has undergone more intense alteration. The boundary line is sub-parallel to the long lineament which runs through Phar Lap.

The magnetics also shows a clear division, apparently unrelated to the electrical contrasts or to the (mapped) petrological contrasts: the SE corner of the grid is magnetically very active in contrast to the rest of the grid, which at a 25 contour interval is virtually devoid of contours. (There are errors in this map e.g. 2 contours missing on 600E over Waxman and Westons.) The shape of the anomalies in the SE suggests very shallow sources and I expect that representative susceptibility values could be obtained from (fresh) surface outcrops within the two areas. Presumably the SE corner has a higher content of magnetite which represents slightly different conditions of pressure and/or temperature (either at the time of crystallisation or during subsequent tectonism) to the rest of the gridded area. The geophysical boundaries discussed above represent strong, definite contrasts which should be incorporated with the geological classifications of the granite.

It was stated above that IP was the best method for ground reconnaissance; testing of a limited number of samples shows that IP and/or resistivity contrasts may be expected from mineralised and/or altered zones within the granite, although the contrasts may be subtle. Examination of the chargeability and resistivity anomaly maps (at 1:5000) shows that all old major mines or prospects show contrasts on one or other, or both properties. Few of the drill-holes within these areas have been sited for IP anomalies; some that have, e.g. Fed. 8, cannot be said to have adequately tested the anomaly (the bottom of the hole not reaching as far as the projection of the peak of the anomaly). Fed. 8 also served as a good example for the argument that dipole-dipole spreads should be set up over potential gradient array targets: a projection of Fed. 8 onto the pseudo-section shows that the drill hole intersects a chargeability low. A more promising zone which extends to depth is located 100m. to the west.

A dipole-dipole survey should be used to verify and better define a gradient anomaly; before drilling the results of that survey should be properly interpreted. This normally means varying the resistivity and IP parameters of a model until a good fit is obtained with the field results. There are various mathematical techniques for doing this, all of which require a computer. For a result such as 1700W (a proposed drill target), a reasonable match to the classical 'trouser leg' or 'butterfly-wing' pattern can be obtained from books of type-curves (see attached example). However from this initial fit, usually of shape and not of relative values, refinement by computer modelling is recommended. A good initial model means less computer time and hence less cost.

Expanding on the interpretation of 1700W; the field curve was matched to a model from a book of scale model responses (these are necessarily cruder than type-curves generated mathematically). The best fitting body is flat and tabular, and is centred beneath 915S; it is 15-20m. deep (to the top of the body), nearly 40m. wide and 10m. thick. The scale model has a strike length of 75m. which is obviously inadequate, given the responses on other lines to the east, however a longer strike length would probably not make a large change to the results.

The two sets of independent information over 1700W may be used to obtain a better and more reliable model of the field results, i.e. computer modelling should be used to fit the model to both the gradient and dipole-dipole results. In particular the gradient array can be used for dip information; the results over 1700W suggest a southerly dipping body (dipole-dipole has a very poor response to dip).

Some preliminary and relatively unsophisticated spectral IP measurements were made on 8 samples; these showed that there were no large differences which might be used to differentiate grain size and/or alteration intensity or type. It is argued in the report that the effort required to effectively test the potential of this method (CR - complex resistivity) is not warranted at this stage. It is also argued that the measurements made by the IPR-8 (used to collect all the IP data so far) are not able to give this information, although they may be able to detect electromagnetic coupling (not usually a problem in Tasmania.

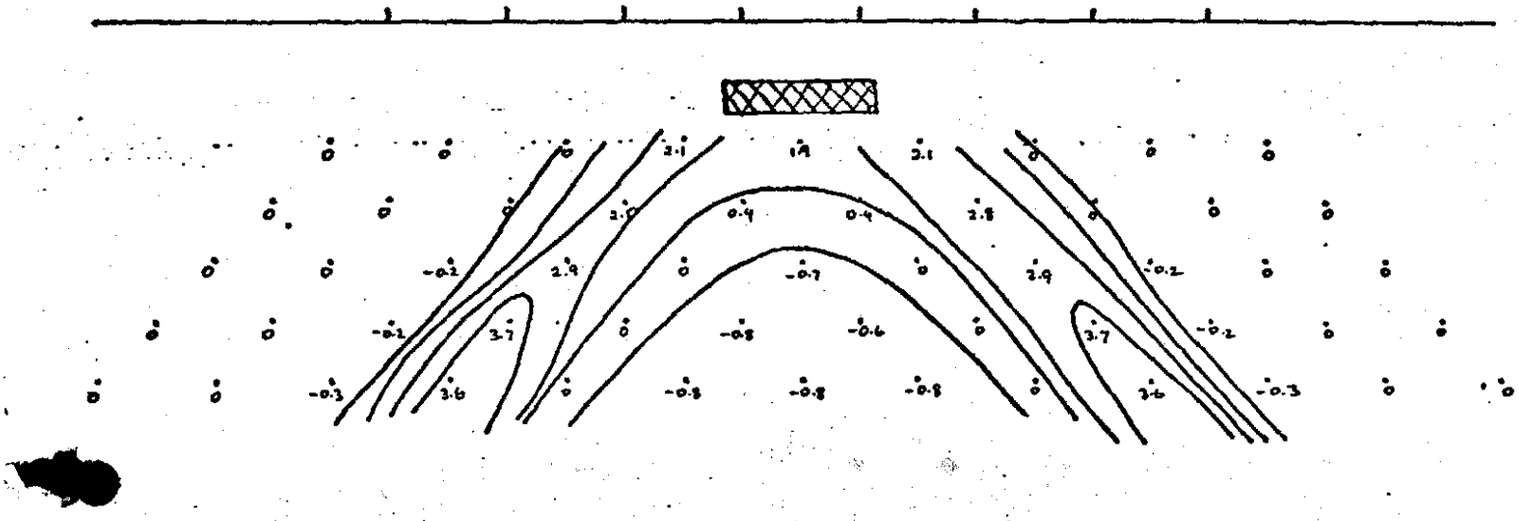
The resistivity anomaly map shows that among the larger workings, only Coleman's has failed to show as an anomaly, although Waxman and Weston's and the eastern workings show only moderate resistivity anomalies. It is possible that a deep alteration zone (of low resistivity) might be found effectively by an electromagnetic (EM) survey. The Sirotem method outputs a resistivity pseudo-section as part of the normal data output. Successful tests with this method would suggest that the surrounding area (and the grid itself) could be flown by a helicopter-borne EM system (e.g. Dighem, which outputs an apparent resistivity contour plan as well as high resolution magnetics).

Work remaining for the report is a comparative examination of the original gradient data, detailed dipole-dipole or pole-dipole data, detailed gradient data and, where possible, bore hole data, before drawing general conclusions and making recommendations.

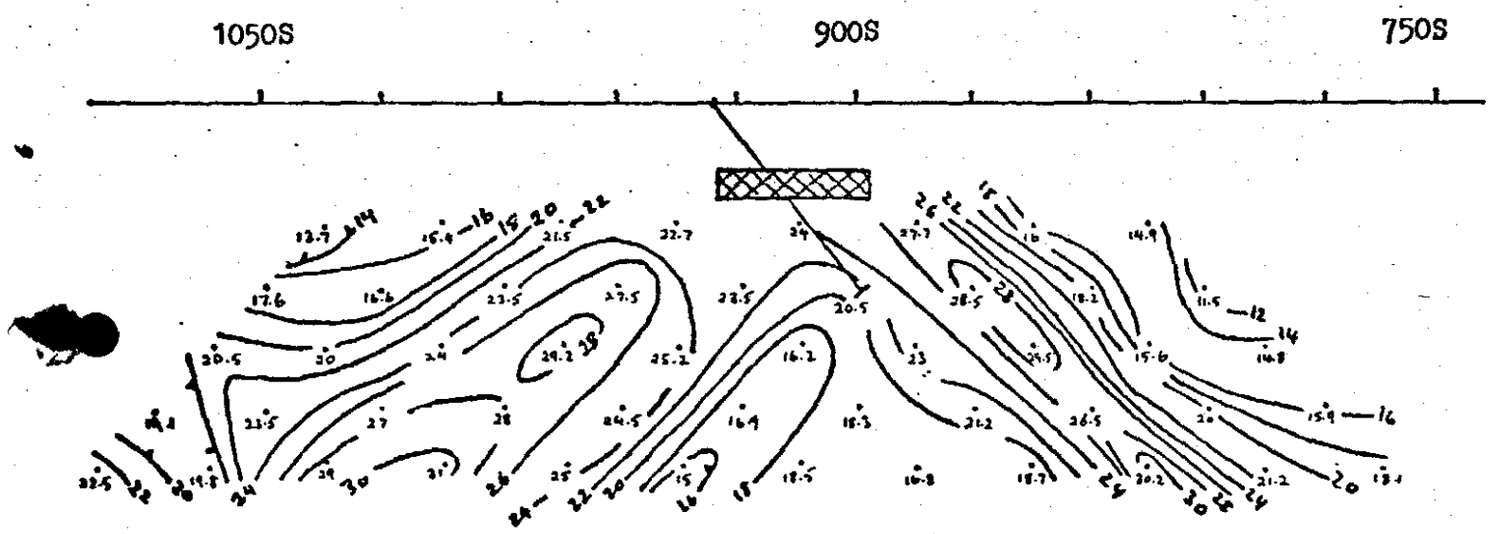
J.R. Bishop

J.R. Bishop

INTERPRETATION OF DIPOLE-DIPOLE SURVEY OVER 1700W, FEDERATION GRID



(a) MODEL (McPhar Geophysics Phase II scale models, P6)



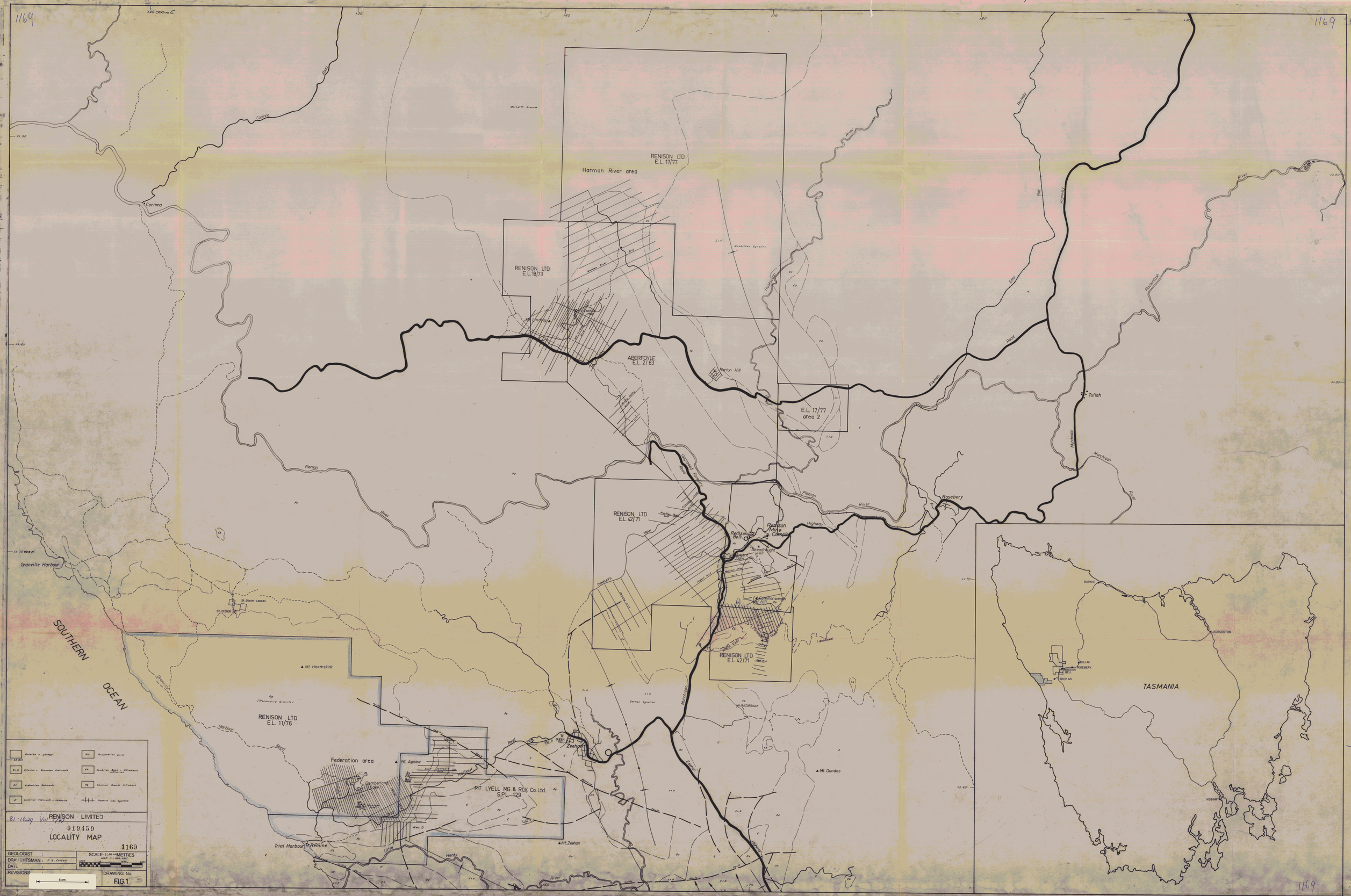
(b) FIELD RESULTS

5 cm

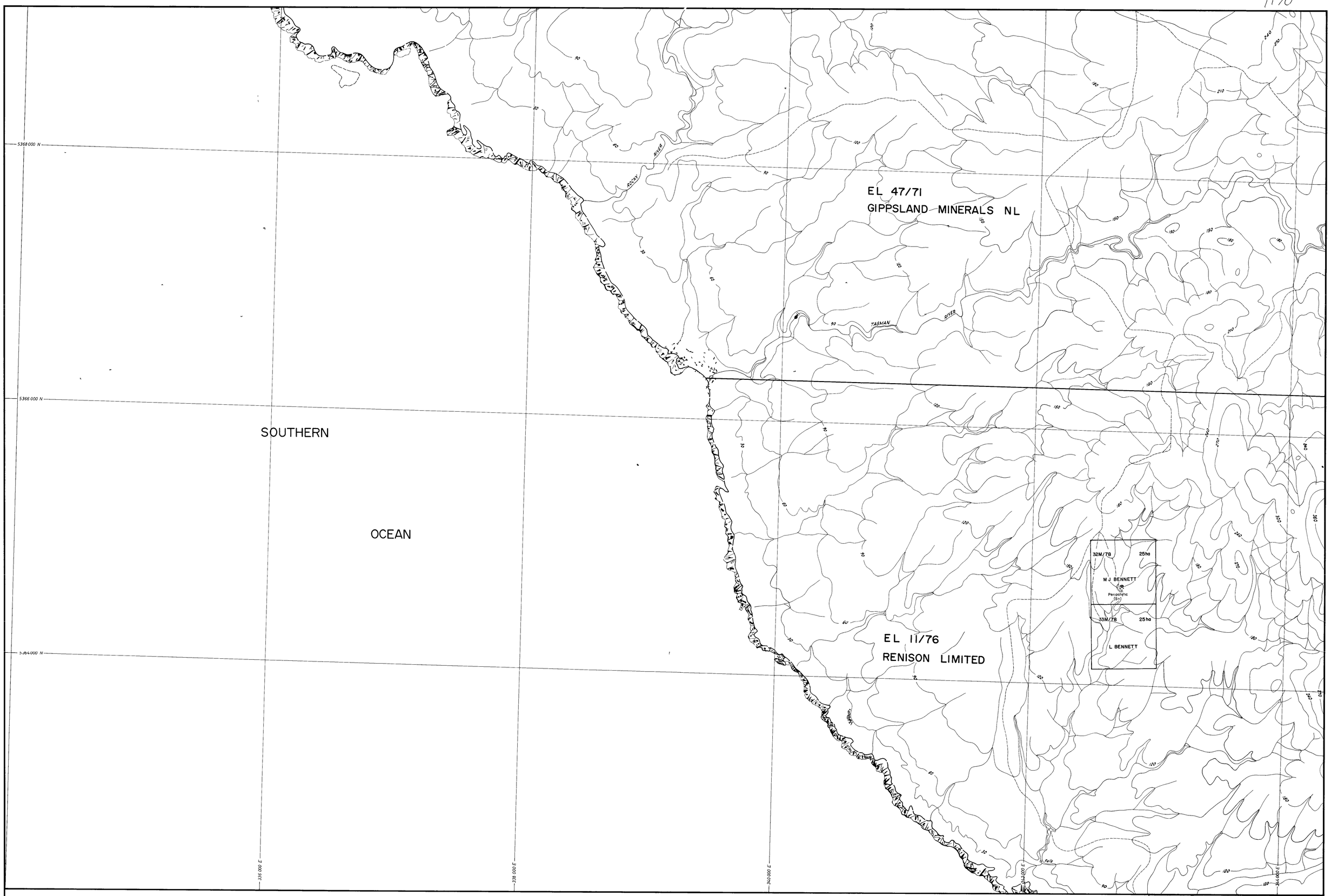
0 30m

Figure to accompany Memorandum Federation Grid

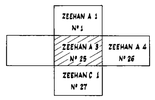
1169


140 000mE
150
160
170
180
190
Corinna
Cuttings
Road
Meredith Branch
Harman River area
RENISON LTD.
E.L. 17/77
RENISON LTD.
E.L. 18/73
Harman River
Hydraulic
Workings
Workings Gully
Workings Gully
Workings Gully
Workings Gully
Workings Gully
Workings Gulley
Workings Gully
Workings Gully
Workings Gully
Workings Gully
Workings Gully

1170



LOCATION



81-1629 (Vol 1/4) RENISON LIMITED 919460

ZEEHAN A-3

LAND TENURE AND LOCATION OF OLD WORKINGS

GEOLOGIST	P A R
DRAUGHTSMAN	T G D S
DATE	JUNE 1981
REVISIONS	

SCALE 1:10 000 METRES

200 0 100 200 300 400

DRAWING No PLAN 2a

1170

5 cm

1172

1171

346 000

348 000

350 000

352 000

354 000

58 000 N

56 000 N

54 000 N

15M/79 8ha

ST DIZIER

16M/62 8ha

17M/62 8ha

APOLLO INTERNATIONAL MINERALS N L

EL 47/71

GIPPSLAND MINERALS N L

EL 11/76

RENISON LIMITED

ZEEHAN A 2

ZEEHAN A 3 | ZEEHAN A 4 | ZEEHAN B 3

ZEEHAN C 4

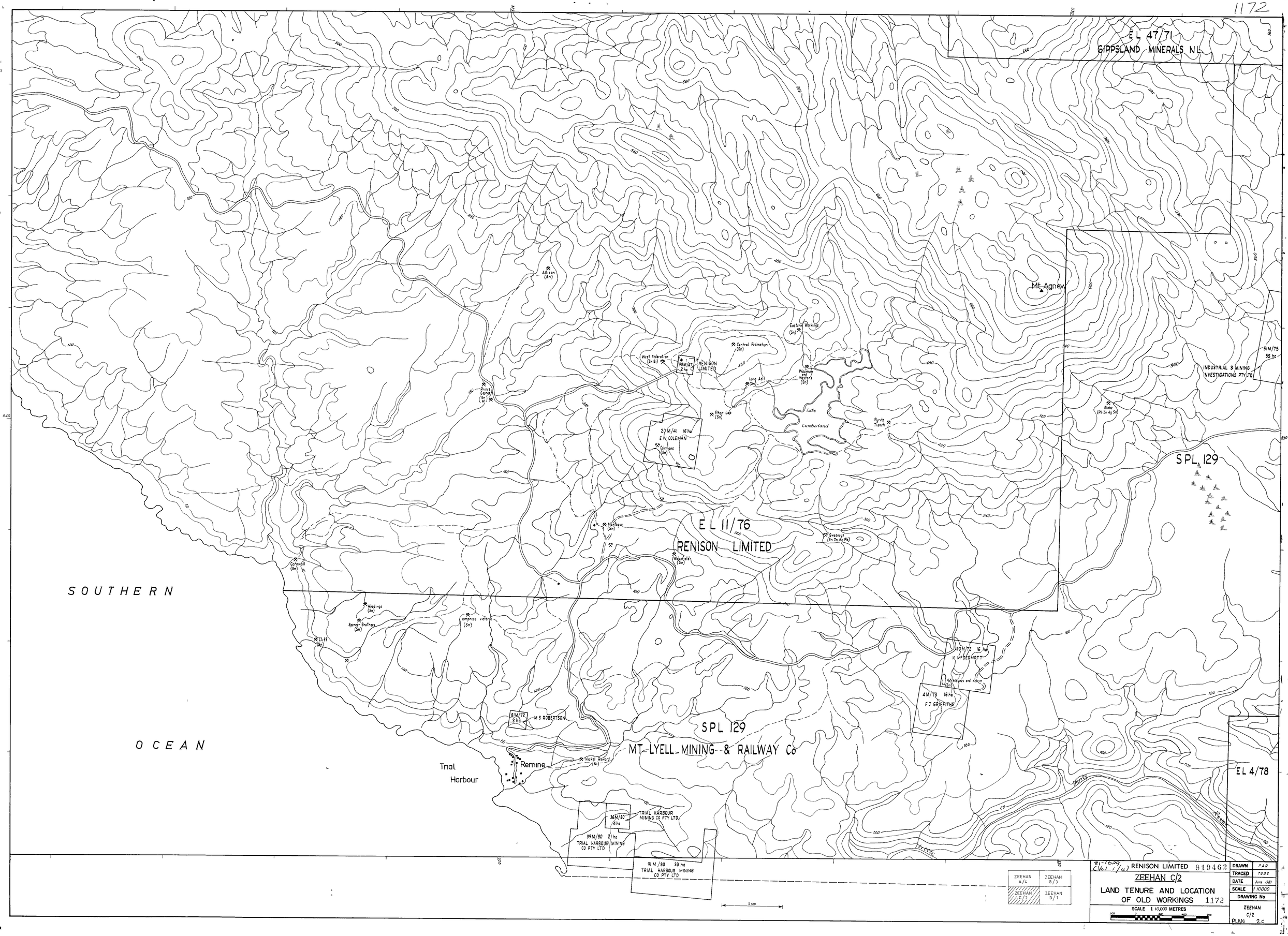
81-1669 (Vol 1/4)

RENISON LIMITED 919461

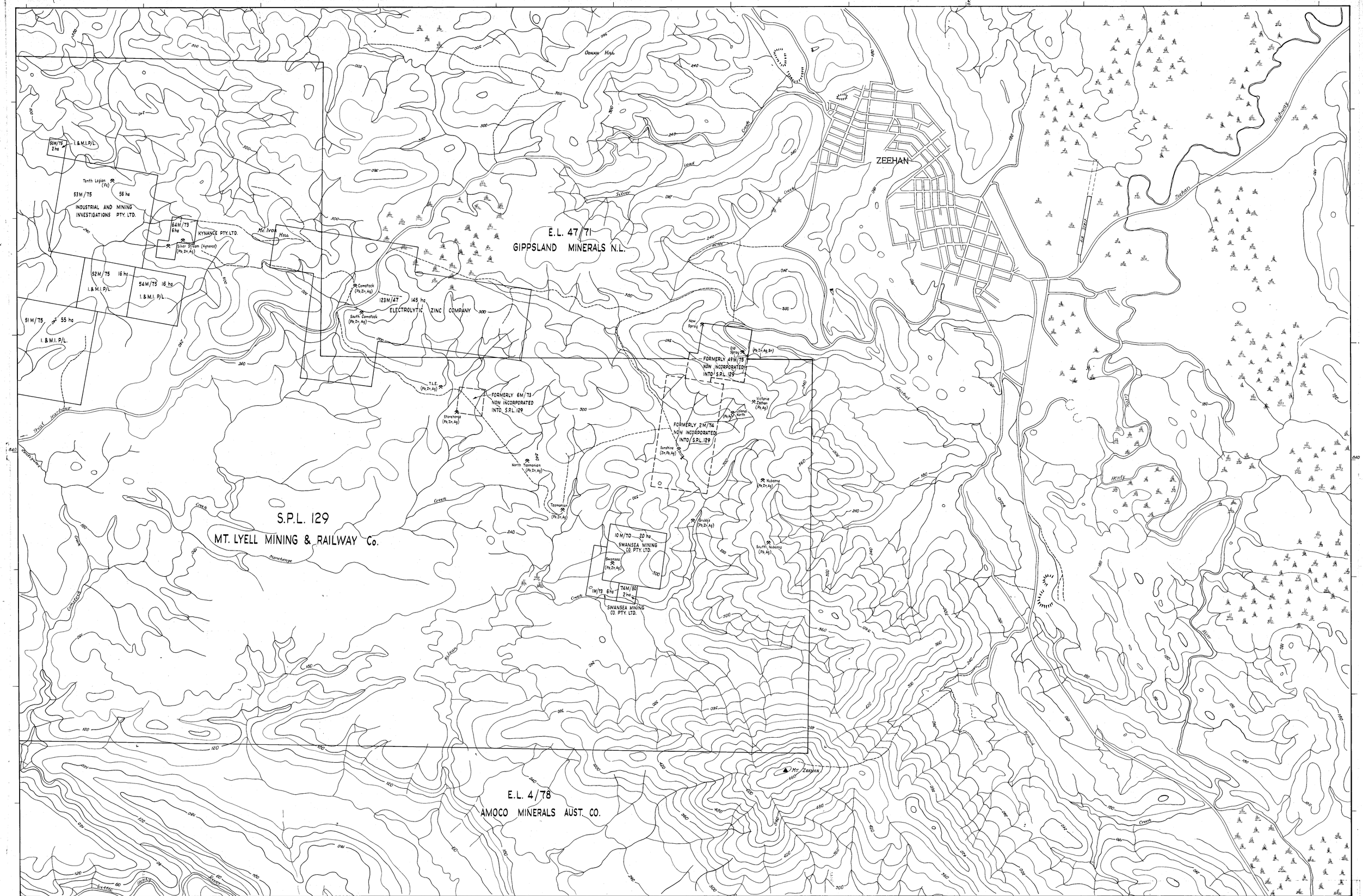
ZEEHAN A-4

LAND TENURE AND LOCATION OF OLD WORKINGS

GEOLOGIST	P A R	SCALE 1 10000 METRES
DRAUGHTSMAN	T G D S	100 0 100 200 300 400
DATE	JUNE 1981	
REVISIONS		DRAWING No
5 cm		1171 PLAN 2b


E L 47/71
GIPPSLAND MINERALS N.L.
Mt Agnew
INDUSTRIAL & MINING INVESTIGATIONS PTY LTD
51M/75 55 ha
Slade (Pb Zn Ag Sn)
S PL 129
Allison (Sn)
Prince of Wales (Sn W)
West Federation (Sn Bi)
90M/47 2 ha
RENISON LIMITED
Central Federation (Sn)
Eastern Workings (Sn)
Long Adit (Sn)
Westmoreland Westons (Sn)
Phar Lap (Sn)
Lake Cumberland
Purity Trench
20 M/41 16 ha
E W COLEMAN
Colemans (Sn)
E L 11/76
RENISON LIMITED
Montague (Sn)
Wakefield (Sn)
Sweetness (Sn Zn Ag Pb)
Cornwall (Sn)
SOUTHERN
OCEAN
Weedings (Sn)
Spencer Brothers (Sn)
Empress Victoria (Sn)
Cliff (Sn)
190M/72 16 ha
K McDERMOTT
Magnes and Kelvin (Sn)
4M/73 16 ha
F J GRIFFITHS
81M/72 2 ha
M S ROBERTSON
SPL 129
MT LYELL MINING & RAILWAY Co
Remine
Nickel Reward (Ni)
Trial Harbour
Herty River
EL 4/78
36M/80 4 ha
TRIAL HARBOUR MINING CO PTY LTD
39M/80 21 ha
TRIAL HARBOUR MINING CO PTY LTD
91 M/80 33 ha
TRIAL HARBOUR MINING CO PTY LTD
5 cm
ZEEHAN A/2
ZEEHAN B/3
ZEEHAN C/2
ZEEHAN D/1
81-1629 (Vol 1/46) RENISON LIMITED 919462
ZEEHAN C/2
LAND TENURE AND LOCATION OF OLD WORKINGS 1172
SCALE 1:10,000 METRES
DRAWN PAR
TRACED PGDS
DATE June 1981
SCALE 1:10000
DRAWING No
ZEEHAN C/2
PLAN 2c

1173



ZEEHAN B/5	ZEEHAN B/4
ZEEHAN D/1	ZEEHAN B/2

RENISON LIMITED 919463

ZEEHAN D/1

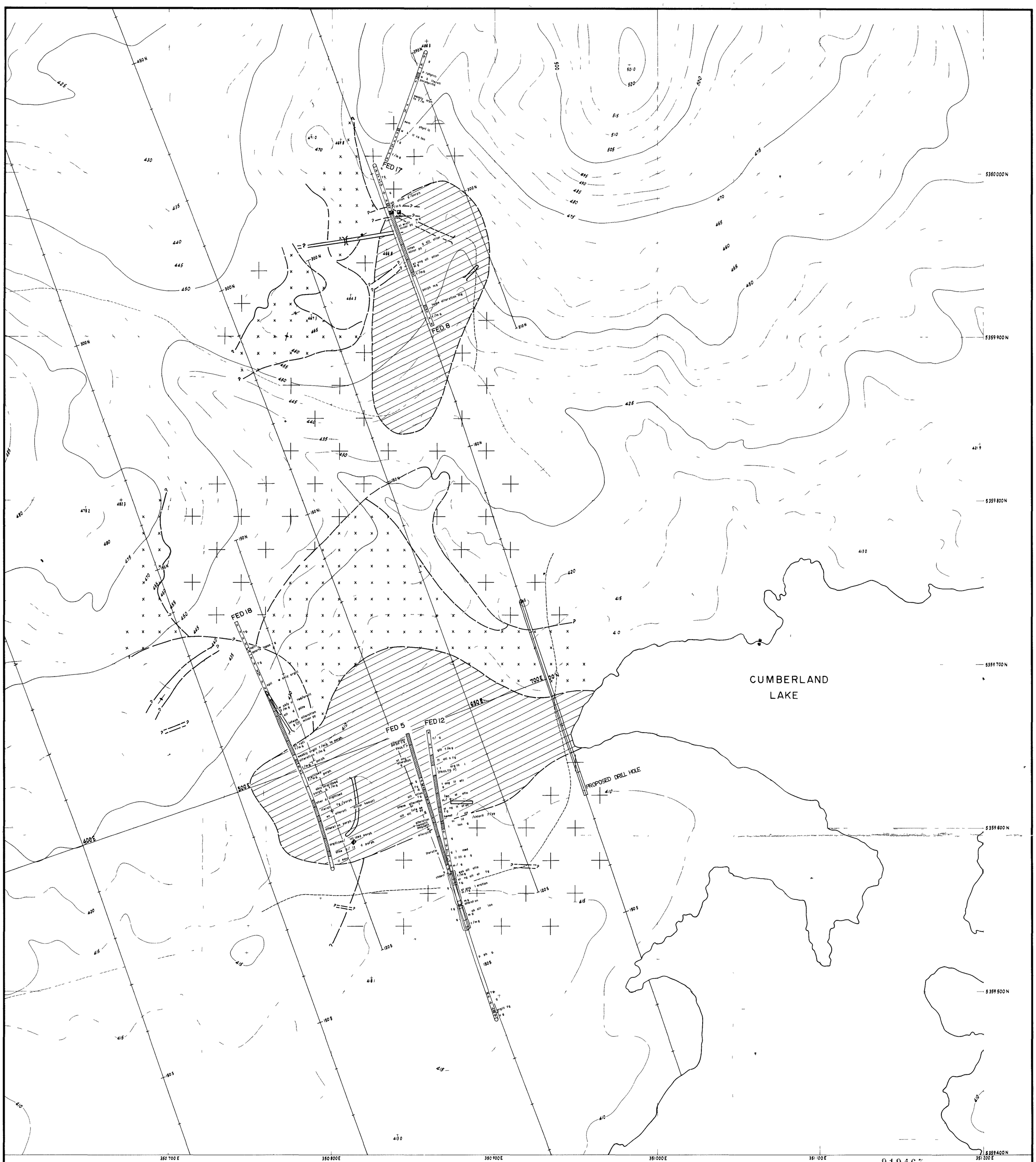
LAND TENURE AND LOCATION OF OLD WORKINGS 1173

SCALE. 1: 10,000 METRES

DRAWN	P.A.R.
TRACED	T.B.D.S.
DATE	June 1981
SCALE	1:10,000
DRAWING No.	ZEEHAN D/1 PLAN 24

1174

A
A'
FED 15
400 0m RL
350 0m RL
300 0m RL
B
B'
FED 10
FED 14
C
C'
FED 2
Fowler & Dunn's Open Cut
D
D'
FED 14
FED 16
CROSS LODE
FED 16
FED 15
FED 10
FED 14
FED 2
VATES ADIT
GEASON'S WORKINGS
5 359 700 N
5 359 600 N
5 359 500 N
919464
LEGEND
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules
ROCK TYPES
Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
Fault
Definite
Approximate
Inferred
Geological boundaries
81-1629 (1/01 1/4)
RENISON LIMITED
WEST FEDERATION
GEOLOGICAL INTERPRETATION & DIAMOND DRILL HOLES
GEOLOGIST PR & KW
DRAUGHTSMAN TGDS
DATE July 1981
REVISIONS
SCALE 1 500 METRES
10 0 10 20
5 cm
1174
DRAWING No Plan 3



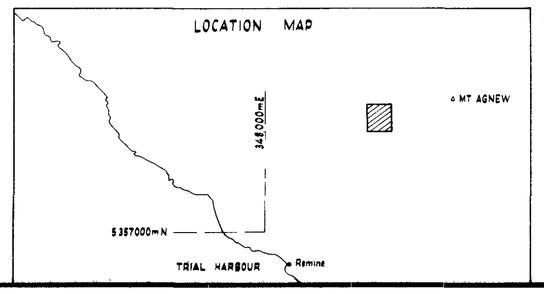
LEGEND

- Coarse grained 'red' granite
- Fine grained 'white' granite
- Porphyritic granite
- Altered (mostly sericitized) granite
- Quartz tourmaline or quartz topaz alteration dyke
- Lithological boundary position accurate
- Lithological boundary position approximate
- Lithological boundary position inferred
- Bedding or veining with dip
- Joint with dip
- Trench
- Pit
- Adit
- Shaft
- 420 Contour (metres)
- + 416.3 Spot height metres
- Foottrack

NOTE Elevations from Heemskirk Area 1:2000 plan (sheet 4)
Grid lines pegs 30m apart

AMGN MAGNETIC N

LOCATION MAP



919465

81-1629 (Vol 1 1/4)

RENISON LIMITED

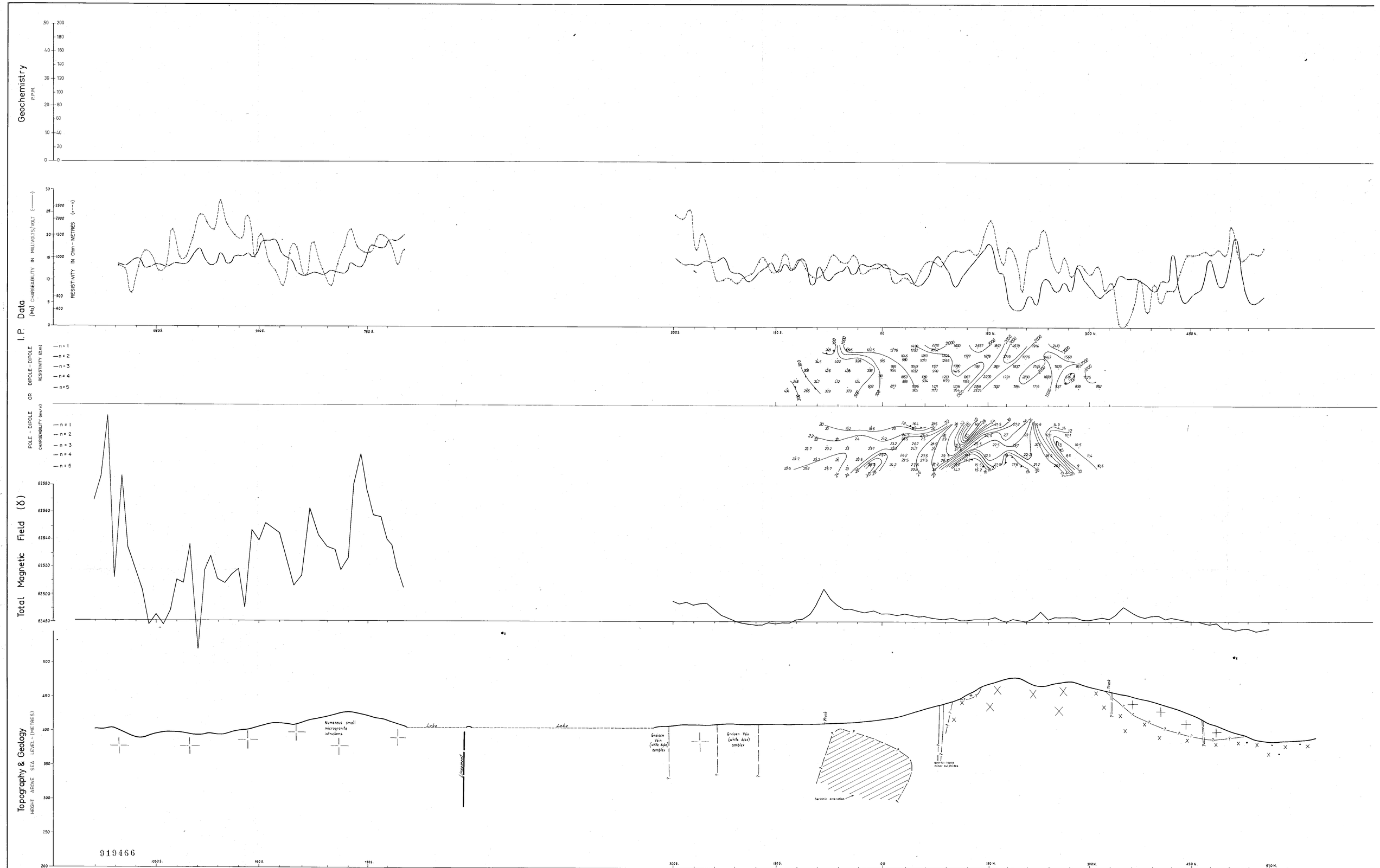
WAXMAN AND WESTON'S AREA
EL 11/76

DIAMOND DRILLHOLES AND INTERPRETATIVE GEOLOGY

GEOLOGIST	PAR	SCALE 1:1000 METRES
DRAUGHTSMAN	TGDS	20 0 10 20 30 40
DATE	May 1981	
REVISIONS		DRAWING No PLAN 4

5 cm

1175



87-1629 (Vol. 1/1a)

RENISON LIMITED

FEDERATION GRID E.L. 11/76

LINE 500 E.

SECTION LOOKING WEST

1176

SCALE. 1: 2000 METRES

40 0 40 80 120

DRAWN	P. Roberts
TRACED	T.G.D.S.
DATE	June 1981
SCALE	1: 2000
DRAWING No.	PLAN 5A

I.P. DATA

CHARGEABILITY & RESISTIVITY

Gradient Array Dec. 1979

Dipole - Dipole Nov. - Dec. 1980

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

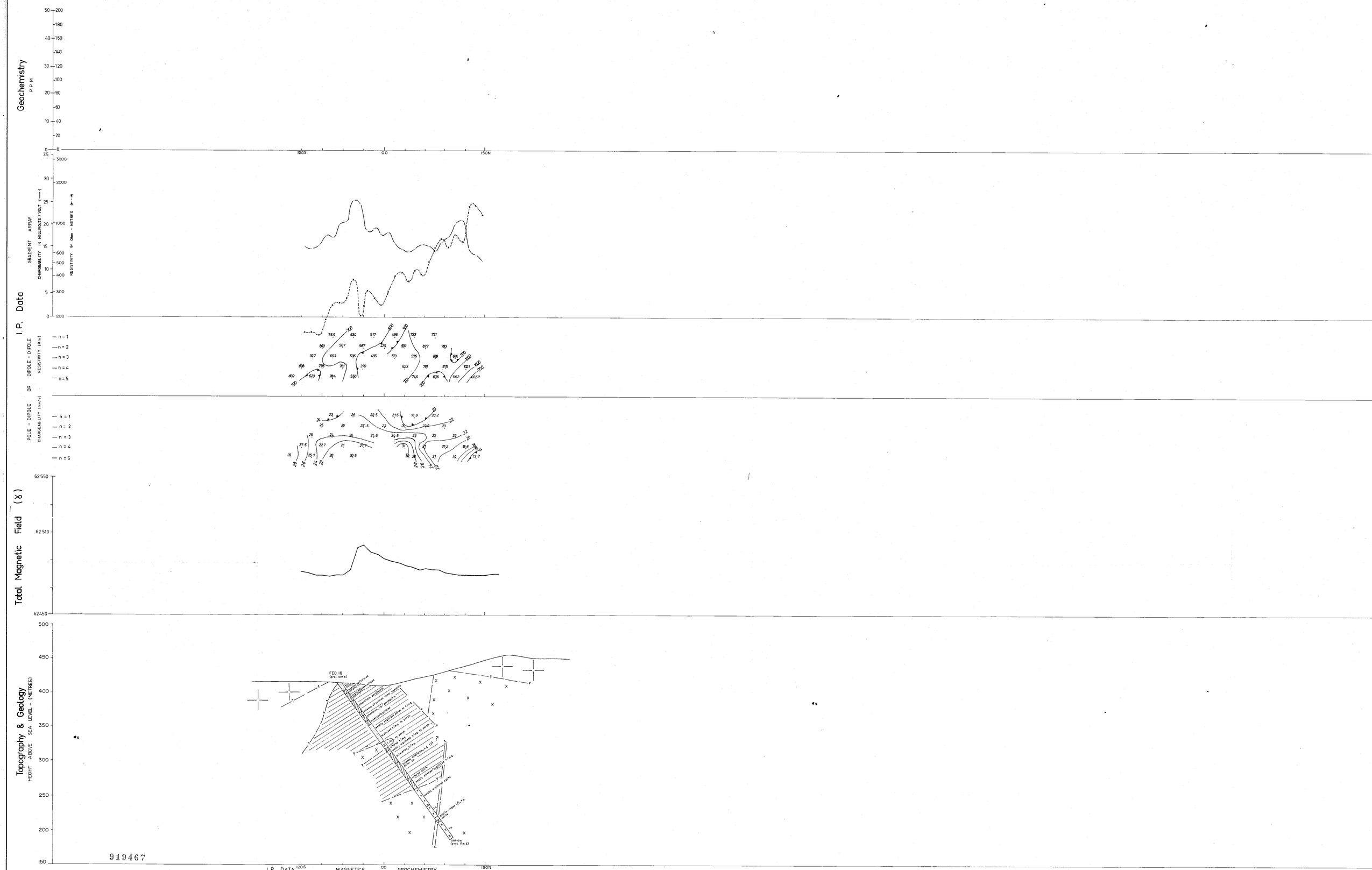
Quartz and topaz and/or tourmaline
Total tourmalinization, occasionally with hematite
Hydrothermal
Collapse
Breccias
White alteration 'Dykes'
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries



81-1689
(Vol 2/4)

RENISON LIMITED

FEDERATION GRID E.L. 11/76

LINE 550E

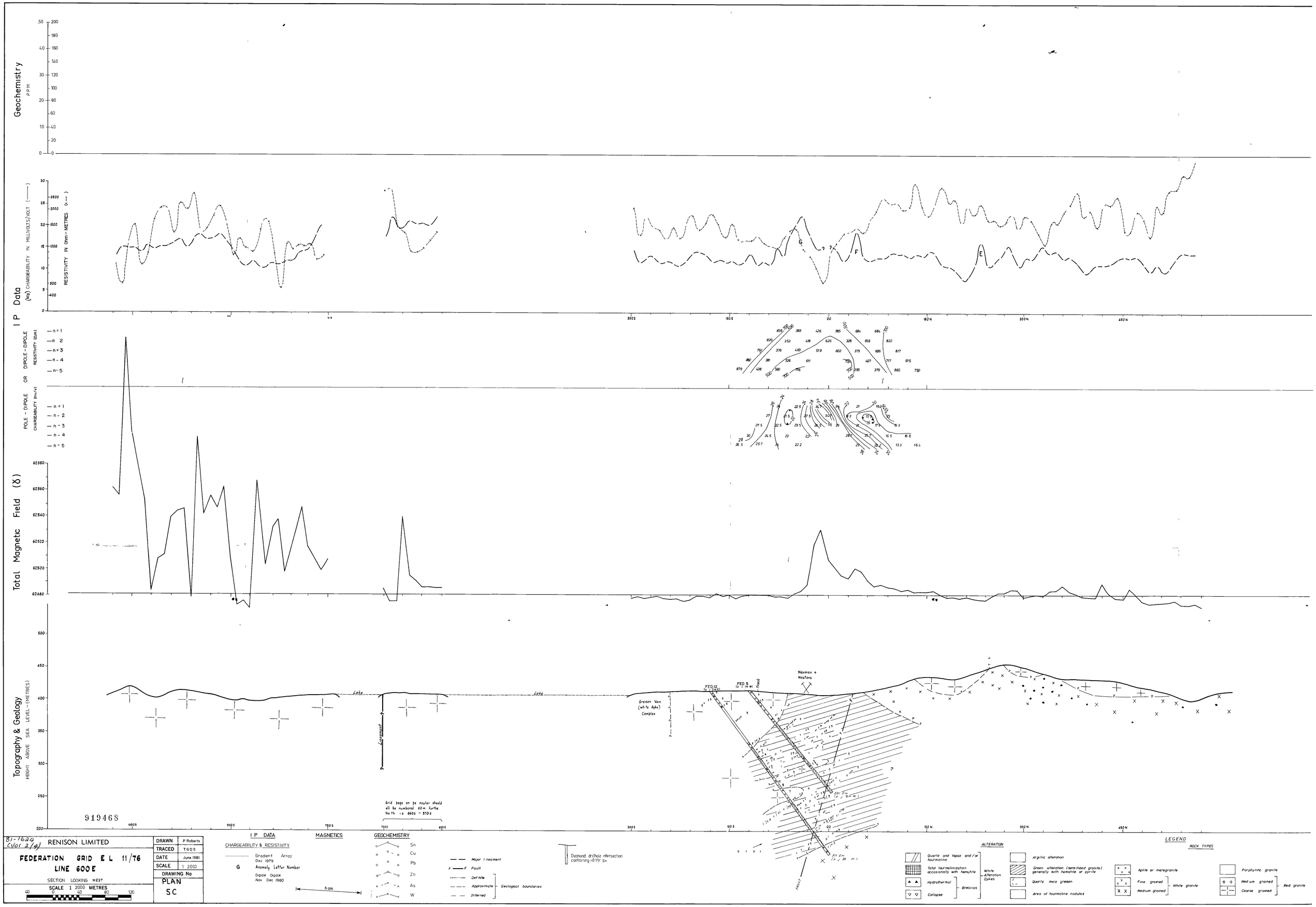
SECTION LOOKING W.

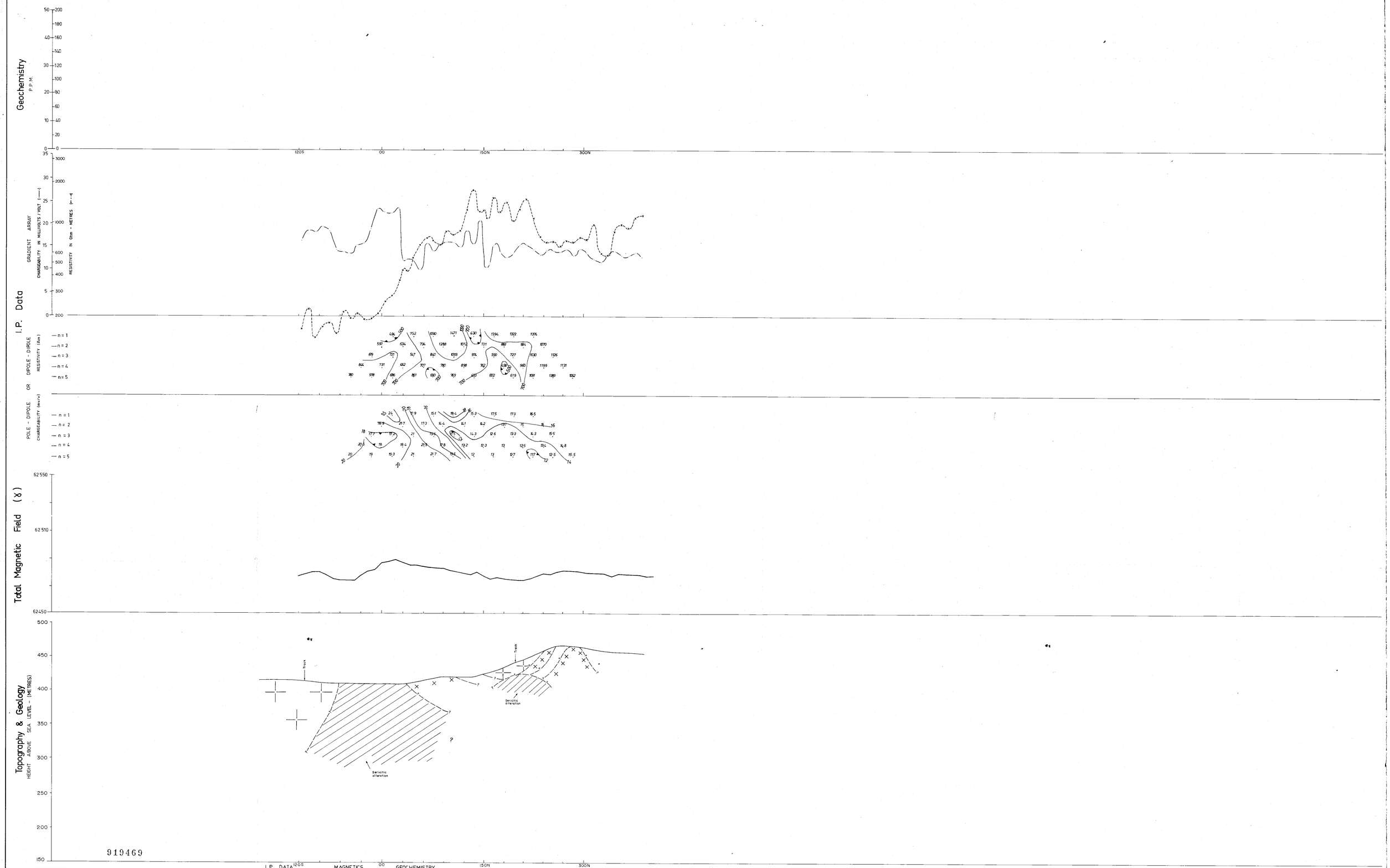
SCALE. 1:2000 METRES

40 0 40 80 120

DRAWN	P. Roberts
TRACED	T.G.D.S.
DATE	June 1981
SCALE	1:2000
DRAWING No.	PLAN 5 B

1177


Geochemistry
PPM
I P Data
(Hz) CHARGEABILITY IN MILLIVOLTS/VOLT (——)
RESISTIVITY IN Ohm-METRES (- - -)
POLE - DIPOLE OR DIPOLE - DIPOLE
RESISTIVITY (Ωm)
n = 1
n = 2
n = 3
n = 4
n = 5
CHARGEABILITY (mv/v)
Total Magnetic Field (γ)
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)
Lake
Lineament
Gresen Vein (with dyke) Complex
FED 12
FED 5
Fault
Wasman + Westons
FAULT
Grid pegs on pegmatular should all be numbered 60m further North i.e. 6605 - 5705
919468
81-1624
(Vol 2/4)
RENISON LIMITED
FEDERATION GRID E L 11/76
LINE 600E
SECTION LOOKING WEST
SCALE 1 2000 METRES
DRAWN P Roberts
TRACED T G D S
DATE June 1981
SCALE 1 2000
DRAWING No PLAN 5C
I P DATA
CHARGEABILITY & RESISTIVITY
Gradient Array Dec 1979
G Anomaly Letter Number
Dipole Dipole Nov Dec 1980
5cm
MAGNETICS
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
Major Lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries
Diamond drillhole intersection containing >01% Sn
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules
LEGEND
ROCK TYPES
Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

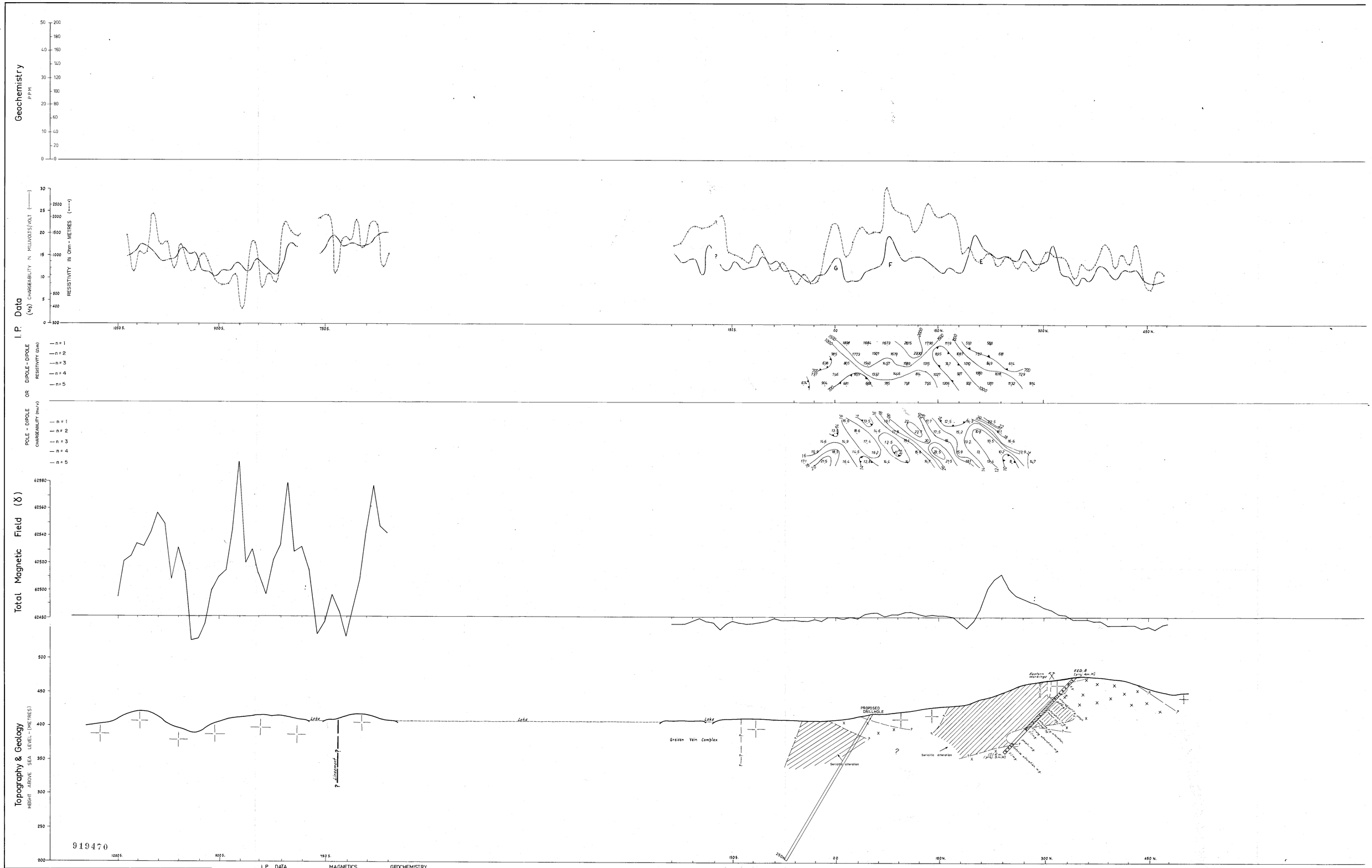


81-1629 (Vol 2/4)

RENISON LIMITED	
FEDERATION GRID E.L. 11/76	
LINE 650E	
SECTION LOOKING W.	
SCALE. 1:2000 METRES (40 0 40 80 120)	

DRAWN	P. Roberts
TRACED	T.G.D.S.
DATE	June 1981
SCALE	1:2000
DRAWING No.	
PLAN 5D	

1179



81-1629
Cvol 2/4

RENISON LIMITED

FEDERATION GRID E.L. 11/76

LINE 700 E.

SECTION LOOKING WEST

SCALE. 1: 2000 METRES

40 0 40 80 120

DRAWN	P. Roberts
TRACED	T.G.D.S.
DATE	June 1981
SCALE	1: 2000
DRAWING No.	PLAN 5E

I.P. DATA

CHARGEABILITY & RESISTIVITY

Gradient Array
Dec. 1979

F Anomaly Letter Number

Dipole - Dipole
Nov - Dec. 1980

MAGNETICS

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

Diamond drillhole intersection containing 0.1-1% Sn

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization, occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration "Dykes"
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules

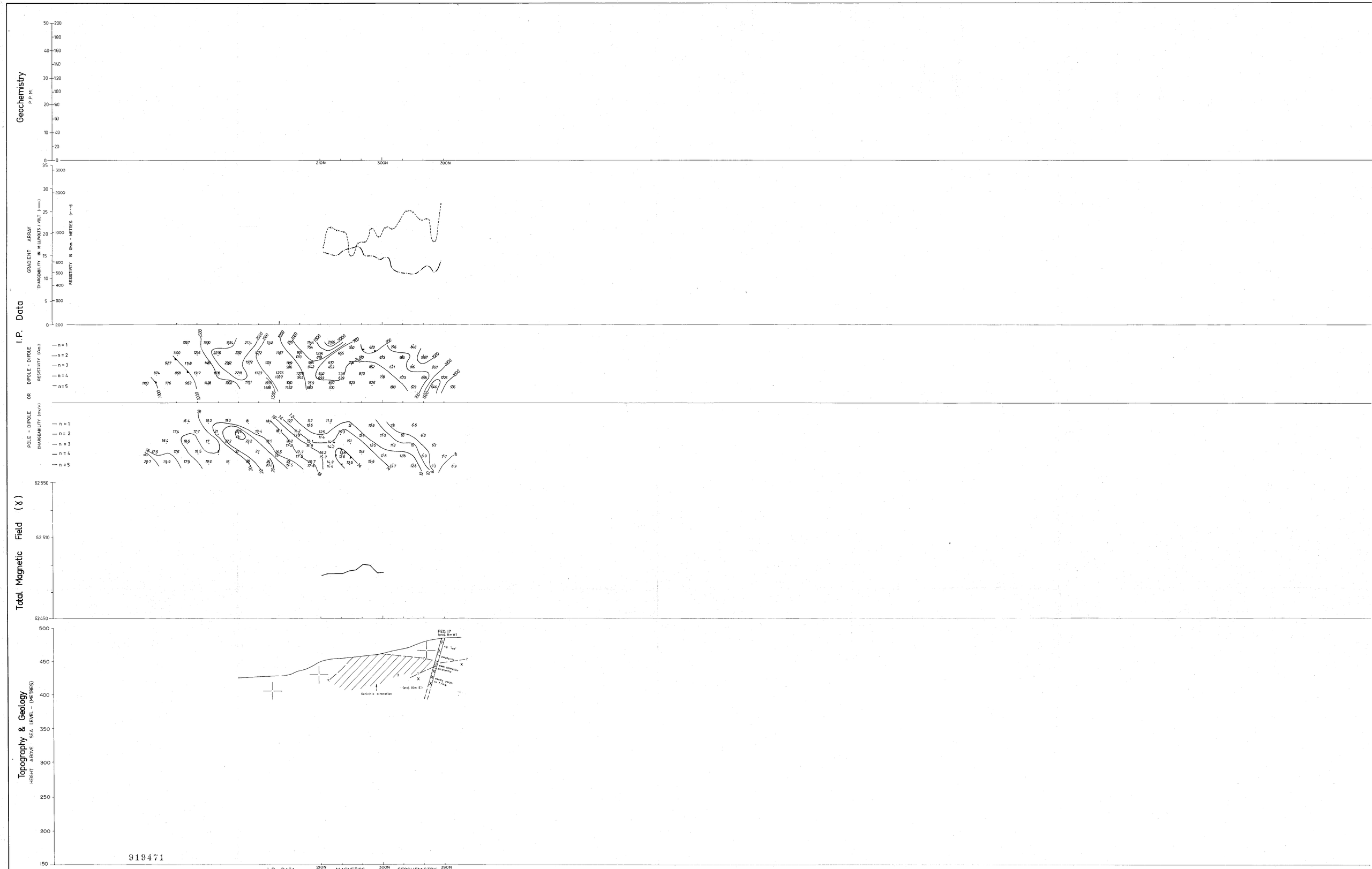
LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1180



81-1629
(Vol 2/4)

RENISON LIMITED

FEDERATION GRID E.L. 11/76

LINE 750E

SECTION LOOKING W.

SCALE. 1:2000 METRES

60 0 40 80 120

DRAWN	P.Roberts
TRACED	T.G.D.S.
DATE	June 1981
SCALE	1:2000
DRAWING No.	

Plan. 5F

I.P. DATA — CHARGEABILITY & RESISTIVITY

S : Anomoly letter number

5 cm

MAGNETICS — 210N 300N 390N

GEOCHEMISTRY — Sn, Cu, Pb, Zn, As, W

Diamond drillhole intersection containing >0.1% Sn

LEGEND

ALTERATION

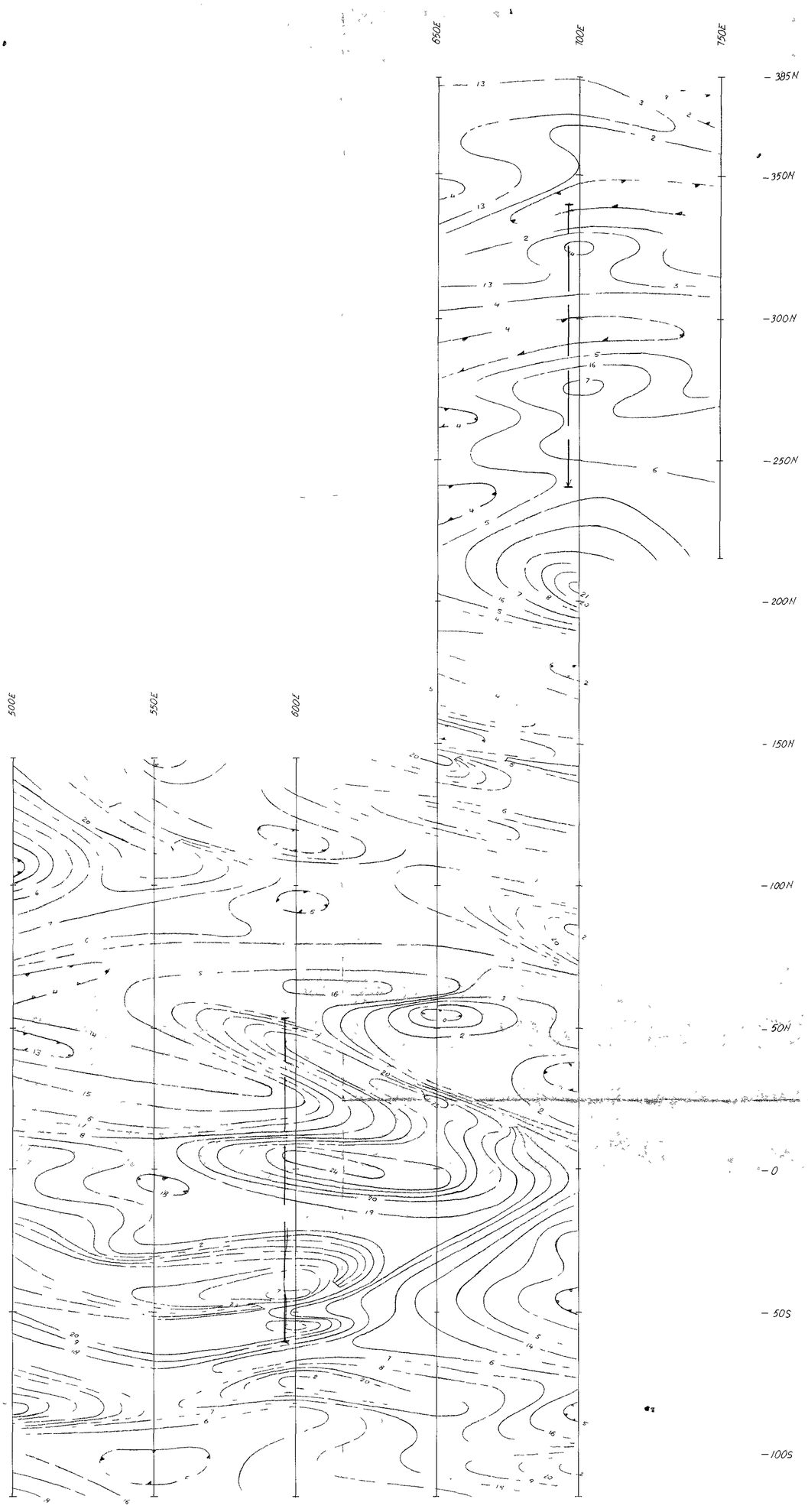
- Quartz and topaz and/or tourmaline
- Total tourmalinization, occasionally with hematite
- Hydrothermal } Breccias
- Collapse } Breccias
- } White Alteration Dykes
- Argillic alteration
- "Green" alteration (sericitized granite) generally with hematite or pyrite
- Quartz - mica greisen
- Area of tourmaline nodules

ROCK TYPES

- Aplite or microgranite
- Fine grained } White granite
- Medium grained } White granite
- Porphyritic granite
- Medium grained } Red granite
- Coarse grained } Red granite

- Major lineament
- F —— F Fault
- Definite } Geological boundaries
- Approximate } Geological boundaries
- —? Inferred } Geological boundaries

1181



Legend

Chargeability in m s/s per v/l

RENISON LIMITED

WAXMAN & WESTON AREAS

FEDERATION

GRADIENT ARRAY EIP SURVEY

CHARGEABILITY CONTOUR PLAN

SURVEYED & COMPILED BY
SCINTREX

NOVEMBER 1980

5 cm

SCALE 1 1000 m

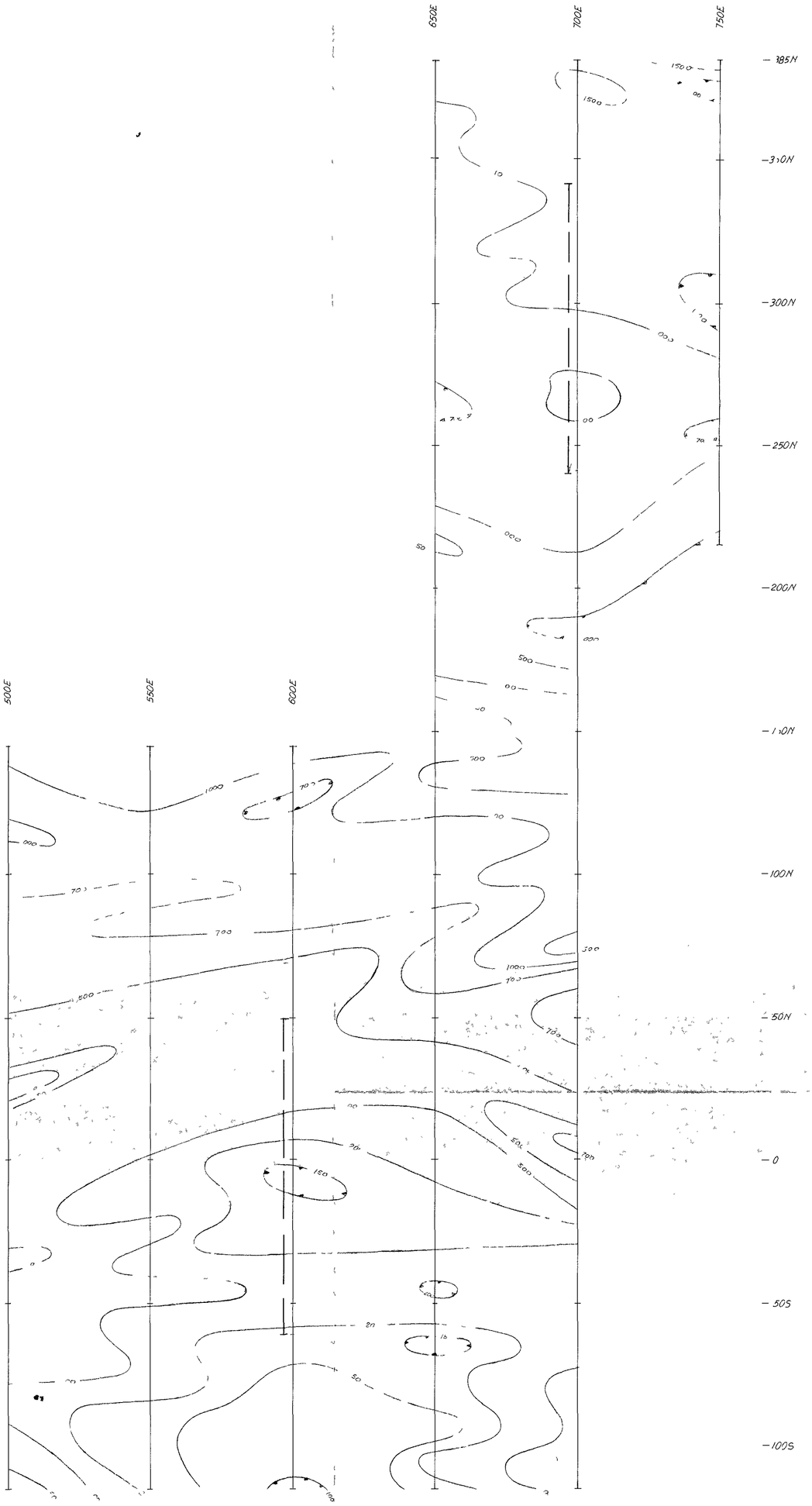
JOB N° TAS 081A

PLAN 6
PLATE 1

81-1629
(Vol 2/4)

919472

1182



Legend

300 Resistivity in ohm metres

Zones of alteration

RENISON LIMITED

WAXMAN & WESTON AREAS

FEDERATION

GRADIENT ARRAY EIP SURVEY

RESISTIVITY CONTOUR PLAN

SURVEYED & COMPILED BY SCINTREX

NOVEMBER 1980

5 cm

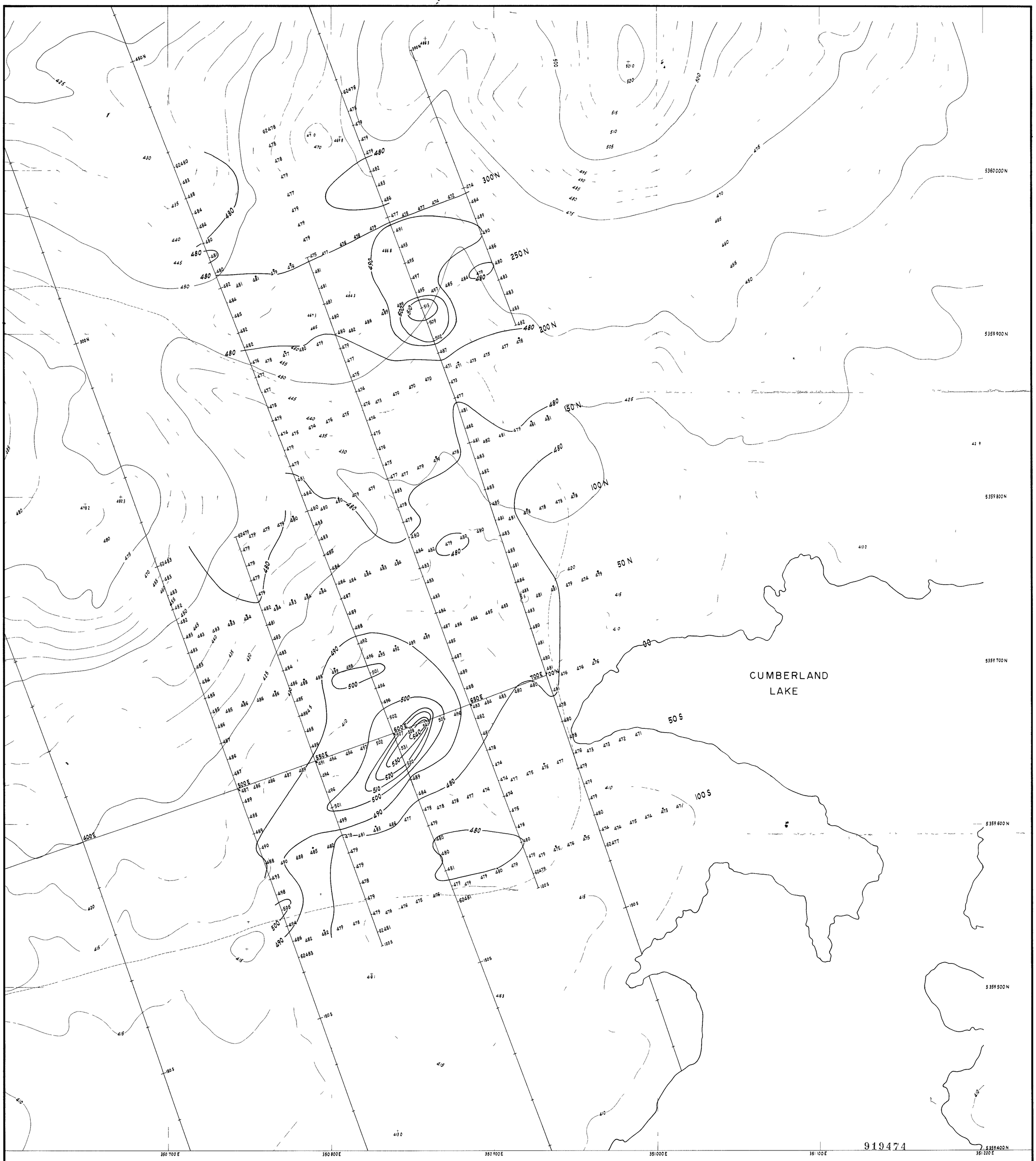
SCALE 1 1000 m

JOB Nº TAS 081A

PLAN 7
PLATE 2

519473

81-1629
(Vol 2/4)



919474

LEGEND

420 Contour 15 metres
416 3 Spot height metres
Foot track
NOTE Elevated from Heemskirk Area 1 2000 pl (sheet 4)
Grid lines pegs 30m apart
Magnetics contour interval 10 gammas

AMGN MAGNETIC N

LOCATION MAP

MT AGNEW
348000mE
5357000mN
TRIAL HARBOUR

RENISON LIMITED
WAXMAN AND WESTON'S AREA
EL 11/76
GROUND MAGNETICS (TOTAL FIELD)

GEOLOGIST PR
DRAUGHTSMAN TGDS
DATE May 1981
REVISIONS

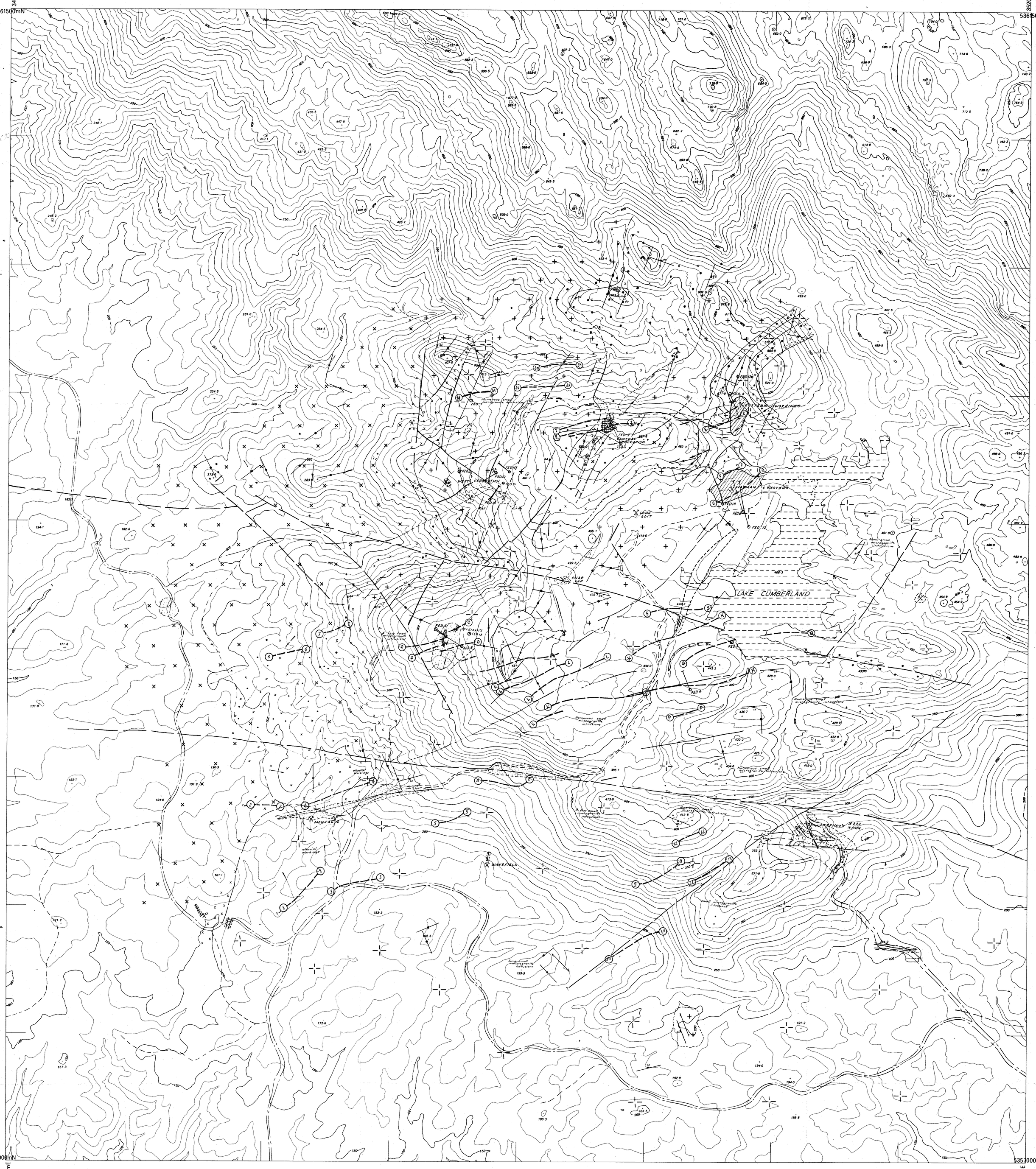
SCALE 1 1000 METRES
20 0 10 20 30 40

DRAWING No
PLAN 8

5 cm

81 1629
Vol 2(4)

1134



LEGEND

ALTERATION

- Argillic Alteration
- Quartz and Topaz and/or Tourmaline
- Total tourmalinisation, occasionally with hematite
- Hydrothermal } Breccias
- Collapse
- } White alteration 'Dykes' (Green Veins)
- Quartz - mica greisen
- Area of Tourmaline nodules
- "Green alteration" (mostly sericitization), some with disseminated hematite or pyrite

ROCK TYPES

- Fine grained } 'White' younger granite
- Medium grained
- Medium grained, usually porphyritic } 'Red' older granite
- Coarse grained

- Major Lineament
- Joint with dip
- Joint, vertical
- Foliation
- Definite } Geological Boundaries
- Approximate
- Inferred
- Old mine or prospect

- Chargeability axis / anomaly and symbol (1977 survey)
- Chargeability axis / anomaly and number (1979 survey)
- FED.2 Diamond drill hole

5 cm

919475

COMPILATION NOTE

This sheet is a composite of photogrammetric contours superimposed on a half tone reproduction of compiled orthophotos from aerial photography dated 12-12-77.

Orthophoto base mapping and photogrammetric contours by Australian Aerial Mapping Pty. Ltd.

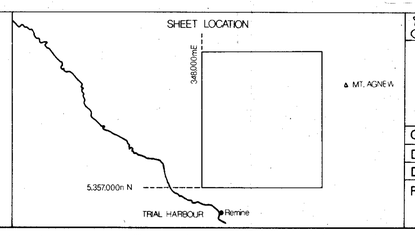
Aerial photography	Wild	RC8
Aerial triangulation	Wild	A8
Contouring	Wild	B8
Orthophotos	Zeiss Topocart	

REFERENCE

- 100 Contours
- Depressions
- +60·5 Spot Heights
- RL 503·98 Control

N.B. Broken lines indicate lower reliability
Contour interval 10 metres
Spot heights to 0·5 metres
Reduced levels to Australian Height Datum
Co-ordinates Australian Map Grid
Grid interval 500 metres

SHEET LOCATION



81-1620
(Vol 2/4)

RENISON LIMITED

HEEMSKIRK AREA

GEOLOGICAL INTERPRETATION

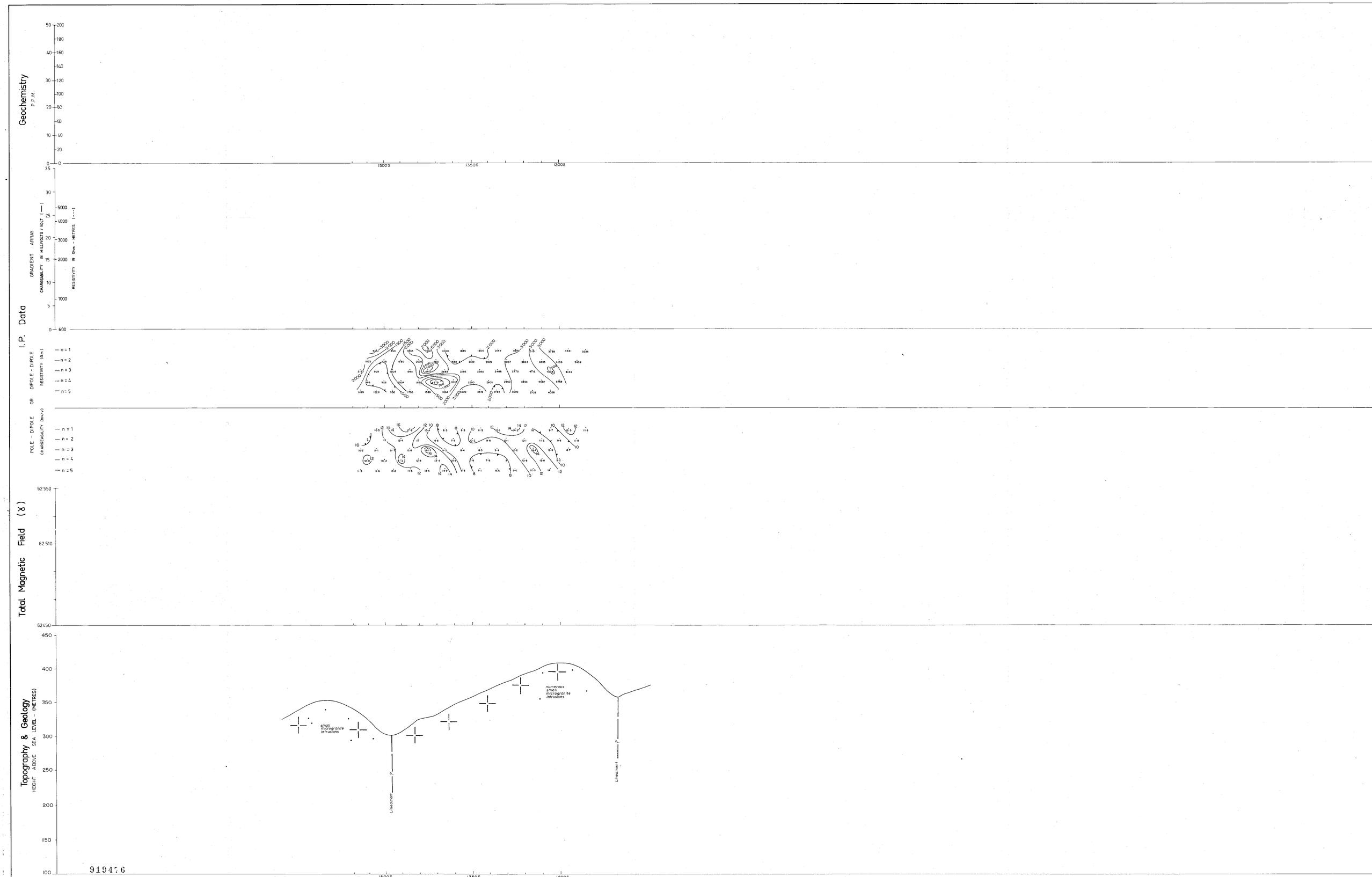
GEOPHYSICAL AXES + DIAMOND DRILL HOLES

GEOLOGIST: K. Wells
DRAUGHTSMAN: F. Colson
DATE: June 1979
REVISIONS: F. Colson May 1980; F. Colson Aug. 1980; P. Roberts July 1981

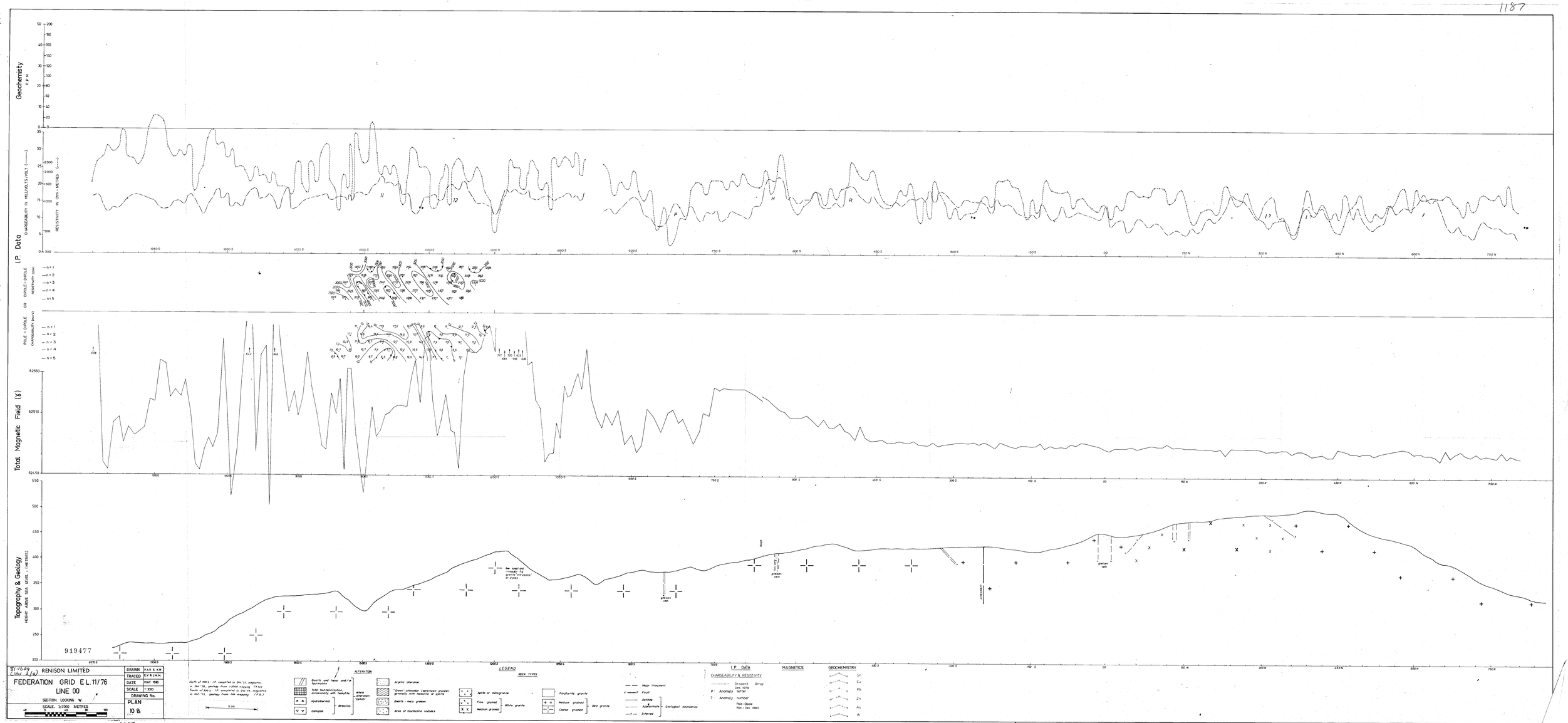
SCALE 1:5000 METRES (100 0 100 200)

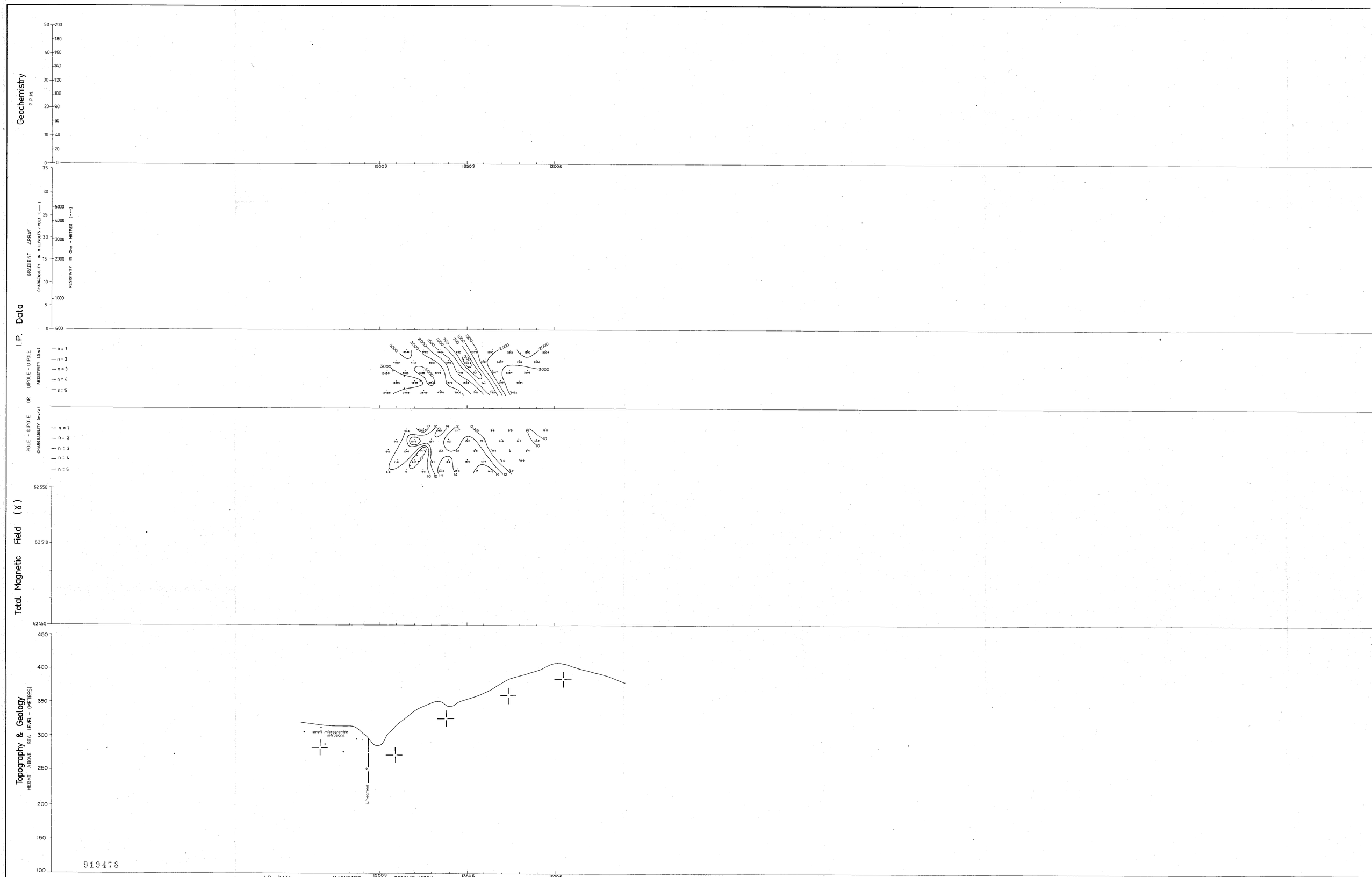
1185

DRAWING NO. PLAN 9.


Geochemistry
P.P.M.
1500S
1350S
1200S
I. P. Data
GRADIENT ARRAY
CHARGEABILITY IN MILLIVOLTS / VOLT (——)
RESISTIVITY IN Ohm - METRES (- - -)
DIPOLE - DIPOLE
RESISTIVITY (Ωm)
n = 1
n = 2
n = 3
n = 4
n = 5
POLE - DIPOLE OR DIPOLE - DIPOLE
CHARGEABILITY (mv/v)
Total Magnetic Field (γ)
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)
small microgranite intrusions
numerous small microgranite intrusions
Lineament
919476
RENISON LIMITED
FEDERATION GRID E.L. 11/76
LINE 50E (South)
SECTION LOOKING W.
SCALE. 1:2000 METRES
DRAWN
TRACED
DATE
SCALE 1:2000
DRAWING No.
Plan 10 A
I.P. DATA
CHARGEABILITY & RESISTIVITY
S: Anomaly letter number
Pole - Dipole I.P. Nov.- Dec. 1980.
5 cm
MAGNETICS
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization, occasionally with hematite
White Alteration "Dykes"
Hydrothermal
Collapse
Breccias
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules
LEGEND
ROCK TYPES
Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1186


Geochemsty
P P M
I.P. Data
CHARGEABILITY IN MILLIVOLTS/VOLT (——)
RESISTIVITY IN Ohm-METRES (- - -)
DIPOLE - DIPOLE RESISTIVITY (Ohm)
POLE - DIPOLE CHARGABILITY (mv/v)
n = 1
n = 2
n = 3
n = 4
n = 5
Total Magnetic Field (γ)
Topography & Geology
HEIGHT ABOVE SEA LEVEL (METRES)
919477
LEGEND
ROCK TYPES
ALTERATION
Quartz and hazel and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Brecciation
White Alteration Zones
Argillic alteration
'Green' alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules
Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
Fault
Definite
Approximate
Inferred
Geological boundaries
I.P. DATA
CHARGEABILITY & RESISTIVITY
Gradient Array
Dec. 1979
P : Anomaly letter
? : Anomaly number
Pole - Dipole
Nov. - Dec. 1980
MAGNETICS
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
RENISON LIMITED
FEDERATION GRID E.L. 11/76
LINE 00
SECTION LOOKING W.
SCALE 1:2000 METRES
DRAWN P.A.R. & K.W.
TRACED D.V. & J.M.N.
DATE MAY 1980
SCALE 1:2000
DRAWING No.
PLAN
10 B



81-1639 (Vol 2/14) RENISON LIMITED	DRAWN
FEDERATION GRID E.L. 11/76	TRACED
LINE 50W (South)	DATE
SECTION LOOKING W.	SCALE 1:2000
SCALE. 1:2000 METRES 40 0 40 80 120	DRAWING No. Plan. 10C.

I.P. DATA

CHARGEABILITY & RESISTIVITY

S Anomaly letter number
Pole-dipole I.P. Nov.-Dec. 1980.

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization, occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration 'Dykes'
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1189

1189

Geochemistry
P.P.M.

I.P. Data
CHARGEABILITY IN MILLIVOLTS/VOLT
RESISTIVITY IN OHM - METRES

POLE - DIPOLE OR DIPOLE - DIPOLE
RESISTIVITY (OHM)
CHARGEABILITY (MSEC)
— n = 1
— n = 2
— n = 3
— n = 4
— n = 5

RESISTIVITY IN OHM - METRES

Total Magnetic Field (γ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL (METRES)

919479

RENISON LIMITED	DRAWN: G.L.R. & K.W.
	TRACED: T.G.D.S.
FEDERATION GRID EL 11/76	DATE: MAY 1980
LINE 300 W	SCALE: 1:2000
SECTION LOOKING W.	DRAWING No.
SCALE. 1:2000 METRES 40 0 40 80 120	Plan 10 D

North of 900 S : I.P. compiled in Dec. '77, magnetics in Dec. '78, geology from 1:2000 mapping (R.W.)
South of 900 S : I.P. compiled in Dec. '79, magnetics in Oct. '79, geology, from line mapping (P.K.)

Digital data I.P. on south end of lines contained in Nov. - Dec. 1980.

5 cm

I.P. DATA
CHARGEABILITY & RESISTIVITY
Gradient Array
M: Anomaly letter
6: Anomaly number

MAGNETICS

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W

diamond drillhole
intersection cut/assay >0.1% Sn.

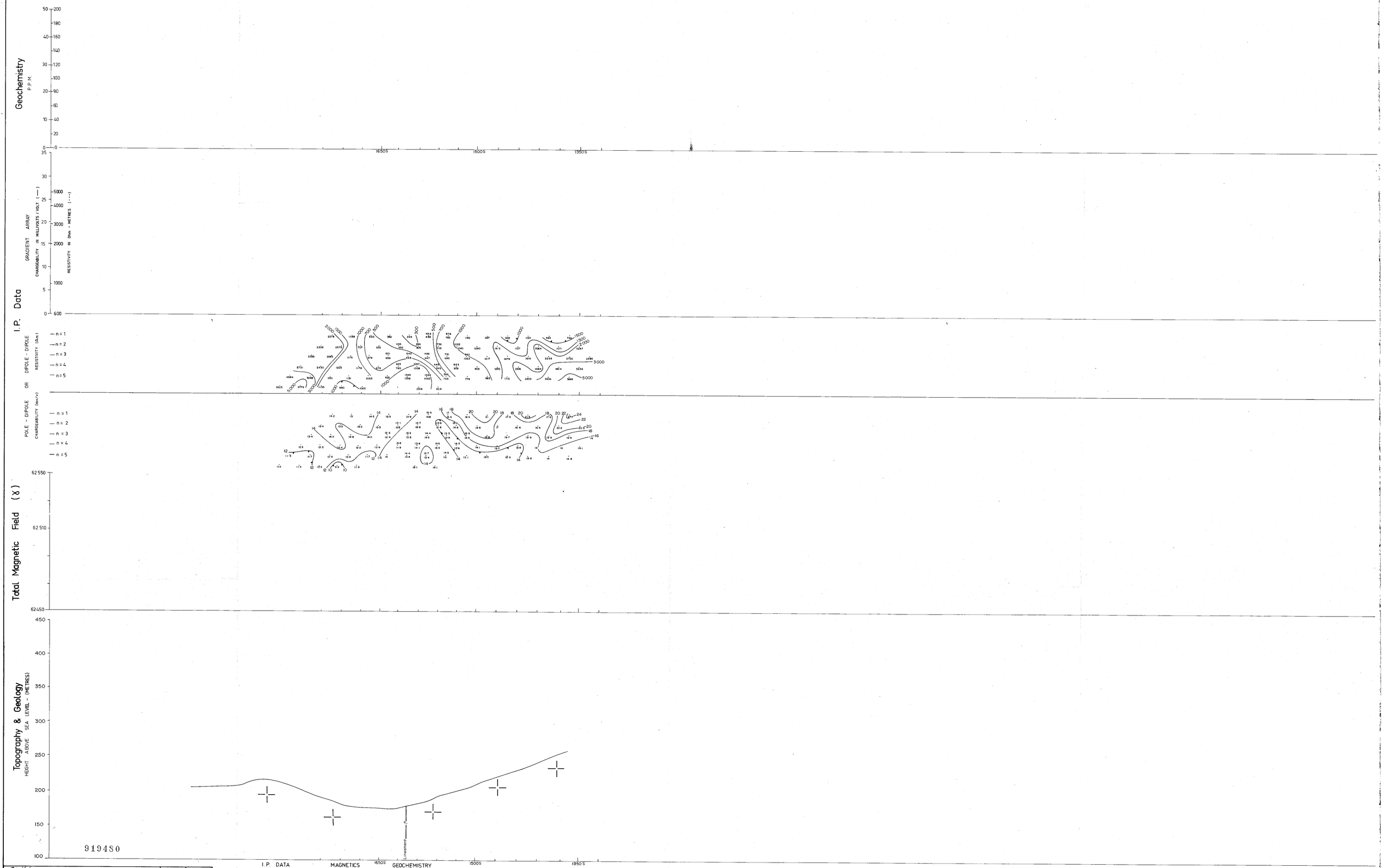
LEGEND

ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinisation, occasionally with hematite
Hydrothermal breccia
Collapse breccia
white alteration (zones)
Argillic alteration
"Green" alteration (sericitised granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules

ROCK TYPES
Aplite or microgranite
Fine grained white granite
Medium grained white granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1189



81-1629
C.V.01 2/4

RENISON LIMITED

FEDERATION GRID E.L. 11/76

LINE 350W (South)

SECTION LOOKING W

SCALE. 1:2000 METRES

40 0 40 80 120

DRAWN	
TRACED	
DATE	
SCALE	1:2000
DRAWING No.	

Plan

10 E 1190

I.P. DATA

CHARGEABILITY & RESISTIVITY

S : Anomaly letter number

Dipole-dipole I.P. Nov.-Dec. 1980.

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization, occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration "Dykes"
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules

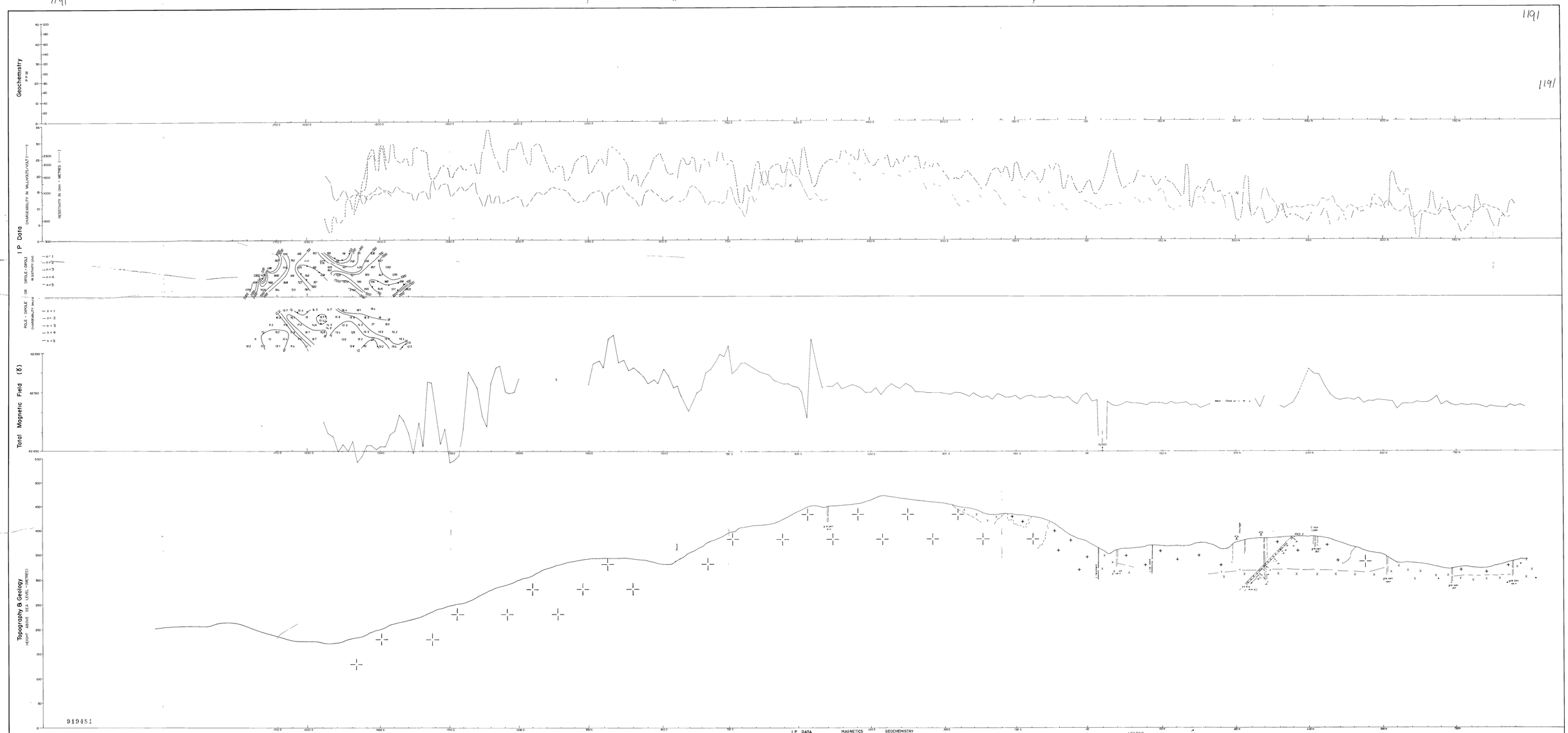
LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
? Inferred
Geological boundaries

1191



RENISON LIMITED	DRAWN / TRACED / DATE / SCALE / DRAWING No
FEDERATION GRID EL 11/76	
LINE 400W	
SECTION LOOKING W 1191	
SCALE 1:2000 METRES	Plan 10 F

I P DATA
CHARGEABILITY & RESISTIVITY
Gradient Array
H Anomaly Letter
x Anomaly number

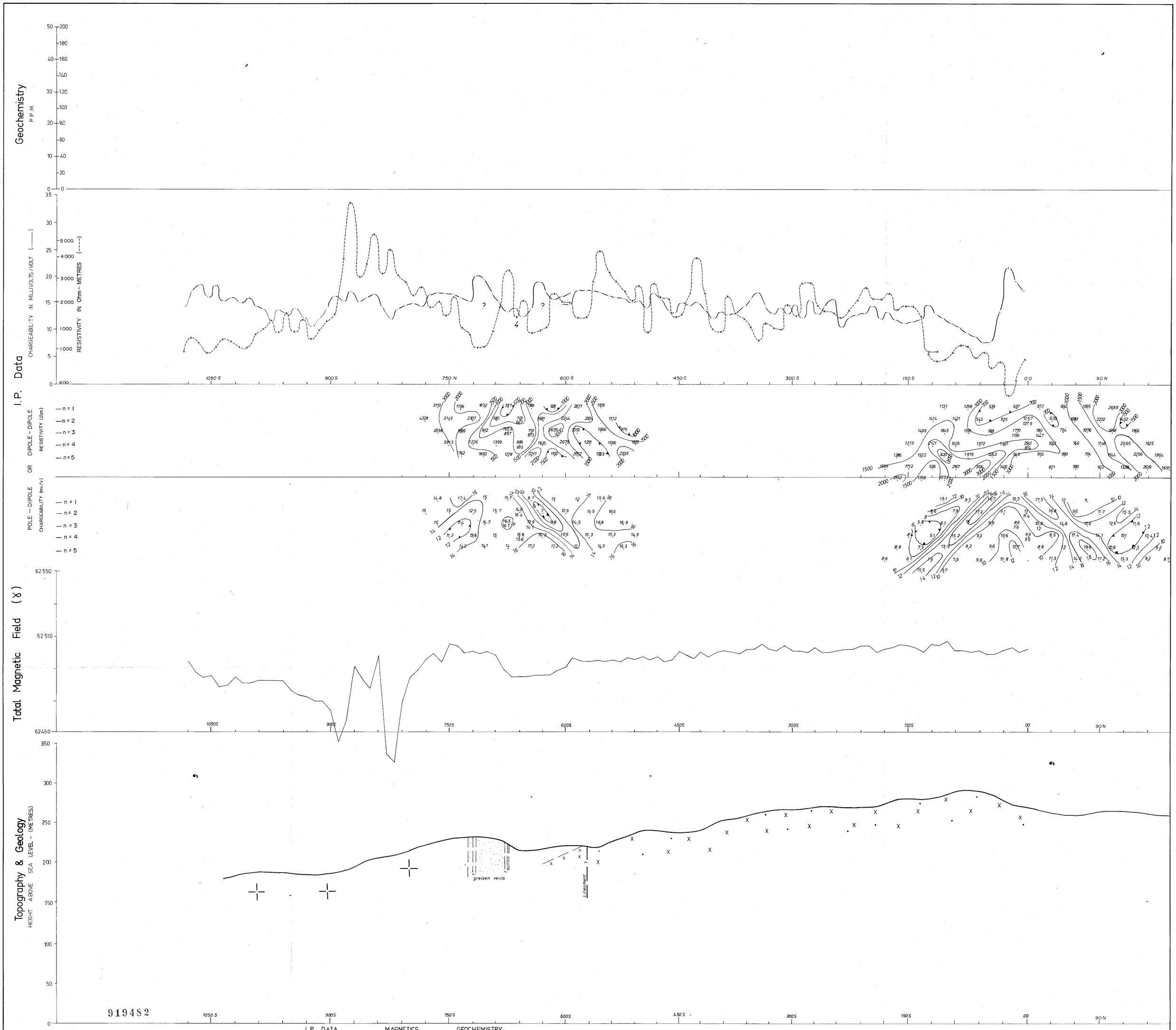
MAGNETICS

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W

ALTERATION
Quartz and heavy sericite/muscovite
Total sericitization accessorily with hematite
Hydrothermal
Collapse
Breccias
White alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz - mass green
area of tourmaline nodules

LEGEND
ROCK TYPES
Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1191



81-1629
(Vol 2/4)

RENISON LIMITED

FEDERATION GRID E.L. 11/76

LINE 1100 W

SECTION LOOKING W.

SCALE. 1:2000 METRES

DRAWN	P.A.R.
TRACED	E.V
DATE	July 1980
SCALE	1:2000
DRAWING No.	PLAN 10 G

I.P. DATA

CHARGEABILITY & RESISTIVITY

Gradient Array Dec. 1979

S : Anomaly letter

4 : Anomaly number

Dipole - Dipole Nov.- Dec. 1980

MAGNETICS

I.P. completed in Dec. '79. Magnetics in Oct. '79. Geology from line mapping (P.R.)

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, W

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization, occasionally with hematite

Hydrothermal

Collapse

Breccias

White Alteration "Dykes"

Argillic alteration

"Green" alteration (sericitized granite) generally with hematite or pyrite

Quartz - mica greisen

Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite

Fine grained

Medium grained

White granite

Porphyritic granite

Medium grained

Coarse grained

Red granite

5 cm

Major lineament

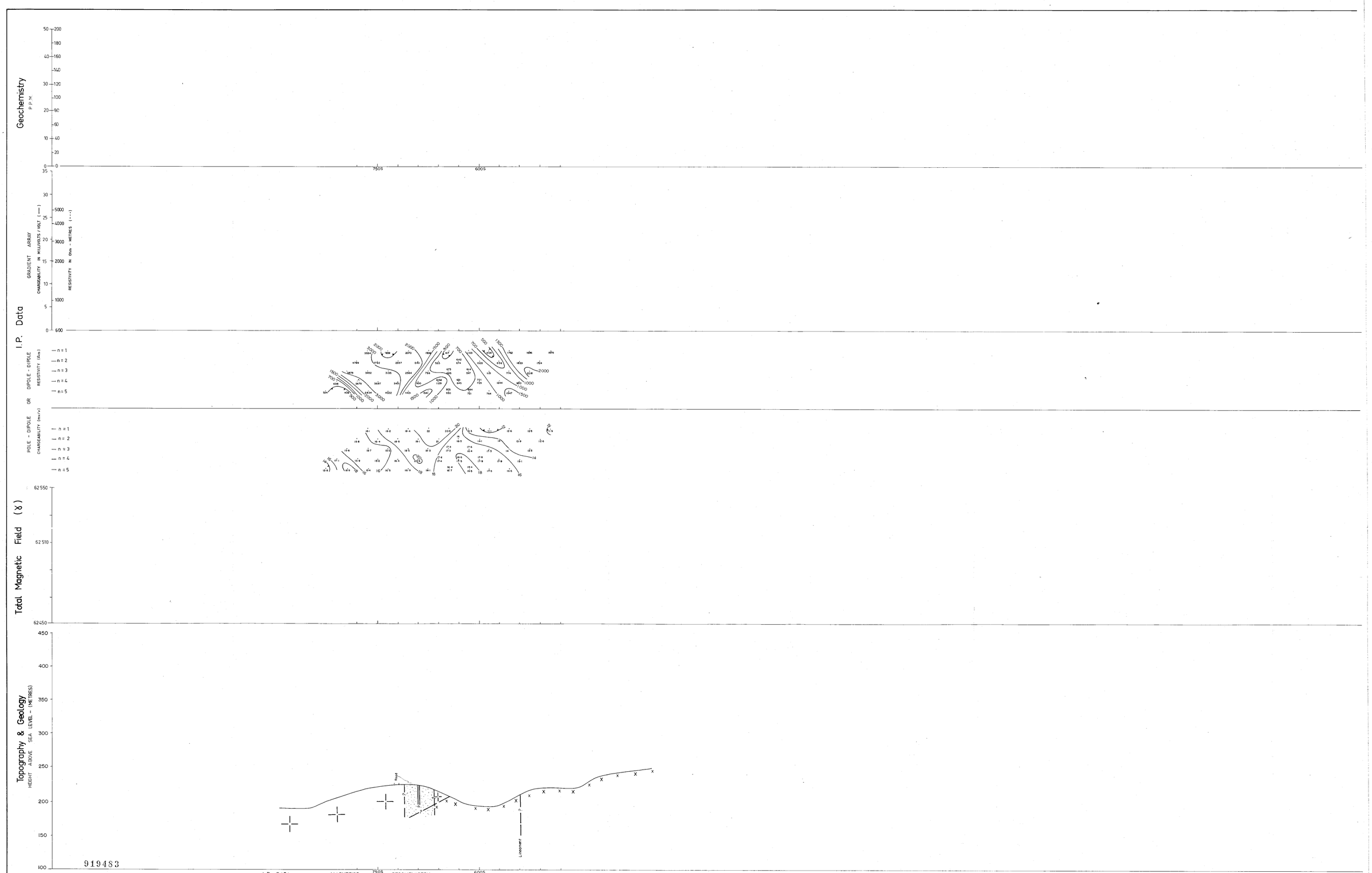
F —— F Fault

Definite

Approximate

Inferred

Geological boundaries



81-1609 CV01 2/4 RENISON LIMITED	DRAWN
FEDERATION GRID E.L. 11/76	TRACED
LINE 1150 W	DATE
SECTION LOOKING W.	SCALE 1:2000
SCALE. 1:2000 METRES 40 0 40 80 120	DRAWING No. PLAN 10H

I.P. DATA

CHARGEABILITY & RESISTIVITY

S. Anomaly letter number

Dipole-dipole I.P. Nov.-Dec. 1980.

5 cm

MAGNETICS

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, W

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization, occasionally with hematite

White alteration "Dykes"

Hydrothermal

Collapse

Breccias

Argillic alteration

"Green" alteration (sericitized granite) generally with hematite or pyrite

Quartz - mica gresen

Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite

Fine grained

Medium grained

White granite

Porphyritic granite

Medium grained

Coarse grained

Red granite

Major lineament

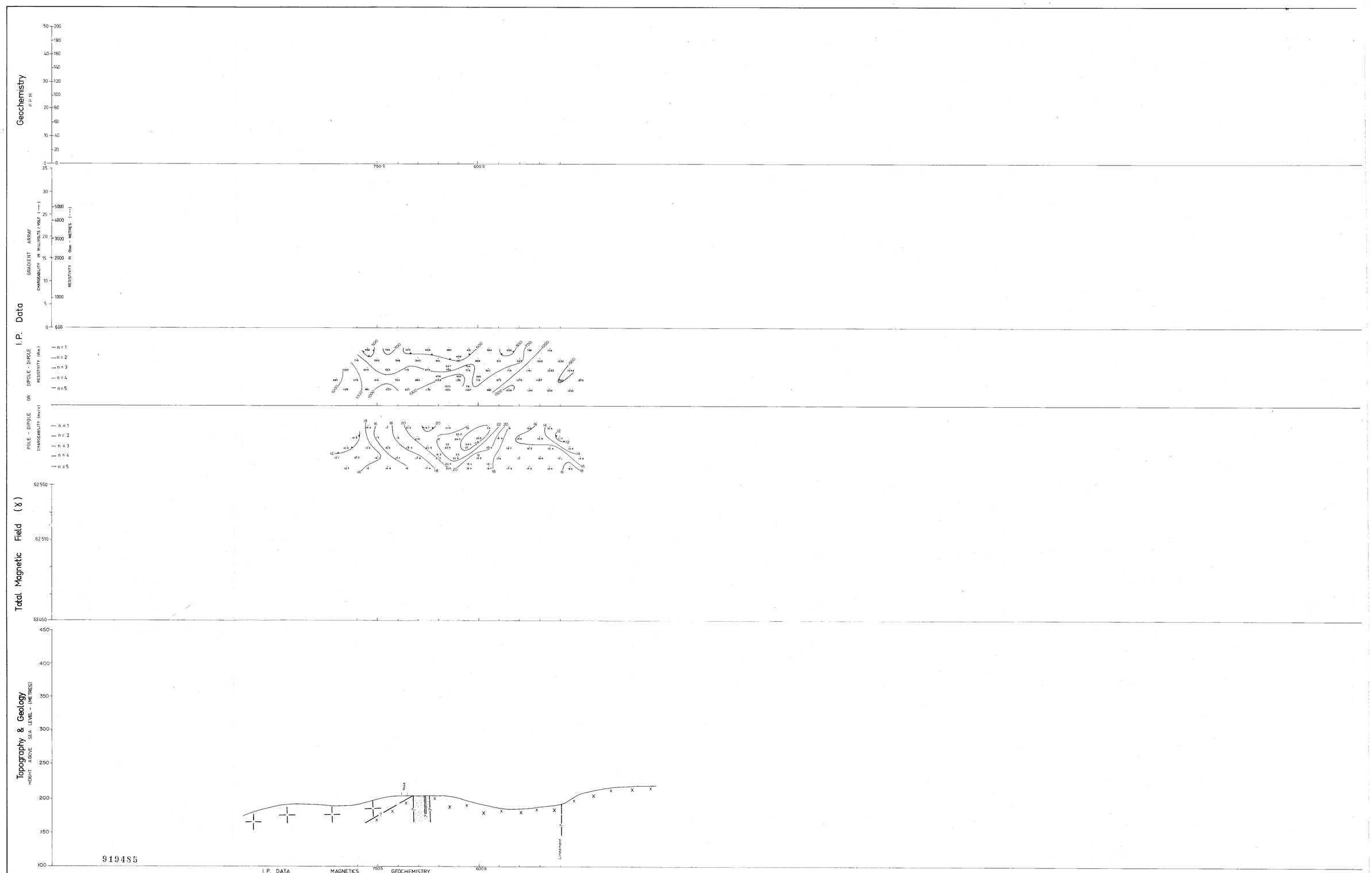
Fault

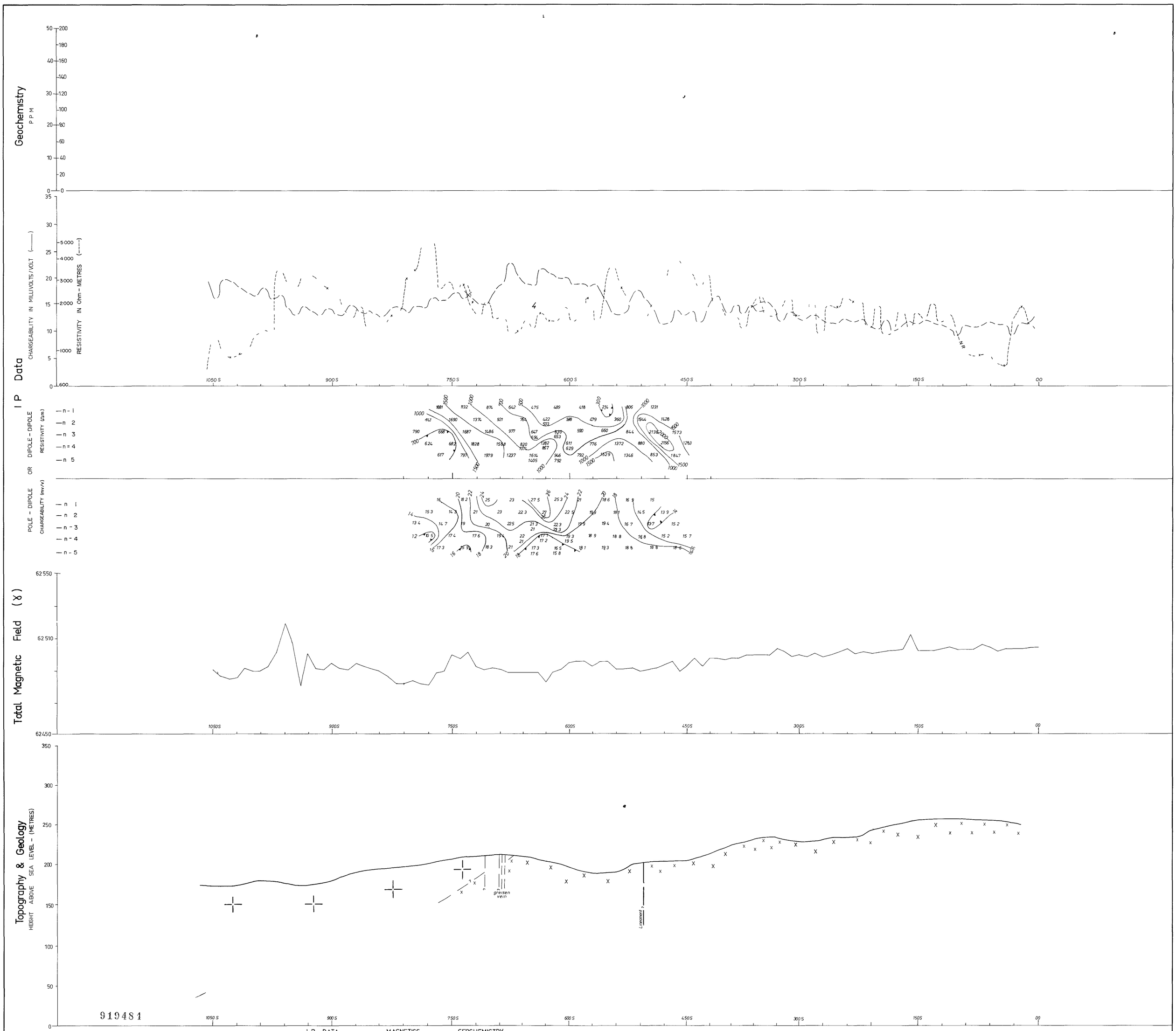
Definite

Approximate

Inferred

Geological boundaries


Geochemistry
P.P.M.
750 S
600 S
I.P. Data
GRADIENT ARRAY
CHARGEABILITY IN MILLIVOLTS / VOLT (—)
RESISTIVITY IN Ohm - METRES (---)
DIPOLE - DIPOLE
RESISTIVITY (Ωm)
POLE - DIPOLE OR DIPOLE
CHARGEABILITY (mv/v)
n = 1
n = 2
n = 3
n = 4
n = 5
Total Magnetic Field (γ)
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)
Road
Lineament
919485
81-1639
(Vol 1 2/4)
RENISON LIMITED
FEDERATION GRID E.L. 11/76
LINE 1250W
1195
SECTION LOOKING W.
SCALE. 1:2000 METRES
DRAWN
TRACED
DATE
SCALE 1:2000
DRAWING No.
Plan.
10 J.
I.P. DATA
CHARGEABILITY & RESISTIVITY
S Anomaly Letter number
Dipole-dipole I.P. Nov.-Dec. 1980.
5 cm
MAGNETICS
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization, occasionally with hematite
White Alteration "Dykes"
Hydrothermal
Collapse
Breccias
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules
LEGEND
ROCK TYPES
Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
F F Fault
Definite
Approximate
? Inferred
Geological boundaries



81-1629
CVo1 2/14

RENISON LIMITED

FEDERATION GRID EL 11/76

LINE 1200 W

SECTION LOOKING W

SCALE 1 2000 METRES

DRAWN	P A R
TRACED	E V
DATE	July 1980
SCALE	1 2000
DRAWING No	PLAN 10 I

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array Dec 1979

S Anomaly letter

6 Anomaly number

Dipole Dipole Nov Dec 1980

MAGNETICS

I P completed Dec 79
Magnetometer Oct 79
Geology from limpping (P R)

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
White Alteration Dykes
Hydrothermal
Collapse
Breccias
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

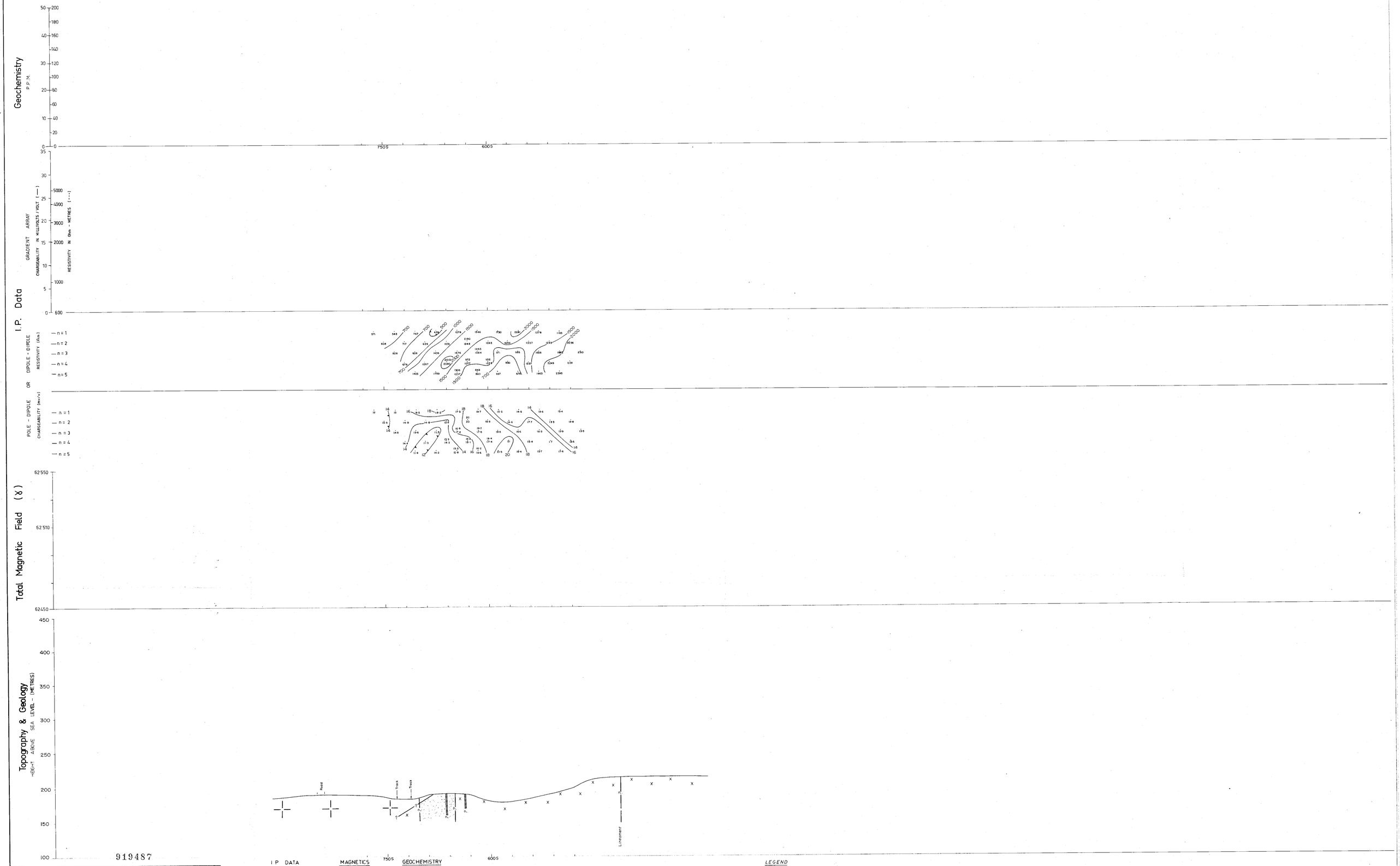
LEGEND

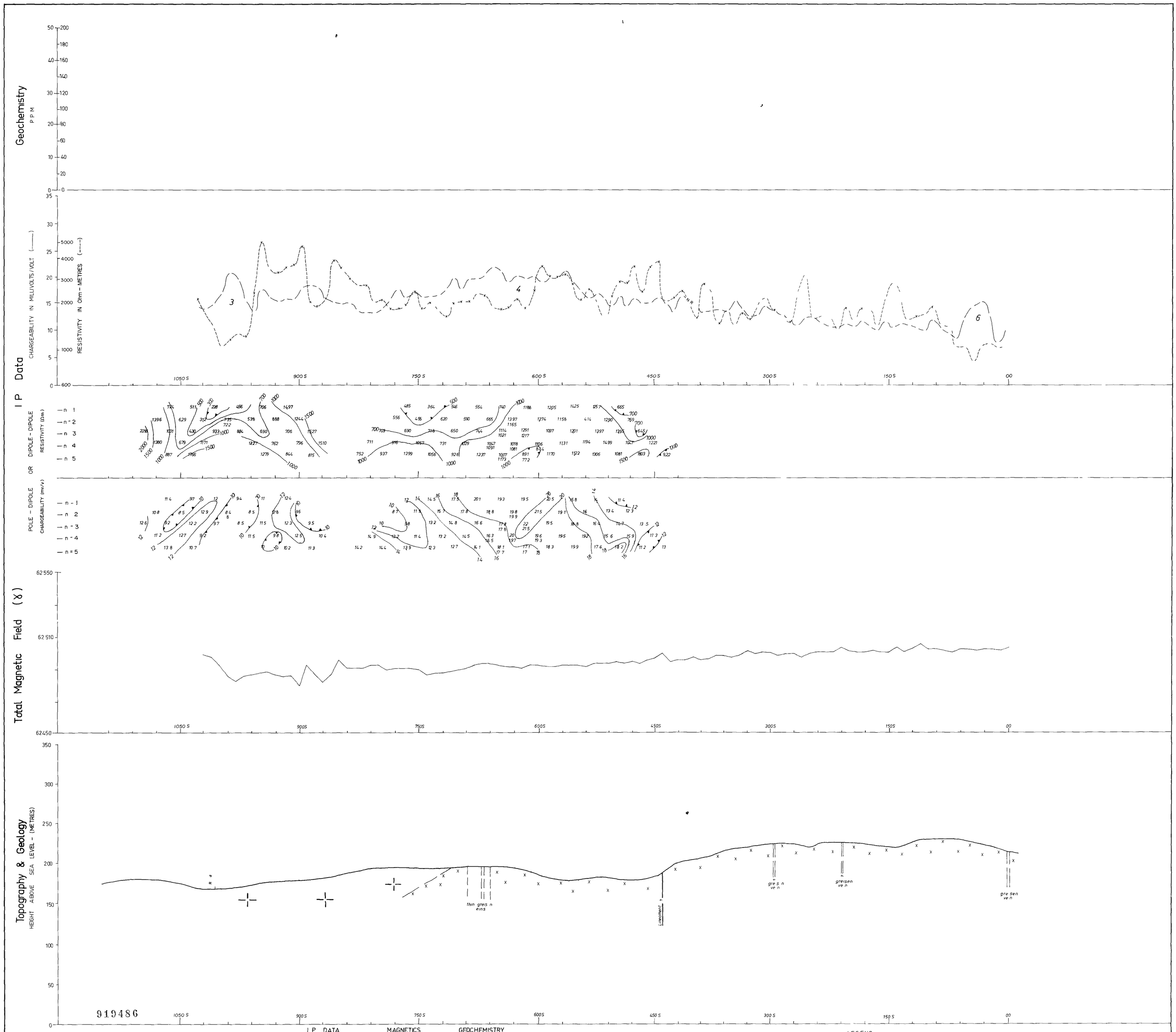
ROCK TYPES

5 cm

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F — F Fault
Definite
Approximate
Inferred
Geological boundaries


Geochemistry
P.P.M.
750S
600S
I.P. Data
GRADIENT ARRAY
CHARGEABILITY IN MILLIVOLTS / VOLT (—)
RESISTIVITY IN Ohm - METRES (- - -)
DIPOLE - DIPOLE
RESISTIVITY (Ωm)
n = 1
n = 2
n = 3
n = 4
n = 5
POLE - DIPOLE OR DIPOLE - DIPOLE
CHARGEABILITY (mv/v)
Total Magnetic Field (γ)
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)
Road
Track
Track
Lineament
919487
I P DATA
CHARGEABILITY & RESISTIVITY
S Assumed letter number
Dipole-dipole I.P. Nov.-Dec. 1980.
5 cm
MAGNETICS
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization, occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration "Dykes"
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica gresen
Area of tourmaline nodules
LEGEND
ROCK TYPES
Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
F F Fault
Definite
Approximate
Inferred
Geological boundaries
RENISON LIMITED
FEDERATION GRID E.L. 11/76
LINE 1350W
SECTION LOOKING W
1197
DRAWN
TRACED
DATE
SCALE 1:2000
DRAWING No.
Plan 10L
SCALE. 1:2000 METRES
0 40 80 120



81-1629 (Vol 2/4) RENISON LIMITED	DRAWN: P A R
FEDERATION GRID E L 11/76	TRACED: E V
LINE 1300 W	DATE: July 1980
SECTION LOOKING W	SCALE: 1 2000
1196	DRAWING No: PLAN 10 K

SCALE 1 2000 METRES
40 0 40 80 120

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array Dec 1979

S Anomaly Letter

6 Anomaly number

Dipole Dipole Nov Dec 1980

MAGNETICS

I P mpl t d n D 79
Magn t s 0 1 79
G ol gy fr m l mapp g (P R)

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
White Alteration Dykes
Hydrothermal
Collapse
Breccias

Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

5 cm

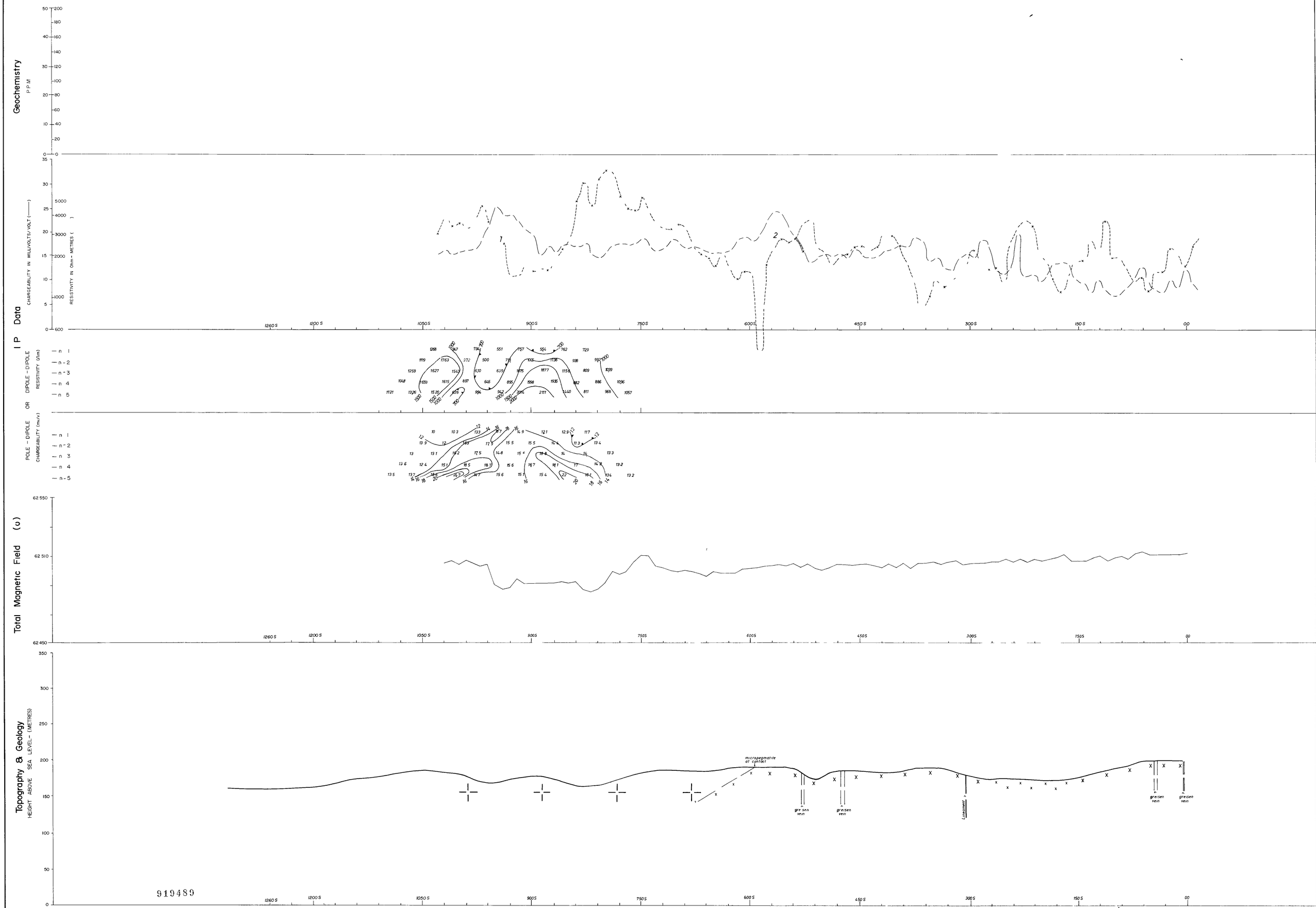
LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite

Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F —— F Fault
Definite
Approximate
Inferred
Geological boundaries



81-1609 (Vol 2/4) RENISON LIMITED	DRAWN: PAR
	TRACED: EV&TGDS
FEDERATION GRID EL 11/76	DATE: July 1980
LINE 1600 W	SCALE: 1 2000
SECTION LOOKING W	DRAWING No: PLAN 10 N
SCALE 1 2000 METRES 40 0 40 80 120	

5 cm

I P completed in Dec 79 magnetics in Oct 79 geology from line mapping (P.R.)

Dipole dipole I P carried out Nov Dec 1980

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly Letter

6 Anomaly number

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and / or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes

Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

LEGEND

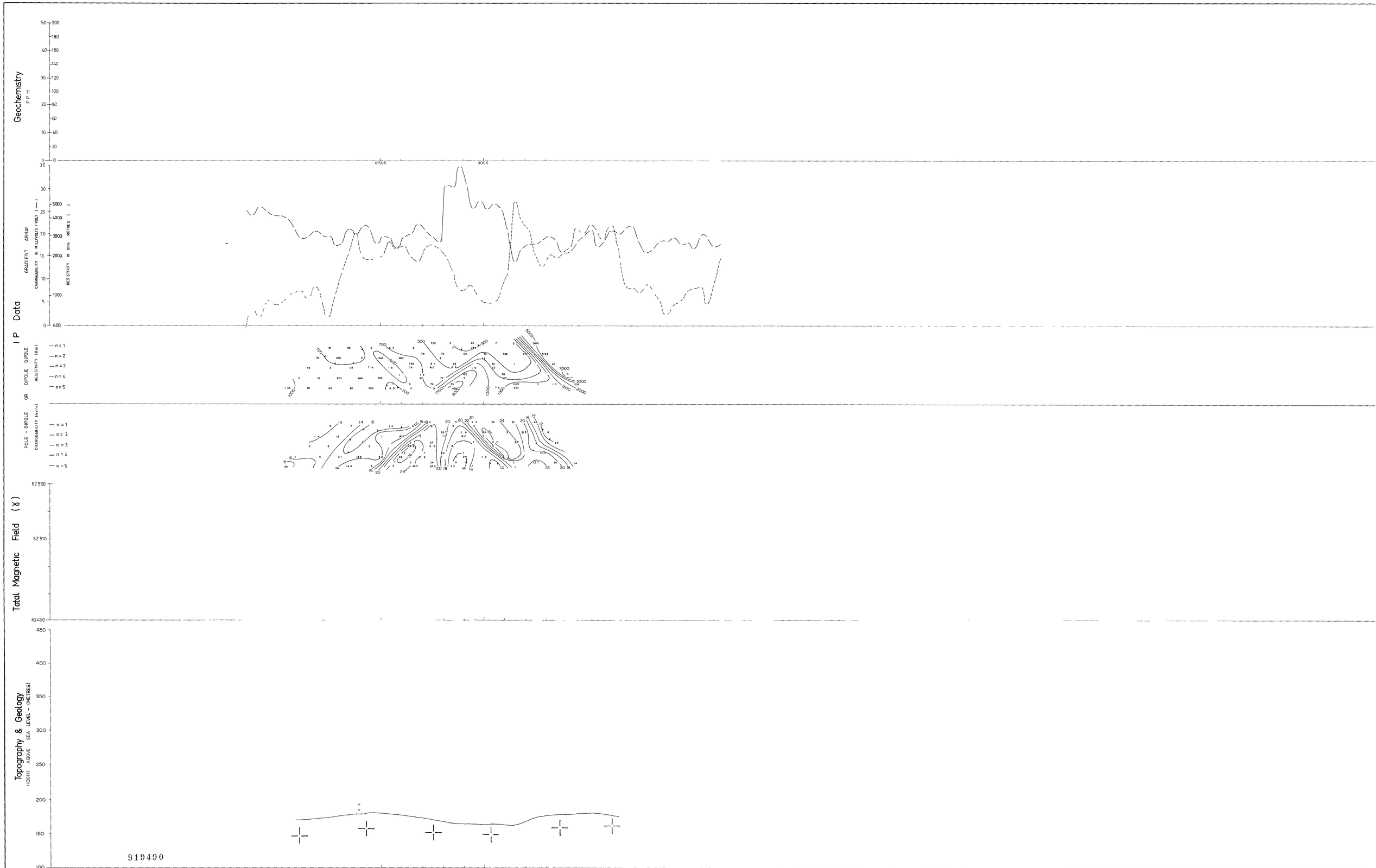
ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite

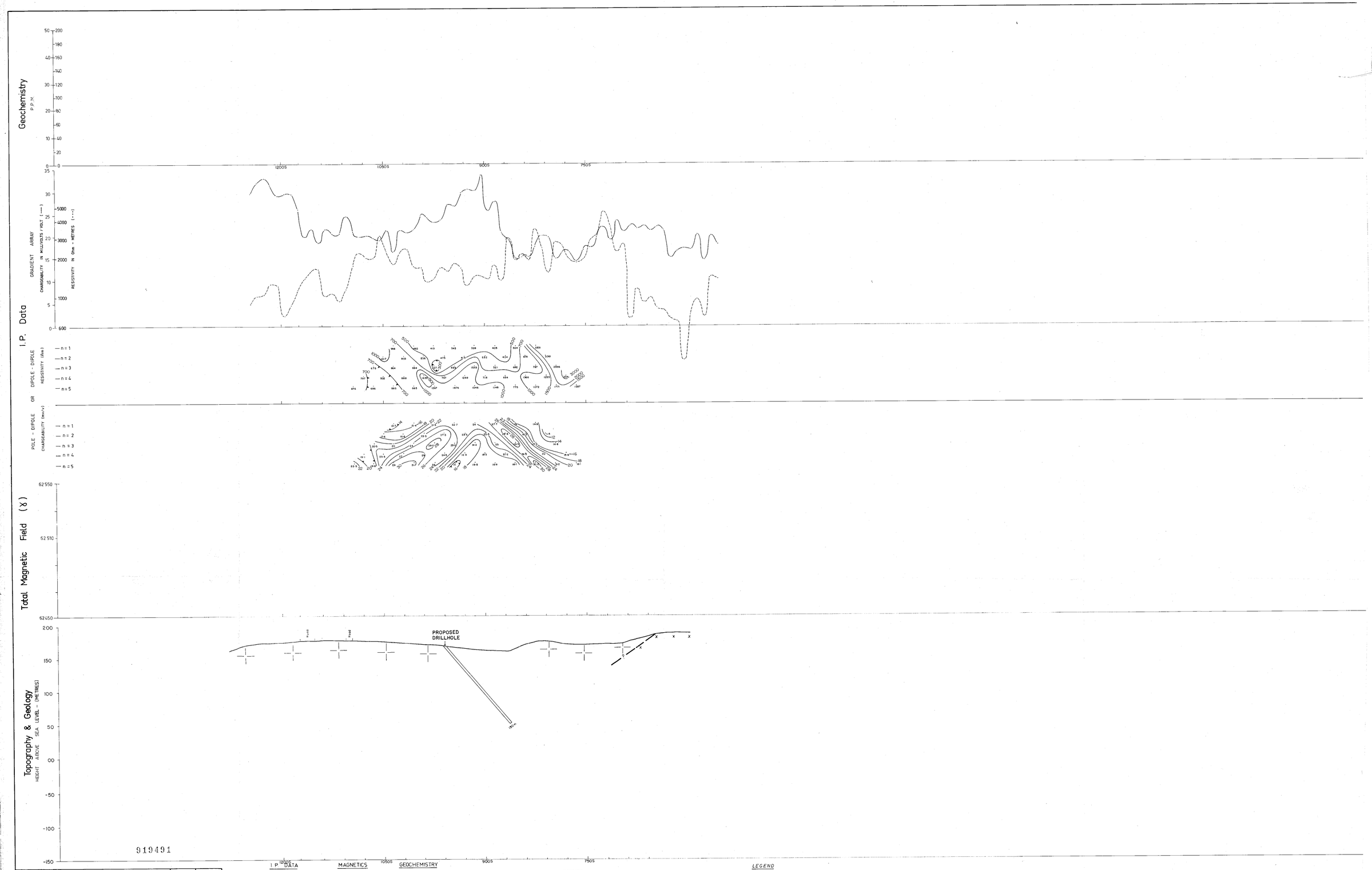
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1199


Geochemistry
P P M
I P Data
GRADIENT ARRAY
CHARGEABILITY IN MILLIVOLTS / VOLT (—)
RESISTIVITY IN Ohm METRES (- -)
1050S
900S
DIPOLE DIPOLE
RESISTIVITY (Ωm)
n = 1
n = 2
n = 3
n = 4
n = 5
POLE - DIPOLE OR DIPOLE DIPOLE
CHARGEABILITY (mv/v)
Total Magnetic Field (γ)
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)
919490
I P DATA
CHARGEABILITY & RESISTIVITY
S Anomaly letter number
Gradient array and dipole dipole I P
Nov Dec 1980
5 cm
MAGNETICS
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules
LEGEND
ROCK TYPES
Aplite o microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries
RENISON LIMITED
FEDERATION GRID EL 11/76
LINE 1650W
SECTION LOOKING W
SCALE 1 2000 METRES
DRAWN
TRACED
DATE
SCALE 1 2000
DRAWING No
Plan 10

1200



81-1629 (Vol 2/4) RENISON LIMITED	DRAWN
FEDERATION GRID E.L. 11/76	TRACED
LINE 1700W	DATE
SECTION LOOKING W	SCALE 1:2000
1201	DRAWING No.
SCALE. 1:2000 METRES (40 0 40 80 120)	Plan. I.P.

I.P. DATA

CHARGEABILITY & RESISTIVITY

S Anomaly letter number

Gradient array and dipole-dipole I.P. Nov.- Dec. 1980.

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

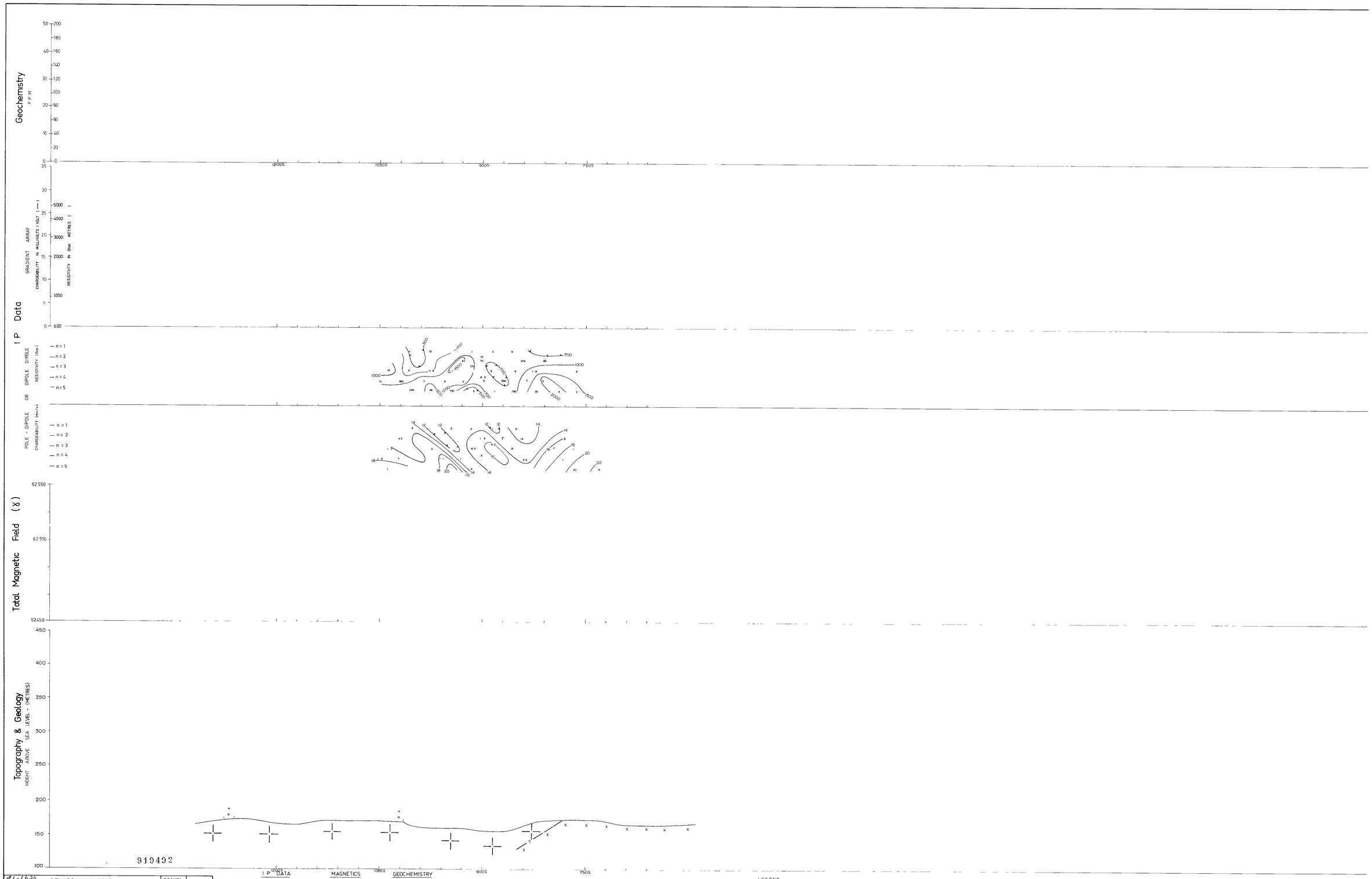
ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization, occasionally with hematite
White Alteration "Dykes"
Hydrothermal
Collapse
Breccias
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F — F Fault
Definite
Approximate
—? — Inferred
Geological boundaries



81-1629
(Vol 2/a)

RENISON LIMITED

FEDERATION GRID E L 11/76

LINE 1800 W

SECTION LOOKING W

1202

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	

SCALE 1 2000 METRES

40 0 40 80 120

Plan 10Q

I P DATA — CHARGEABILITY & RESISTIVITY

S Anomaly - letter number
Dipole dipole IP Jan 1981

5 cm

MAGNETICS

GEOCHEMISTRY

S
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
White alteration types
Hydrothermal
Brecciation
Collapse

Argillic alteration
Green alteration (serpentized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

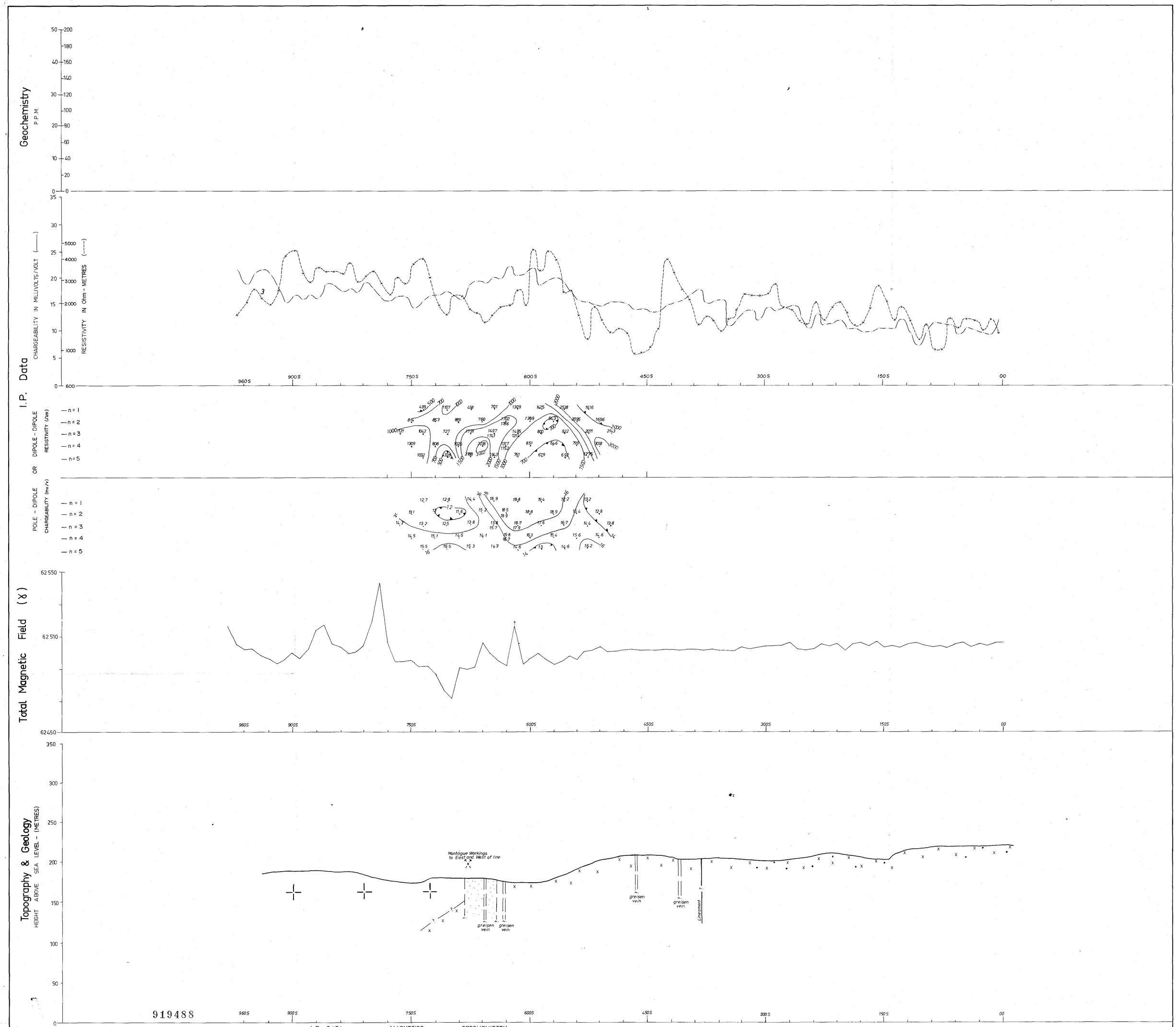
LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite

Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F F Fault
Definite
Approximate
Inferred
Geological boundaries



81-1629
(V012/4)

RENISON LIMITED

FEDERATION GRID E.L. 11/76

LINE 1400 W

SECTION LOOKING W

SCALE. 1:2000 METRES

DRAWN	P.A.R
TRACED	E.V
DATE	July 1980
SCALE	1:2000
DRAWING No.	PLAN 10 M

I.P. DATA

CHARGEABILITY & RESISTIVITY

Gradient Array Dec. 1979

S : Anomaly Letter

7 : Anomaly number

Dipole - Dipole Nov. - Dec. 1980

MAGNETICS

I.P. completed in Dec '79 magnetics in Oct '79, geology from line mapping (P.A.)

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization, occasionally with hematite

White Alteration 'Dykes'

Hydrothermal

Collapse

Breccias

Argillic alteration

"Green" alteration (sericitized granite) generally with hematite or pyrite

Quartz - mica greisen

Area of tourmaline nodules

5 cm

ROCK TYPES

Aplite or microgranite

Fine grained

Medium grained

White granite

Porphyritic granite

Medium grained

Coarse grained

Red granite

Major lineament

F Fault

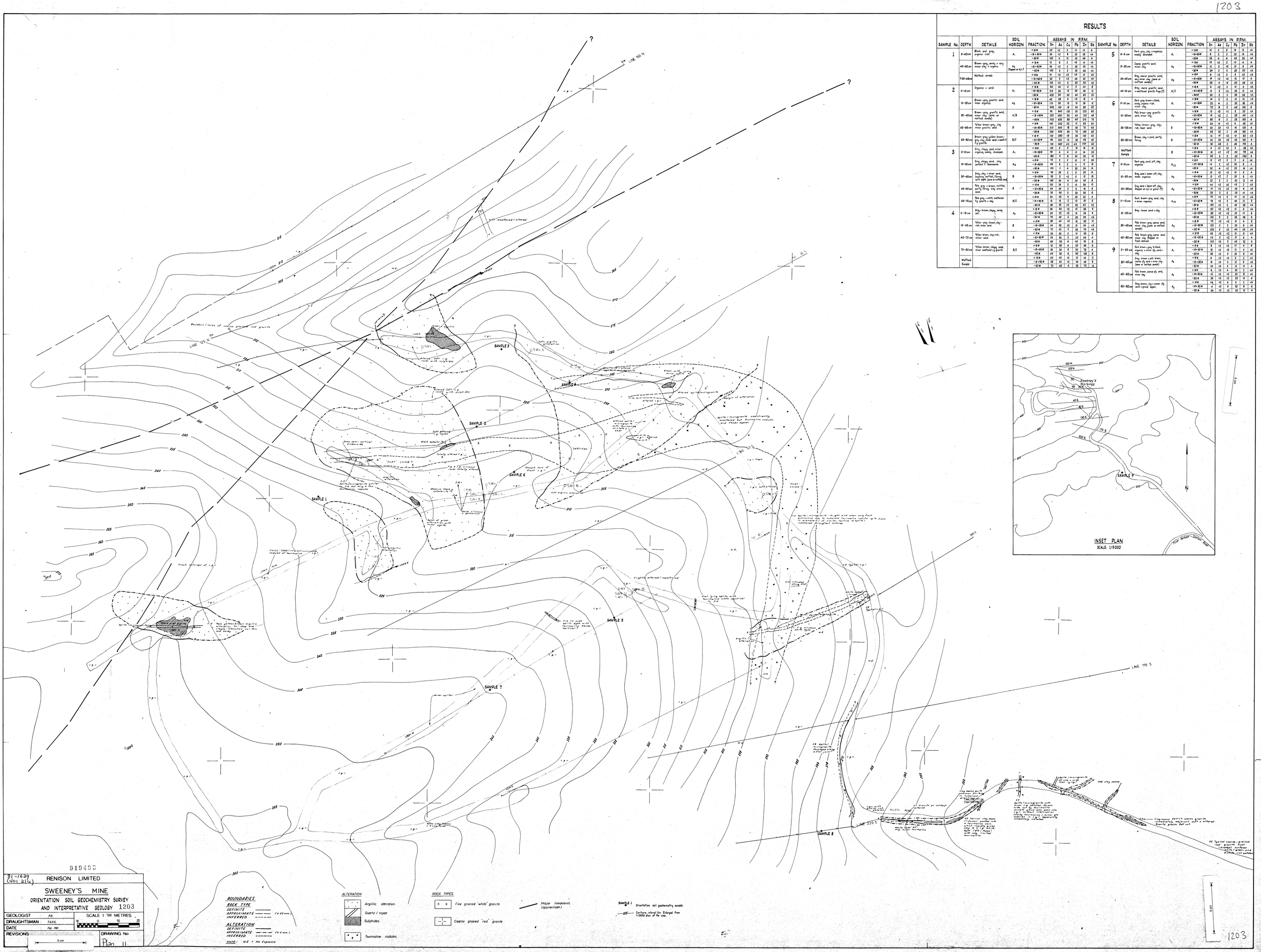
Definite

Approximate

Inferred

Geological boundaries

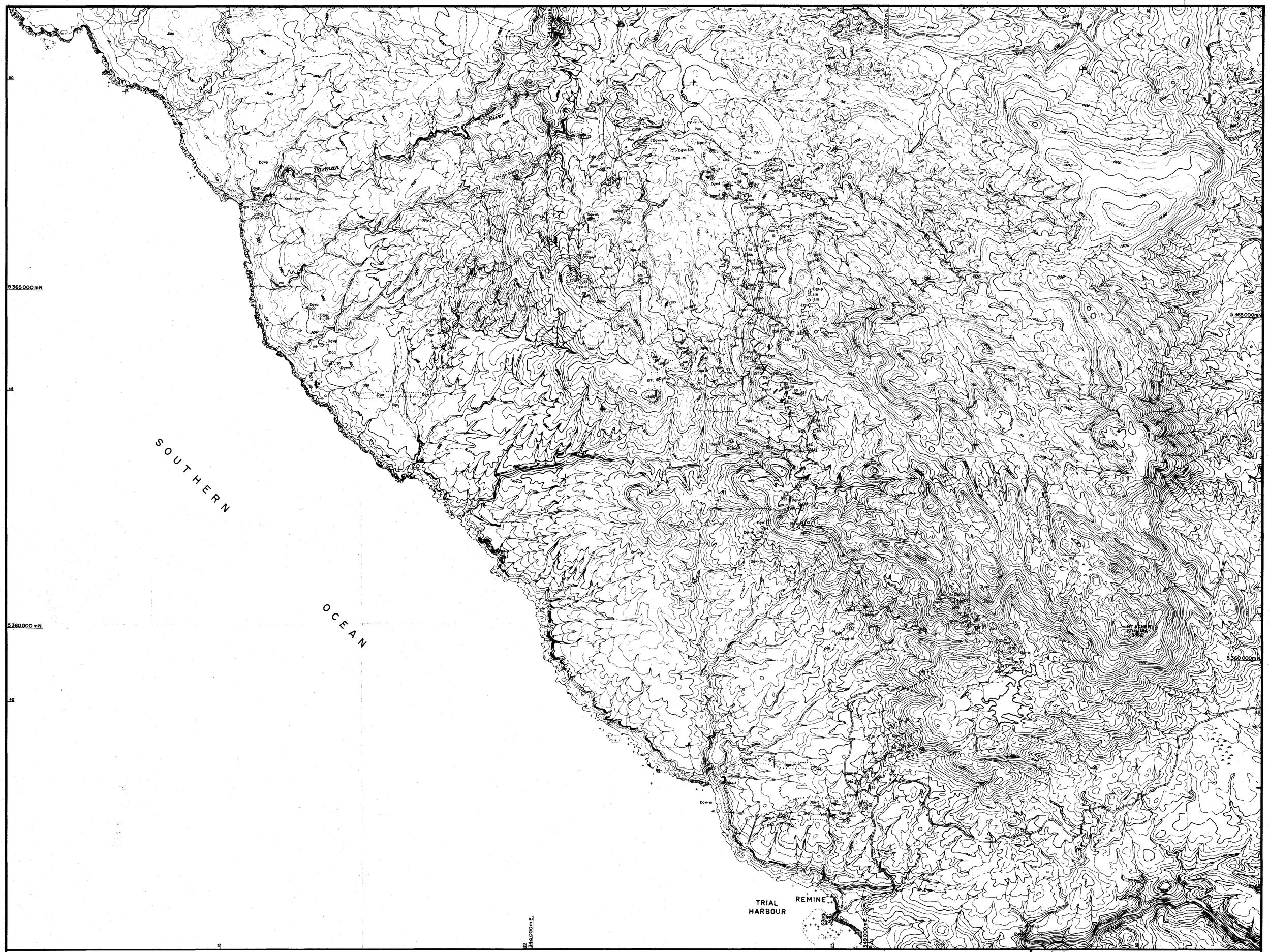
1203



RESULTS

SAMPLE No.	DEPTH	DETAILS	SOIL HORIZON	FRACTION	ASSAYS IN P.P.M. Sn	As	Cu	Pb	Zn	Sb
1	0-40cm	Black and grey, organic rich.	A_1	+1Ø#	20	<2	2	12	14	6
				-1Ø+2Ø#	34	<2	8	30	28	<4
				-2Ø#	100	4	12	30	68	4
	40-48cm	Brown-grey, sandy, + very minor clay, + organic.	A_2 Stopped on b/r	+1Ø#	12	8	2	<8	14	<4
				-1Ø+2Ø#	34	<2	2	25	34	<4
				-2Ø#	100	3	2	30	48	<4
	230-280cm	Mottled sample.		+1Ø#	14	<2	<2	<8	12	<4
				-1Ø+2Ø#	32	7	<2	25	30	<4
				-2Ø#	150	<2	2	30	55	<4
2	0-12cm	Organics + sand.	A_1	+1Ø#	50	20	4	5	22	8
				-1Ø+2Ø#	210	30	12	35	38	12
				-2Ø#	400	55	20	40	65	20
	12-35cm	Brown-grey, granitic sand, minor organics.	A_2	+1Ø#	42	28	4	<5	18	4
				-1Ø+2Ø#	170	90	10	10	36	12
				-2Ø#	500	100	18	30	80	22
	35-48cm	Brown-grey, granitic sand, minor clay (same as mottled sample)	A/B	+1Ø#	95	640	150	20	220	60
				-1Ø+2Ø#	320	600	95	40	320	48
				-2Ø#	520	600	85	45	210	75
	48-66cm	Yellow-brown-grey, clay minor granitic sand.	B	+1Ø#	160	230	22	15	85	34
				-1Ø+2Ø#	210	340	18	35	70	44
				-2Ø#	350	420	34	70	160	85
	66-80cm	Brown-grey, yellow-brown-grey, clay, minor sand + weath'd fg granite.	B/C	+1Ø#	130	380	18	30	100	42
				-1Ø+2Ø#	95	220	14	30	95	30
				-2Ø#	160	340	24	45	150	40
3	0-12cm	Grey, clayey, sand, minor organics, weakly developed.	A_1	+1Ø#	120	8	6	15	14	18
				-1Ø+2Ø#	90	4	4	12	16	22
				-2Ø#	180	9	8	30	18	18
	12-30cm	Grey, clayey, sand, surface & downwards	A_2	+1Ø#	70	2	2	12	17	38
				-1Ø+2Ø#	90	5	2	5	12	18
				-2Ø#	190	11	4	30	24	14
	30-48cm	Grey, clay + minor sand, organics, mottled / forms, with depth (same as mottle sam)	B	+1Ø#	16	20	2	5	20	14
				-1Ø+2Ø#	95	5	<2	5	12	18
				-2Ø#	160	34	4	30	30	8
	48-60cm	Pale grey + brown, mottled, partly ferug. clay minor sand	B	+1Ø#	50	28	2	10	36	12
				-1Ø+2Ø#	44	24	2	5	16	8
				-2Ø#	70	50	2	20	58	6
	60-79cm	Pale grey + white, weathered fg. granite + clay.	B/C	+1Ø#	24	22	4	25	32	4
				-1Ø+2Ø#	11	15	2	<2	18	8
				-2Ø#	36	52	<2	25	42	<4
4	0-15cm	Grey-brown, clayey, sandy soil.	A_2	+1Ø#	26	34	<2	10	38	4
				-1Ø+2Ø#	24	22	<2	15	26	4
				-2Ø#	70	30	4	20	69	<4
	15-45cm	Yellow-grey-brown, clay-rich, minor sand.	B	+1Ø#	38	40	<2	15	60	10
				-1Ø+2Ø#	34	30	<2	15	34	<4
				-2Ø#	70	42	2	35	70	<4
	45-72cm	Yellow-brown, clay-rich, minor sand.	B	+1Ø#	34	34	2	10	55	6
				-1Ø+2Ø#	26	36	2	20	44	4
				-2Ø#	60	50	4	40	96	6
	72-90cm	Yellow-brown, clayey, sand, minor weathered fg granite.	B/C	+1Ø#	18	28	6	20	95	6
				-1Ø+2Ø#	30	34	8	30	78	4
				-2Ø#	40	50	12	60	130	8
	Mottled Sample			+1Ø#	40	42	<2	10	42	12
				-1Ø+2Ø#	32	30	<2	30	38	5
				-2Ø#	72	40	4	35	72	14

SAMPLE No.	DEPTH	DETAILS	SOIL HORIZON	FRACTION	ASSAYS IN P.P.M. Sn	As	Cu	Pb	Zn	Sb
5	0-5 cm	Dark grey, clay + organics, weakly developed.	A_1	+1Ø#	12	2	2	15	12	<4
				-1Ø+2Ø#	8	2	2	22	14	<4
				-2Ø#	24	4	4	40	24	<4
	5-25 cm	Coarse granitic sand, minor clay.	A_2	+1Ø#	12	<2	2	10	4	4
				-1Ø+2Ø#	12	2	<2	10	8	<4
				-2Ø#	24	2	2	25	22	<4
	35-45 cm	Grey, coarse granitic sand, very minor clay (same as mottled sample)	A_2	+1Ø#	8	<2	2	5	<2	<4
				-1Ø+2Ø#	14	<2	<2	15	12	4
				-2Ø#	28	4	14	40	28	<4
	45-61 cm	Grey, coarse granitic sand, + weathered granite frags.(?)	A/C	+1Ø#	6	<2	2	12	4	<4
				-1Ø+2Ø#	12	2	<2	22	12	<4
				-2Ø#	30	2	2	38	24	<4
6	0-12 cm	Dark grey-brown + black, sandy, organic-rich, minor clay.	A_1	+1Ø#	14	2	2	12	12	<4
				-1Ø+2Ø#	20	4	2	32	36	<4
				-2Ø#	70	8	2	42	58	8
	12-30 cm	Pale brown-grey granitic sand, minor clay.	A_2	+1Ø#	12	<2	2	8	22	<4
				-1Ø+2Ø#	14	<2	2	28	42	<4
				-2Ø#	85	6	2	25	160	4
	30-55 cm	Yellow-brown-grey, clay-rich, minor sand.	B	+1Ø#	24	14	<2	8	55	<4
				-1Ø+2Ø#	32	20	<2	15	100	8
				-2Ø#	55	32	2	45	180	<4
	55-80 cm	Brown, clay + sand, partly ferrug.	B	+1Ø#	14	18	<2	12	60	<4
				-1Ø+2Ø#	22	30	<2	25	130	4
				-2Ø#	32	42	2	45	190	4
	Mottled Sample		B	+1Ø#	4	<2	<2	5	28	<4
				-1Ø+2Ø#	18	<2	<2	12	92	<4
				-2Ø#	55	3	2	22	250	4
7	0-12 cm	Dark grey, sand, silt, clay, organics.	$A_1/_2$	+1Ø#	10	<2	2	5	8	<4
				-1Ø+2Ø#	16	2	<2	20	8	4
				-2Ø#	30	4	<2	25	18	<4
	12-50 cm	Grey sand + lesser silt, clay, minor organics.	A_2	+1Ø#	10	<2	<2	12	6	4
				-1Ø+2Ø#	12	<2	2	20	8	<4
				-2Ø#	22	2	2	22	12	<4
	50-58cm	Grey sand + lesser silt, clay. Stopped on b/r or gravel (?)	A_2	+1Ø#	<4	<2	<2	<5	2	<4
				-1Ø+2Ø#	14	<2	<2	20	6	<4
				-2Ø#	22	3	2	22	14	<4
8	0-12 cm	Dark brown-grey sand, clay + minor organics.	$A_{1/2}$	+1Ø#	72	<2	2	10	14	<4
				-1Ø+2Ø#	75	<2	2	20	12	8
				-2Ø#	160	<2	2	25	38	<4
	12-30 cm	Grey - brown sand + clay.	A_2	+1Ø#	50	<2	<2	12	6	<4
				-1Ø+2Ø#	85	<2	<2	20	12	8
				-2Ø#	190	2	2	35	36	8
	30-45 cm	Pale brown-grey, coarse sand, minor clay (same as mottled sample)	A_2	+1Ø#	70	<2	<2	5	4	8
				-1Ø+2Ø#	122	2	2	20	6	<4
				-2Ø#	220	2	<2	40	34	<4
	45-90 cm	Pale brown-grey, coarse sand, minor clay. Stopped on fresh bedrock.	A_2	+1Ø#	42	<2	<2	8	6	<4
				-1Ø+2Ø#	110	2	<2	15	6	4
				-2Ø#	190	2	2	45	12	8
9	0-30 cm	Dark brown-grey to black organics + minor ely. sand + clay.	A_1	+1Ø#	8	<2	<2	12	4	8
				-1Ø+2Ø#	18	<2	<2	12	4	<4
				-2Ø#	28	<2	2	20	8	<4
	30-45 cm	Grey - brown + pale brown, coarse ely. sand + minor clay (same as mottled sample)	A_2	+1Ø#	6	<2	<2	5	2	<4
				-1Ø+2Ø#	14	<2	2	12	8	<4
				-2Ø#	20	<2	2	15	12	4
	45-62 cm	Pale brown, coarse ely. sand, minor clay.	A_2	+1Ø#	8	<2	4	20	12	<4
				-1Ø+2Ø#	14	<2	<2	20	8	<4
				-2Ø#	28	<2	<2	25	12	8
	62-80cm	Grey-brown, clay + coarse ely. sand + gravel layers.	A_2	+1Ø#	<4	<2	4	5	2	<4
				-1Ø+2Ø#	4	<2	8	20	6	4
				-2Ø#	24	<2	<2	25	12	8



LEGEND

Tertiary

Tg	Gravels

Cambrian

Єc	Crimson Creek Formation

Precambrian

Puo	Oonah Formation

IGNEOUS ROCKS

Td	Tertiary Basalt

Devonian Heemskirk Granite

	Dga	Aplite Granite	
'White' granite	Dgw-f	Fine grained	White coloured biotite granite, commonly with tourmaline segregations and nodules. Occasional minor muscovite.
	Dgw-m	Medium grained	
	Dgw-c	Coarse grained	
	Dgw-p	Porphyritic	
	Dgw-i	'Intermediate' granite. Fine to medium grained all feldspars are red coloured; abundant tourmaline nodules generally near contacts.	
'Red' granite	Dgr-f	Fine grained	Biotite granite with pink K-feldspar and plagioclase; minor tourmaline mostly as joint fillings.
	Dgr-m	Medium grained	
	Dgr-c	Coarse grained	
	Dgr-p	Porphyritic	

NOTE: Fine grained is defined as less than 2mm average grain size, medium grained as 2-5mm average grain size and coarse grained as greater than 5mm average grain size.

Alteration

- Quartz-tourmaline-topaz
- Quartz-topaz
- Quartz-muscovite sericite greisen
- "Green" alteration (sericitized granite) generally with hematite or pyrite
- Argillic alteration

SYMBOLS

- L——L Lineament
- F——F Fault
- Geological Boundaries: Definite; Approximate; Inferred
- 20° Dip and strike of contact between granite types.
- Vertical contact between granite types.
- Dip and strike of bedding.
- Limit of mapped area
- Rock description location
- Rock sample location
- Assayed rock sample location (Samples prefixed "HSK")

81-1629
CN=1 2(4)

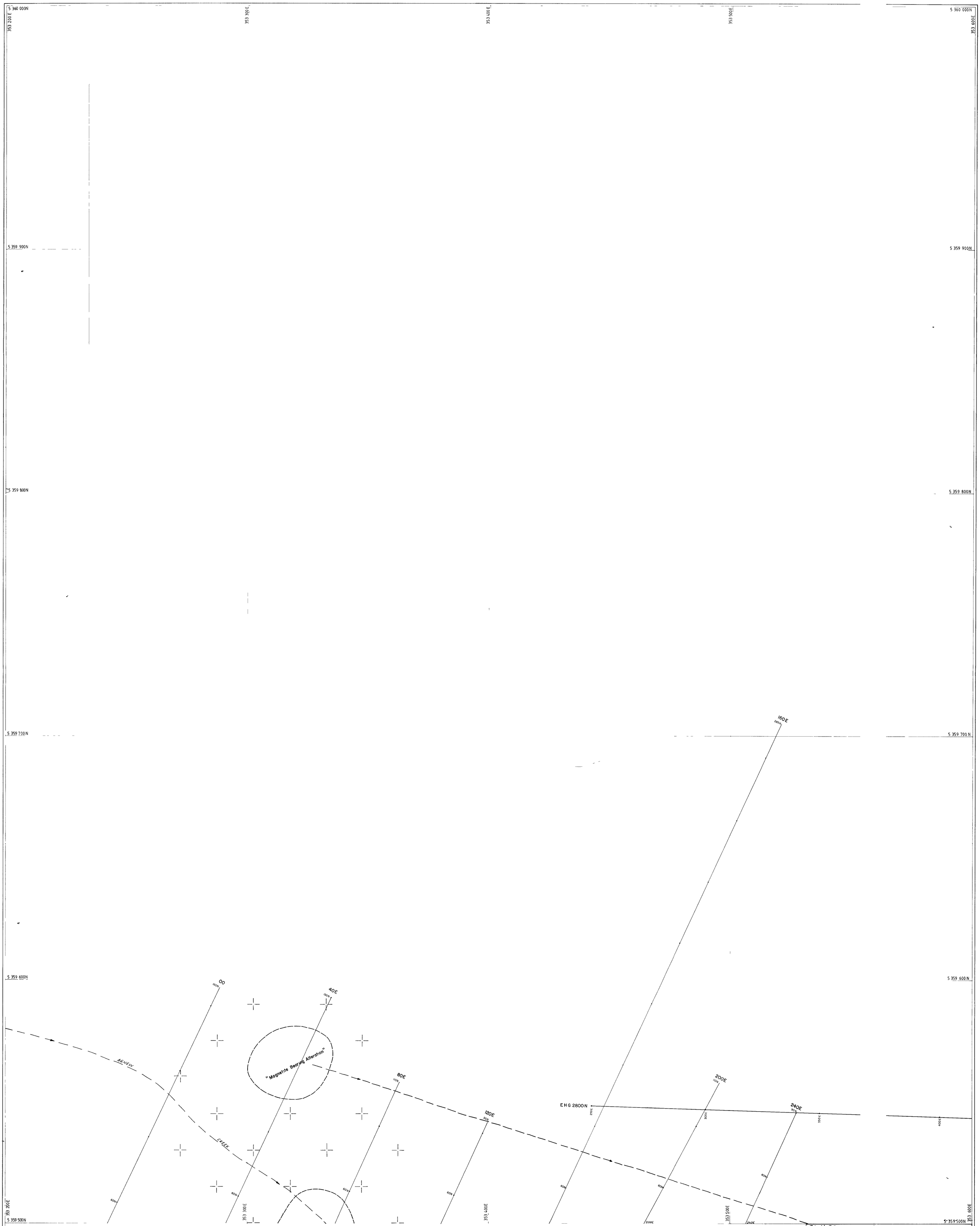
RENISON LIMITED

HEEMSKIRK GRANITE AREA.
919494
GEOLOGICAL MAP

GEOLOGIST : R.P.	SCALE: 1:25,000 METRES (500 0 500 1000)
DRAUGHTSMAN : T.G.D.S.	
DATE : July 1981	
REVISIONS :	DRAWING NO. PLAN 12

5 cm

1204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353 200E
353 300E
353 400E
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160E
285N
00
160N
40E
150N
80E
110N
120E
95N
200E
110N
240E
90N
EHG 2800N
270E
300E
350E
400E
AGNEW
CREEK
"Magnetite Bearing Alteration"
60N
200E
240E
LEGEND
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Quartz and topaz and/or tourmaline
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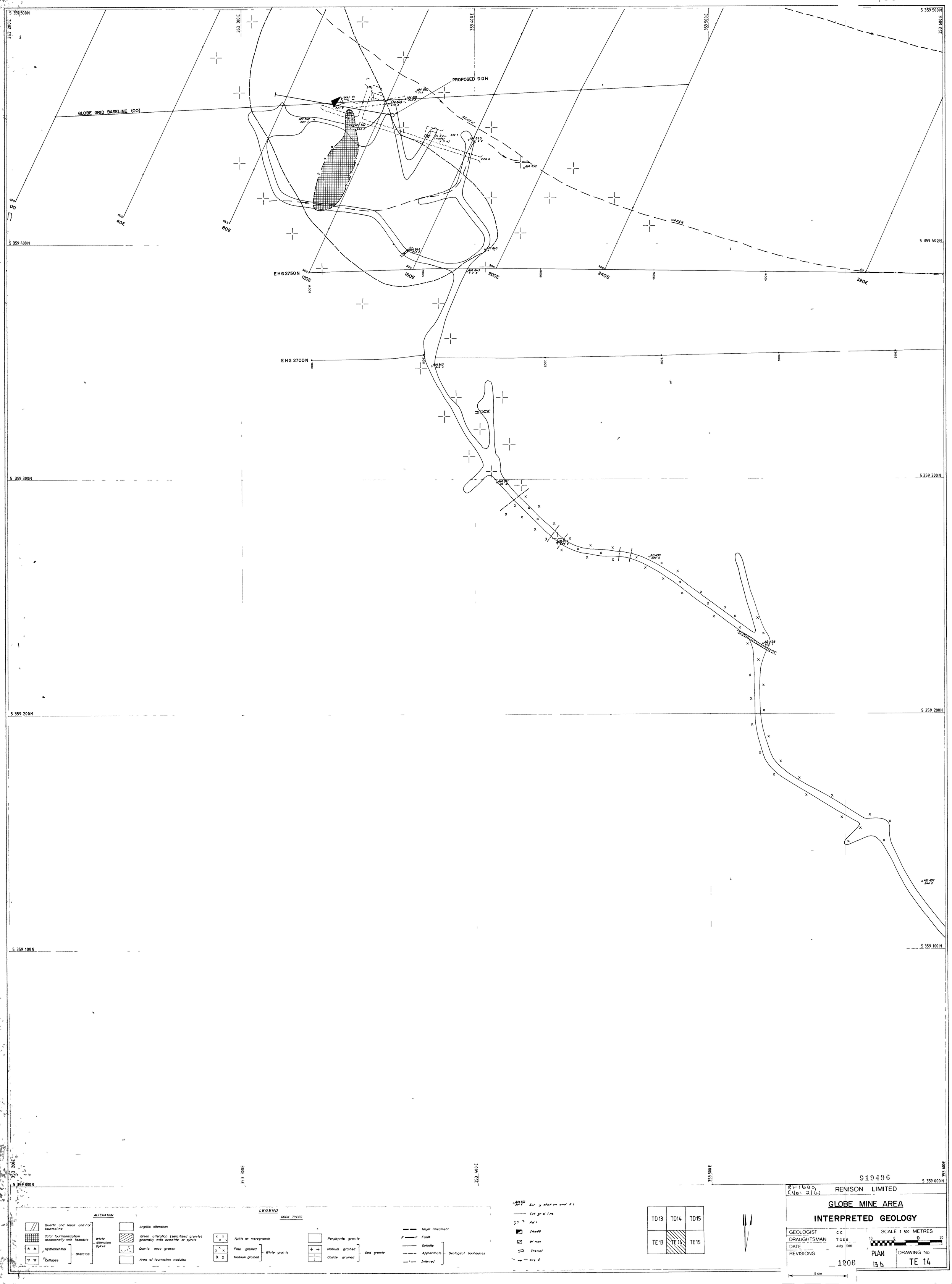
Inferred
Geological boundaries
AM 841 Survey station and RL
Cutgwline
Adit
Shaft
Winze
Trench
Creek
TD13
TD14
TD15
TE13
TE14
TE15
5 cm
81-1629
(4012/4)
RENISON LIMITED
GLOBE MINE AREA
919495
INTERPRETED GEOLOGY
GEOLOGIST C C
DRAUGHTSMAN T G D S
DATE July 1981
REVISIONS
SCALE 1 500 METRES
10 0 10 20
PLAN Ba
DRAWING No TD 14

1206


5 359 500N
353 200E
353 300E
353 400E
353 500E
353 600E
PROPOSED DDH
GLOBE GRID BASELINE (00)
AGNEW
CREEK
00
40E
80E
120E
160E
200E
240E
320E
EHG 2750N
EHG 2700N
5 359 400N
5 359 300N
5 359 200N
5 359 100N
5 359 000N
AM 850
AM 851
AM 849
AM 848
AM 847
AM 845
AM 852
AM 844
AM 846
AM 843
AM 842
AM 841
AB 499
AB 498
AB 497
LEGEND
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
White Alteration Dykes
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Red granite
Major lineament
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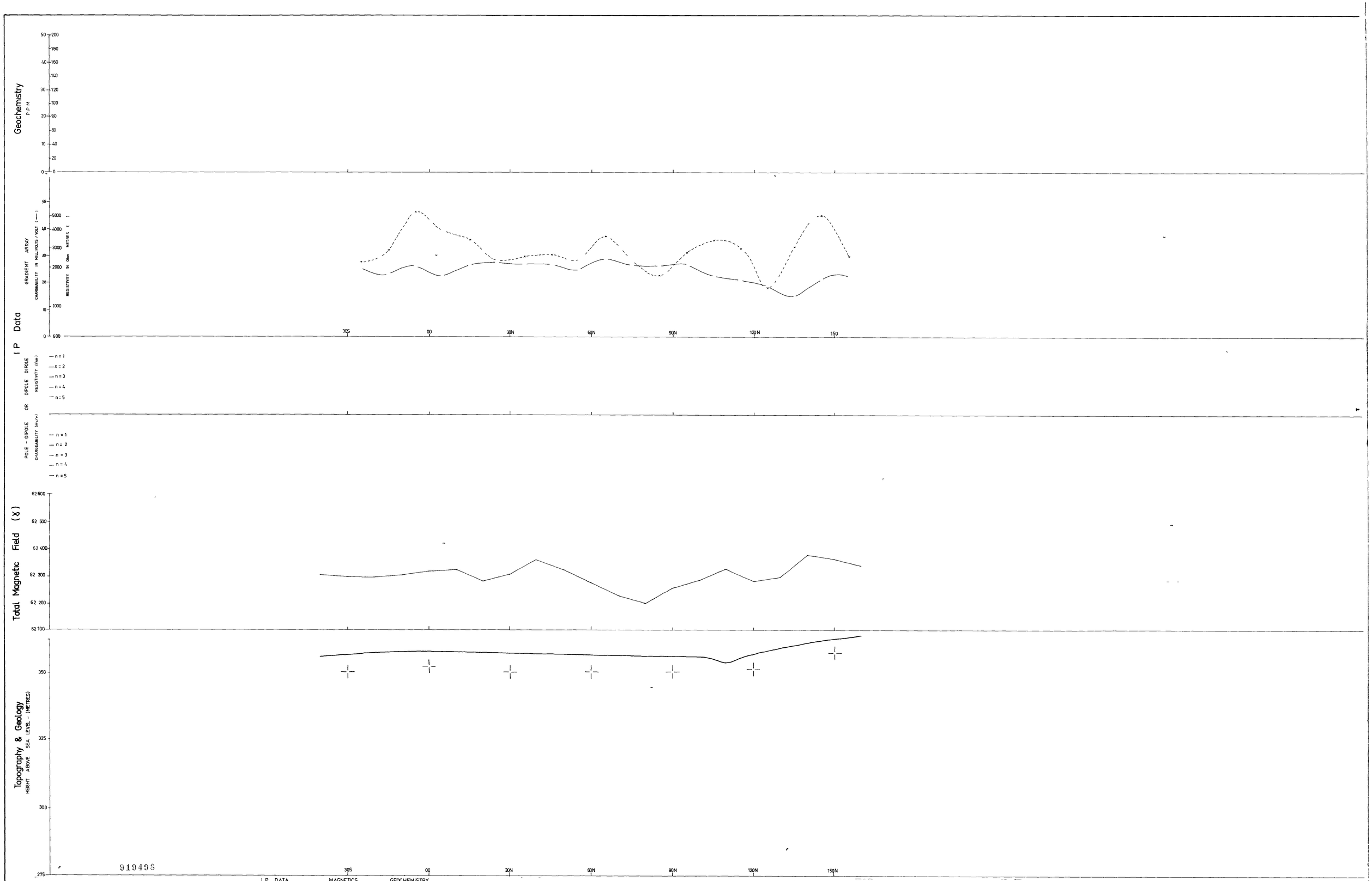
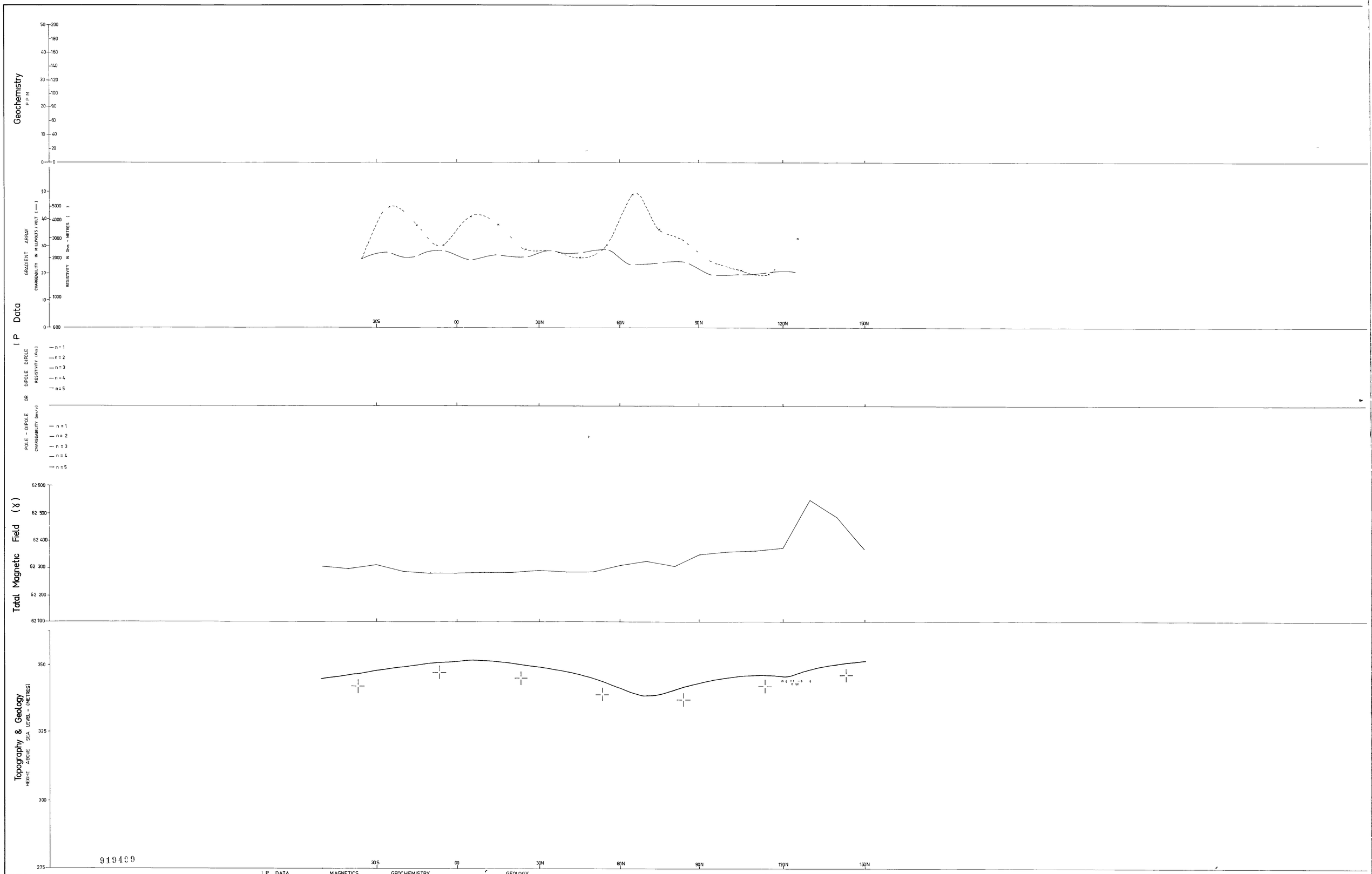
Inferred
Geological boundaries
Survey station and R.L.
Cut grid line
Adit
Shaft
Winze
Trench
Creek
TD13
TD14
TD15
TE13
TE14
TE15
919496
81-1629
C(01 2/4)
RENISON LIMITED
GLOBE MINE AREA
INTERPRETED GEOLOGY
GEOLOGIST C C
DRAUGHTSMAN T G D S
DATE July 1981
REVISIONS
SCALE 1 500 METRES
10 0 10 20
PLAN 13b
DRAWING No TE 14
1206
5 cm


Geochemistry
PPM
50 200
180
40 160
140
30 120
100
20 80
60
10 40
20
0 0
I P Data
GRADIENT ARRAY
CHARGEABILITY IN MILLIVOLTS / VOLT (—)
RESISTIVITY IN Ohm METRES ( )
50
5000
40 4000
30 3000
20 2000
10 1000
0 600
30S
00
30N
60N
90N
120N
150
POLE - DIPOLE OR DIPOLE DIPOLE
RESISTIVITY (Ωm)
— n = 1
— n = 2
— n = 3
— n = 4
— n = 5
CHARGEABILITY (mv/v)
— n = 1
— n = 2
— n = 3
— n = 4
— n = 5
Total Magnetic Field (γ)
62 600
62 500
62 400
62 300
62 200
62 100
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)
350
325
300
275
919498
30S
00
30N
60N
90N
120N
150N
81-1629
(V01 3116)
RENISON LIMITED
GLOBE MINE GRID SPL 129
LINE 00
SECTION LOOKING W
1203
SCALE 1:500 METRES
10 0 10 20 30
DRAWN C C
TRACED P A R
DATE
SCALE 1:500
DRAWING No.
PLAN
15 A
I P DATA
CHARGEABILITY & RESISTIVITY
S Anomaly letter number
MAGNETICS
5 cm
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
LEGEND
ALTERATION
Quartz and topaz and / or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
B ecc ns
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules
ROCK TYPES
Aplite or microgranite
Fine grained
medium grained
White granite
Porphyritic granite
Medium grained
Coarse g a ined
Red granite
Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries



919439

81/1639 (V01 2/9) RENISON LIMITED	DRAWN: C C
	TRACED: P A R
GLOBE MINE GRID S P L 129	DATE:
LINE 40E	SCALE: 1 500
SECTION LOOKING W 1200	DRAWING No.
SCALE 1 500 METRES 10 0 10 20 30	Plan 15 B

I P DATA

CHARGEABILITY & RESISTIVITY

S Anomaly Letter number

5 cm

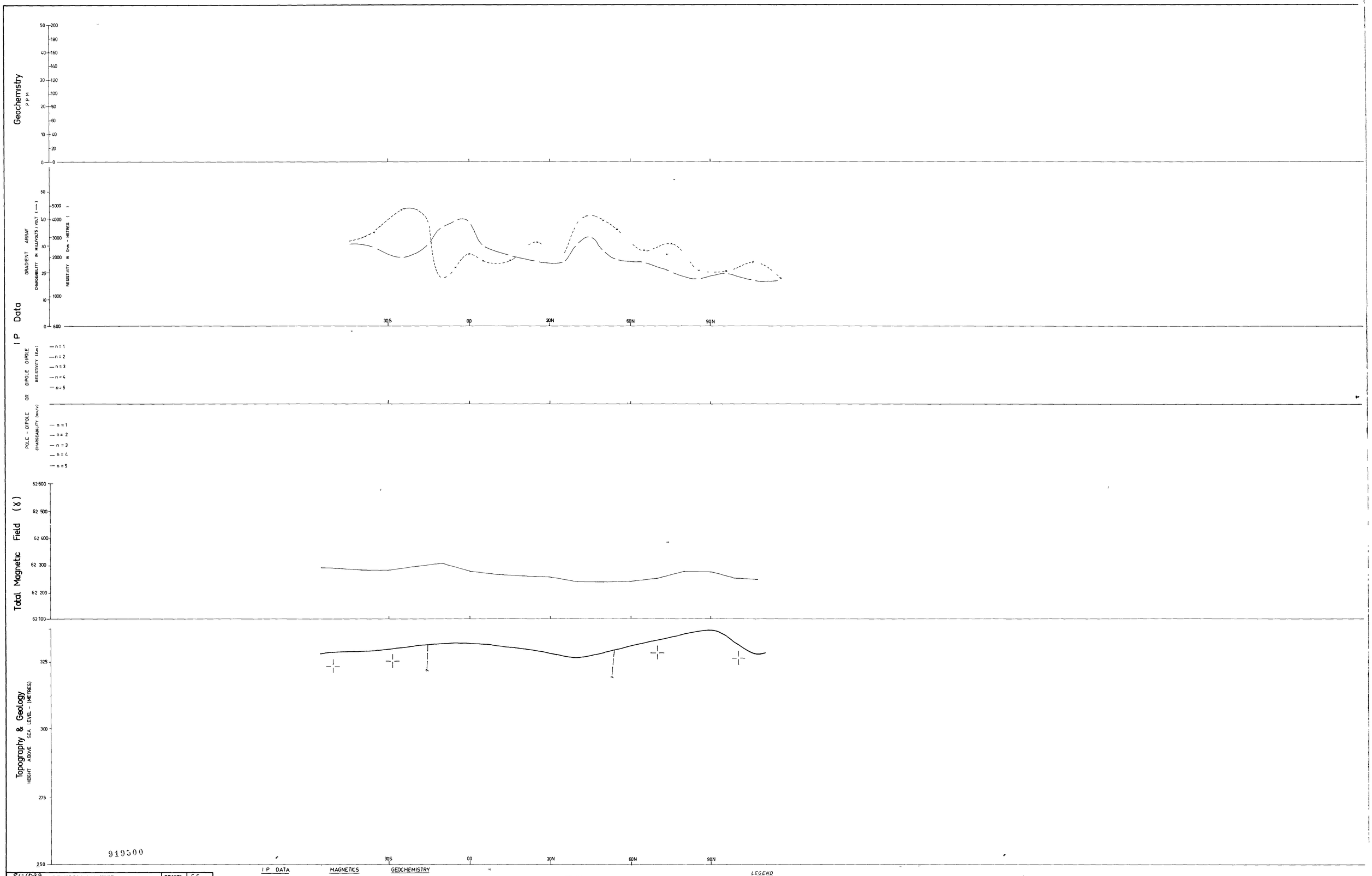
MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

GEOLOGY

Geology as on geological map



81-1629
CV1 3/4

RENISON LIMITED

GLOBE MINE GRID SPL 129

LINE 80E

SECTION LOOKING W 1210

SCALE 1: 500 METRES

DRAWN	C C
TRACED	P A R
DATE	
SCALE	1 500
DRAWING No.	PLAN 15 C

I P DATA

CHARGEABILITY & RESISTIVITY

S Anomaly Letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

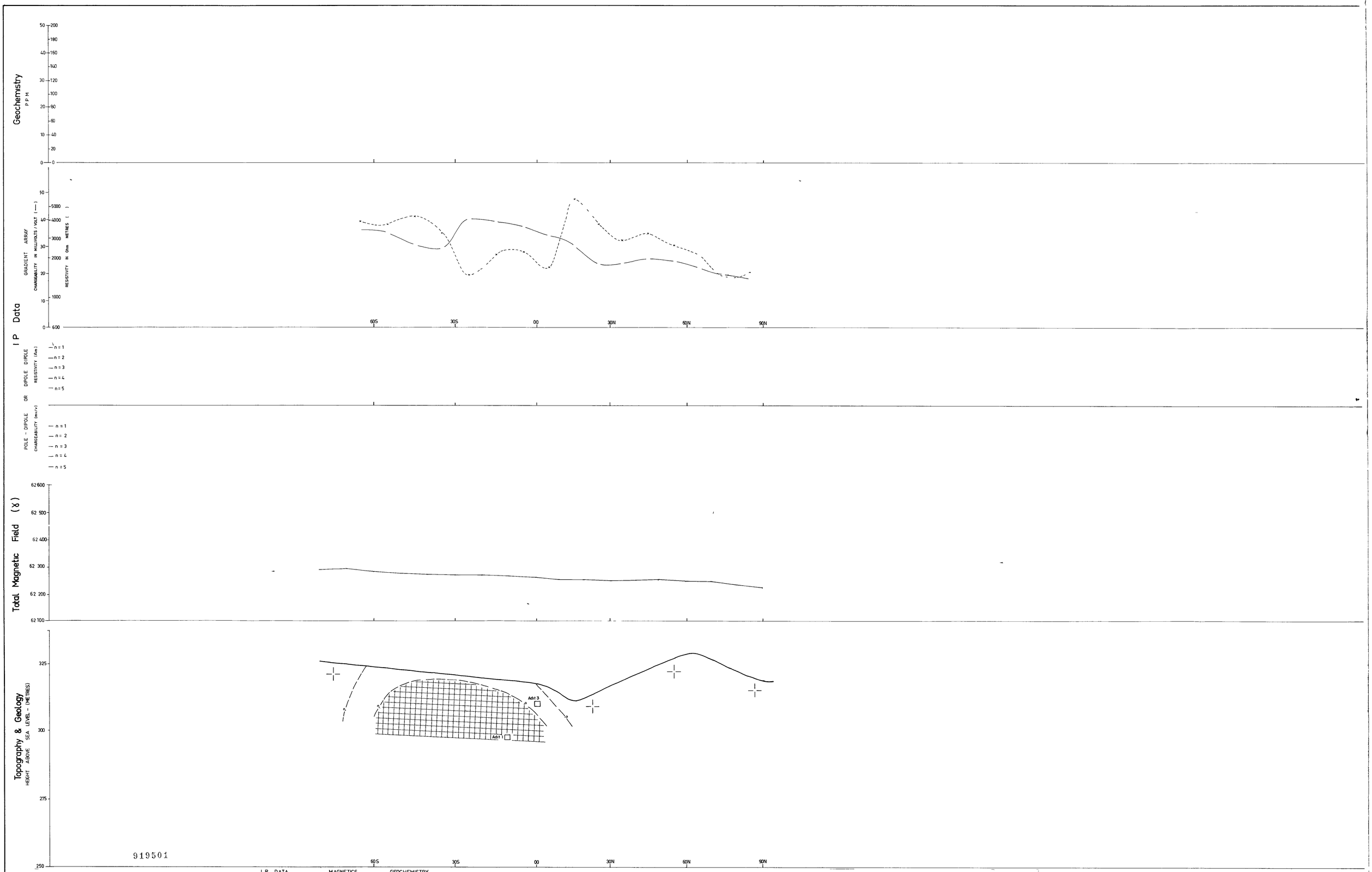
ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
White Alteration Dykes
Hydrothermal
Collapse
Breccias
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F F Fault
Definite
Approximate
Inferred
Geological boundaries



81-1629
(161 3/4)

RENISON LIMITED

GLOBE MINE GRID SPL 129

LINE 120E

SECTION LOOKING W

1211

SCALE 1:500 METRES

10 0 10 20 30

DRAWN	C C
TRACED	P A R
DATE	
SCALE	1 500
DRAWING No.	
PLAN	
15 D	

I P DATA

CHARGEABILITY & RESISTIVITY

S Anomaly Letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

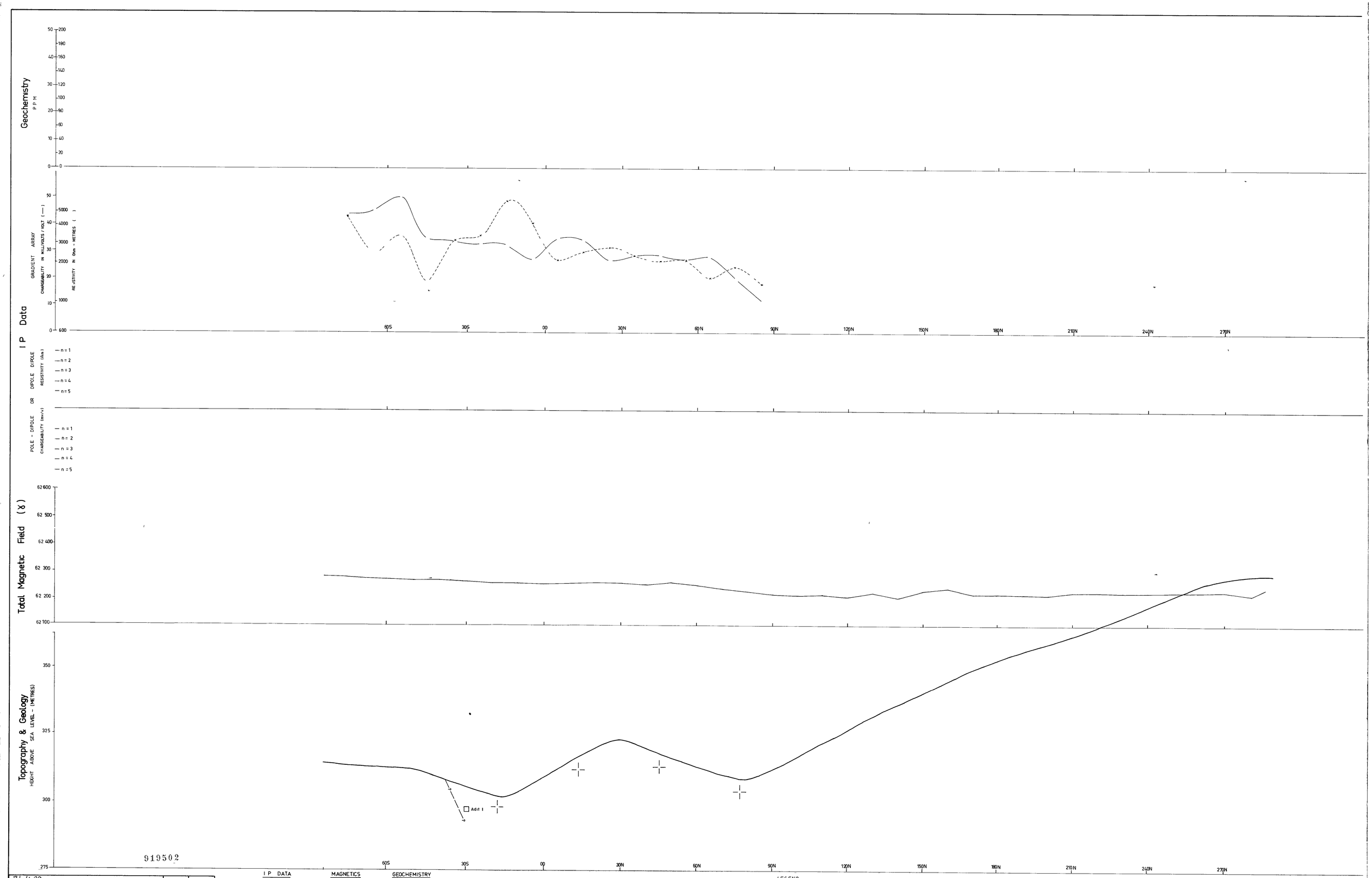
Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica gresen
Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Rea granite

Major lineament
F —— F Fault
Definite
Approximate
Inferred
Geological boundaries



81-1629
C/W01 314

RENISON LIMITED

GLOBÉ MINE GRID SPL 129

LINE 160E

SECTION LOOKING W

1212

SCALE 1:500 METRES

DRAWN	C C
TRACED	P A R
DATE	
SCALE	1 500
DRAWING No.	
PLAN	
15 E	

I P DATA

CHARGEABILITY & RESISTIVITY

S Anomaly letter number

MAGNETICS

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

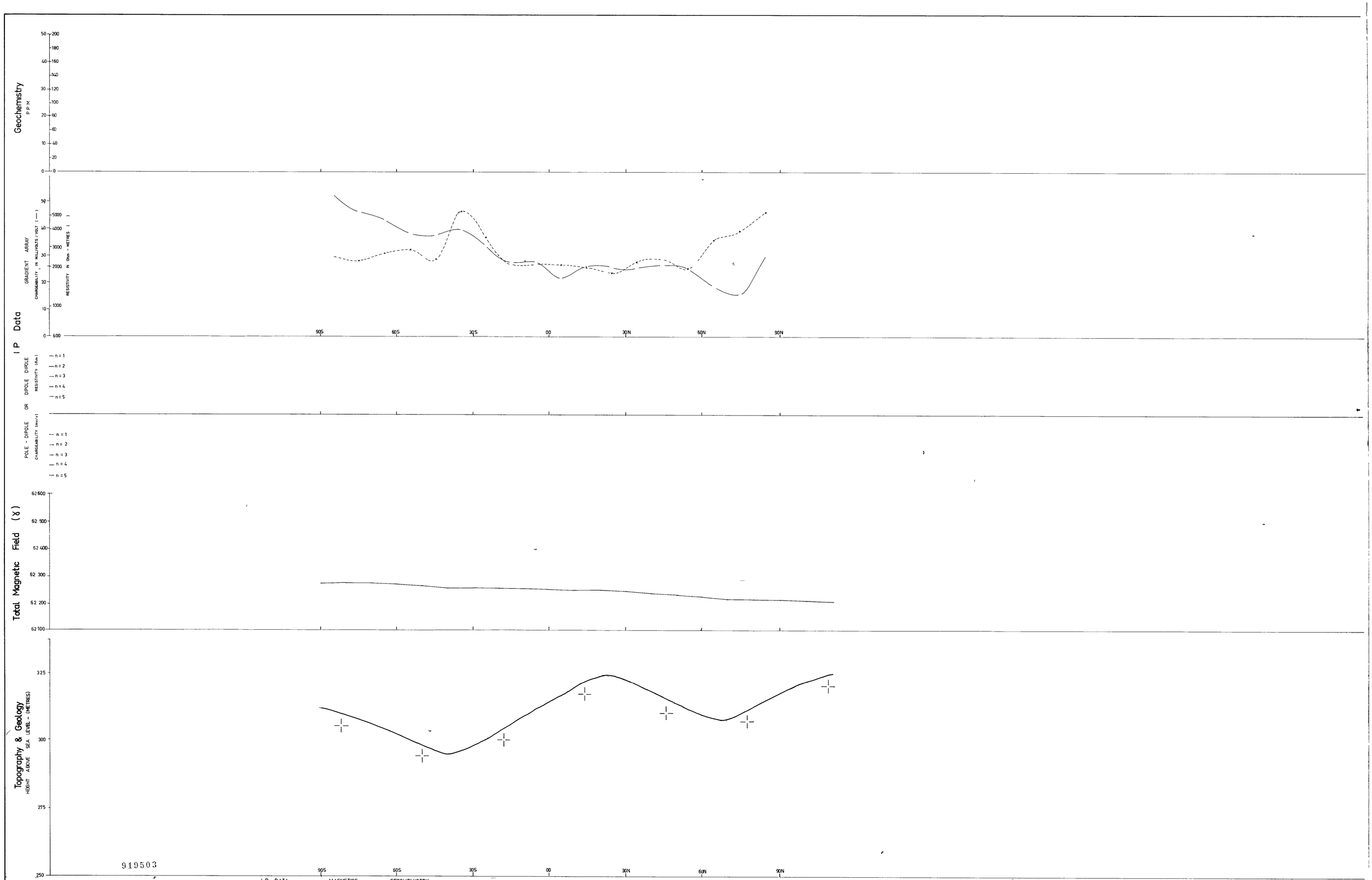
ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries



81 1629
(No 1 3/4)

RENISON LIMITED

GLOBE MINE GRID SPL 129

LINE 200E

SECTION LOOKING W

1213

SCALE 1: 500 METRES

DRAWN	C C
TRACED	P A R
DATE	
SCALE	1 500
DRAWING No.	
PLAN 15 F	

I P DATA

CHARGEABILITY & RESISTIVITY

S Anomaly Letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and / or tourmaline
Total tourmalinization (occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Cycle

Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

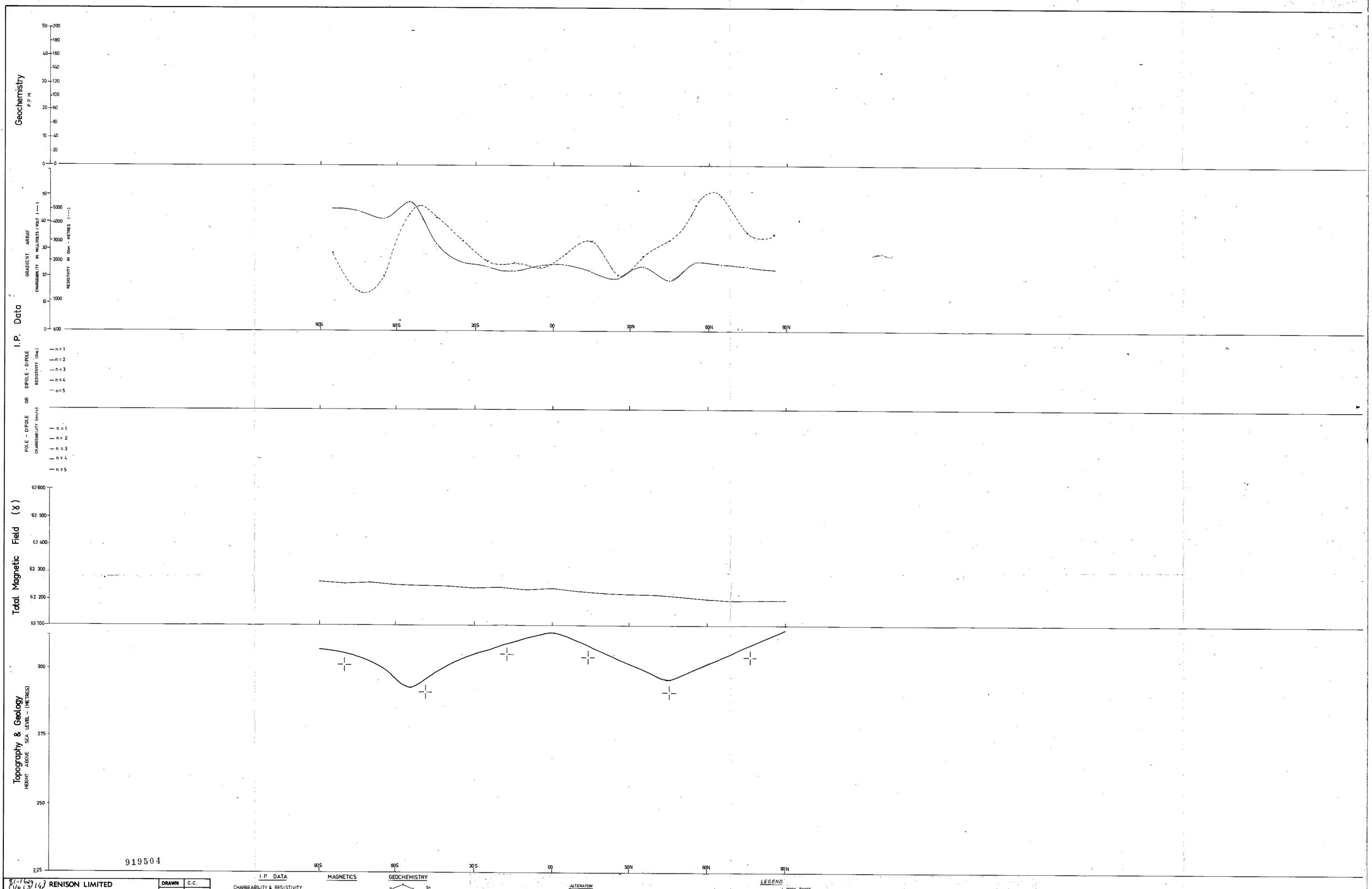
LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite

Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F — F Fault
Definite
Approximate
Inferred
Geological boundaries



(81-1629 / 82-1314) RENISON LIMITED	DRAWN	C.C.
	TRACED	P.A.R
GLOBE MINE GRID S.P.L. 129	DATE	
LINE 240E	SCALE	1:500
SECTION LOOKING W	DRAWING No.	PLAN 15 G

SCALE 1:500 METRES 10 0 10 20 30

I.P DATA

CHARGEABILITY & RESISTIVITY

S. Anomaly Letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

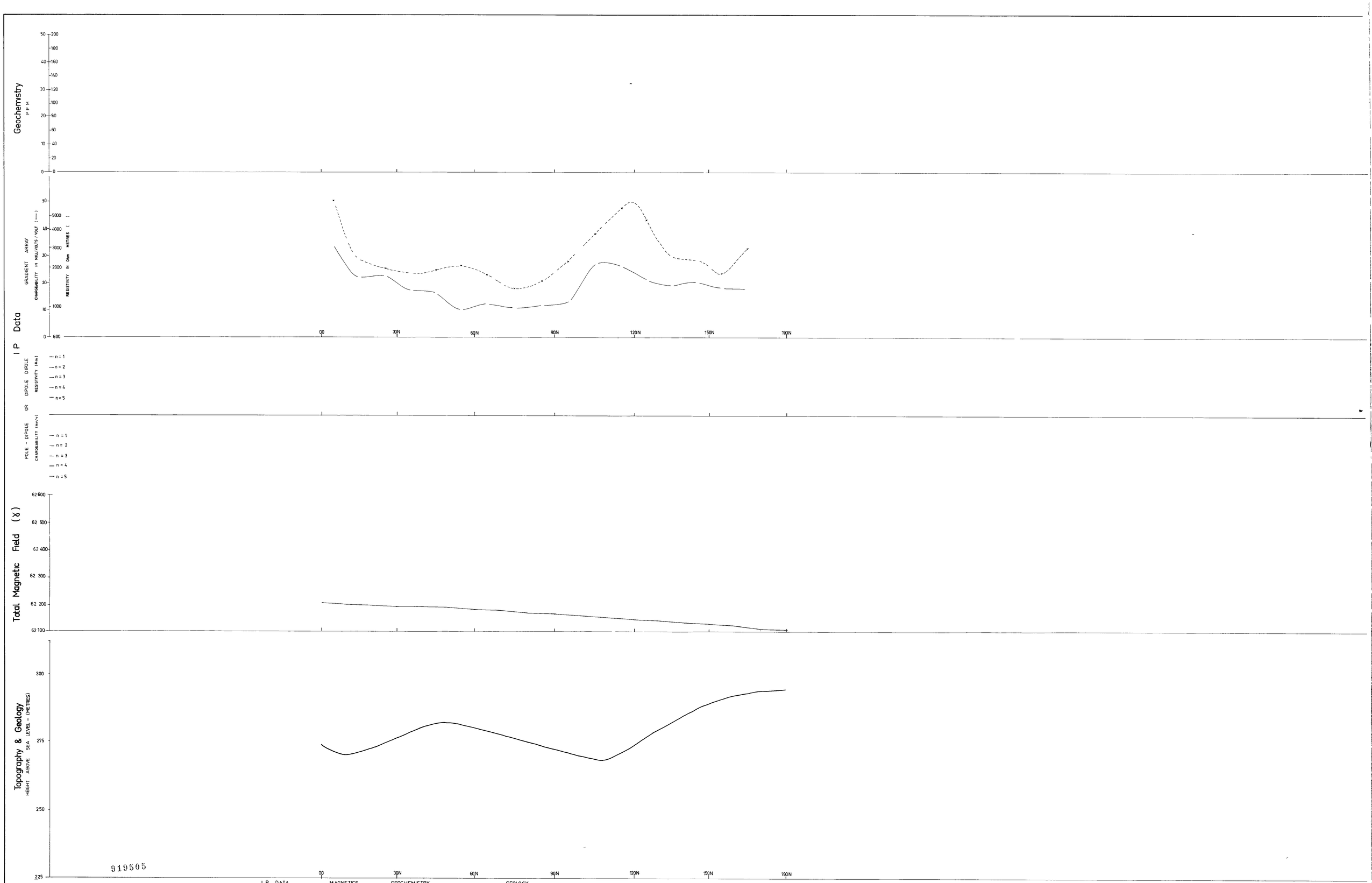
ALTERATION

Quartz and topaz and / or tourmaline
Total tourmalinization, occationally with bentutite
Hydrothermal
Collapse
Breccias
White Alteration "Dykes"
Argillic alteration
"Green" alteration (sericitized granite) generally with hematite or pyrite
Quartz - mica greisen
Area of tourmaline nodules

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
Fault
Definite
Approximate
Inferred
Geological boundaries



919505

81/1639
C(a) 3/(a)

RENISON LIMITED

GLOBE MINE GRID SPL 129

LINE 320E

SECTION LOOKING W

SCALE. 1. 500 METRES

10 0 10 20 30

DRAWN	C C
TRACED	P A R
DATE	
SCALE	1 500
DRAWING No.	

Plan 15H

I P DATA

CHARGEABILITY & RESISTIVITY

S Anomaly Letter number

5 cm

MAGNETICS

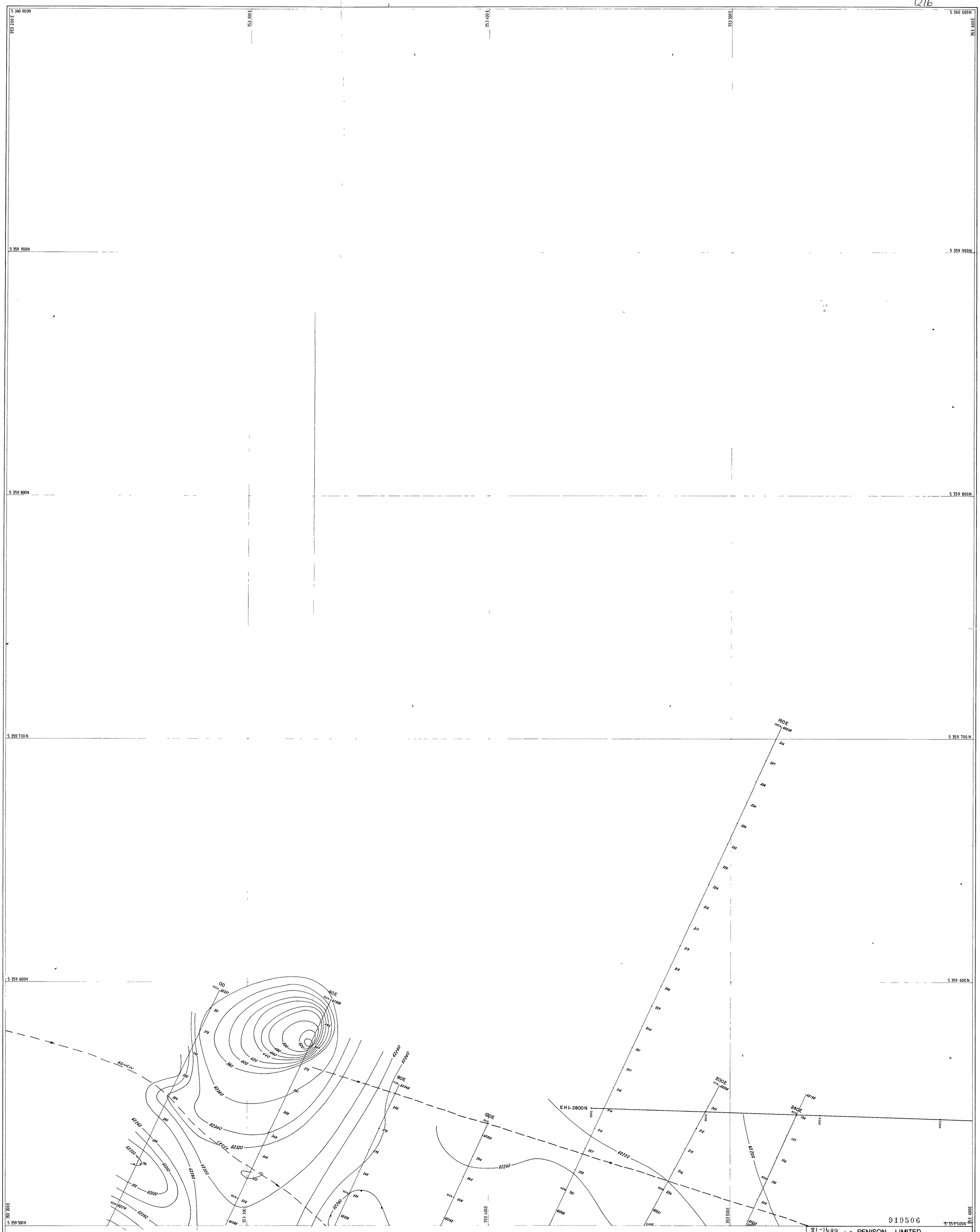
GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

GEOLOGY

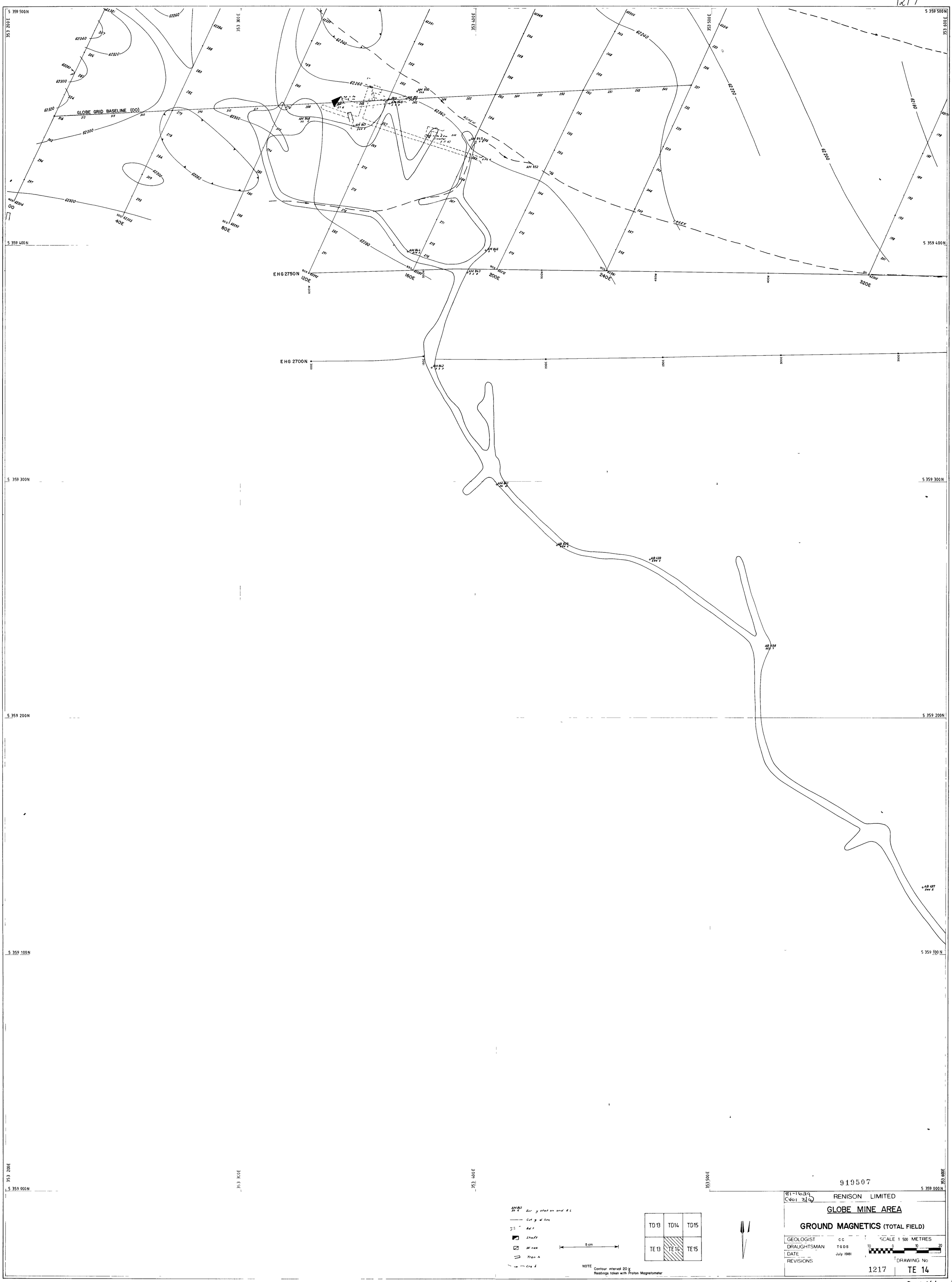
Geology as on geological map

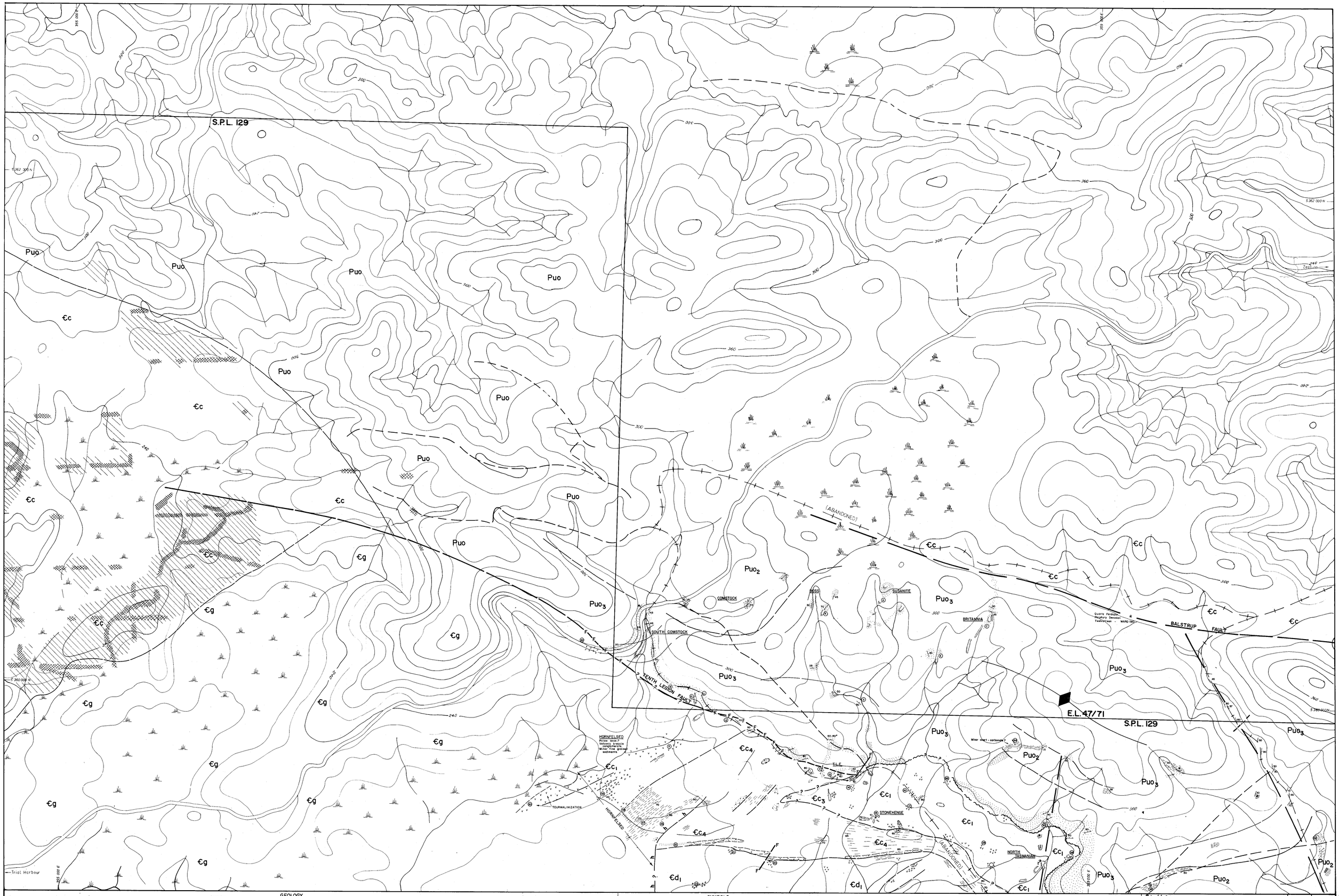
1216

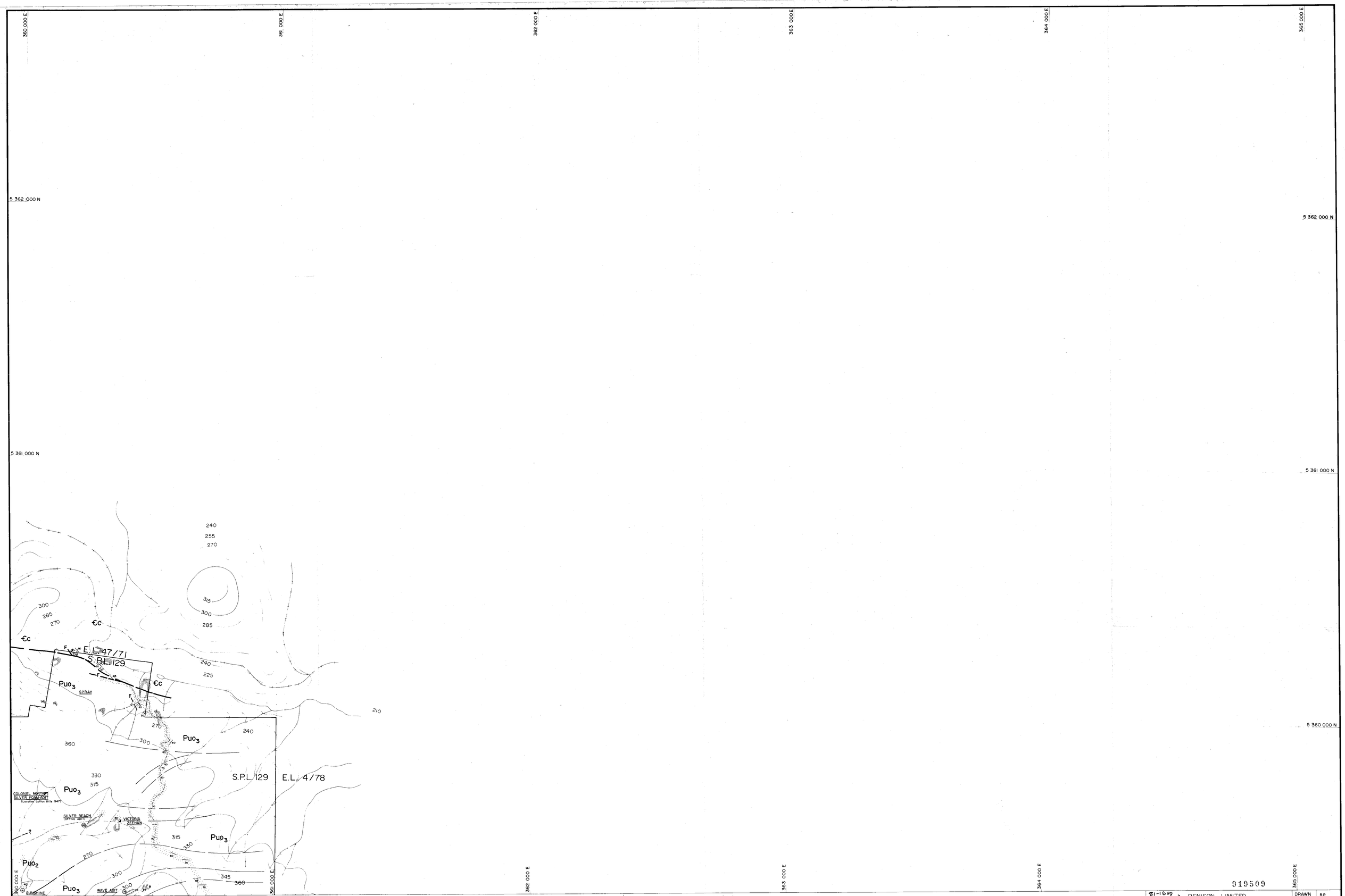


PLAN 16a

1217


GLOBE GRID BASELINE (00)
EHG 2750N
EHG 2700N
CREEK
5 359 500N
5 359 400N
5 359 300N
5 359 200N
5 359 100N
5 359 000N
353 200E
353 300E
353 400E
353 500E
353 600E
00
40E
80E
120E
160E
200E
240E
320E
AM 842
AM 841
AB 499
AB 498
AB 497
Surveyed station and R.L.
Cut grid line
Adit
Shaft
Winze
Trench
Creek
5 cm
TD 13
TD 14
TD 15
TE 13
TE 14
TE 15
NOTE
Contour interval 20 γ
Readings taken with Proton Magnetometer
919507
81-1629
CV01 3/4
RENISON LIMITED
GLOBE MINE AREA
GROUND MAGNETICS (TOTAL FIELD)
GEOLOGIST CC
DRAUGHTSMAN TGDS
DATE July 1981
REVISIONS
SCALE 1 500 METRES
10 0 10 20
DRAWING No
1217
TE 14
PLAN 16 b


S.P.L. 129
E.L. 47/71
S.P.L. 129
Puo
Puo
Puo



GEOLOGY

Quaternary
- Qro — Recent Alluvium

Tertiary ?
- Ironstone Outcrop, Scree, includes Magnetite, Limonite, Ferruginous Mud, Gossan.
- Iron Rich Soils, Ironstone Scree, Lateritic Development.

Ordovician
- Oz — Mt Zeehan Conglomerate

Cambrian
Dundas Group
- €Ds — Black Siltstone
- €d2 — Greywacke, Siltstone, Sandstone, Quartzite, Carbonate
- €d1 — Siltstone, Greywacke, Conglomerate

Crimson Creek Formation
- €c4 — Siltstone, Grit - Conglomerate
- €c3 — Conglomerate
- €c2 — Chert
- €c1 — Basic Volcanics, Undifferentiated.

Precambrian
Oonah Formation
- Puo3 — Quartzite and Siltstone.
- Puo2 — Siltstone, minor Quartzite, Carbonate.
- Puo1 — Spilite.

IGNEOUS ROCKS
- Dg — Devonian Granite and Adamellite.
- €g — Cambrian Gabbro

SYMBOLS

- Geological boundary
- Geological boundary unconformable and/or fault
- Limit of hornfelsing
- Fault and linear negative topographic features
- Lode, open shape
- Dip and strike of bedding
- Dip and strike of bedding overturned
- Dip and strike of foliation
- Anticline, syncline axis
- Trend bedding
- Rock sample location
- Mine workings, Adit
- Shaft
- Dump

5 cm

ZEEHAN D/1-1	ZEEHAN D/1-2
	ZEEHAN D/1-4

919509

81-1609
C101 B(4)

RENISON LIMITED

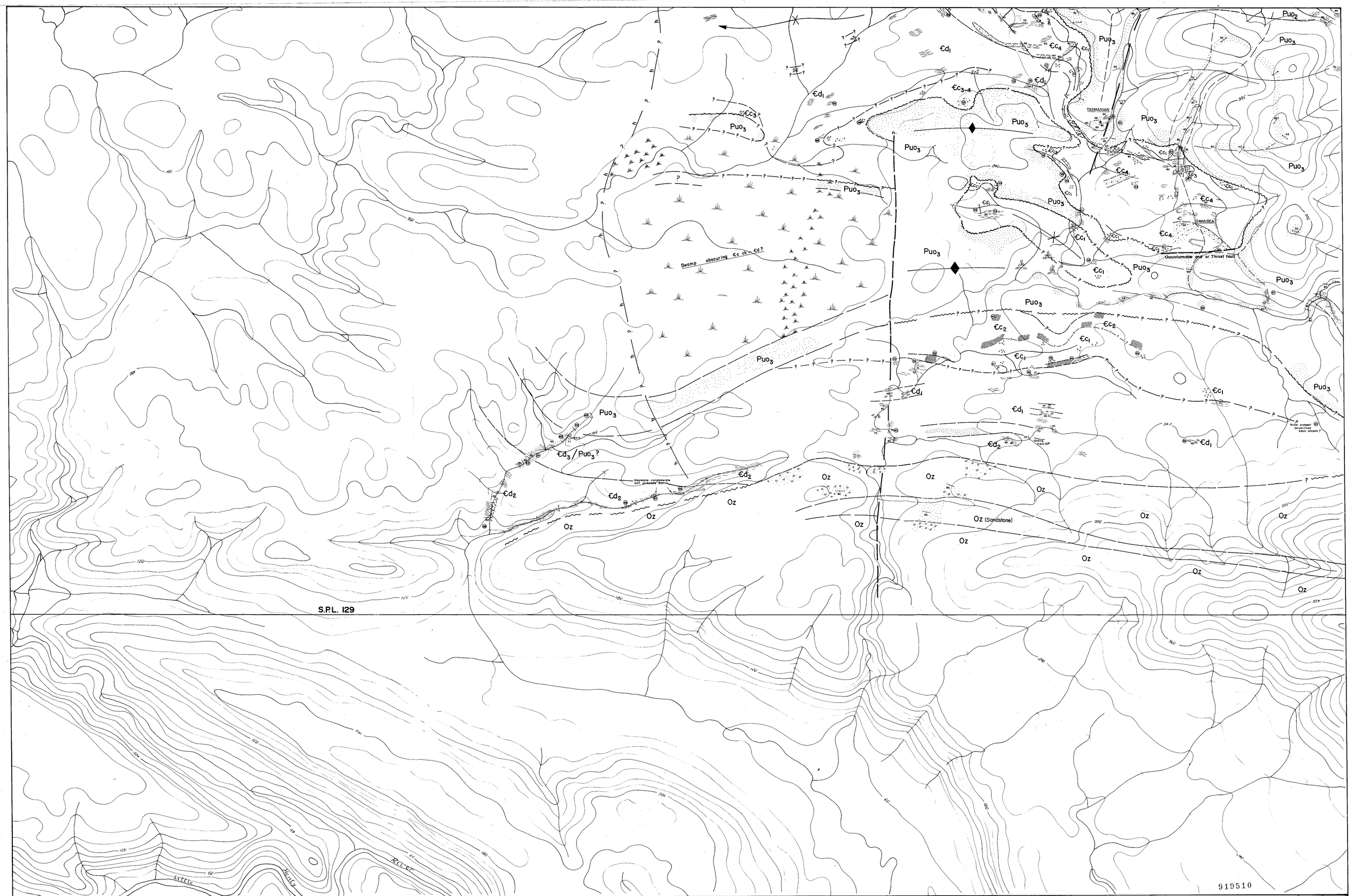
ZEEHAN D/1-2

1219

INTERPRETATIVE GEOLOGY

SCALE. 1:5000 METRES
100 0 100 200 300

DRAWN	R.P.
TRACED	T.G.D.S.
DATE	July, 1981
SCALE	1:5000
DRAWING No.	Plan 17B



GEOLOGY

Quaternary

Qra — Recent Alluvium.

Tertiary ?

Ironstone Outcrop, Scree. Includes Magnetite, Limonite, Ferruginous Mud, Gossan.

Iron Rich Soils, Ironstone Scree, Lateritic Development.

Ordovician

Oz — Mt. Zeehan Conglomerate.

Cambrian

Dundas Group

Ꞓd3 — Black Siltstone.

Ꞓd2 — Greywacke, Siltstone, Sandstone, Quartzite, Carbonate.

Ꞓd1 — Siltstone, Greywacke, Conglomerate.

Crimson Creek Formation

Ꞓc4 — Siltstone, Grit - Conglomerate.

Ꞓc3 — Conglomerate.

Ꞓc2 — Chert.

Ꞓc1 — Basic Volcanics.

Ꞓc — Undifferentiated.

Precambrian

Corinth Formation

Puo3 — Quartzite and Siltstone.

Puo2 — Siltstone, minor Quartzite, Carbonate.

Puo1 — Spilite.

IGNEOUS ROCKS

Dg — Devonian Granite and Adamellite.

Ꞓg — Cambrian Gabbro.

SYMBOLS

- Geological boundary
- Geological boundary unconformable and/or fault
- Limit of hornfelsing
- Fault and linear negative topographic features
- Lode - open shaft
- Dip and strike of bedding
- Dip and strike of bedding overturned
- Dip and strike of foliation
- Anticline syncline axis
- Trend bedding
- Rock sample location
- Mine workings. Adit
- Shaft
- Dump

5 cm

ZEEHAN C2/2	ZEEHAN D1/1
ZEEHAN C2/4	ZEEHAN D1/3

81-1625 C(6) 3/4) RENISON LIMITED

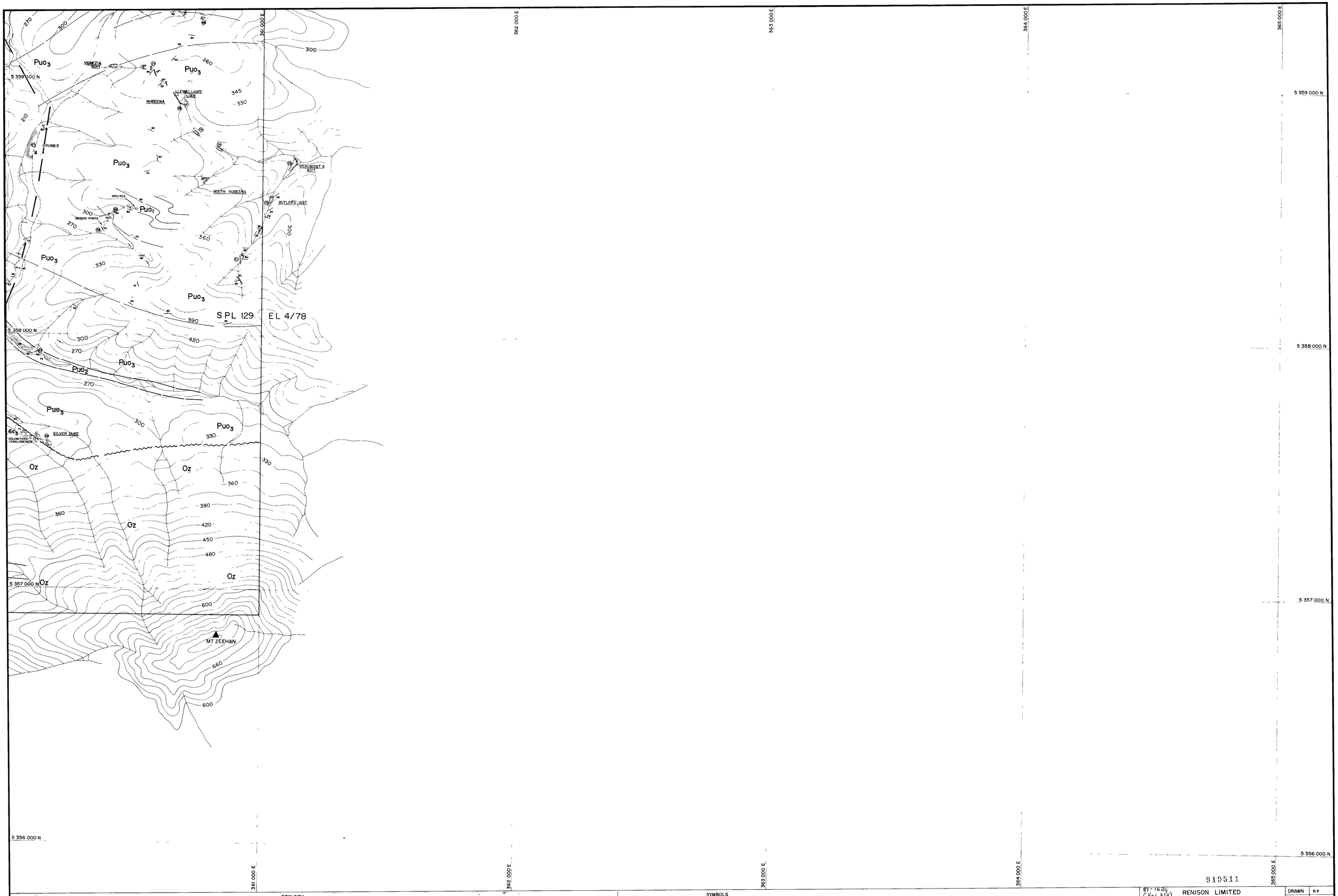
ZEEHAN D1/3. 1220

INTERPRETATIVE GEOLOGY

SCALE. 1: 5000 METRES

100 0 100 200 300

DRAWN	R.P.
TRACED	T.G.D.S.
DATE	July 1981
SCALE	1:5000
DRAWING No.	Plan 17C



GEOLOGY

Quaternary

Qra — Recent Alluvium

Tertiary ?

Intrusive Porphyry, Andesite, Magnetite
Limonite, Pebbly Sandstone, Gossan
Late Intrusive Development

Ordovician

Oz — Mt Zeehan Conglomerate

Cambrian

Cd3 — Black Shale
Cd2 — Grey Chert, Siltstone, Sandstone, Conglomerate
Cd1 — Siltstone, Greywacke, Conglomerate

Cc4 — Siltstone
Cc3 — Conglomerate
Cc2 — Chert

Cc1 — Basic Volcanics
Cc — Undifferentiated

Precambrian

Puq3 — Quartzite and Siltstone
Puq2 — Siltstone minor Quartz Pebble, Calcareous
Puq1 — Spilite

IGNEOUS ROCKS

Dg — Devonian Granite and Adamellite
Cg — Cambrian Gabbro

SYMBOLS

Geological boundary, approximate or inferred, mobile and/or fault
Limit of hydrothermal alteration
Fault, inferred lineament, geophysical features
Lode, open stope
Dip and strike of bedding, overturned
Dip and strike of foliation
Anticline, syncline
Trend bedding
Rock, mineral locality
Mine workings, Adit
Shaft
Dump

5 cm

ZEEHAN D/I 1	ZEEHAN D/I 2
	ZEEHAN D/I 4

919511

81-1629
CVol 3(4)

RENISON LIMITED

ZEEHAN D/I-4

1221

INTERPRETATIVE GEOLOGY

SCALE 1 5000 METRES
100 0 100 200 300

DRAWN	R P
TRACED	TGDS
DATE	July 1981
SCALE	1 5000
DRAWING No	

Plan 17D

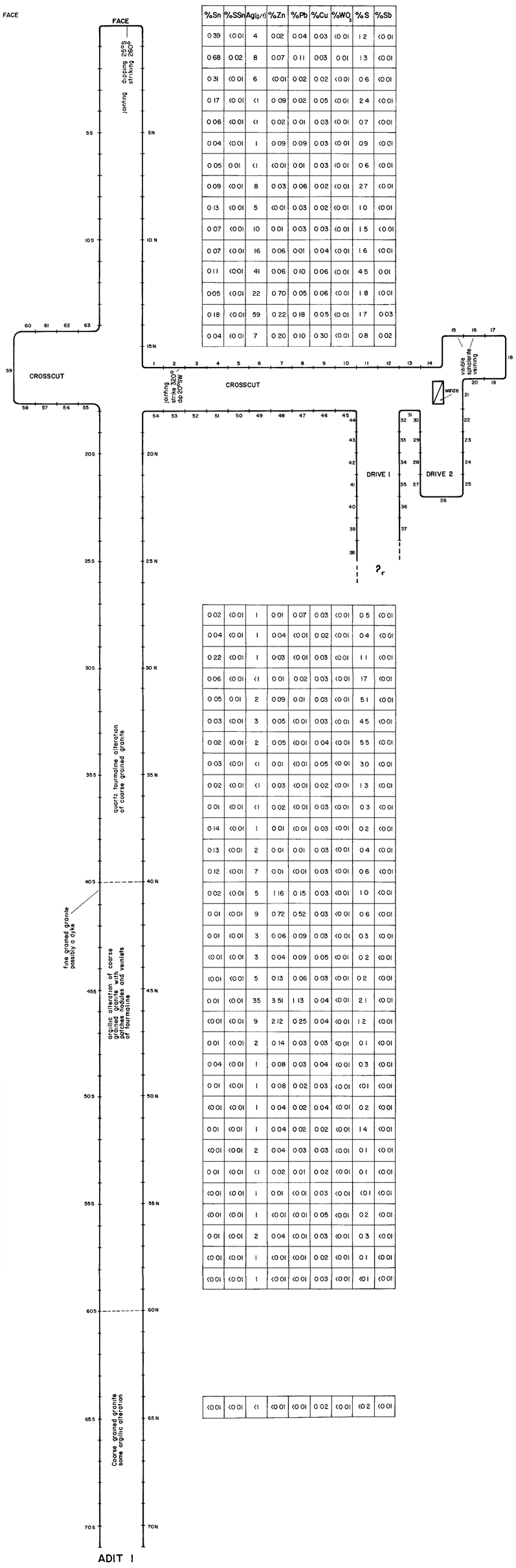
1207

% Sb	% S	%WO_3	%Cu	%Pb	%Zn	Ag(g/t)	%SSn	%Sn
<0 01	0 8	<0 01	0 03	0 07	0 08	5	<0 01	0 89
<0 01	1 3	0 01	0 02	0 19	0 19	12	<0 01	1 44
<0 01	0 4	<0 01	0 02	0 05	<0 01	2	0 01	0 53
<0 01	0 4	<0 01	0 02	<0 01	0 01	2	<0 01	0 28
<0 01	1 7	<0 01	0 05	0 04	0 90	4	0 01	0 17
<0 01	0 9	<0 01	0 04	<0 01	0 39	2	0 01	0 04
<0 01	0 5	<0 01	0 03	0 02	0 02	2	<0 01	0 05
<0 01	0 1	<0 01	0 02	<0 01	<0 01	1	0 01	0 02
<0 01	0 6	<0 01	0 04	0 03	0 03	4	<0 01	0 12
<0 01	0 5	<0 01	0 03	0 01	0 01	3	<0 01	0 10
<0 01	0 5	<0 01	0 02	0 07	<0 01	7	<0 01	0 12
<0 01	0 4	<0 01	0 02	0 08	<0 01	8	<0 01	0 04
<0 01	0 8	<0 01	0 03	0 04	<0 01	10	<0 01	0 04
0 04	0 6	<0 01	0 03	0 11	<0 01	45	<0 01	0 03
0 08	1 3	<0 01	0 05	0 54	0 02	69	<0 01	0 05

%Sn	%SSn	Ag(g/t)	%Zn	%Pb	%Cu	%WO_3	% S	%Sb
0 39	<0 01	4	0 02	0 04	0 03	<0 01	1 2	<0 01
0 68	0 02	8	0 07	0 11	0 03	0 01	1 3	<0 01
0 31	<0 01	6	<0 01	0 02	0 02	<0 01	0 6	<0 01
0 17	<0 01	<1	0 09	0 02	0 05	<0 01	2 4	<0 01
0 06	<0 01	<1	0 02	0 01	0 03	<0 01	0 7	<0 01
0 04	<0 01	1	0 09	0 09	0 03	<0 01	0 9	<0 01
0 05	0 01	<1	<0 01	0 01	0 03	<0 01	0 6	<0 01
0 09	<0 01	8	0 03	0 06	0 02	<0 01	2 7	<0 01
0 13	<0 01	5	<0 01	0 03	0 02	<0 01	1 0	<0 01
0 07	<0 01	10	0 01	0 03	0 03	<0 01	1 5	<0 01
0 07	<0 01	16	0 06	0 01	0 04	<0 01	1 6	<0 01
0 11	<0 01	41	0 06	0 10	0 06	<0 01	4 5	0 01
0 05	<0 01	22	0 70	0 05	0 06	<0 01	1 8	<0 01
0 18	<0 01	59	0 22	0 18	0 05	<0 01	1 7	0 03
0 04	<0 01	7	0 20	0 10	0 30	<0 01	0 8	0 02

%Sn	%SSn	Ag(g/t)	%Zn	%Pb	%Cu	%WO_3	%S	%Sb
0 04	<0 01	32	0 02	0 51	0 03	<0 01	0 6	0 05
0 02	<0 01	16	0 01	0 53	0 02	0 04	0 2	0 02
0 03	0 01	50	0 02	3 23	0 02	0 06	1 4	0 04
0 05	<0 01	10	0 06	0 17	0 04	0 03	1 6	<0 01
0 59	<0 01	4	0 06	0 07	0 02	<0 01	1 1	<0 01
0 09	<0 01	2	<0 01	0 02	0 02	<0 01	0 7	<0 01
0 11	<0 01	2	0 01	0 05	0 02	<0 01	0 6	<0 01
0 03	<0 01	2	<0 01	0 05	0 03	<0 01	0 5	<0 01
0 02	<0 01	2	<0 01	0 01	0 02	<0 01	0 2	<0 01
0 02	<0 01	4	0 01	0 13	0 03	<0 01	0 7	<0 01
0 02	<0 01	1	0 12	0 04	0 02	<0 01	0 4	<0 01
0 04	<0 01	1	0 07	<0 01	0 02	<0 01	1 0	<0 01

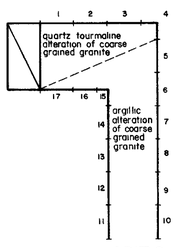
Samples taken from cross cut back next to junction with adit



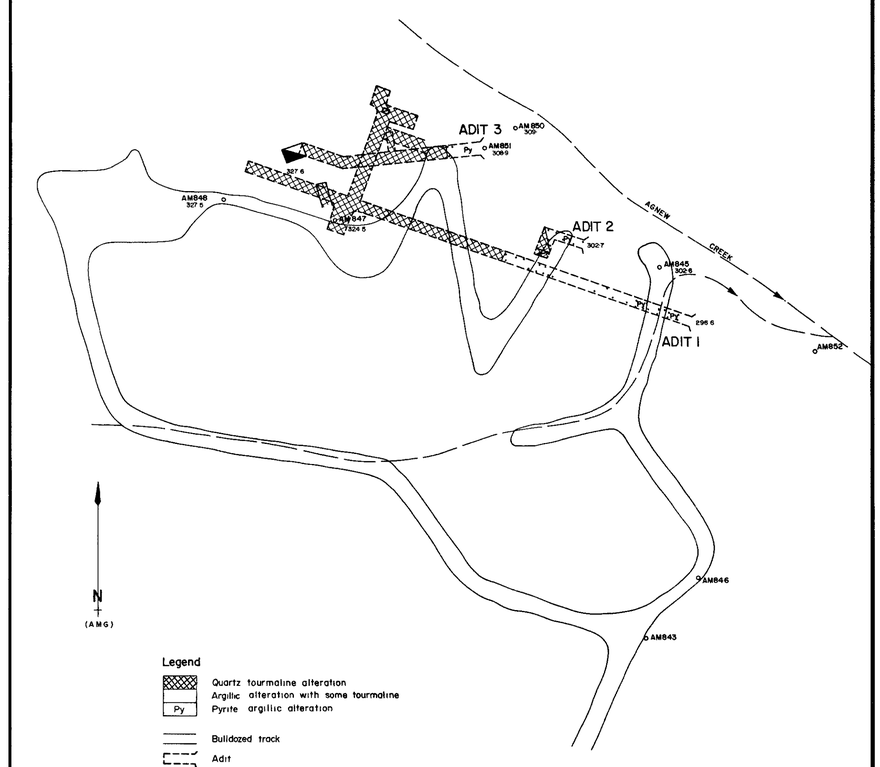
ADIT 1

Sample No	%Sn	%SSn	Ag(g/t)	%Zn	%Pb	%Cu	%WO_3	% S	%Sb
1	0 14	<0 01	1	0 10	0 12	0 02	<0 01	0 7	0 01
2	0 41	<0 01	1	0 04	0 05	0 02	<0 01	1 2	0 01
3	0 05	<0 01	2	0 06	0 04	0 01	<0 01	2 8	0 01
4	0 02	<0 01	3	0 05	0 10	0 02	<0 01	5 6	0 01
5	0 03	<0 01	6	0 12	0 46	0 01	<0 01	3 3	0 01
6	0 28	<0 01	7	0 08	0 24	0 02	<0 01	4 1	0 02
7	0 33	<0 01	1	0 16	0 07	0 02	<0 01	2 4	0 01
8	0 01	<0 01	3	0 29	0 12	0 02	<0 01	2 0	0 01
9	<0 01	<0 01	2	0 03	0 07	0 02	<0 01	0 1	0 01
10	0 02	<0 01	1	<0 01	0 01	0 02	<0 01	<0 1	0 01
11	0 08	<0 01	3	0 01	0 07	0 02	<0 01	0 1	<0 01
12	0 12	<0 01	3	0 02	0 05	0 01	<0 01	0 4	<0 01
13	0 05	<0 01	2	0 04	0 06	0 02	<0 01	2 6	<0 01
14	0 19	<0 01	1	0 22	0 04	0 02	<0 01	2 0	<0 01
15	0 01	<0 01	3	0 03	0 06	0 02	<0 01	0 5	<0 01
16	0 01	0 01	2	0 05	0 06	0 02	<0 01	0 4	0 01
17	<0 01	<0 01	3	0 23	0 28	0 02	<0 01	0 3	0 01

*NB As <0 1% Bi <0 001% in all instances



ADIT 2



GLOBE MINE AREA
SCALE 1 500

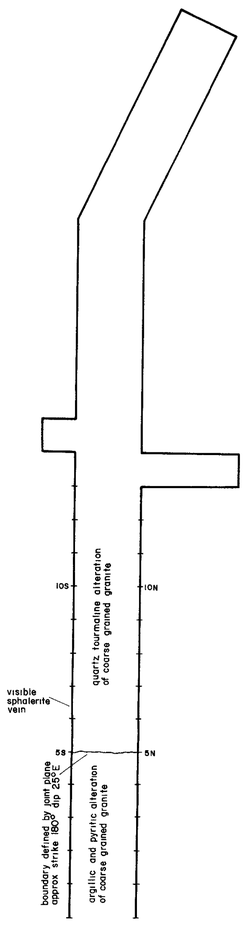
*NB As <0 1% except Sample No 10 0 1%
15 0 1%
16 0 2%
34 2 2%
33 34 S 0 54%

Bi <0 007 except Sample No 33 0 017%
1 2N 0 016%

Sample No	%Sn	%SSn	Ag(g/t)	%Zn	%Pb	%Cu	%WO_3	% S	%Sb
1	0 51	<0 01	168	0 01	0 28	0 02	<0 01	0 2	0 11
2	0 03	<0 01	18	0 01	0 06	0 01	<0 01	<0 1	0 03
3	0 02	0 01	145	0 01	0 25	0 02	<0 01	<0 1	0 08
4	0 03	0 01	250	0 01	0 42	0 02	<0 01	0 4	0 18
5	0 05	0 02	97	0 01	0 22	0 02	<0 01	0 3	0 09
6	0 07	0 02	99	0 01	0 32	0 03	<0 01	0 2	0 12
7	0 04	0 02	95	0 01	0 24	0 02	<0 01	0 2	0 10
8	0 03	0 02	42	0 01	0 22	0 03	<0 01	0 1	0 09
9	0 04	<0 01	40	0 06	0 10	0 04	<0 01	0 9	0 06
10	0 11	<0 01	52	0 20	0 33	0 08	<0 01	9 6	0 09
11	0 26	<0 01	59	0 11	0 08	0 06	<0 01	2 5	0 03
12	0 03	<0 01	38	0 02	0 30	0 05	<0 01	0 6	0 06
13	0 03	<0 01	57	0 02	0 29	0 06	<0 01	0 6	0 10
14	0 04	<0 01	86	0 04	0 63	0 04	<0 01	0 9	0 13
15	0 03	<0 01	215	3 48	2 72	0 38	<0 01	4 9	0 61
16	0 02	<0 01	250	0 44	2 99	0 35	<0 01	2 9	0 52
17	0 06	<0 01	153	0 14	0 30	0 14	<0 01	0 6	0 14
18	0 06	<0 01	52	0 22	0 30	0 09	<0 01	0 8	0 10
19	0 02	<0 01	128	0 09	0 35	0 13	<0 01	0 7	0 17
20	0 03	<0 01	250	0 28	1 33	0 17	<0 01	1 5	0 45
21	0 05	<0 01	76	0 01	0 41	0 05	<0 01	0 2	0 12
22	0 03	<0 01	217	0 02	0 44	0 07	<0 01	0 2	0 23
23	0 07	<0 01	215	0 02	0 85	0 06	<0 01	0 3	0 36
24	0 11	<0 01	186	0 04	4 35	0 12	0 01	1 2	0 37
25	0 01	<0 01	138	0 01	0 19	0 04	<0 01	<0 1	0 10
26	0 02	<0 01	125	0 01	0 70	0 03	<0 01	0 3	0 19
27	0 02	<0 01	63	0 03	0 75	0 03	<0 01	0 1	0 18
28	0 03	<0 01	56	0 01	0 14	0 03	<0 01	<0 1	0 05
29	0 05	<0 01	37	0 02	0 16	0 03	<0 01	0 1	0 04
30	0 03	<0 01	180	0 03	0 37	0 07	<0 01	0 5	0 13
31	0 02	<0 01	88	0 09	0 19	0 06	<0 01	0 3	0 07
32	0 02	<0 01	132	0 01	0 07	0 02	<0 01	0 1	0 04

Sample No	%Sn	%SSn	Ag(g/t)	%Zn	%Pb	%Cu	%WO_3	% S	%Sb
33	0 03	<0 01	300	0 03	0 39	0 03	<0 01	0 2	0 13
34	0 13	0 08	200	4 90	0 74	0 13	0 01	6 8	0 15
35	0 04	<0 01	13	0 01	0 08	0 01	<0 01	<0 1	0 01
36	0 02	<0 01	10	0 03	0 09	0 03	<0 01	<0 1	0 01
37	0 02	<0 01	10	0 01	0 06	0 01	<0 01	<0 1	0 01
38	0 02	<0 01	43	0 01	0 24	0 02	<0 01	0 2	0 04
39	0 04	<0 01	107	0 03	0 19	0 03	<0 01	0 2	0 07
40	0 02	<0 01	20	0 01	0 05	0 02	<0 01	<0 1	0 01
41	0 02	<0 01	52	0 01	0 44	0 02	<0 01	0 1	0 03
42	0 06	<0 01	33	0 01	0 22	0 03	<0 01	<0 1	0 04
43	0 02	<0 01	53	0 02	0 22	0 04	<0 01	0 6	0 04
44	0 03	0 01	240	0 02	0 31	0 03	<0 01	0 4	0 12
45	0 06	<0 01	67	0 06	0 17	0 13	<0 01	1 3	0 07
46	0 03	<0 01	66	0 02	0 15	0 07	<0 01	0 9	0 07
47	0 03	<0 01	38	0 01	0 11	0 02	<0 01	0 4	0 05
48	0 03	<0 01	132	0 01	0 14	0 02	<0 01	0 1	0 07
49	0 02	<0 01	24	0 01	0 18	0 02	<0 01	0 1	0 06
50	0 04	<0 01	32	0 01	0 16	0 02	<0 01	0 2	0 05
51	0 03	<0 01	136	0 01	0 25	0 03	<0 01	0 3	0 08
52	0 02	<0 01	47	0 01	0 14	0 01	<0 01	0 1	0 05
53	0 02	<0 01	50	0 01	0 16	0 02	<0 01	0 3	0 07
54	0 04	<0 01	86	0 01	0 22	0 04	<0 01	0 2	0 09
55	0 03	<0 01	6	<0 01	0 11	0 02	<0 01	0 1	<0 01
56	0 01	0 01	35	<0 01	1 11	0 02	<0 01	2 7	<0 01
57	0 02	0 01	5	<0 01	0 03	0 02	<0 01	0 3	<0 01
58	0 02	0 01	3	<0 01	0 06	0 04	<0 01	0 3	<0 01
59	0 03	<0 01	5	<0 01	0 02	0 03	<0 01	0 6	<0 01
60	0 04	<0 01	3	0 01	0 07	0 02	<0 01	0 2	0 01
61	0 03	<0 01	7	0 01	0 16	0 02	<0 01	0 8	0 01
62	0 02	<0 01	15	<0 01	0 02	0 02	<0 01	0 1	0 01
63	0 01	<0 01	19	<0 01	0 20	0 02	<0 01	0 4	0 01

%Sb	%S	%WO_3	%Cu	%Pb	%Zn	Ag(g/t)	%SSn	%Sn
<0 01	<0 1	<0 01	0 03	0 11	0 01	1 1	<0 01	0 27
<0 01	<0 1	<0 01	0 03	0 13	<0 01	4	0 01	0 04
<0 01	0 1	<0 01	0 03	0 06	0 01	3	<0 01	0 03
<0 01	0 1	<0 01	0 03	0 09	0 01	4	0 02	0 18
<0 01	<0 1	<0 01	0 03	0 03	0 02	3	0 02	0 16
<0 01	0 5	<0 01	0 03	0 18	0 56	4	0 01	0 16
<0 01	0 1	<0 01	0 03	0 07	0 08	7	<0 01	0 08
0 01	8 5	<0 01	0 10	1 63	11 58	52	<0 01	0 24
0 01	0 3	<0 01	0 02	0 13	0 25	7	0 01	0 72
<0 01	0 1	<0 01	0 03	0 05	0 01	5	<0 01	0 07
0 01	<0 1	<0 01	0 02	0 07	0 01	2	<0 01	0 02
0 01	<0 1	<0 01	0 02	0 01	<0 01	1	<0 01	<0 01
0 01	<0 1	<0 01	0 03	0 01	0 01	2	<0 01	0 03
<0 01	<0 1	<0 01	0 02	0 01	<0 01	3	<0 01	<0 01



*NB As <0 1% Bi <0 004% in all instances

ADIT 3

%Sn	%SSn	Ag(g/t)	%Zn	%Pb	%Cu	%WO_3	% S	%Sb
0 08	<0 01	27	0 01	0 36	0 02	<0 01	0 8	0 02
0 06	<0 01	31	0 02	0 17	0 03	<0 01	0 6	0 01
0 10	<0 01	18	<0 01	0 06	0 03	<0 01	0 1	0 02
0 04	<0 01	10	0 24	0 13	0 03	<0 01	0 6	0 01
0 05	<0 01	1	0 03	0 08	0 02	<0 01	0 1	0 01
0 42	0 01	2	0 14	0 18	0 03	<0 01	0 2	0 01
5 00	0 03	23	0 03	0 39	0 03	0 07	0 3	0 01
0 15	0 01	4	0 07	0 11	0 03	<0 01	0 2	0 01
0 18	0 01	6	0 12	0 22	0 03	<0 01	0 3	0 01
0 01	<0 01	1	0 01	0 03	0 02	<0 01	<0 1	0 01
<0 01	<0 01	1	0 01	0 04	0 02	<0 01	<0 1	0 01
0 01	0 01	3	<0 01	0 01	0 03	<0 01	<0 1	0 01
<0 01	<0 01	2	<0 01	0 01	0 02	<0 01	<0 1	0 01

NOTE WO3 analyses are somewhat inaccurate because at the time of assaying the XRF calibration was incorrect Corrections have been made to the reported assays by subtracting a background value approximately equivalent to <0 01% WO3

81 1629 (V01 3 1/4)

RENISON LIMITED

GLOBE MINE SPL 129

ADIT SAMPLING RESULTS

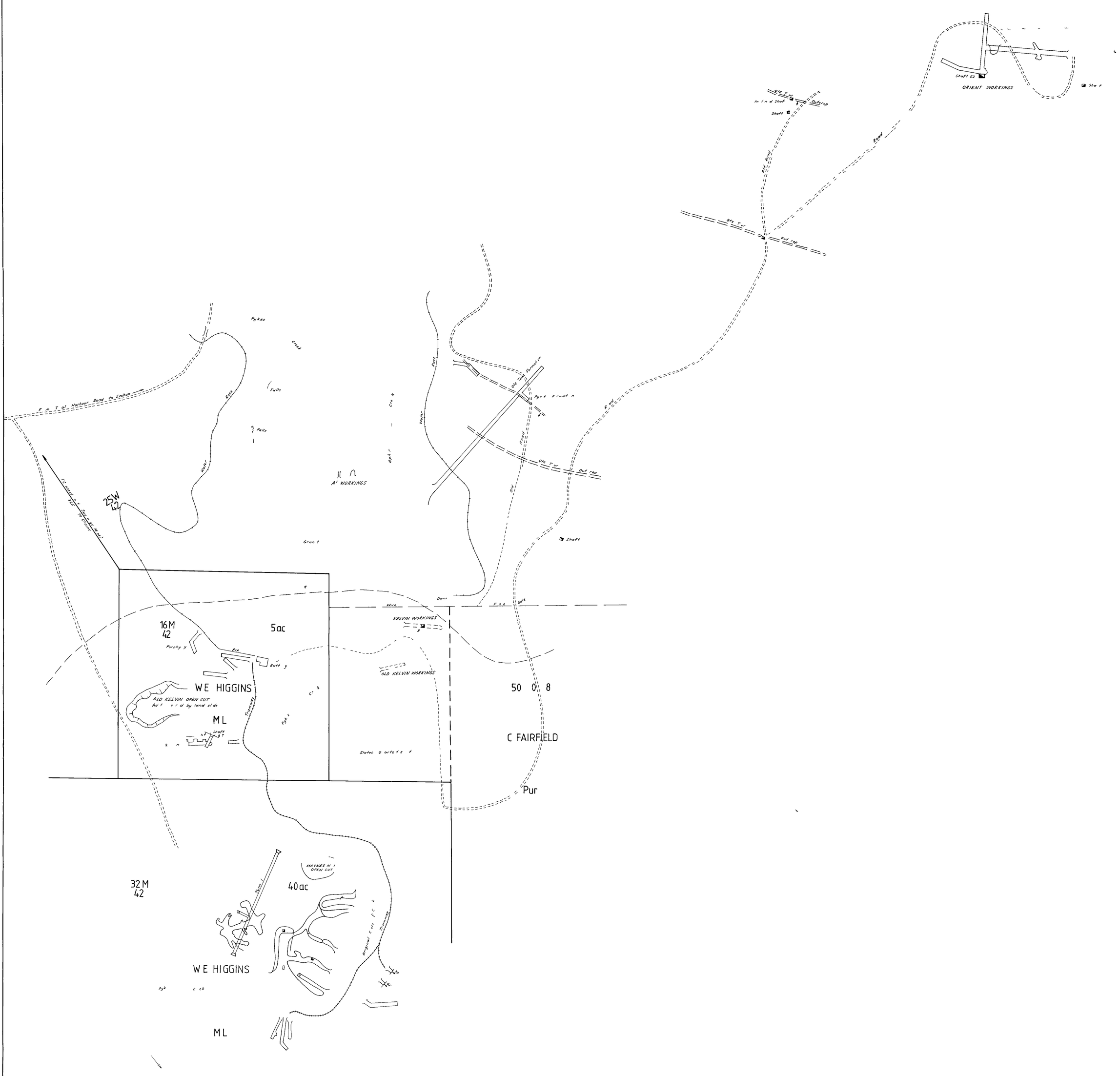
GEOLOGIST	C C
DRAUGHTSMAN	T G D S
DATE	JULY 1981
REVISIONS	

SCALE 1 100 METRES

DRAWING NO 1207 Plan 14

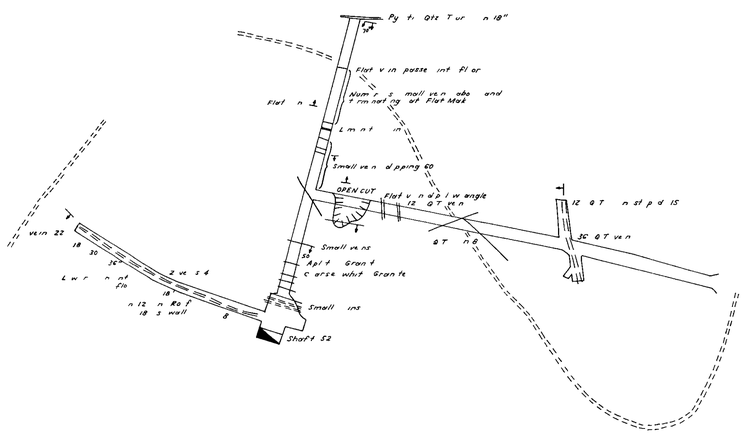
5 cm

1222



INSET
SHOWING HIGGINS (MAYNES) WORKINGS
Scale 1 500

INSET
SHOWING ORIENT WORKINGS
Scale 1 500



919512

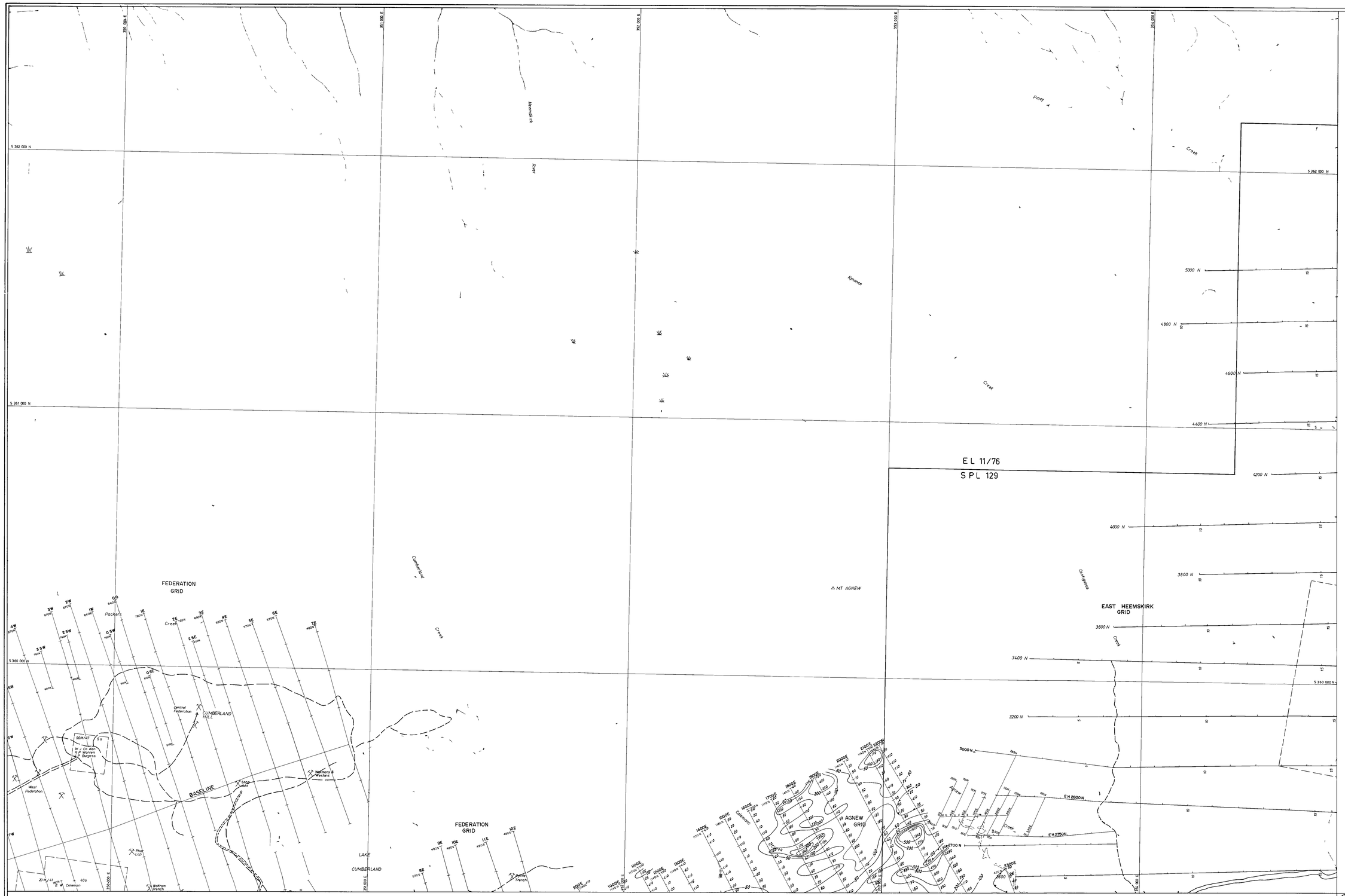
5 cm

81-1629
C(V01314)

RENISON LIMITED

MAYNES KELVIN and ORIENT MINES
(from KEID 1943) 1222

GEOLOGIST	H G W KEID	SCALE 1 : 1000 METRES
DRAUGHTSMAN	F A COLSON	Insets As Shown
DATE	Oct 1980	
REVISIONS		DRAWING No Plan 18



919513

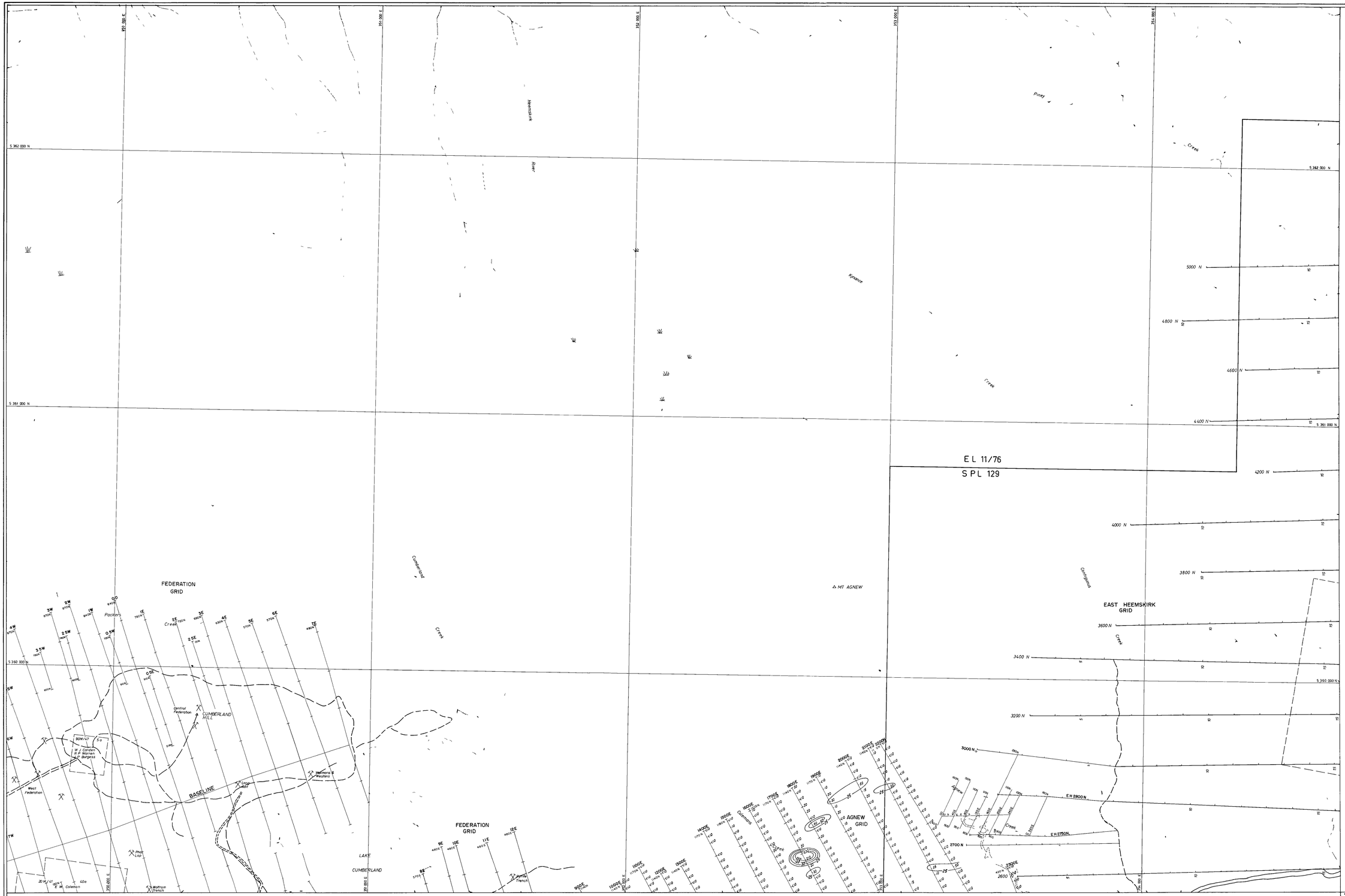
81-1630
CUG1 3/4

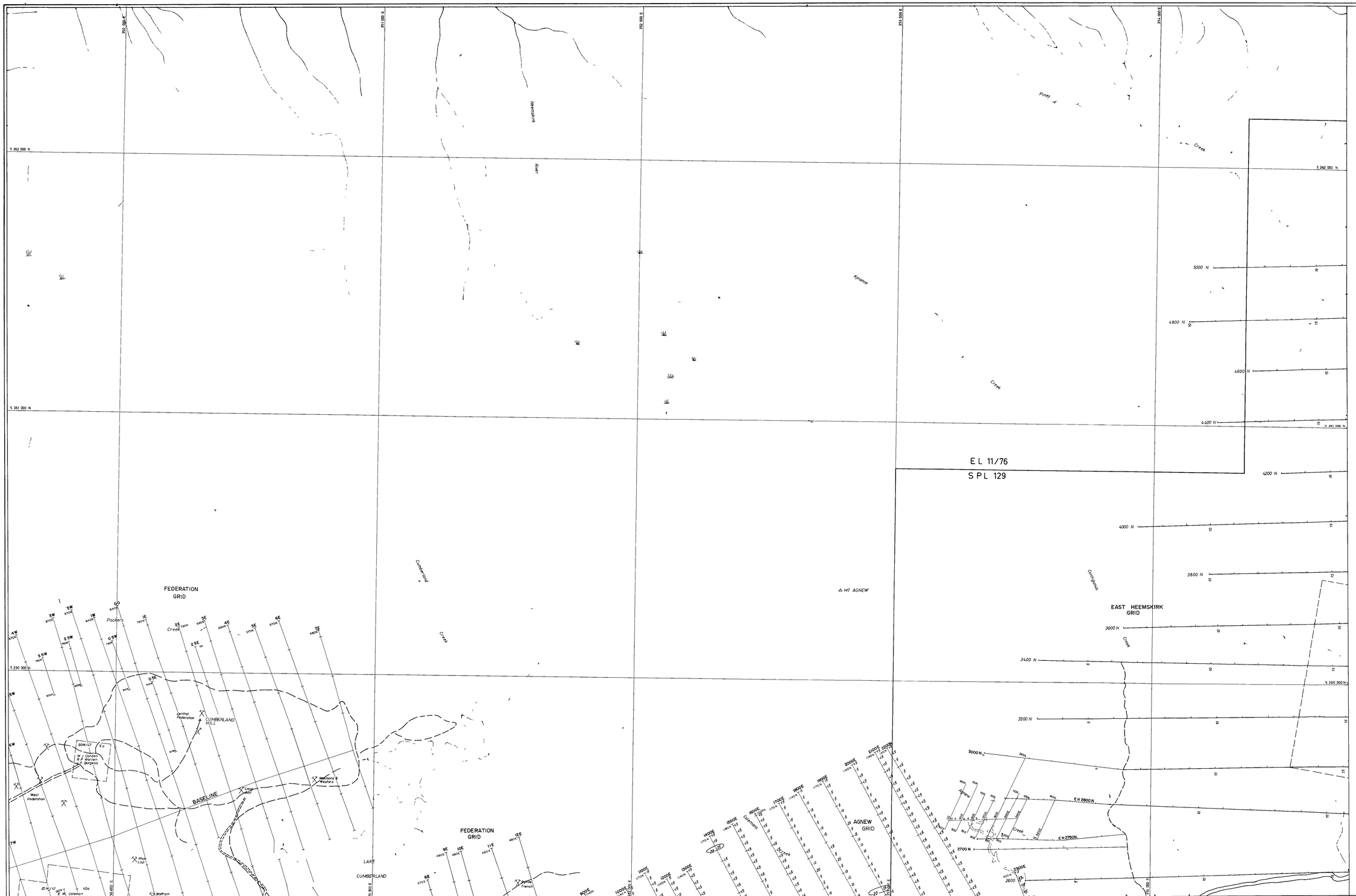
RENISON LIMITED

ZEEHAN C2/2

SOIL GEOCHEMISTRY (-180µm)
TIN IN PPM

GEOLOGIST	P ROBERTS	SCALE 1 5000 METRES
DRAUGHTSMAN	T G D S	100 0 100 200
DATE	JUNE 1981	
REVISIONS		1223
		DRAWING No PLAN 19 a


350 000 E
351 000 E
352 000 E
353 000 E
354 000 E
355 000 E
356 000 E
5 362 000 N
5 361 000 N
5 360 000 N
Heemskirk
River
Piney
Creek
Kynance
Creek
Cumberland
Creek
Packers
Creek
Contingals
Creek
MT AGNEW
E L 11/76
S P L 129
FEDERATION GRID
EAST HEEMSKIRK GRID
AGNEW GRID
FEDERATION GRID
LAKE CUMBERLAND
BASELINE
CUMBERLAND HILL
Central Federation
West Federation
Phoenix Lap
Wolfram Trench
Carter Trench
Neptunes Reefers
Lone Star
90M/L7
W J Carden
R P Warren
R Burgess
20 M/L1
E M Coleman
40a
5a
Colonists
EH 2800 N
EH 2750N
5000 N
4800 N
4600 N
4400 N
4200 N
4000 N
3800 N
3600 N
3400 N
3200 N
3000 N
2700 N
2600 N
MD
TRUE
MAG
ZEEHAN A4
ZEEHAN B3
A4/4
B3/3
C2/1
C2/2
D1/1
ZEEHAN C2
ZEEHAN D1
C2/3
C2/4
919511
KEY
>200
100 200
50 100
25 50
LEGEND
Cut grid lines
Walking track
5 cm
81-1620 (Vol 3/4)
RENISON LIMITED
ZEEHAN C2/2
SOIL GEOCHEMISTRY (-180 µm)
ARSENIC IN PPM
GEOLOGIST P ROBERTS
DRAUGHTSMAN T G D S
DATE JUNE 1981
SCALE 1 5000 METRES
100 0 100 200
REVISIONS
DRAWING No
PLAN 19 b
1224



919515

81-1629
(No) 314

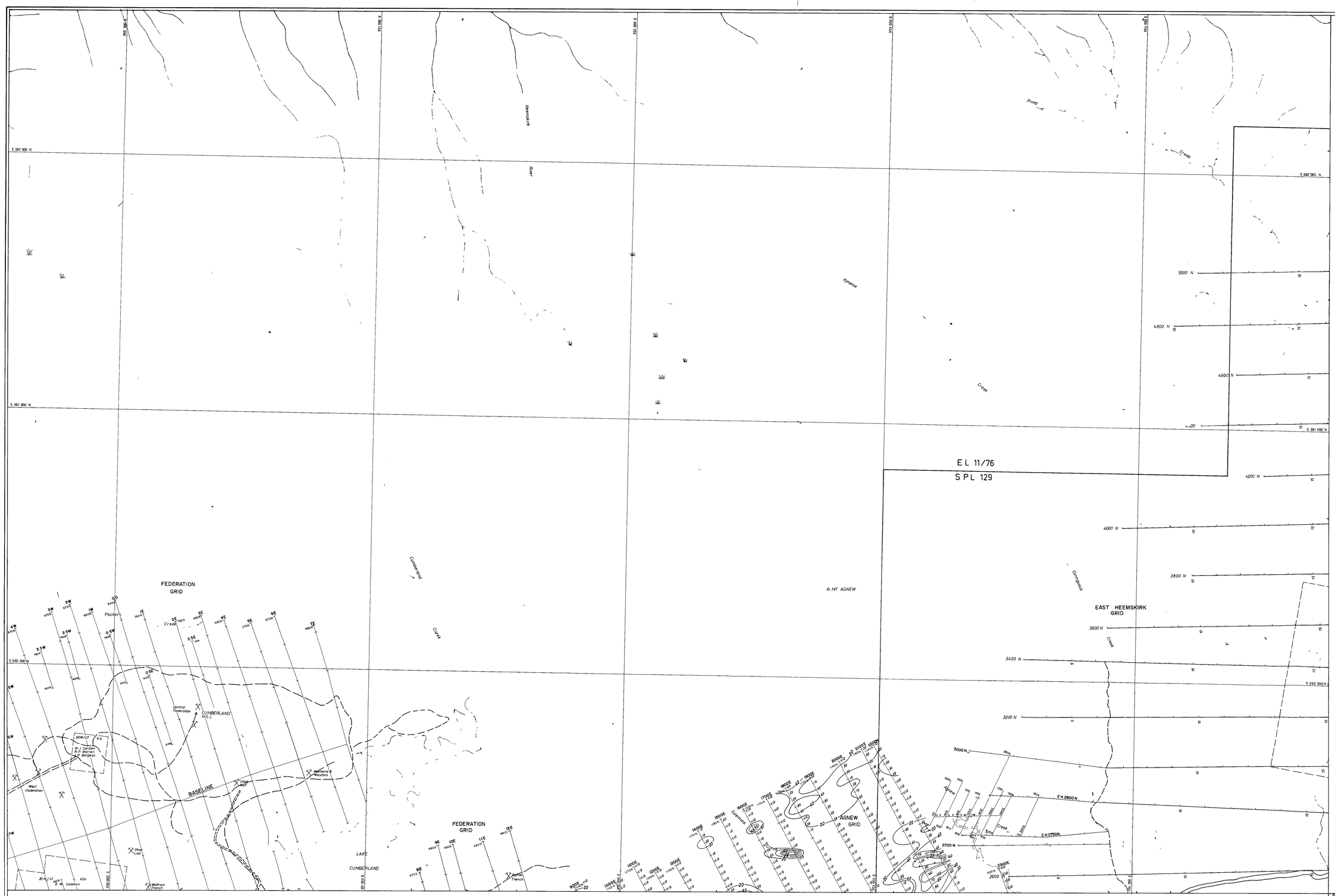
RENISON LIMITED

ZEEHAN C2/2

SOIL GEOCHEMISTRY (-180µm)
COPPER IN PPM

GEOLOGIST	P ROBERTS
DRAUGHTSMAN	T G D S
DATE	JUNE 1981
REVISIONS	
SCALE	1 5000 METRES (100 0 100 200)
DRAWING No	PLAN 19 c

1225



919516

81-1629
(V01 314)

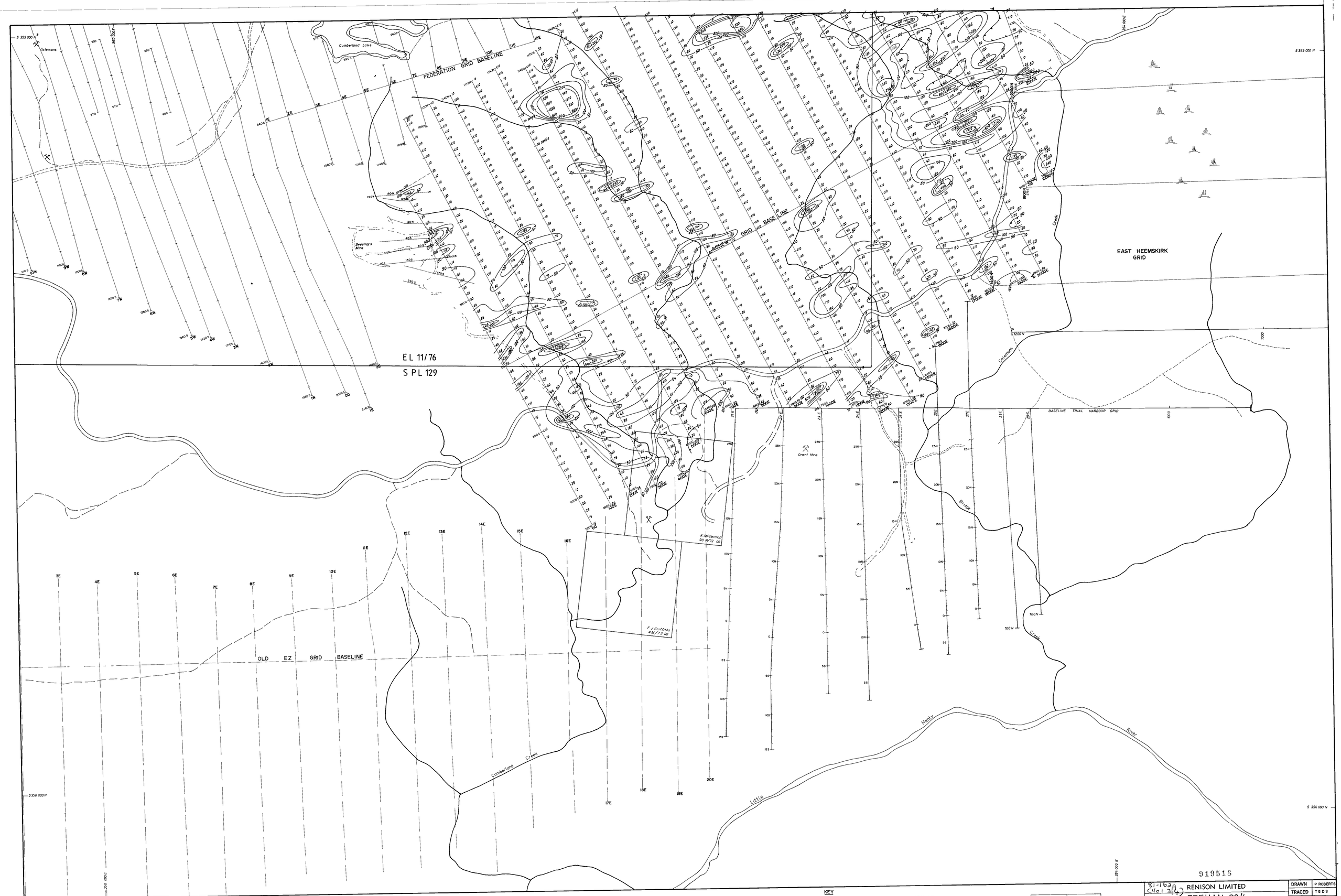
RENISON LIMITED

ZEEHAN C2/2

SOIL GEOCHEMISTRY (-180µm)

LEAD IN PPM

GEOLOGIST	P ROBERTS	SCALE 1 5000 METRES
DRAUGHTSMAN	T G D S	100 0 100 200
DATE	JUNE 1981	
REVISIONS		DRAWING No
		1226 PLAN 19 d



919518

KEY

- >500
- 200 500
- 100 200
- 50 100

5 cm

LEGEND

- Cut grid lines
- Walking track
- Cut grid lines not located accurately

ZEEHAN C2/2	ZEEHAN D1/1
ZEEHAN C2/4	ZEEHAN D1/3

81-1629
CVol 3(4)

RENISON LIMITED

ZEEHAN C2/4

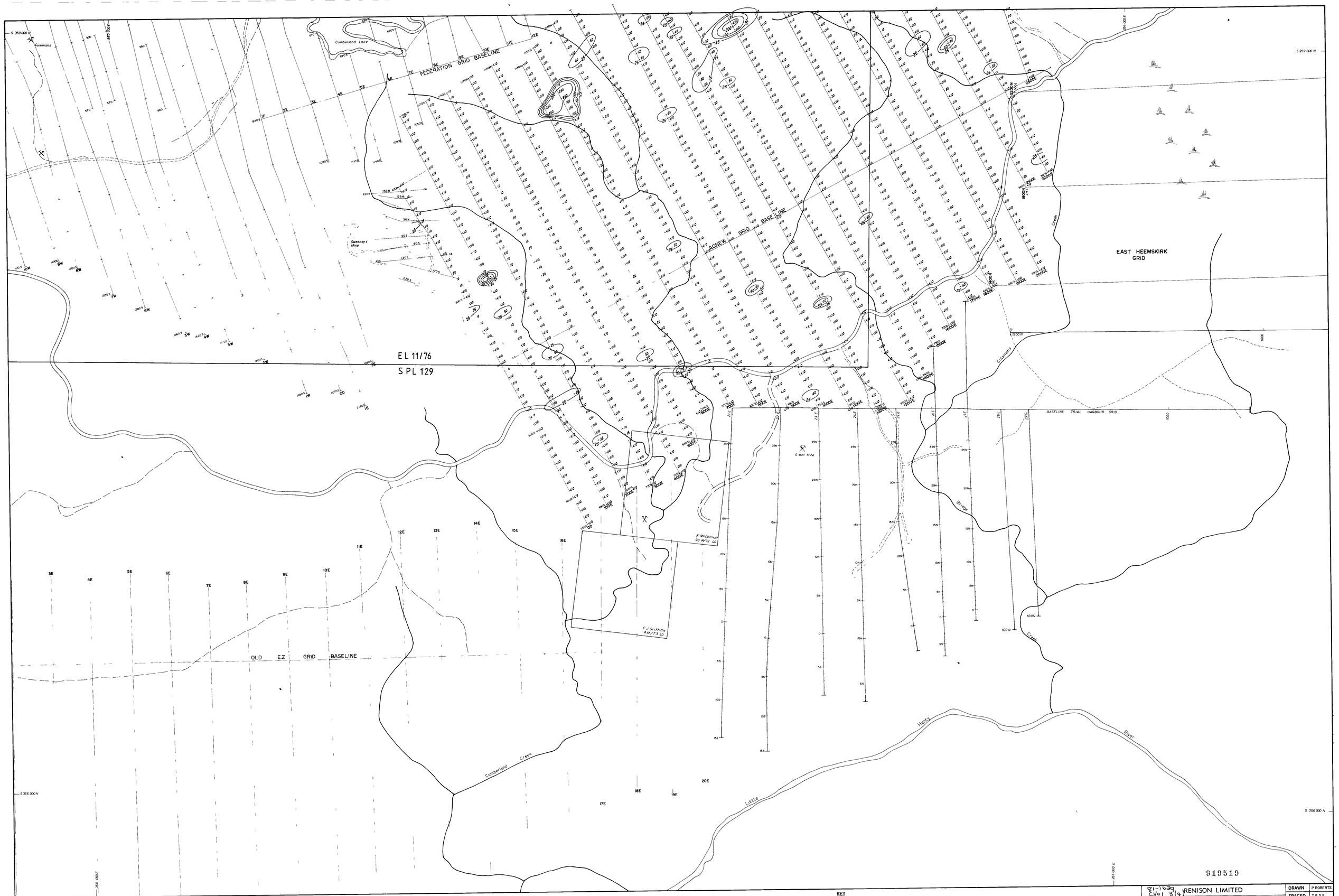
SOIL GEOCHEMISTRY (-180µm)

TIN IN PPM 1228

SCALE 1:5000 METRES

100 0 100 200 300

DRAWN	P ROBERTS
TRACED	T G D S
DATE	JUNE 1981
SCALE	1:5000
DRAWING No	PLAN 20 a



919519

KEY

- >200
- 100 200
- 50 100
- 25 50

5 cm

LEGEND

- Cut grid lines
- Walking track
- Cut grid lines not located accurately

ZEEHAN C2/2	ZEEHAN D1/1
ZEEHAN C2/4	ZEEHAN D1/3

81-1637
CVol 3(4)

RENISON LIMITED

ZEEHAN C2/4

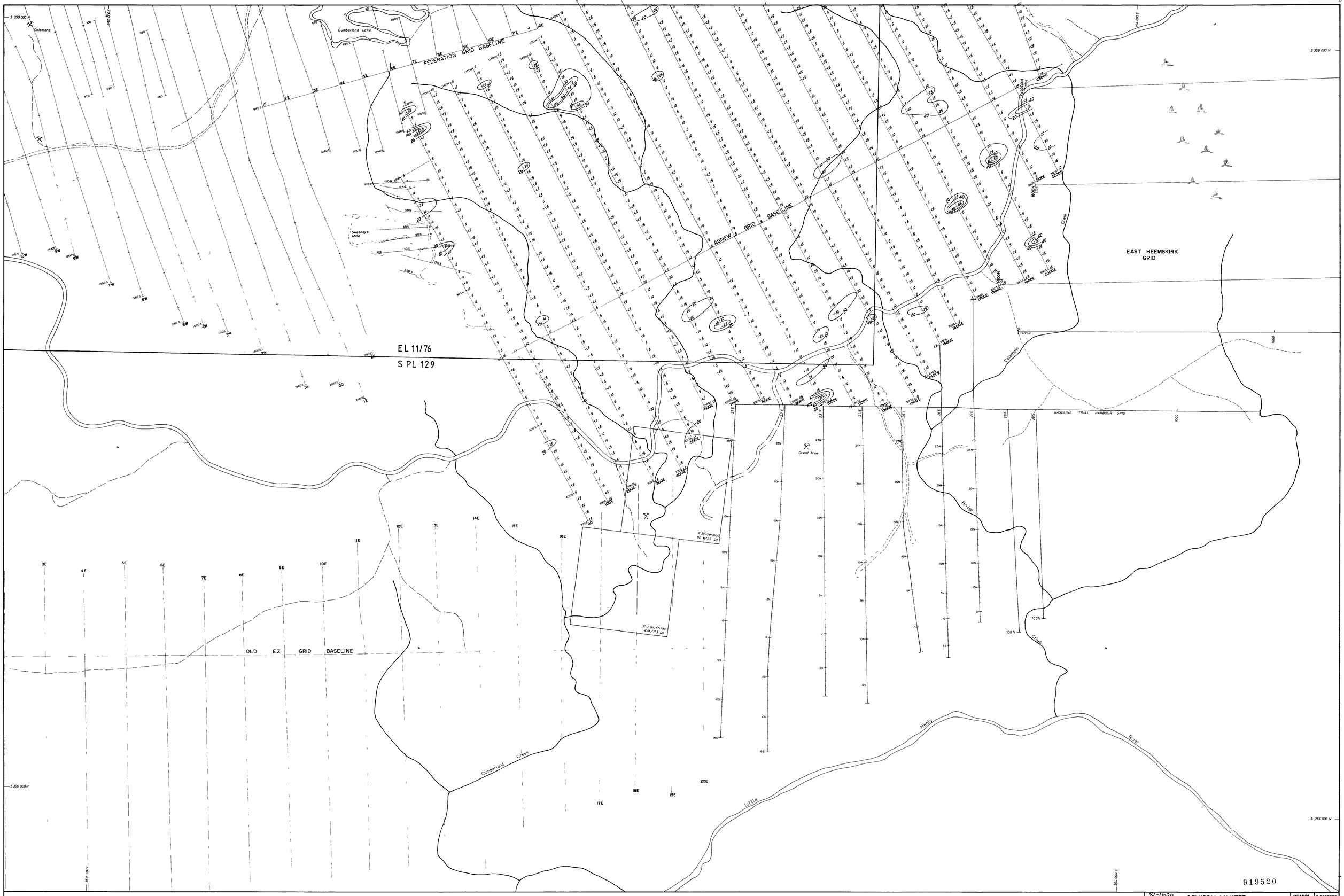
SOIL GEOCHEMISTRY (-180µm)

ARSENIC IN PPM 1229

SCALE 1:5000 METRES

100 0 100 200 300

DRAWN	P ROBERTS
TRACED	T G D S
DATE	JUNE 1981
SCALE	1:5000
DRAWING No	PLAN 20 b



KEY

- >100
- 60 100
- 40 60
- 20 40

5 cm

LEGEND

- Cut grid lines
- Walking track
- Cut grid lines not located accurately

ZEEHAN C2/2	ZEEHAN D1/1
ZEEHAN C2/4	ZEEHAN D1/3

81-1629 (Vol 3/4) RENISON LIMITED

ZEEHAN C2/4

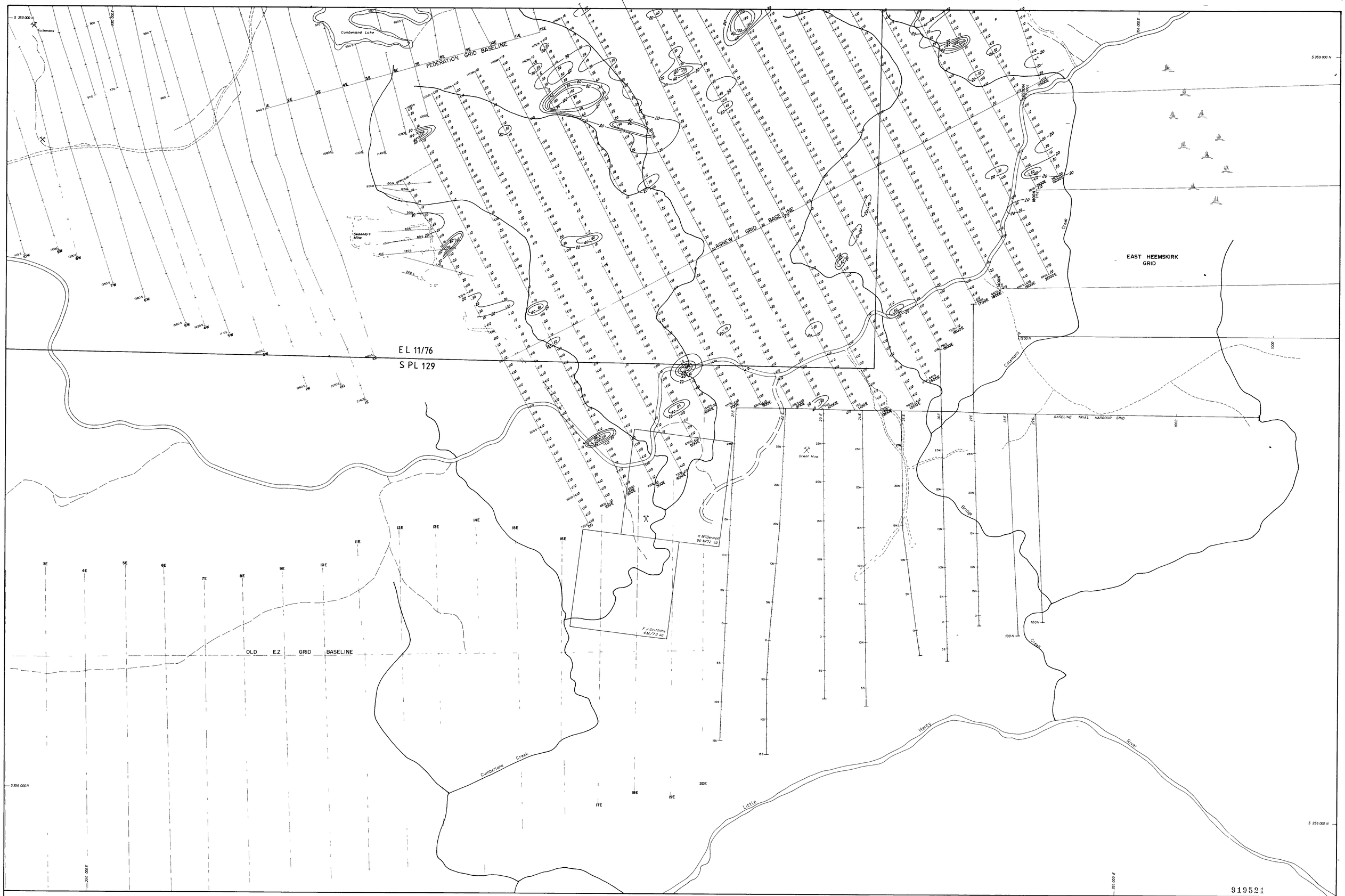
SOIL GEOCHEMISTRY (-180µm)

COPPER IN PPM 1230

SCALE 1 5000 METRES

100 0 100 200 300

DRAWN	P ROBERTS
TRACED	T G D S
DATE	JUNE 1981
SCALE	1 5000
DRAWING No	PLAN 20c



919521

KEY

- >100
- 60 100
- 40 60
- 20 40

5 cm

LEGEND

- Cut grid lines
- Walking track
- Cut grid lines not located accurately

ZEEHAN C2/2	ZEEHAN D1/1
ZEEHAN C2/4	ZEEHAN D1/3

81-1629 (Vol 3) (4)

RENISON LIMITED

ZEEHAN C2/4

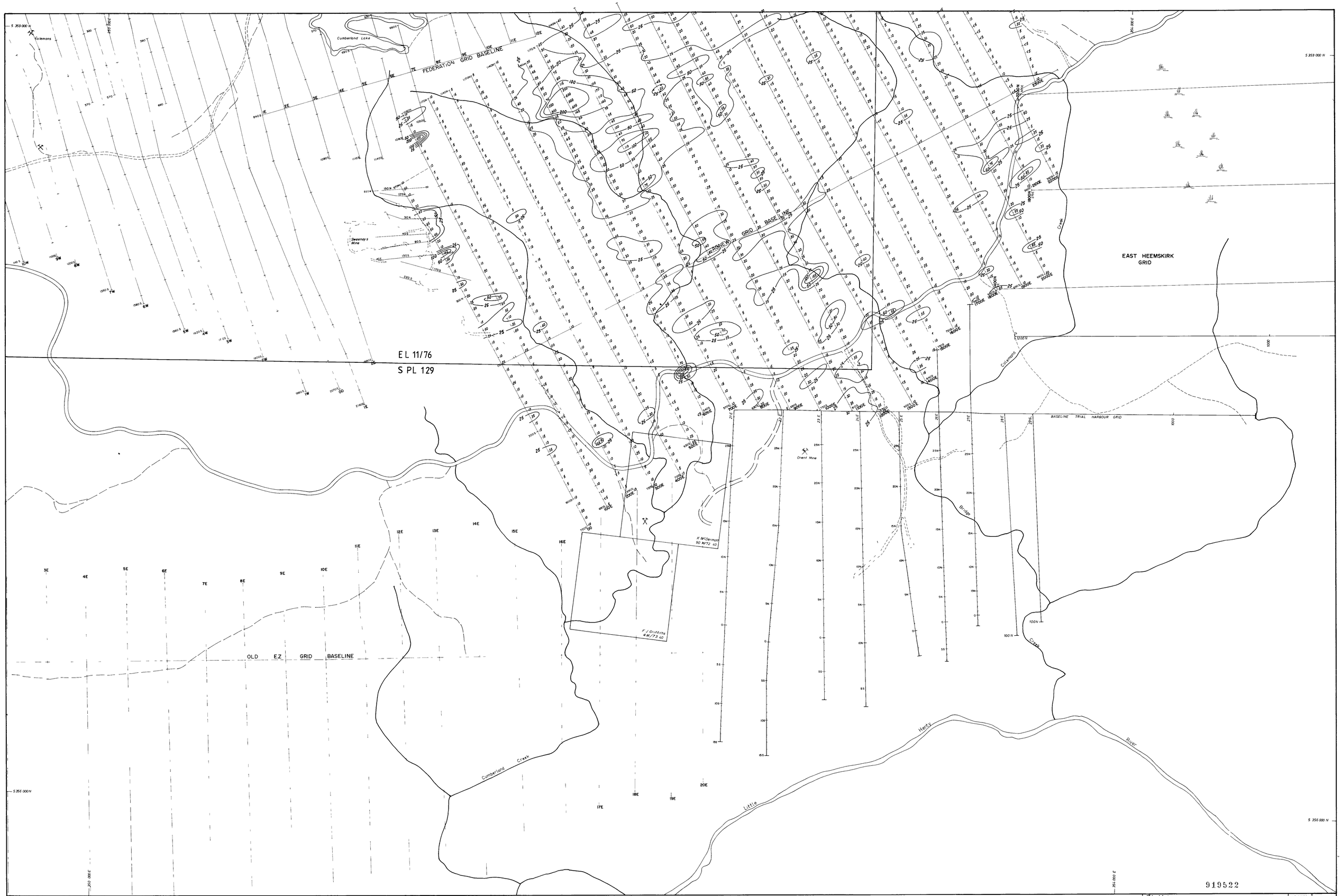
SOIL GEOCHEMISTRY (-180µm)

LEAD IN PPM

SCALE 1:5000 METRES

100 0 100 200 300

DRAWN	P ROBERTS
TRACED	T G D S
DATE	JUNE 1981
SCALE	1:5000
DRAWING No	PLAN 20 d



919522

KEY

	>200
	100 200
	50 100
	25 50

5 cm

LEGEND

- Cut grid lines
- Walking track
- Cut grid lines not located accurately

ZEEHAN C2/2	ZEEHAN D1/1
ZEEHAN C2/4	ZEEHAN D1/3

81-1629
C161 2/4

RENISON LIMITED

ZEEHAN C2/4

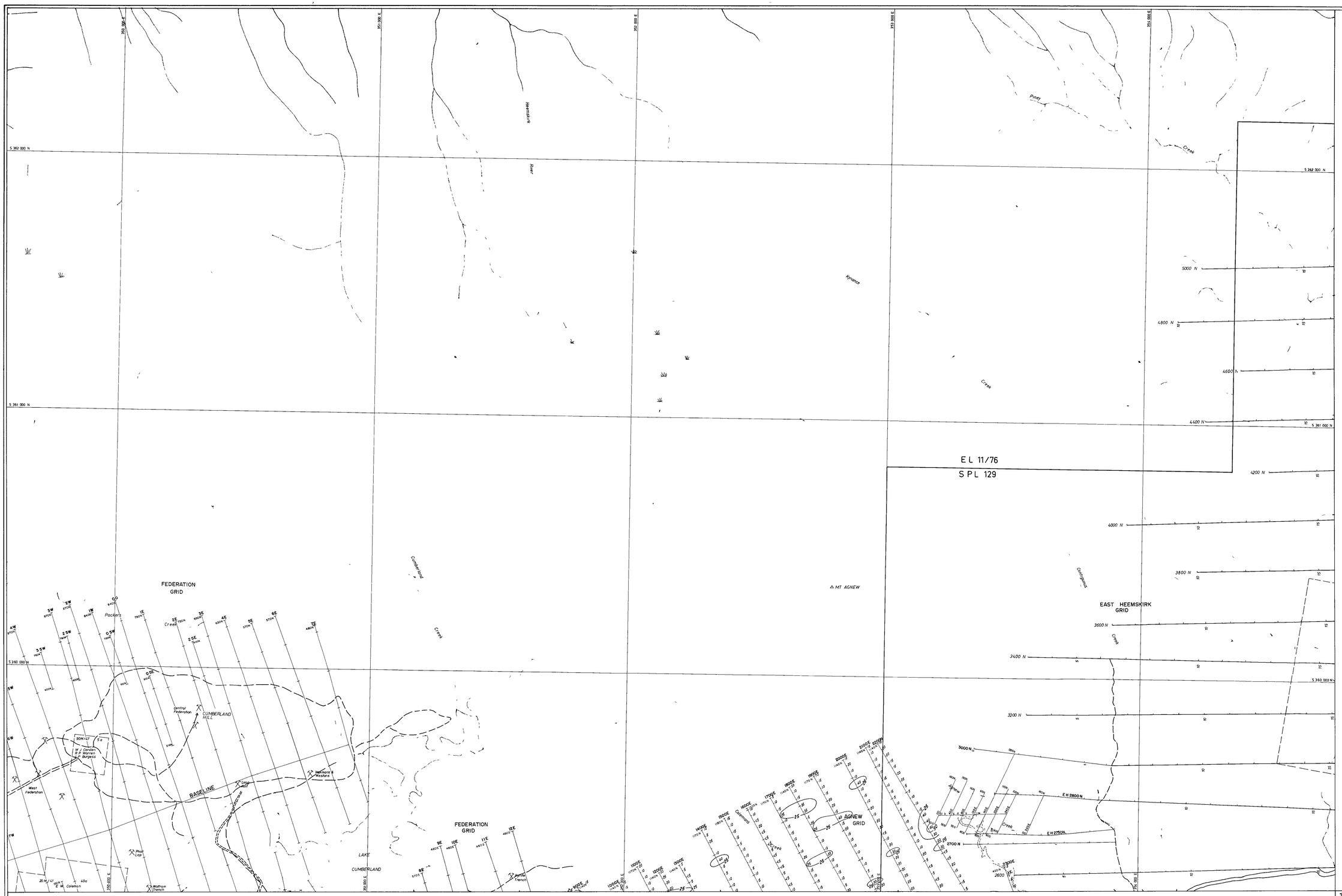
SOIL GEOCHEMISTRY (-180 µm)

ZINC IN PPM 1232

SCALE 1:5,000 METRES

100 0 100 200 300

DRAWN	P ROBERTS
TRACED	T G D S
DATE	JUNE 1981
SCALE	1:5000
DRAWING No	Plan 20e



319517

81-1626
CW01 314

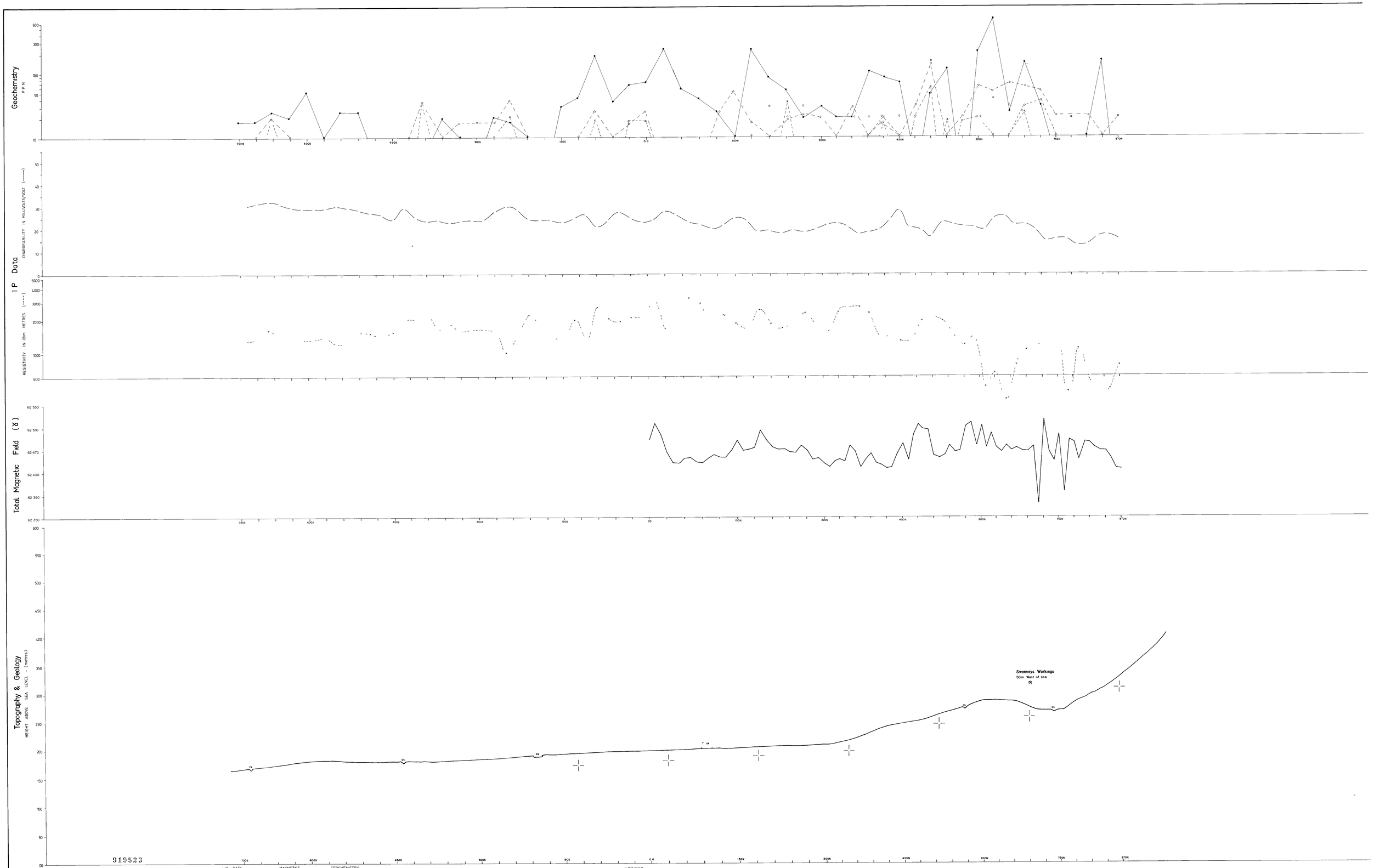
RENISON LIMITED

ZEEHAN C2/2

SOIL GEOCHEMISTRY (-180µm)

ZINC IN PPM

GEOLOGIST	P ROBERTS	SCALE 1 5000 METRES
DRAUGHTSMAN	T G D S	100 0 100 200
DATE	JUNE 1981	
REVISIONS		DRAWING No
		1227 PLAN 8e



51-1629
Cu,Cl 2114

RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 00

SECTION LOOKING WEST

1233

SCALE 1 2000 METRES

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	
PLAN	21 A

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization accasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica green
Area of tourmaline nodules

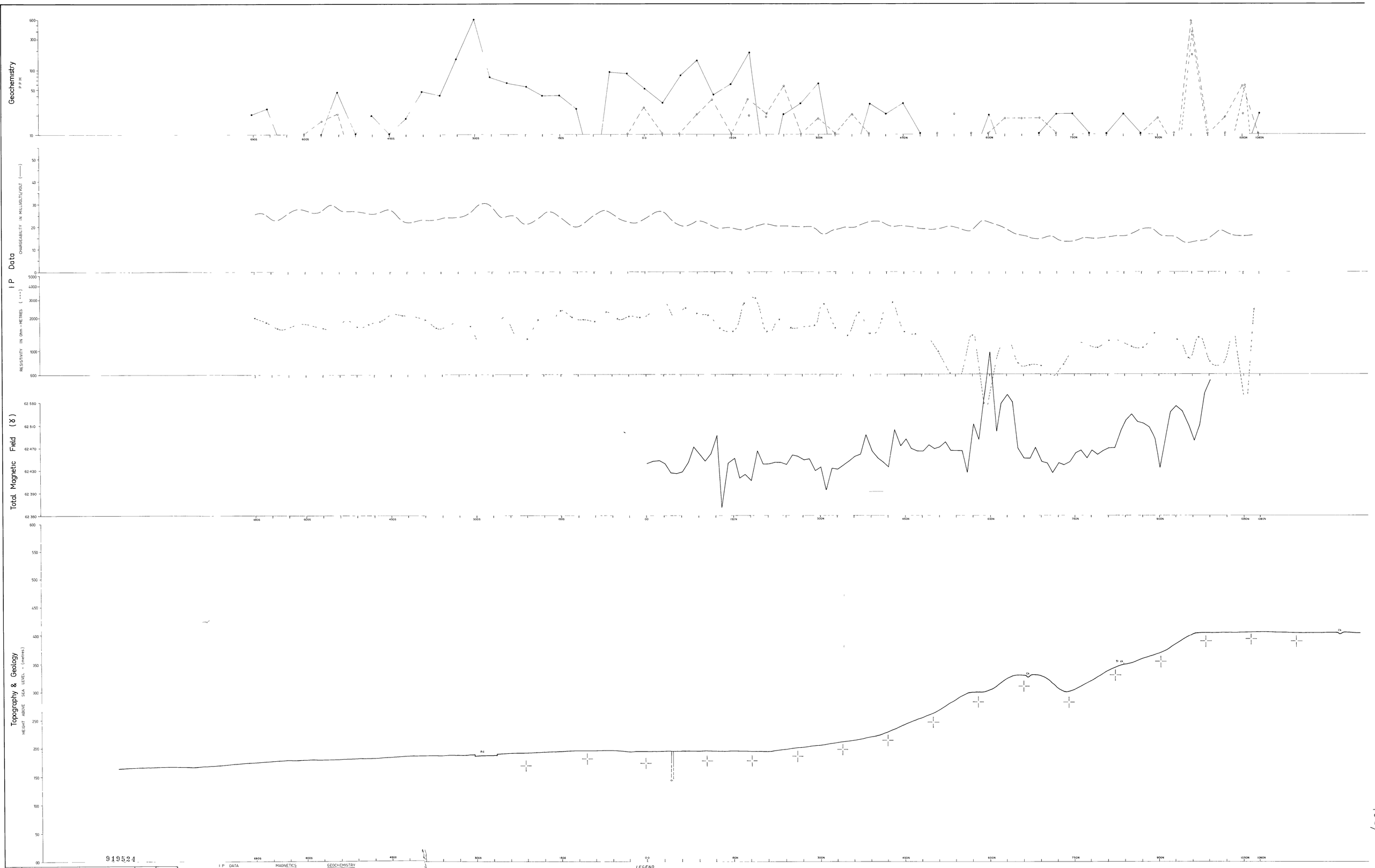
LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

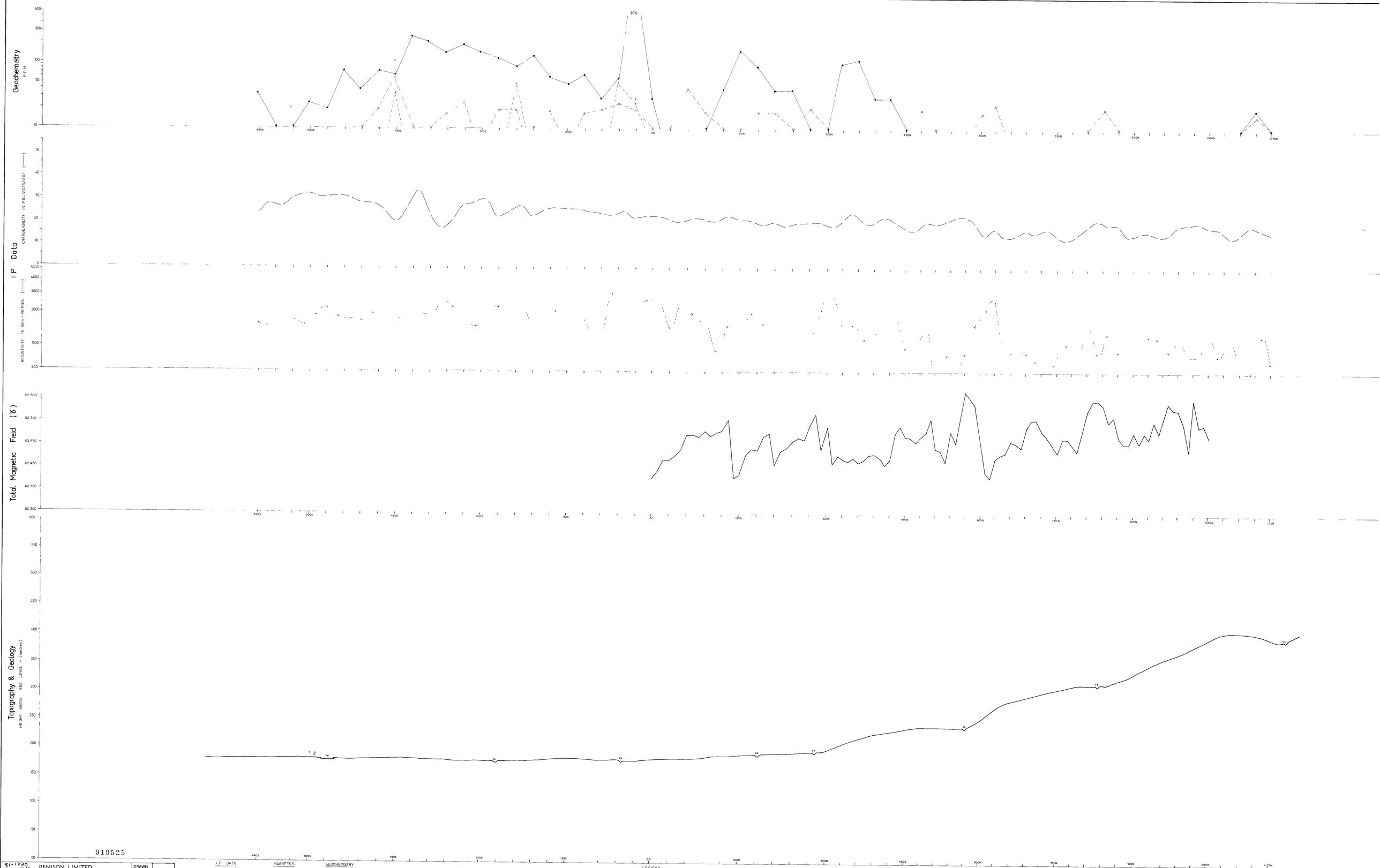
Major lineament
F F Fault
Definite
Approximate
Inferred
Geological boundaries

1233.


Geochemistry
P P M
600
300
100
50
10
I P Data
CHARGEABILITY IN MILLIVOLTS/VOLT (——)
50
40
30
20
10
0
RESISTIVITY IN Ohm - METRES (- - -)
5000
4000
3000
2000
1000
500
Total Magnetic Field (γ)
62 550
62 510
62 470
62 430
62 390
62 350
690S
600S
450S
300S
150S
0 0
150N
300N
450N
600N
750N
900N
1050N
1080N
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (metres)
600
550
500
450
400
350
300
250
200
150
100
50
00
Ra
Ch
Tr Ch
919524
I P DATA
CHARGEABILITY & RESISTIVITY
Gradient Array
S Anomaly letter number
MAGNETICS
5cm
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
White Alteration Dykes
Hydrothermal
Collapse
Breccias
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica gleisen
Area of tourmaline nodules
LEGEND
ROCK TYPES
Aplite or micrograniite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
F Fault
Dehiscence
Approximate
Inferred
Geological boundaries
RENISON LIMITED
AGNEW GRID EL 11/76 & SPL 129
LINE 100E
1234
SECTION LOOKING WEST
SCALE 1 2000 METRES
DRAWN
TRACED
DATE
SCALE 1 2000
DRAWING No
PLAN 21 B

1234

1235



81-1629
CVO1 3/4

RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 200E 1235

SECTION LOOKING WEST

SCALE 1 2000 METRES

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	
PLAN	21 C

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes

Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

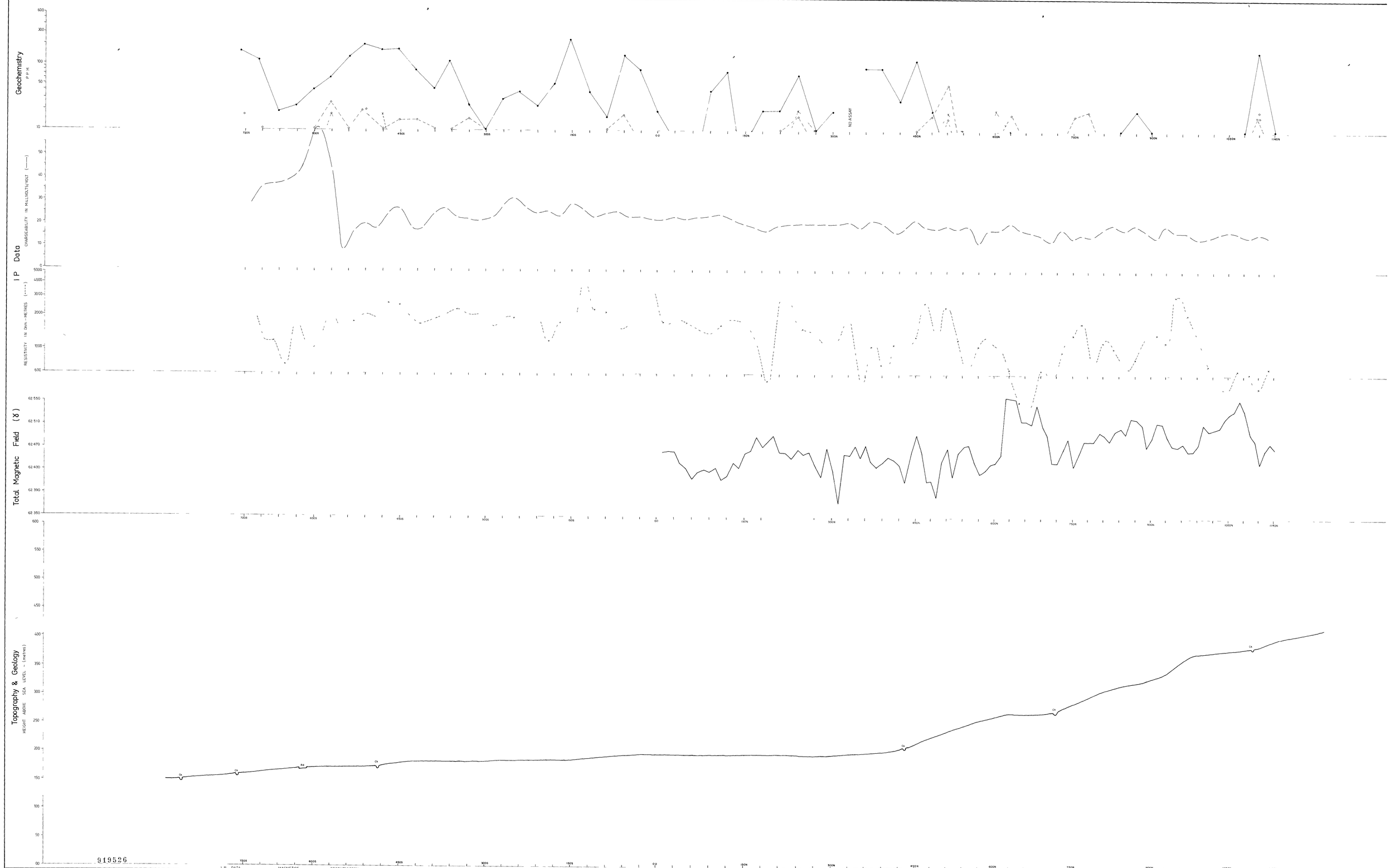
ROCK TYPES

Aplite or metagranite
Fine grained
Medium grained
White granite

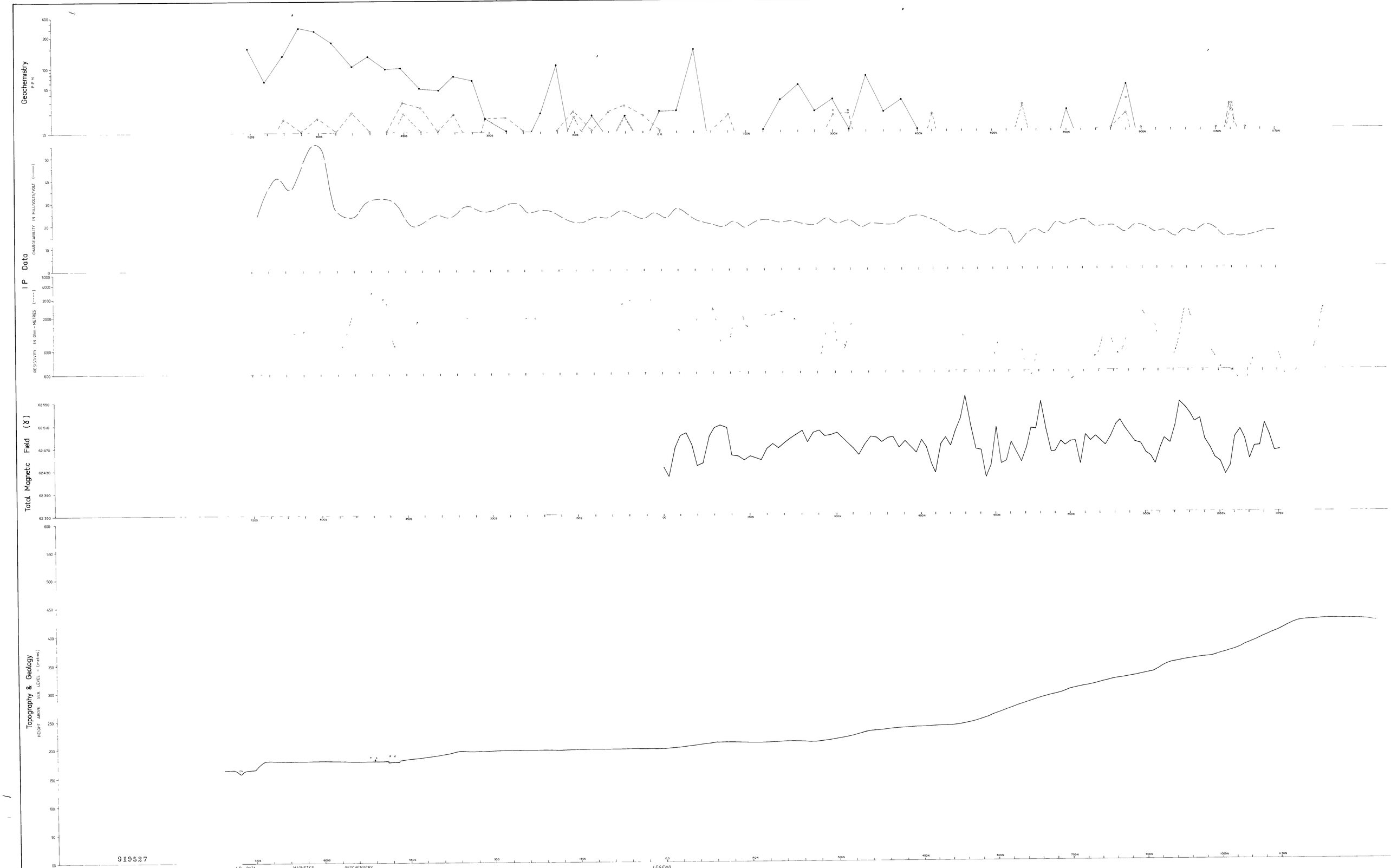
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1236

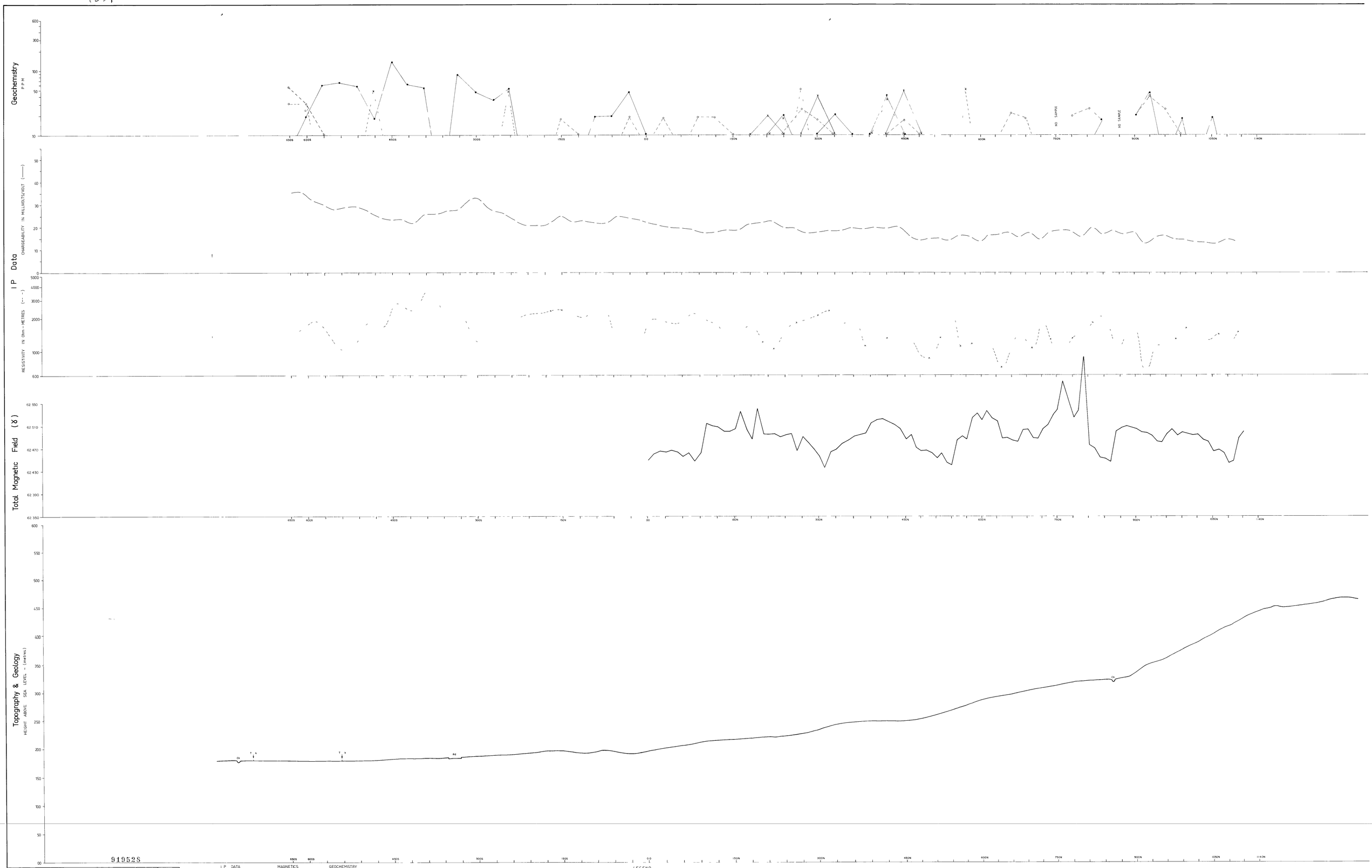


81-163a (Ver. 3/4) RENISON LIMITED	DRAWN
AGNEW GRID EL 11/76 & SPL 129	TRACED
LINE 300E 1236	DATE
SECTION LOOKING WEST	SCALE 1:2000
SCALE 1:2000 METRES	DRAWING No PLAN 21 D


Geochemistry
P P M
600
300
100
50
10
IP Data
CHARGEABILITY IN MILLIVOLTS/VOLT (——)
50
40
30
20
10
0
RESISTIVITY IN Ohm - METRES (- - - -)
5000
4000
3000
2000
1000
600
Total Magnetic Field (γ)
62.550
62.510
62.470
62.430
62.390
62.350
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (metres)
600
550
500
450
400
350
300
250
200
150
100
50
00
120S
60S
0
60N
120N
180N
240N
300N
360N
420N
480N
540N
600N
660N
720N
780N
840N
900N
960N
1020N
1080N
1140N
919527
IP DATA
CHARGEABILITY & RESISTIVITY
Gradient Array
S Anomaly letter number
5 cm
MAGNETICS
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (beneficiated granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules
LEGEND
ROCK TYPES
Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
Fault
Dolerite
Approximate
Inferred
Geological boundaries
81-1620
CL(01) 3(4)
RENISON LIMITED
AGNEW GRID EL 11/76 & SPL 129
LINE 400E
SECTION LOOKING WEST
SCALE 1 2000 METRES
40 0 40 80 120
DRAWN
TRACED
DATE
SCALE 1 2000
DRAWING No
PLAN
21 E

1239

1239



RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 500E

SECTION LOOKING WEST 1233

SCALE 1 2000 METRES

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	PLAN 21 F

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinisation occasionally with hematite

Hydrothermal

Collapse

Breccias

White Alteration Cones

Argillic alteration

Green alteration (sericitized granite) generally with hematite or pyrite

Quartz mica greisen

Areas of tourmaline nodules

ROCK TYPES

Aplite porphyritic granite

Fine grained

Medium grained

White granite

Medium grained

Coarse grained

Red granite

Major lineament

F Fault

Definite

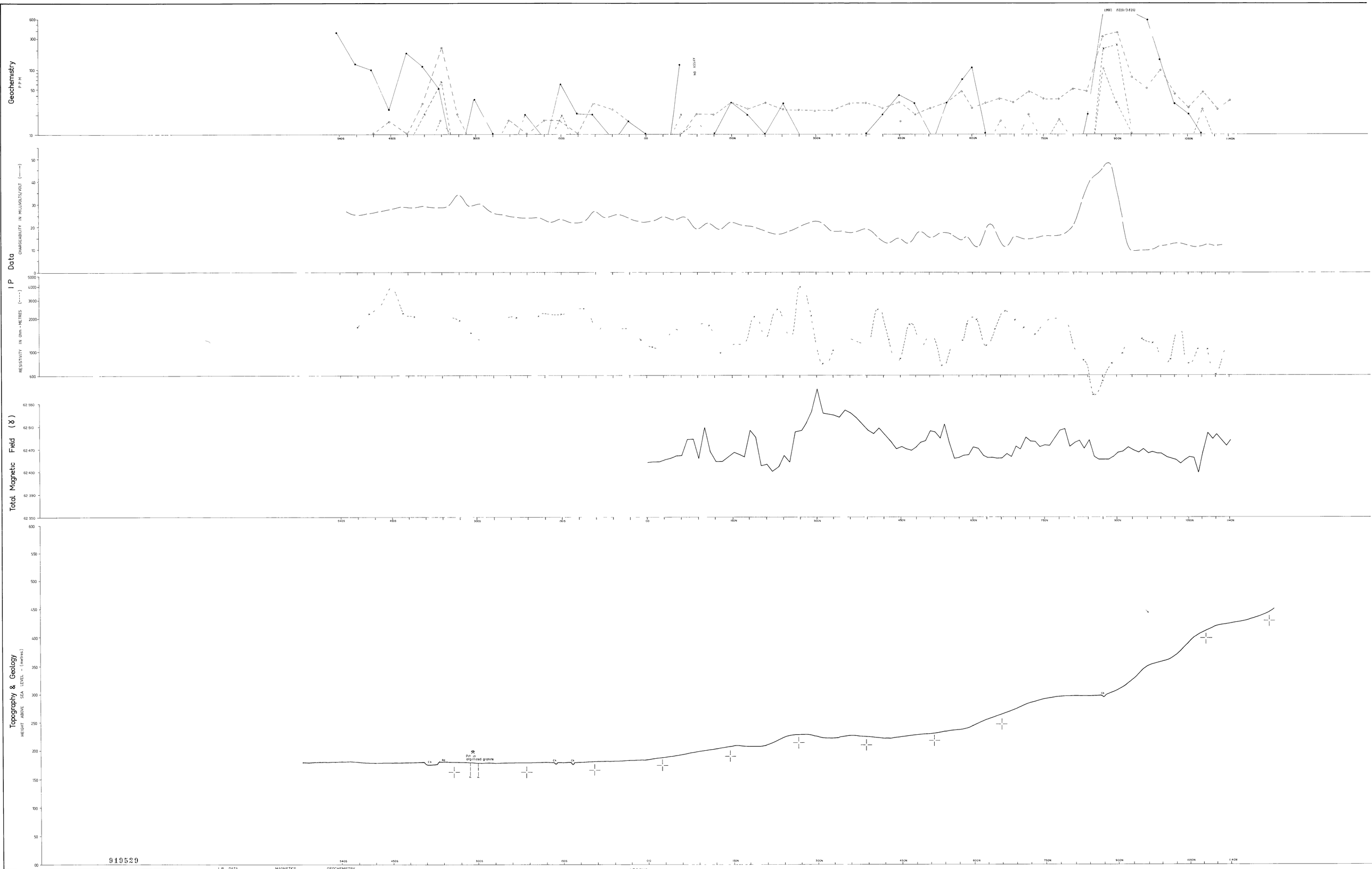
Approximate

Inferred

Geological boundaries

1238

1238



81-1639
(Vol 3140)

RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 600E

1238

SECTION LOOKING WEST

SCALE 1 2000 METRES

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	PLAN 21 6

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array

S Anomaly letter number

MAGNETICS

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite — White Alteration Dykes
Hydrothermal
Collapse — Breccias
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

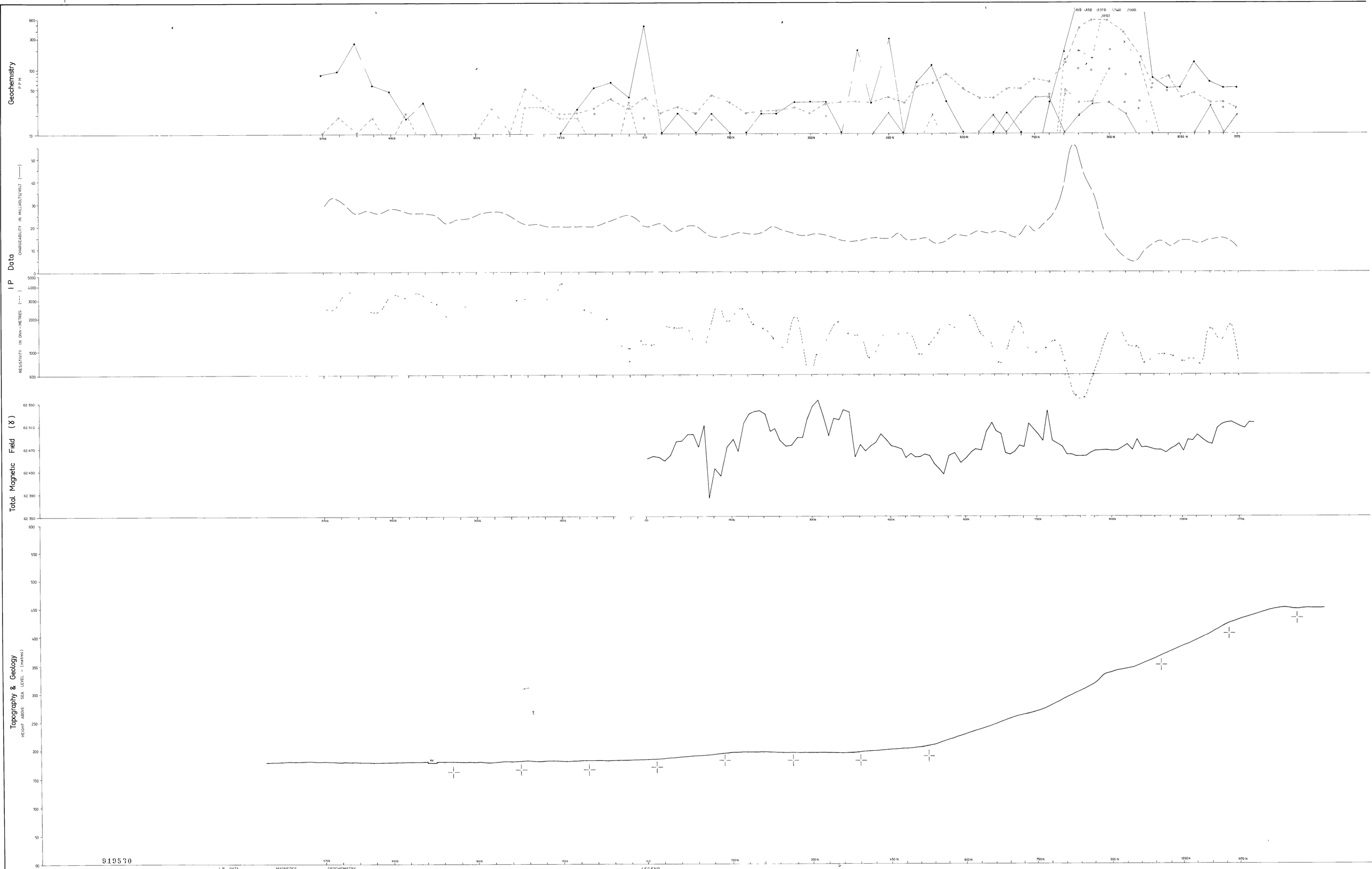
ROCK TYPES

Aplite or microgranite
Fine grained — White granite
Medium grained
Porphyritic granite
Medium grained — Red granite
Coarse grained

Major lineament
F —— F Fault
—— Definite
— — Approximate — Geological boundaries
—?— Inferred

1240

1240



81-1629 C/101 4(14) RENISON LIMITED	DRAWN
AGNEW GRID EL 11/76 & SPL 129	TRACED
LINE 700E	DATE
	SCALE 1 2000
SECTION LOOKING WEST 1240	DRAWING No
SCALE 1 2000 METRES 0 20 40 60 80 100	PLAN 2.1 H

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
White alteration dykes
Hydrothermal
Collapse
Breccias
Argillic alteration
Green alteration (serpentized gravite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

LEGEND

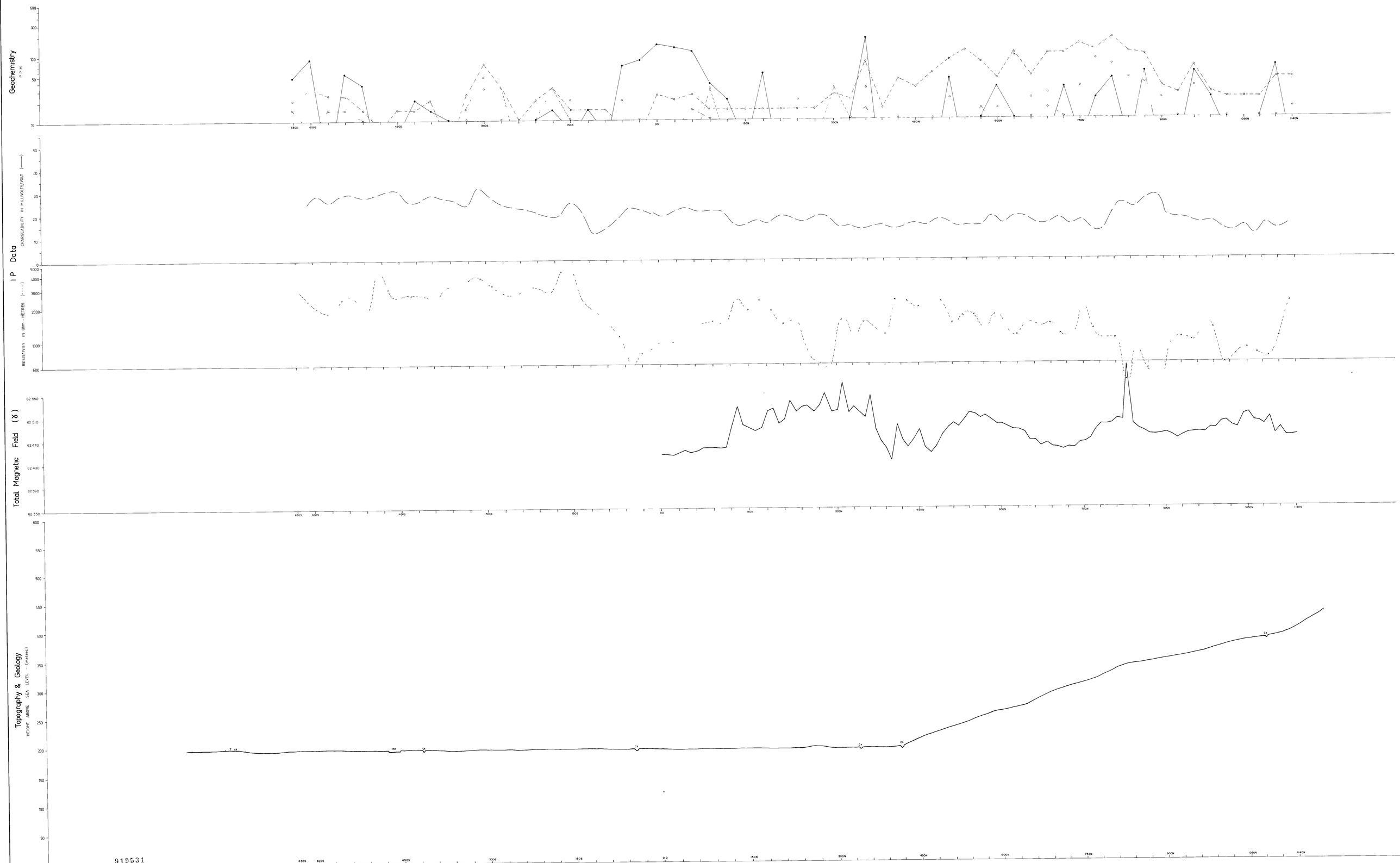
ROCK TYPES

Aplite or metag anite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F F Fault
Definite
Approximate
Inferred
Geological boundaries

1241

1241



919531

81-1629 (Vol 4.4)

RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 800E

1241

SECTION LOOKING WEST

SCALE 1 2000 METRES

40 0 40 80 120

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	
PLAN	21 I

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

6 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization occasionally with hematite

White Alteration Dykes

Hydrothermal

Collapse

Breccias

Argillic alteration

Green alteration (sericitized granite) generally with hematite or pyrite

Quartz mica greisen

Area of tourmaline nodules

ROCK TYPES

Aplite or microgranite

Fine grained

Medium grained

White granite

Porphyritic granite

Medium grained

Coarse grained

Red granite

Major lineament

F — F Fault

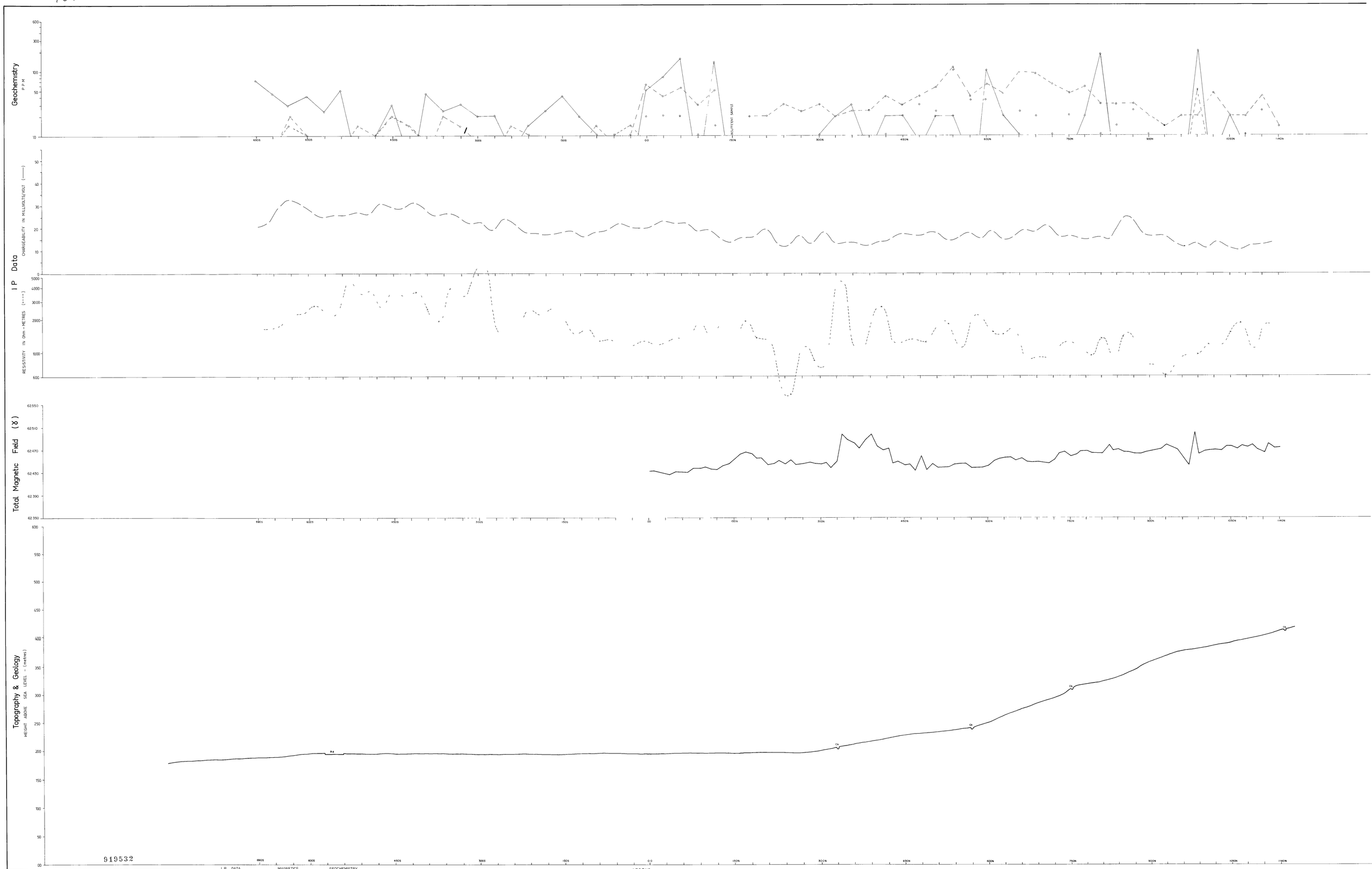
Definite

Approximate

Inferred

Geological boundaries

1242



RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 900E

SECTION LOOKING WEST

SCALE 1 2000 METRES

40 0 40 80 120

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	
PLAN 21 J	

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
White Alteration Dykes
Hydrothermal
Collapse
Breccias
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

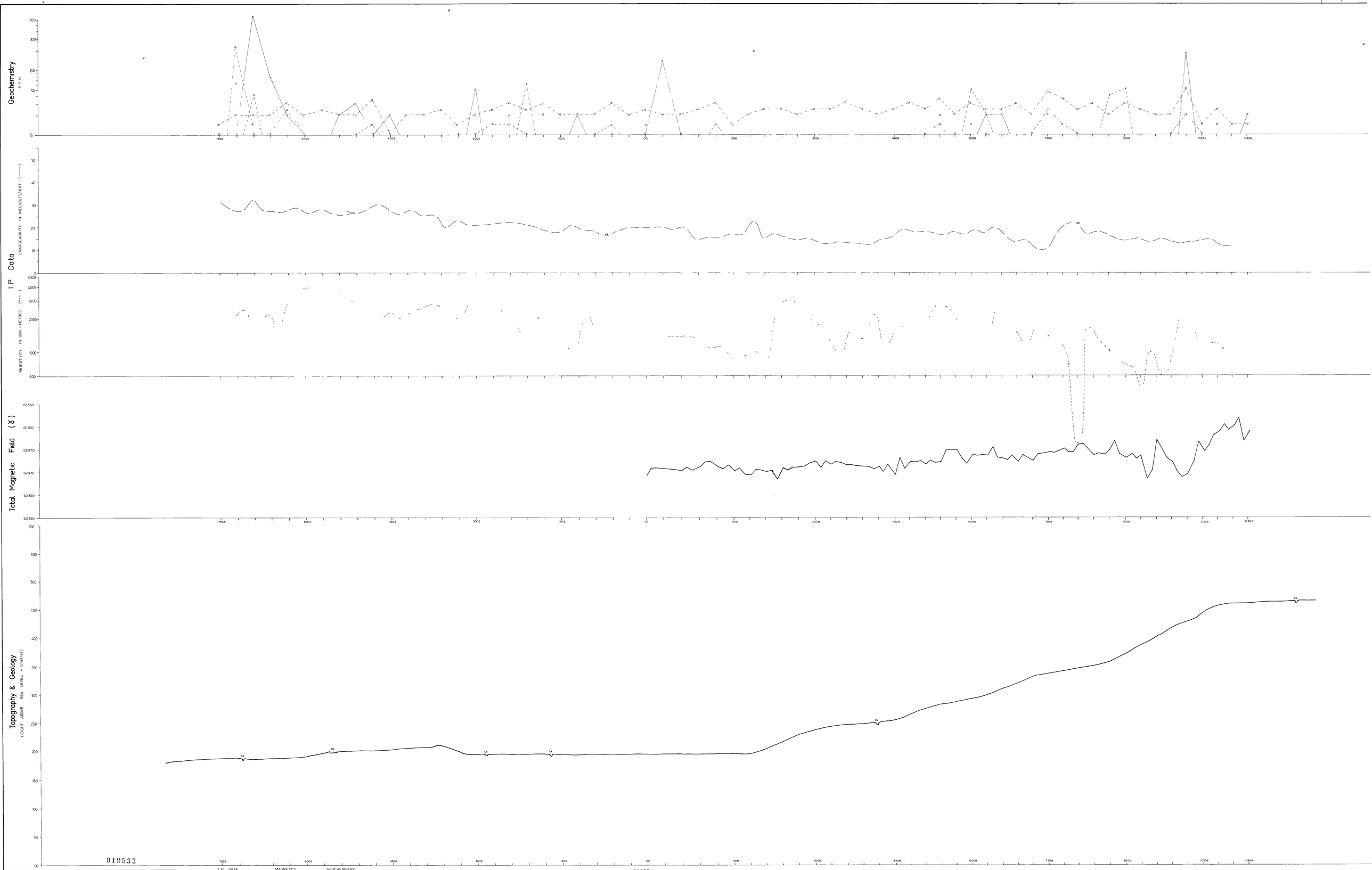
LEGEND

ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1243



RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 1000E

SECTION LOOKING WEST

SCALE 1 2000 METRES

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	PLAN 21 K

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, W

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization occasionally with hematite

Hydrothermal

Collapse

Breccias

With alteration Dykes

Argillic alteration

Green alteration (serpentized granite) generally with hematite or pyrite

Quartz mica greisen

Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite

Fine grained

Medium grained

With granite

Porphyritic granite

Medium grained

Coarse grained

Red granite

Major lineament

Fault

Definite

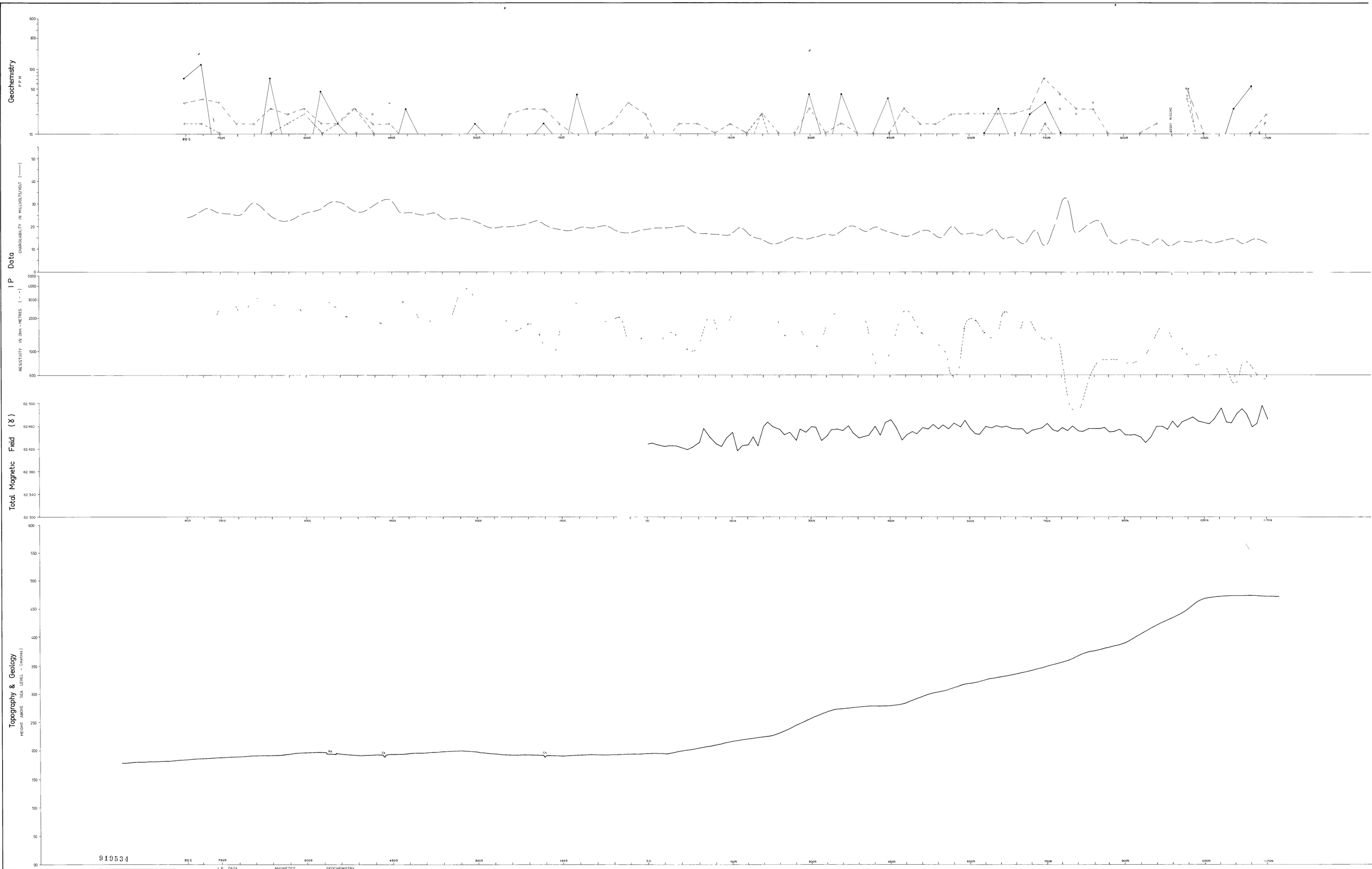
Approximate

Inferred

Geological boundaries

1244

1244



CVG1 GRENISON LIMITED	DRAWN
AGNEW GRID EL 11/76 & SPL 129	TRACED
LINE 1100E	DATE
SECTION LOOKING WEST	SCALE 1 2000
SCALE 1 2000 METRES (40 0 40 80 100)	DRAWING No 1244
	PLAN 21 L

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array

5 Anomaly letter number

MAGNETICS

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

LEGEND

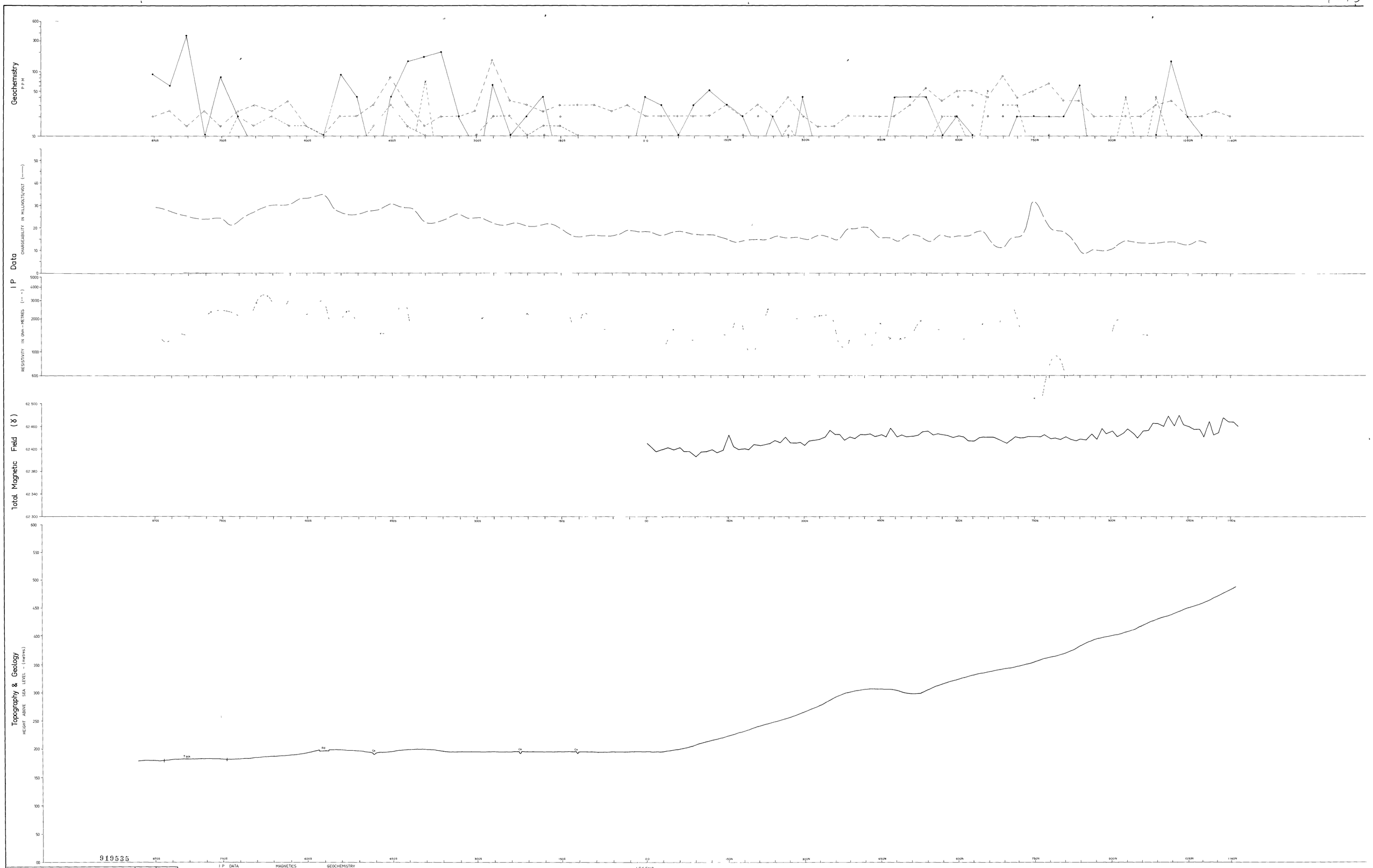
ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1245

1245



81-1680
(Vol 476)

RENISON LIMITED	DRAWN
	TRACED
AGNEW GRID EL 11/76 & SPL 129	DATE
LINE 1200E	SCALE 1 2000
SECTION LOOKING WEST 1245	DRAWING No
SCALE 1 2000 METRES 0 40 80 120	PLAN 21 M

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

MAGNETICS

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
With alteration Dykes

Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

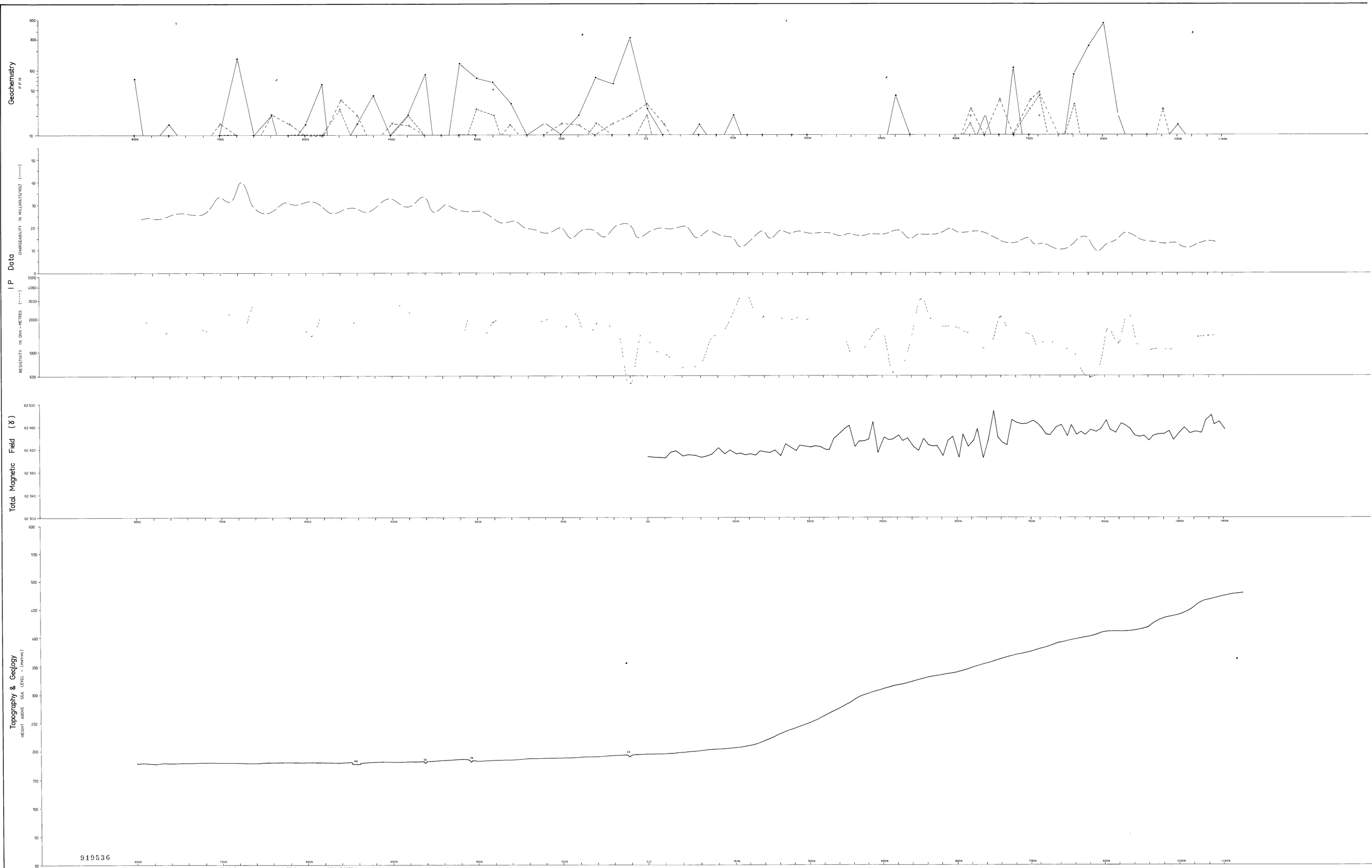
ROCK TYPES

Aplite or meregranite
Fine grained
Medium grained
White granite

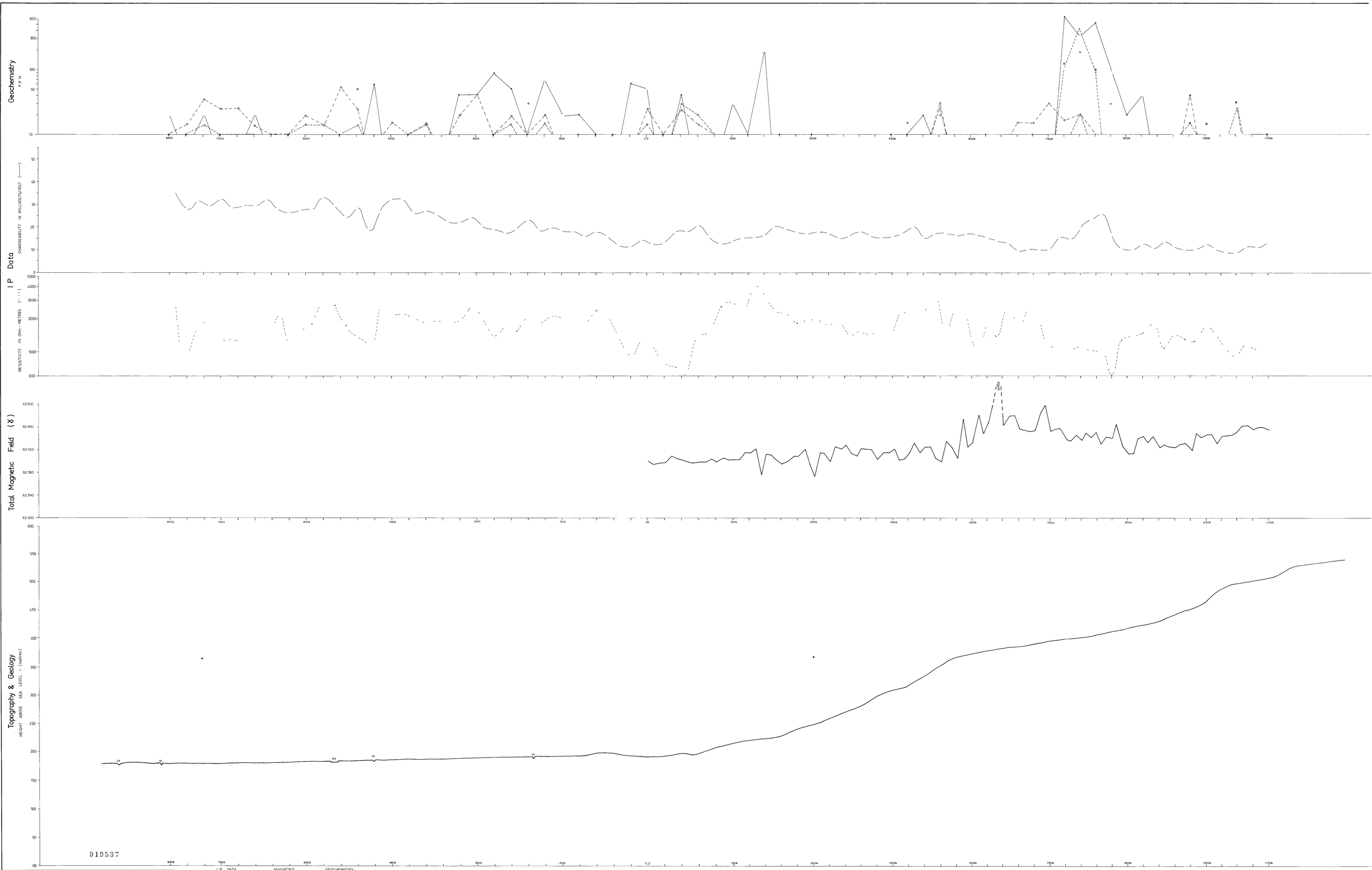
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1246



RENISON LIMITED	DRAWN
AGNEW GRID EL 11/76 & SPL 129	TRACED
LINE 1300E	DATE
SECTION LOOKING WEST 1246	SCALE 1 2000
SCALE 1 2000 METRES	DRAWING No
	PLAN 21 N



81-1699
(101 4/4)

RENISON LIMITED

AGNEW GRID E L 11/76 & SPL 129

LINE 1400E

SECTION LOOKING WEST

1247

SCALE 1 2000 METRES

60 0 40 80 120

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	PLAN 21 0

I P DATA

CHARGEABILITY & RESISTIVITY

——— Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes

Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

LEGEND

ROCK TYPES

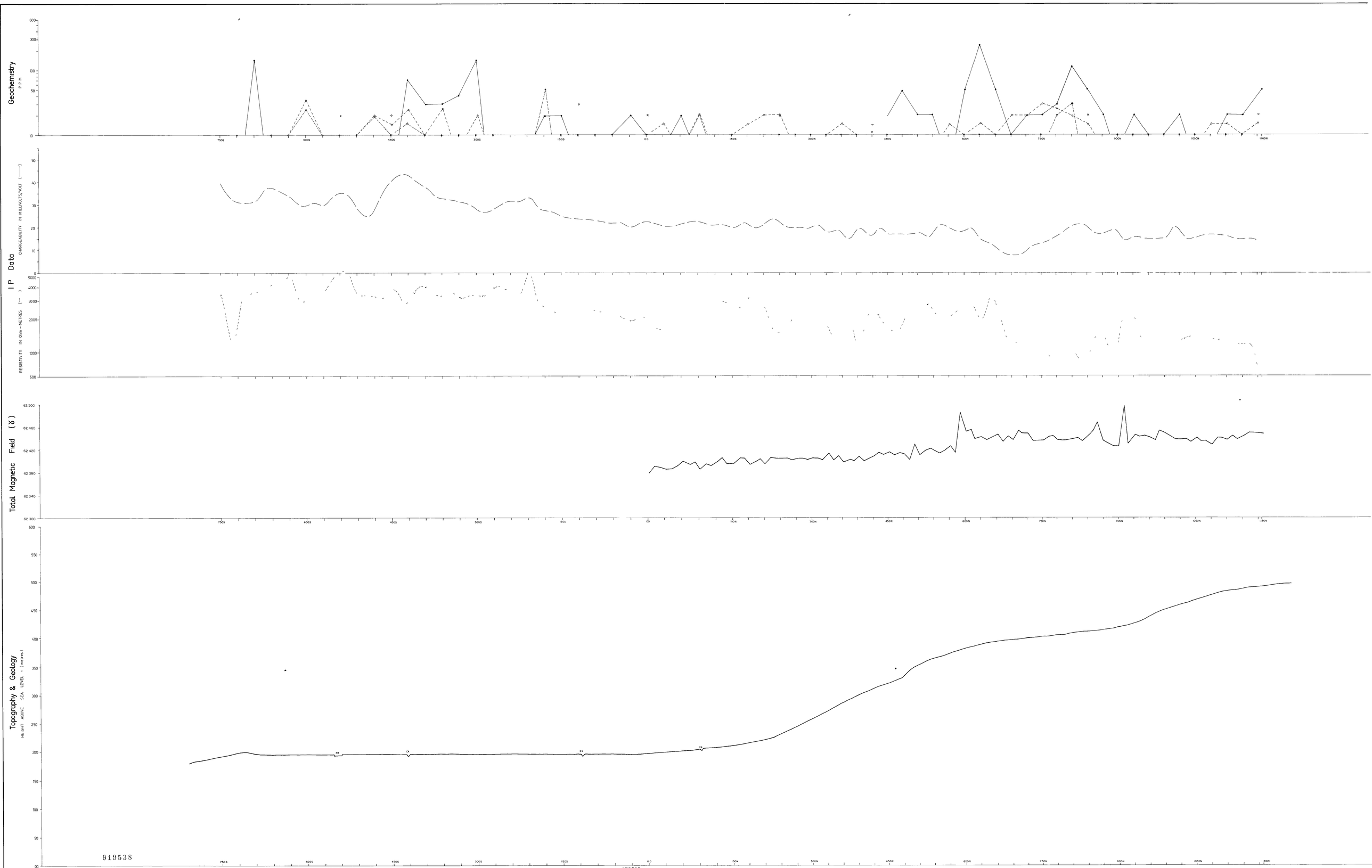
Aplite or microgranite
Fine grained
Medium grained
White granite

Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F —— F Fault
Definite
Approximate
? Inferred
Geological boundaries

1248

1248



81 1559
(Vol 4 (4))

RENISON LIMITED	DRAWN
	TRACED
AGNEW GRID EL 11/76 & SPL 129	DATE
LINE 1500E	SCALE 1 2000
SECTION LOOKING WEST 1248	DRAWING No
SCALE 1 2000 METRES 0 40 80 120	PLAN 21 P

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

MAGNETICS

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dyke

Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

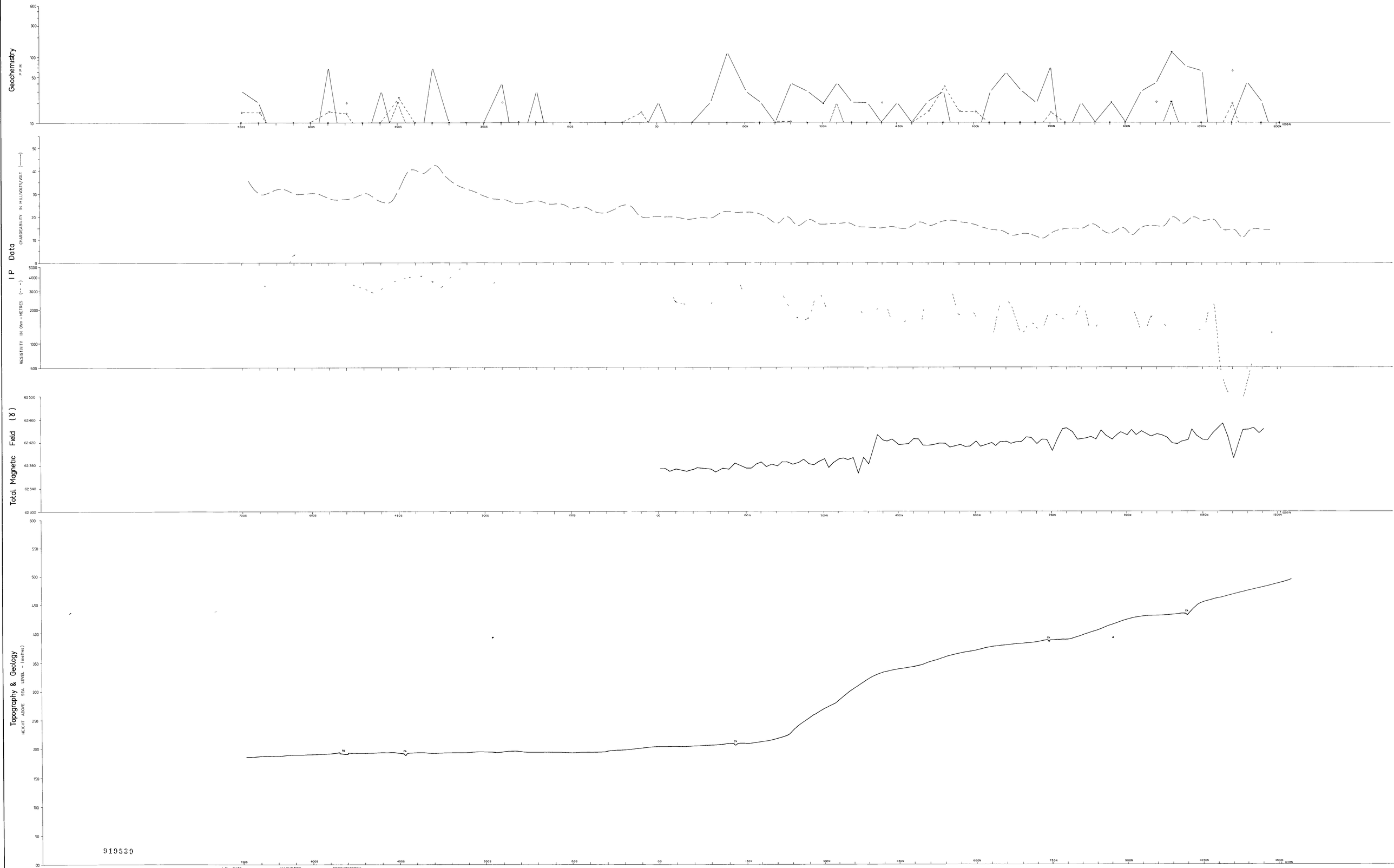
ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite

Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1249



31-1639
CVol 44

RENISON LIMITED	DRAWN
	TRACED
AGNEW GRID EL 11/76 & SPL 129	DATE
LINE 1600E	SCALE 1 2000
SECTION LOOKING WEST 1249	DRAWING No
SCALE 1 2000 METRES 40 0 40 80 120	PLAN 21 Q

I.P. DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization occasionally with hematite — White Alteration Dykes

Hydrothermal — Breccias

Collapse

Argillic alteration

Green alteration (sericitized granite) generally with hematite or pyrite

Quartz mica greisen

Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite

Fine grained — White granite

Medium grained

Porphyritic granite

Medium grained — Red granite

Coarse grained

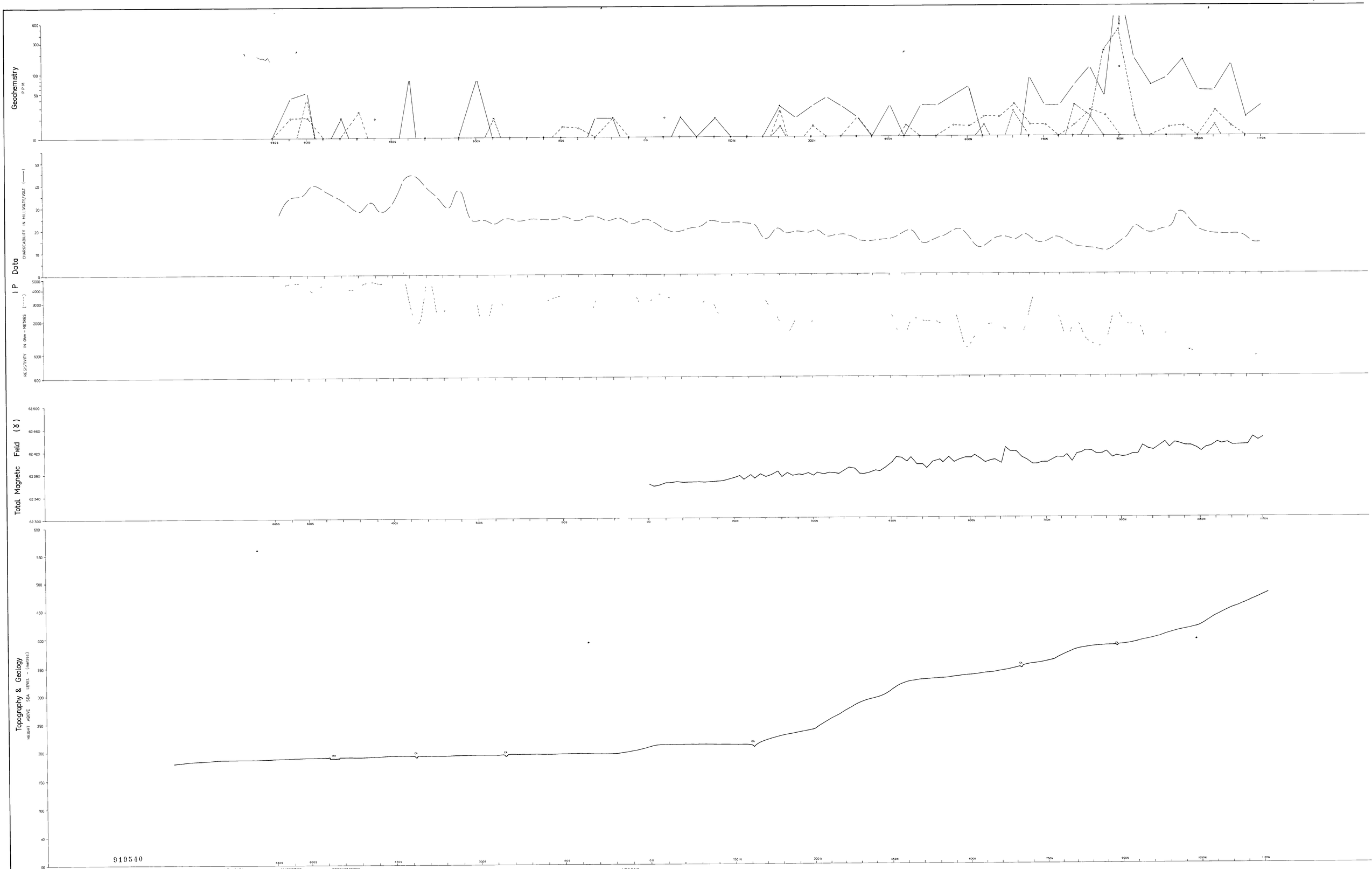
Major lineament

F — F Fault

Definite

Approximate — Geological boundaries

? Inferred



61-1629
CV01 416

RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 1700E

SECTION LOOKING WEST 1250

SCALE 1 2000 METRES

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	
PLAN	
21 R	

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, W

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization occasionally with hematite

White Alteration Dykes

Hydrothermal

Collapse

Breccias

Argillic alteration

Green alteration (sericitized granite) generally with hematite or pyrite

Quartz mica greisen

Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite

Fine grained

Medium grained

White granite

Porphyritic granite

Medium grained

Coarse grained

Red granite

Major lineament

F Fault

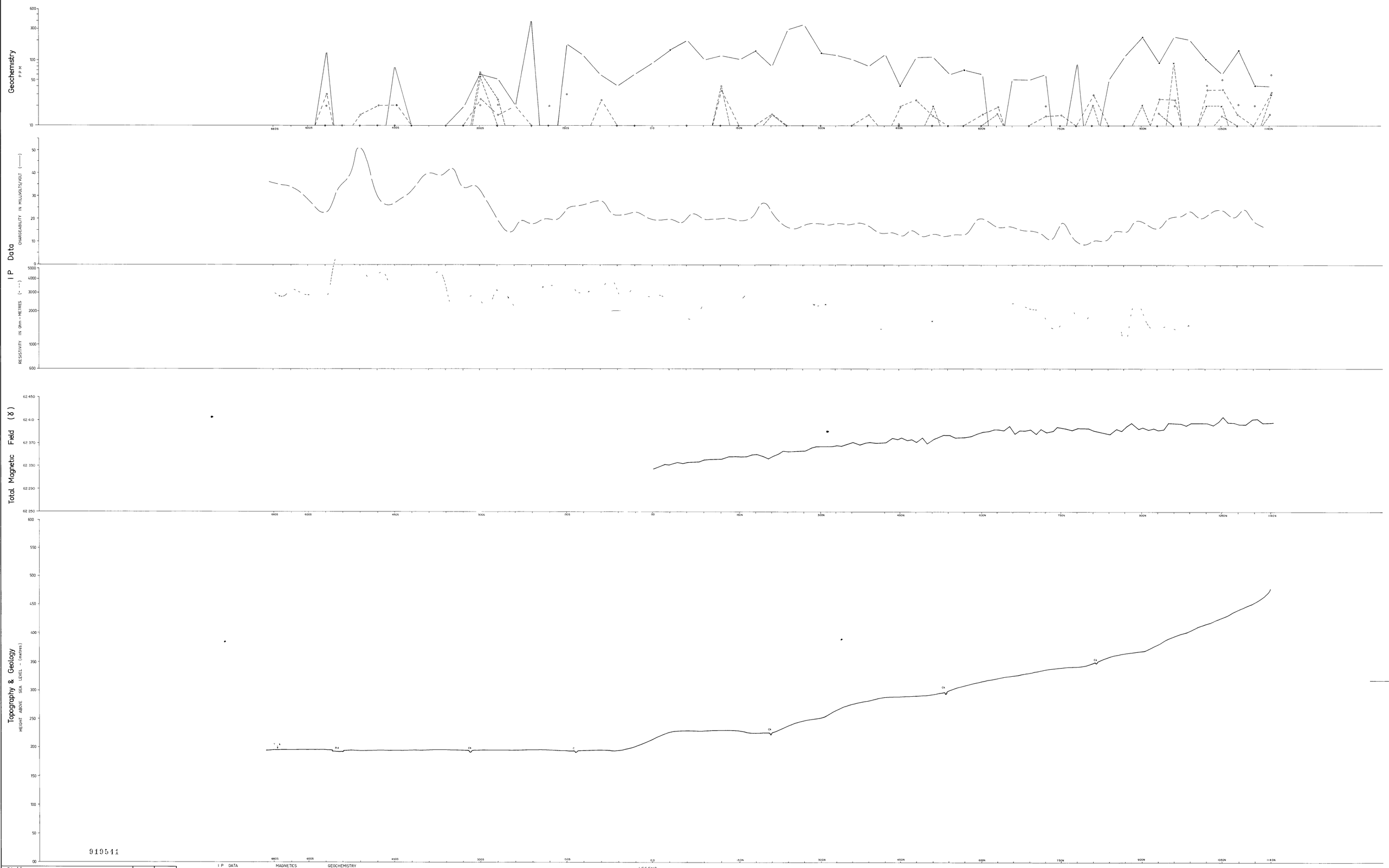
Definite

Approximate

Inferred

Geological boundaries

1251



Bi-Lagg
Level (4)

RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 1800E

SECTION LOOKING WEST

1251

SCALE 1 2000 METRES

40 0 40 80 120

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	
PLAN 21 S	

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization accessorily with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

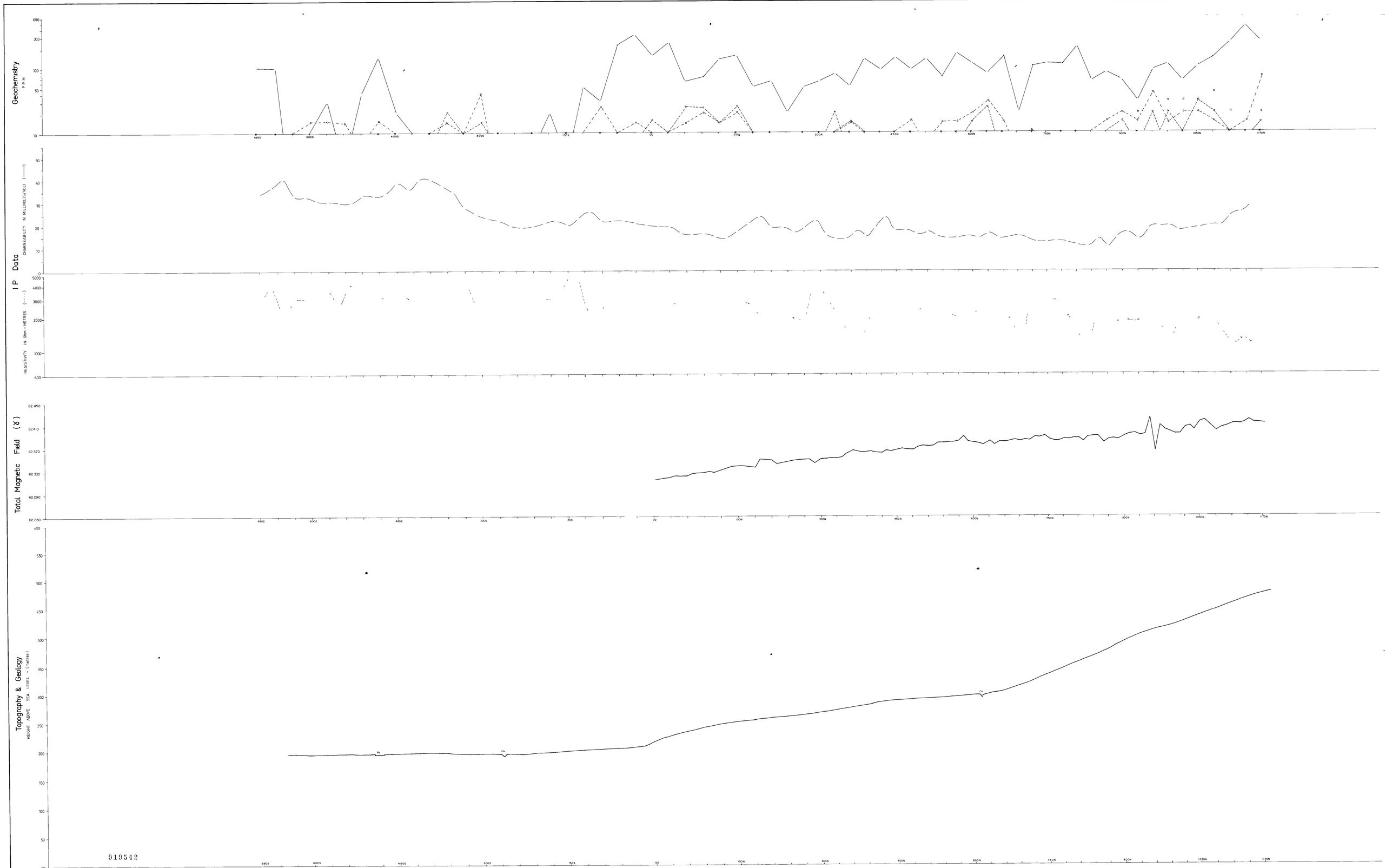
ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1252

1252



81-1629 (Vol 4-11) RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 1900E

SECTION LOOKING WEST

SCALE 1 2000 METRES

0 20 40 80 120

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	
PLAN	21 T

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

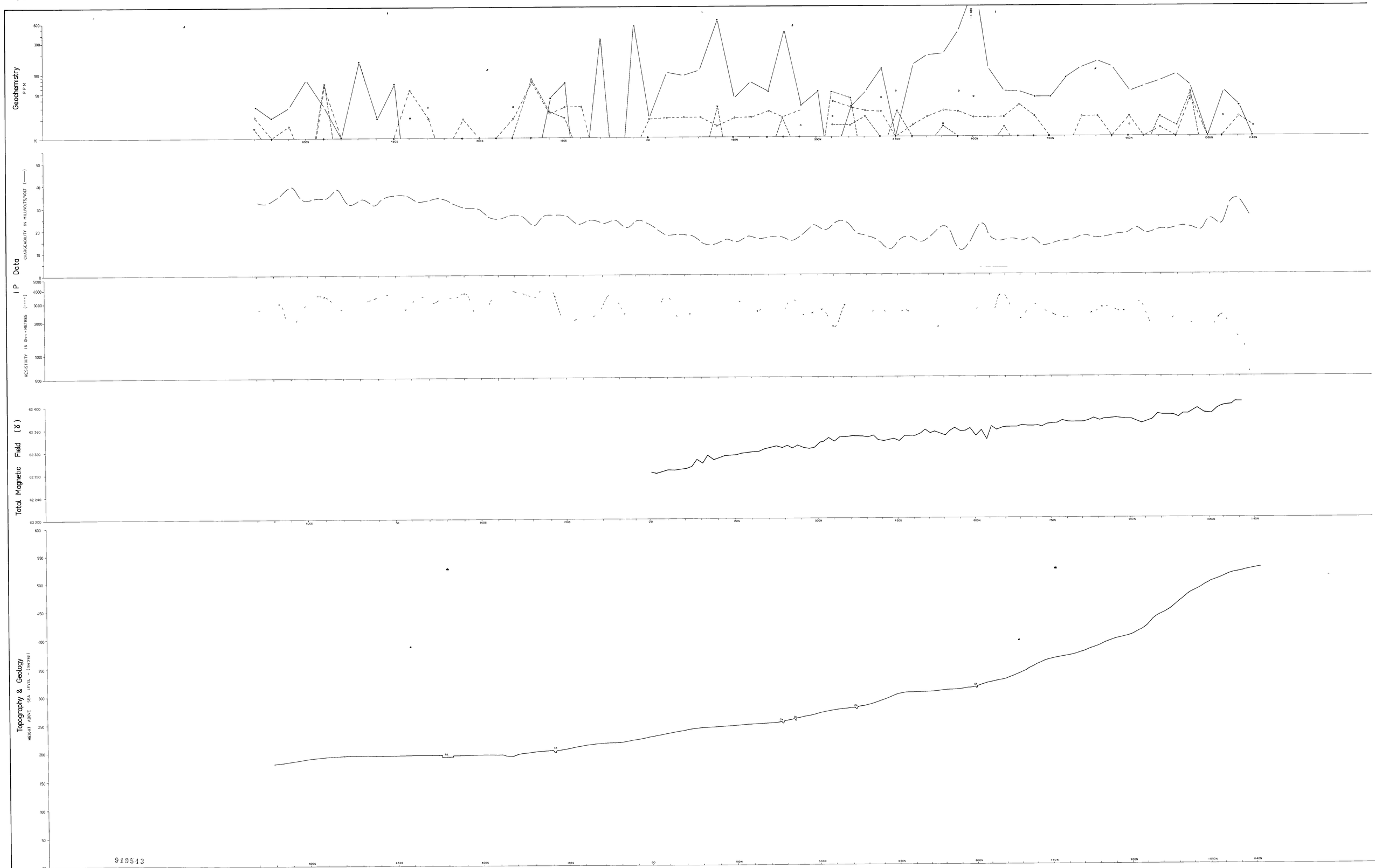
ROCK TYPES

Aplite or microgranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F Fault
Definite
Approximate
Inferred
Geological boundaries

1253

3917



81-159a (C01414) RENISON LIMITED	DRAWN	
	TRACED	
AGNEW GRID EL 11/76 & SPL 129	DATE	
LINE 2000E 1253	SCALE	1 2000
SECTION LOOKING WEST	DRAWING No	
SCALE 1 2000 METRES (0 20 40 60 120)	PLAN 21 U	

I P DATA

CHARGEABILITY & RESISTIVITY

Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, W

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization accessionally with hematite

White Alteration Dykes

Hydrothermal

Collapse

Breccias

Argillic alteration

Green alteration (sericitized granite) generally with hematite or pyrite

Quartz mica greisen

Area of tourmaline nodules

LEGEND

ROCK TYPES

Aplite or microgranite

Fine grained

Medium grained

White granite

Porphyritic granite

Medium grained

Coarse grained

Red granite

Major lineament

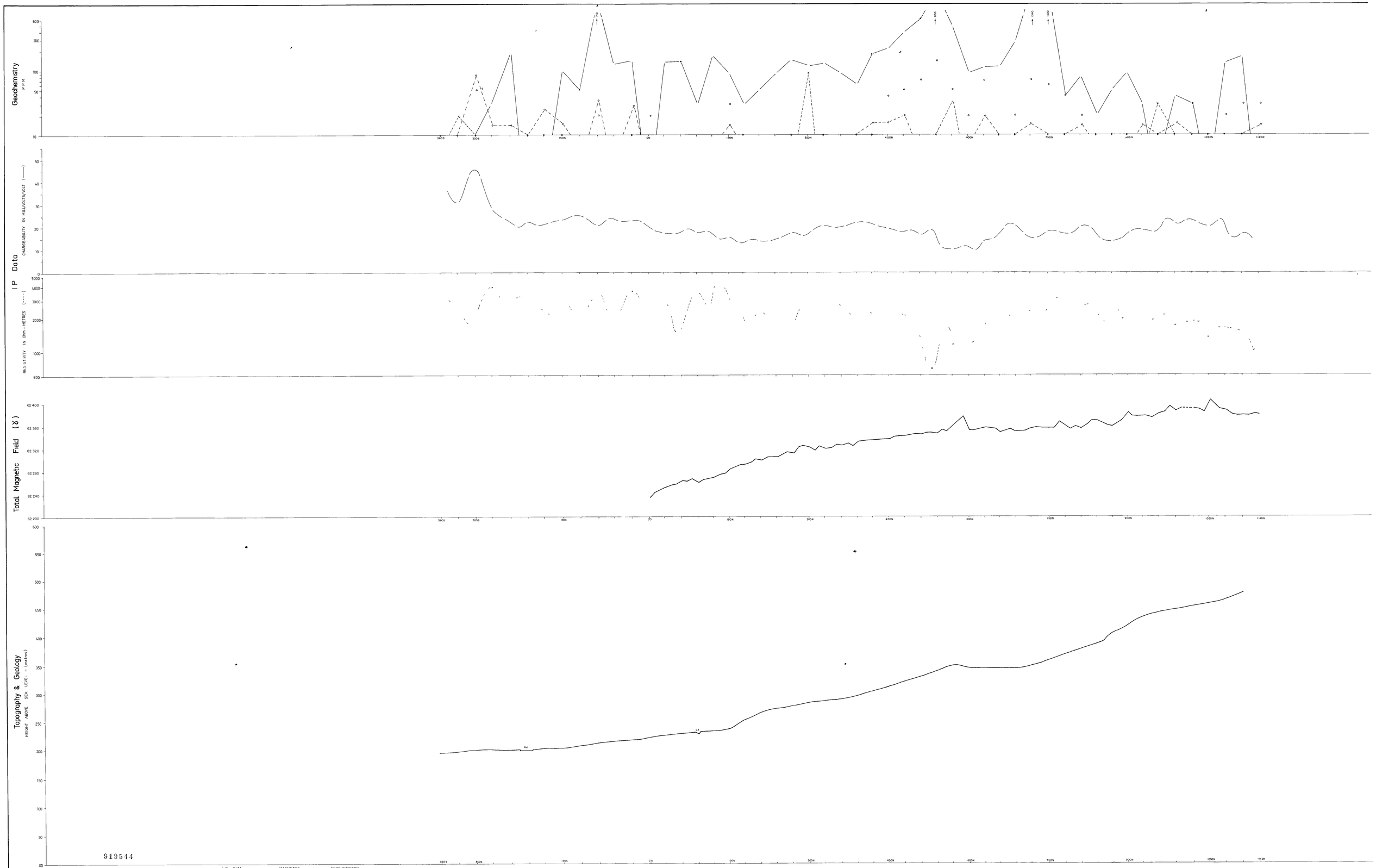
F Fault

Definite

Approximate

Inferred

Geological boundaries



81-1683
(Vol 4114)

RENISON LIMITED

AGNEW GRID EL 11/76 & SPL 129

LINE 2100E 1254

SECTION LOOKING WEST

SCALE 1 2000 METRES

DRAWN	
TRACED	
DATE	
SCALE	1 2000
DRAWING No	PLAN 21 V

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array

S Anomaly letter number

MAGNETICS

5 cm

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline
Total tourmalinization occasionally with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules

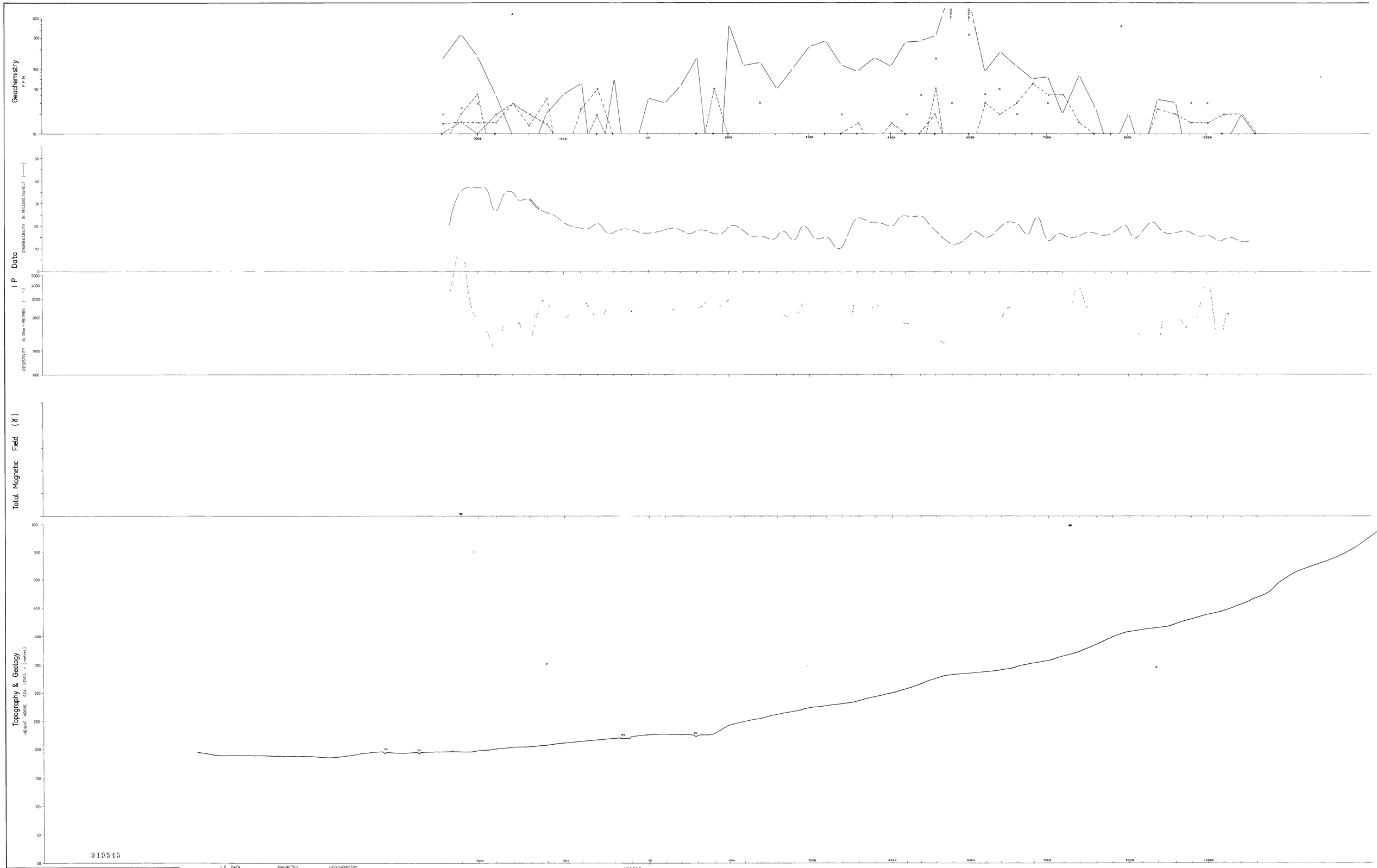
ROCK TYPES

Aplite or metagranite
Fine grained
Medium grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite

Major lineament
F —— F Fault
Definite
Approximate
Inferred
Geological boundaries

1255

1255



91-1605 (Vol 4 1/6) RENISON LIMITED	DRAWN
AGNEW GRID EL 11/76 & SPL 129	TRACED
LINE 2200E 1255	DATE
SECTION LOOKING WEST	SCALE 1 2000
SCALE 1 2000 METRES 40 0 40 80 120	DRAWING No
	PLAN 21 W

I P DATA

CHARGEABILITY & RESISTIVITY

—— Gradient Array

S Anomaly letter number

5 cm

MAGNETICS

GEOCHEMISTRY

Sn

Cu

Pb

Zn

As

W

LEGEND

ALTERATION

Quartz and topaz and/or tourmaline

Total tourmalinization occasionally with hematite

Hydrothermal

Collapse

Breccias

White Alteration Dykes

Argillic alteration

Green alteration (sericitized granite) generally with hematite or pyrite

Quartz mica greisen

Area of tourmaline nodules

ROCK TYPES

Aplite or microgranite

Fine grained

Medium grained

White granite

Porphyritic granite

Medium grained

Coarse grained

Red granite

Major lineament

F Fault

Definite

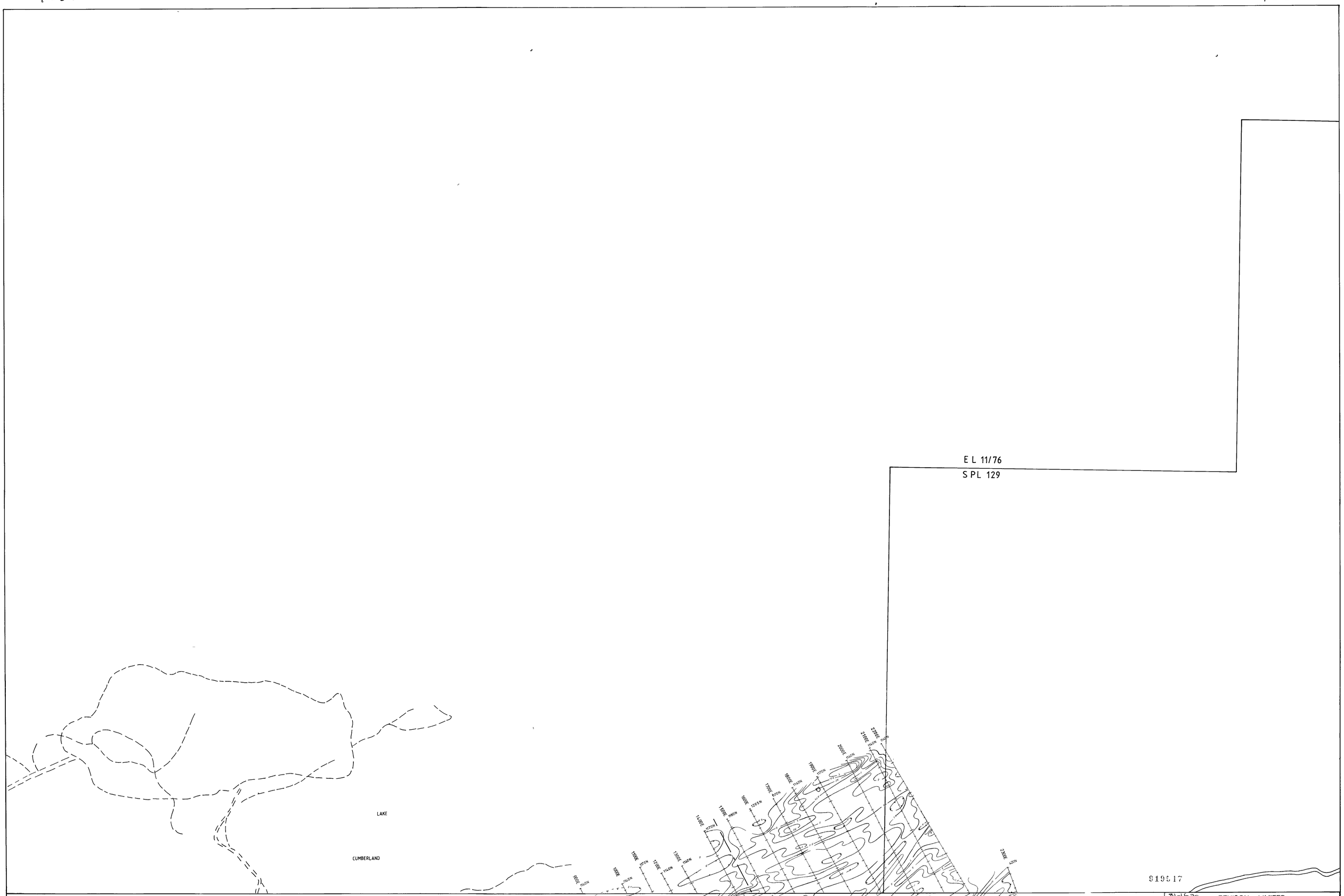
Approximate

Inferred

Geological boundaries

1257

1257



919517

81-1629
(V014/4)

RENISON LIMITED

ZEEHAN C 2/2

GRADIENT ARRAY EIP SURVEY
CHARGEABILITY CONTOURS

SURVEYED & COMPILED BY SCINTREX JAN 1981

Job Nº
TAS 081 D

GEOLOGIST	SCALE 1:5000 METRES
DRAUGHTSMAN	0 100 200 300
DATE	
REVISIONS	DRAWING No
1257	PLAN 22 a

1258

919548

LEGEND

CUT GRID LINES

WALKING TRACK

ZEEHAN C 2/2	ZEEHAN D 1/1
ZEEHAN C 2/4	ZEEHAN D 1/3

5 cm

81-1629
(Vol 4/4)

RENISON LIMITED

ZEEHAN C 2/4

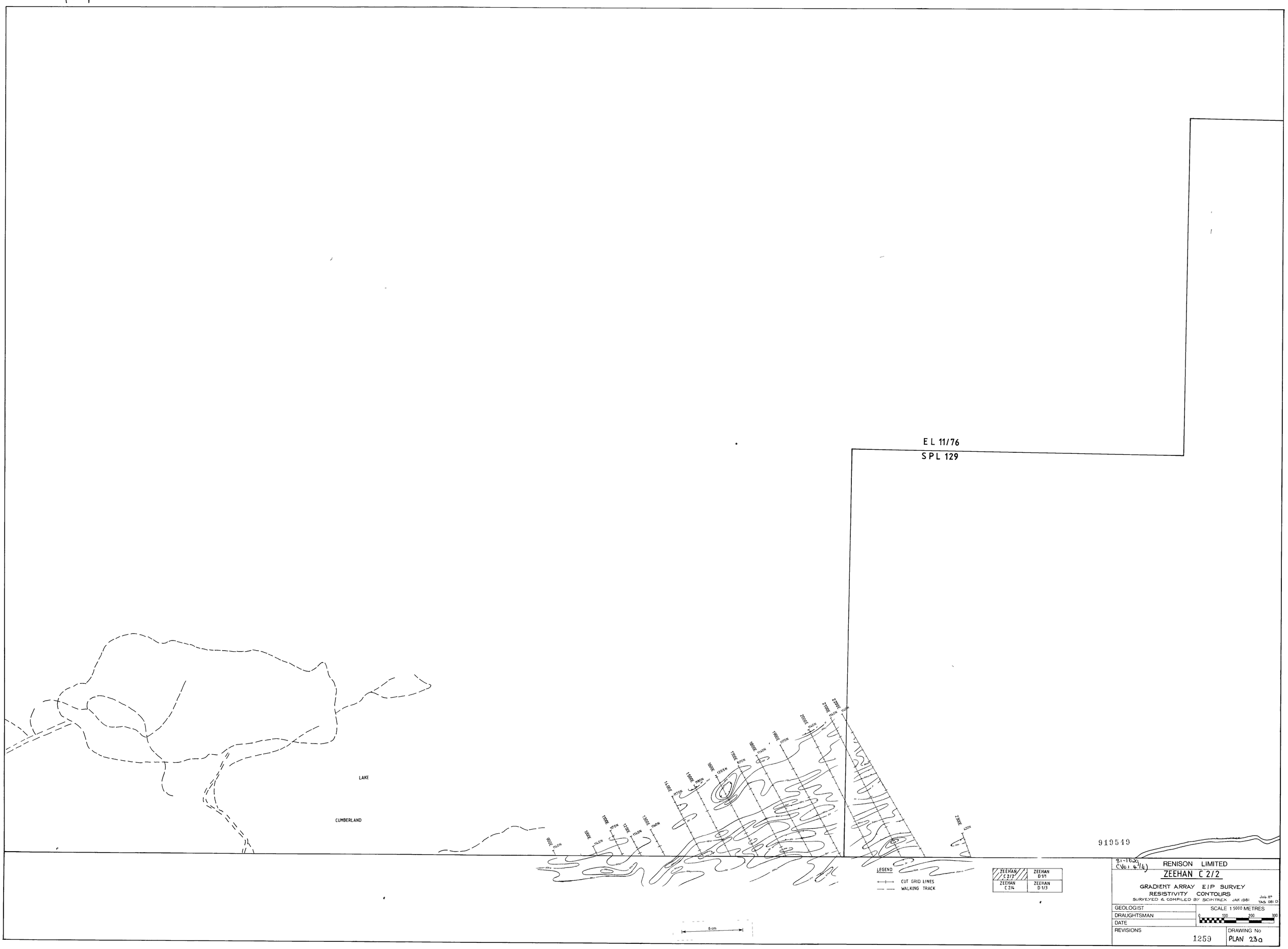
GRADIENT ARRAY EIP SURVEY
CHARGEABILITY CONTOURS

SURVEYED & COMPILED BY SCINTREX JAN 1981

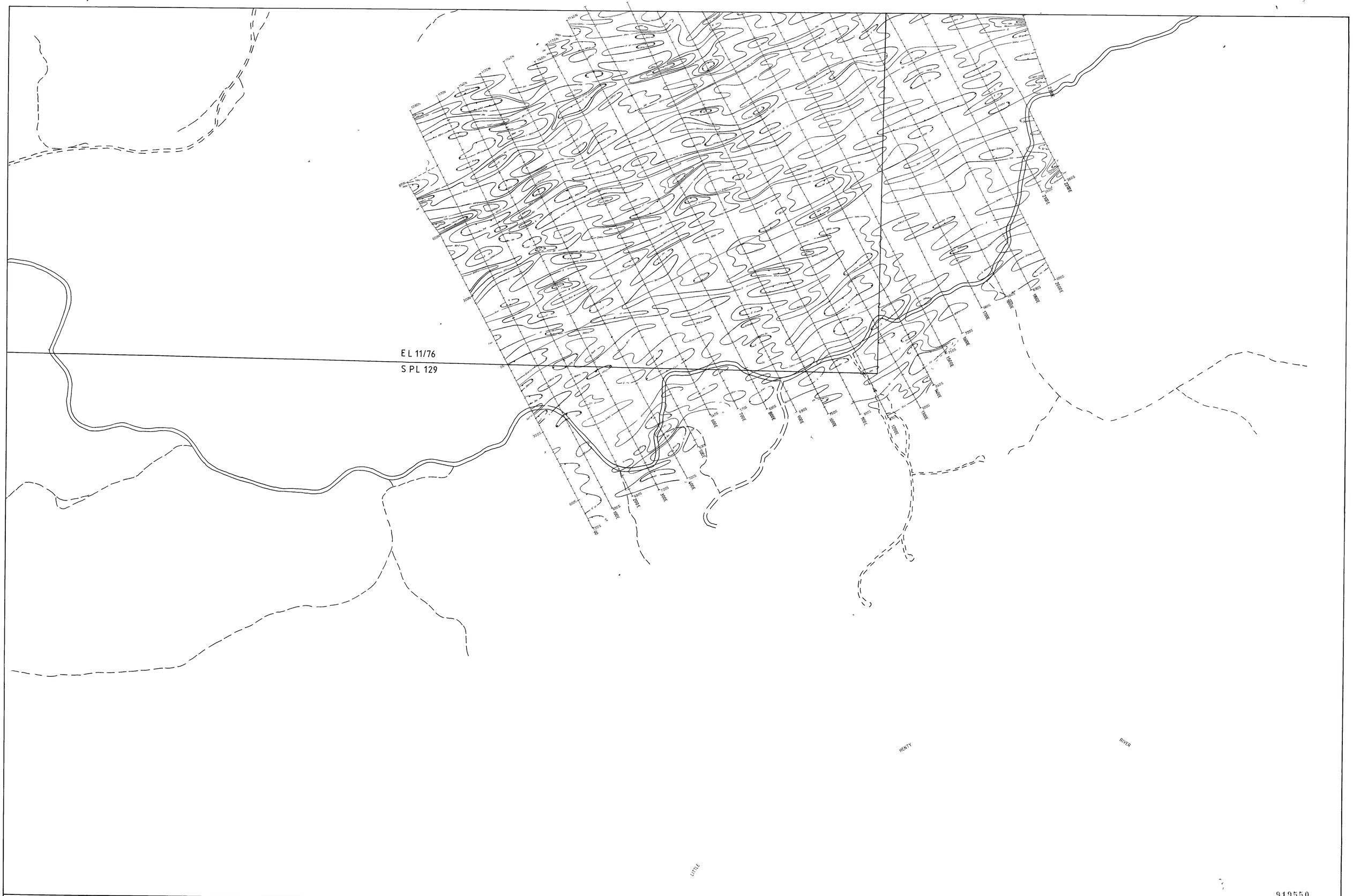
Job No
TAS 081 D

GEOLOGIST	SCALE 1:5000 METRES (0, 100, 200, 300)
DRAUGHTSMAN	
DATE	
REVISIONS 1258	DRAWING No Plan 22 b

1259


EL 11/76
SPL 129
LAKE
CUMBERLAND
900E 11LON
1000E 11LON
1100E 11LON
1200E 11LON
1300E 11LON
1400E 11LON
1500E 11LON
1600E 1265N
1700E 11LON
1800E 11LON
1900E 11LON
2000E 11LON
2100E 11LON
2200E 11LON
2300E 11LON
LEGEND
CUT GRID LINES
WALKING TRACK
ZEEHAN C 2/2
ZEEHAN D 1/1
ZEEHAN C 2/4
ZEEHAN D 1/3
5 cm
919519
RENISON LIMITED
ZEEHAN C 2/2
GRADIENT ARRAY EIP SURVEY
RESISTIVITY CONTOURS
SURVEYED & COMPILED BY SCINTREX JAN 1981
Job No TAS 081 D
GEOLOGIST
DRAUGHTSMAN
DATE
REVISIONS
SCALE 1:5000 METRES
0 100 200 300
DRAWING No
PLAN 23a

1260



919550

LEGEND

CUT GRID LINES

WALKING TRACK

ZEEHAN C 2/2	ZEEHAN D 1/1
ZEEHAN C 2/4	ZEEHAN D1/3

5 cm

81-1622
(01 61 14)

RENISON LIMITED

ZEEHAN C 2/4

GRADIENT ARRAY EIP SURVEY
RESISTIVITY CONTOURS

SURVEYED & COMPILED BY SCINTREX JAN 1981

Job No
TAS 081 D

GEOLOGIST	SCALE 1:5000 METRES
DRAUGHTSMAN	0 100 200 300
DATE	
REVISIONS	DRAWING No
1260	Plan 23 b

1256

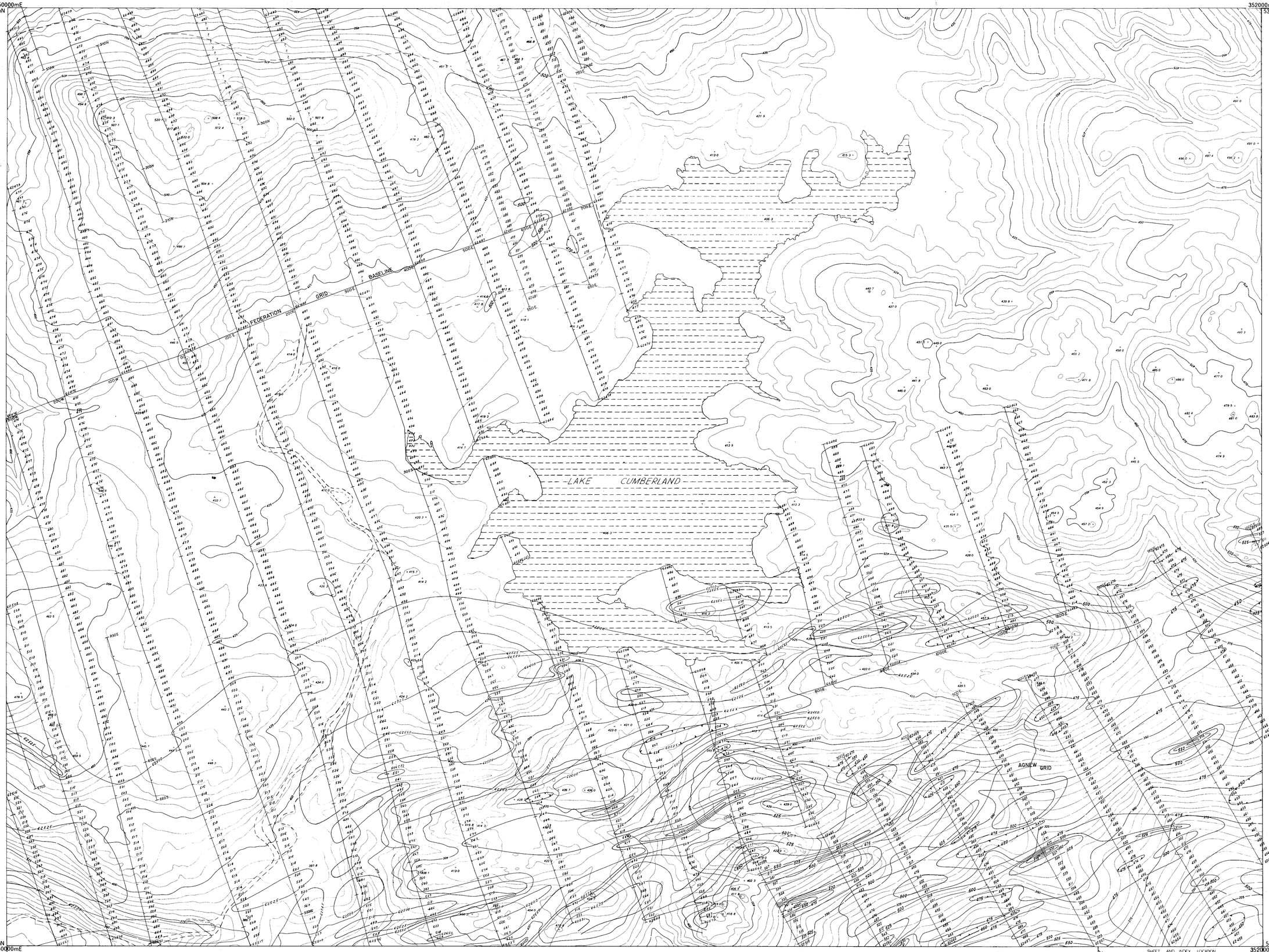
Geochemistry
P P M
600
300
100
50
10
0
150 N
300 N
420 N
I P Data
CHARGEABILITY IN MILLIVOLTS/VOLT (——)
50
40
30
20
10
0
RESISTIVITY IN Ohm-METRES (- - - -)
5000
4000
3000
2000
1000
600
Total Magnetic Field (γ)
62 600
62 560
62 520
62 480
62 440
62 400
0
150N
300N
420N
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (metres)
600
550
500
450
400
350
300
250
200
150
100
50
00
919546
81-1baq
CV61 4(4)
RENISON LIMITED
AGNEW GRID EL 11/76 & SPL 129
LINE 2300 E
SECTION LOOKING WEST
1256
SCALE 1 2000 METRES
60 0 60 80 100
DRAWN P A R
TRACED J M M
DATE MAR 81
SCALE 1 2000
DRAWING No
PLAN
21 X
I P DATA
CHARGEABILITY & RESISTIVITY
Gradient Array
S Anomaly letter number
MAGNETICS
5 cm
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
W
150 N
300 N
420 N
ALTERATION
Quartz and topaz and/or tourmaline
Total tourmalinization accompanied with hematite
Hydrothermal
Collapse
Breccias
White Alteration Dykes
Argillic alteration
Green alteration (sericitized granite) generally with hematite or pyrite
Quartz mica greisen
Area of tourmaline nodules
LEGEND
ROCK TYPES
Aplite or microgranite
Fine grained
Medium grained
Coarse grained
White granite
Porphyritic granite
Medium grained
Coarse grained
Red granite
Major lineament
F F Fault
Definite
Approximate
Inferred
Geological boundaries

1261

1261

350000mE
5360000mN

352000mE
5360000mN



5358500mN
350000mE

5358500mN
352000mE

919551

81-1625
C/01 & 14

RENISON LIMITED

FEDERATION GRID

GROUND MAGNETICS (TOTAL FIELD)

COMPILATION NOTE

This sheet is a composite of photogrammetric contours superimposed on a half tone reproduction of compiled orthophotos from aerial photography dated 12.12.77.

Orthophoto base mapping and photogrammetric contours by Aust. Aerial Mapping		
Aerial photography	Wild RC8	
Aerial triangulation	Wild A8	
Contouring	Wild B8	
Orthophotos	Zeiss Topocart	

REFERENCE

400	Contours
50	Depressions
+62.5	Spot Heights
502.98	Control

N.B. Broken lines indicate lower reliability

Contour interval 5 metres

Spot heights to 0.5 metres

REDUCED LEVELS TO AUST. HEIGHT DATUM

CO-ORDINATES AUST. MAP GRID

Grid interval 200 metres

5 cm

SHEET AND INDEX LOCATION

SHEET 1	SHEET 2
SHEET 3	SHEET 4
SHEET 5	SHEET 6

a MT ALNEW

5,357,000mN

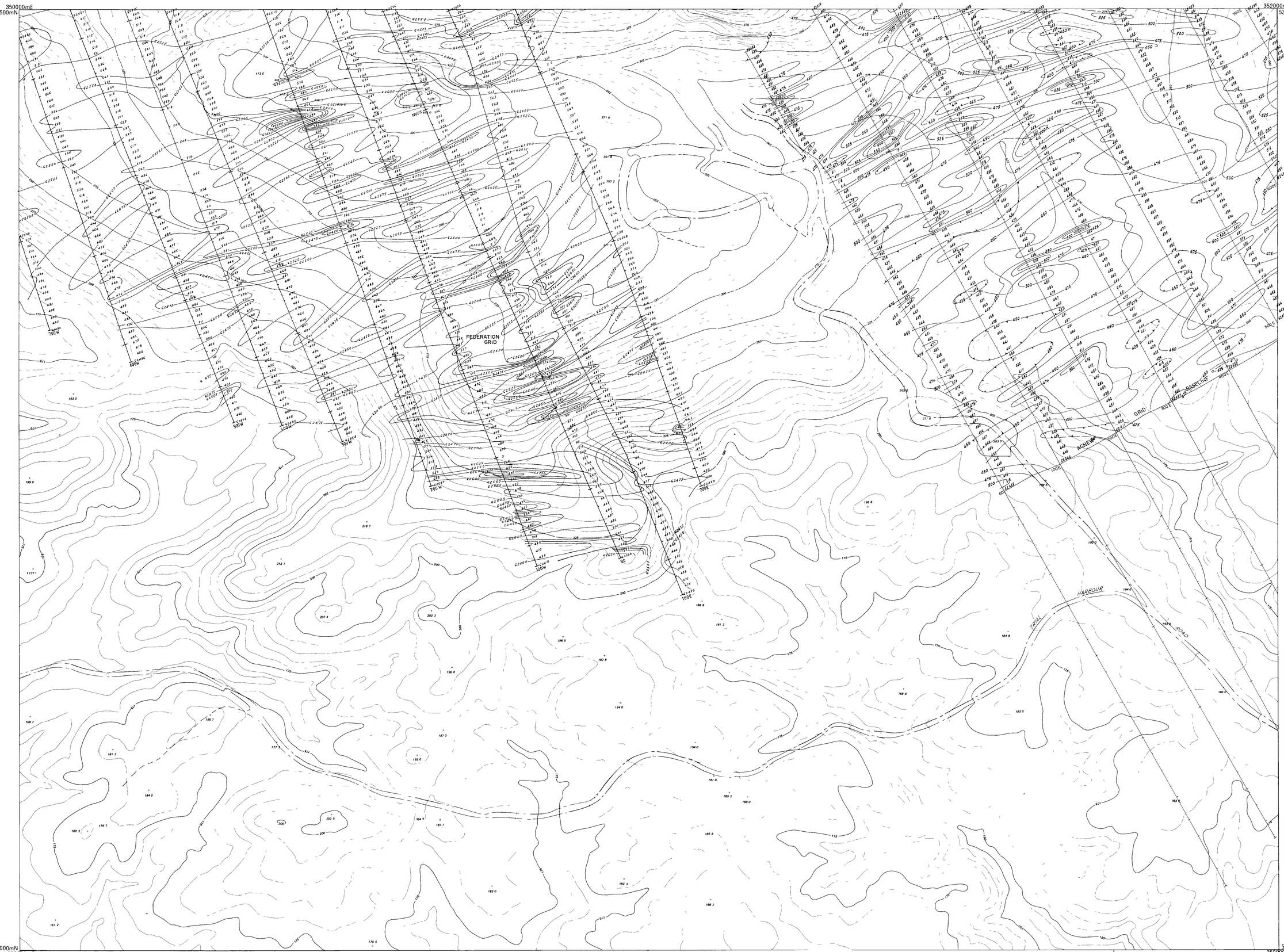
TRAL HA(45,3,3)

Renne

GEOLOGIST:	P. ROBERTS	SCALE 1:2000 METRES
DRAUGHTSMAN:	F. COLDON	40 0 40 80
DATE:	JUNE 1981	
REVISIONS		DRAWING NO. PLAN 24 A

1261

1262



5 cm

COMPILATION NOTE

This sheet is a composite of photo grammetric contours superimposed on a half tone reproduction of compiled orthophotos from aerial photography dated 12 12 77

Orthophoto base mapping and photogrammetric contours by Aust Aerial Mapping

Aerial photography	Wild RC8
Aerial triangulation	Wild A8
Contouring	Wild B8
Orthophotos	Zeiss Topocart

REFERENCE

200	Contours
200	Depressions
* 60 5	Spot Heights
C.R. 503 98	Control

N B Broken lines indicate lower reliablity

Contour interval 5 metres

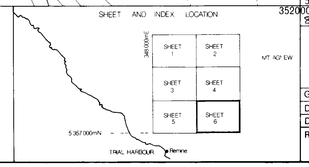
Spot heights to 0 5 metres

REDUCED LEVELS TO AUST HEIGHT DATUM

CO-ORDINATES AUST MAP GRID

Grid interval 200 metres

SHEET AND INDEX LOCATION



919552

RENISON LIMITED

FEDERATION GRID

GROUND MAGNETICS (TOTAL FIELD)

GEOLOGIST	P ROBERTS
DRAUGHTSMAN	P COLDEN
DATE	JUNE 1981
REVISIONS	

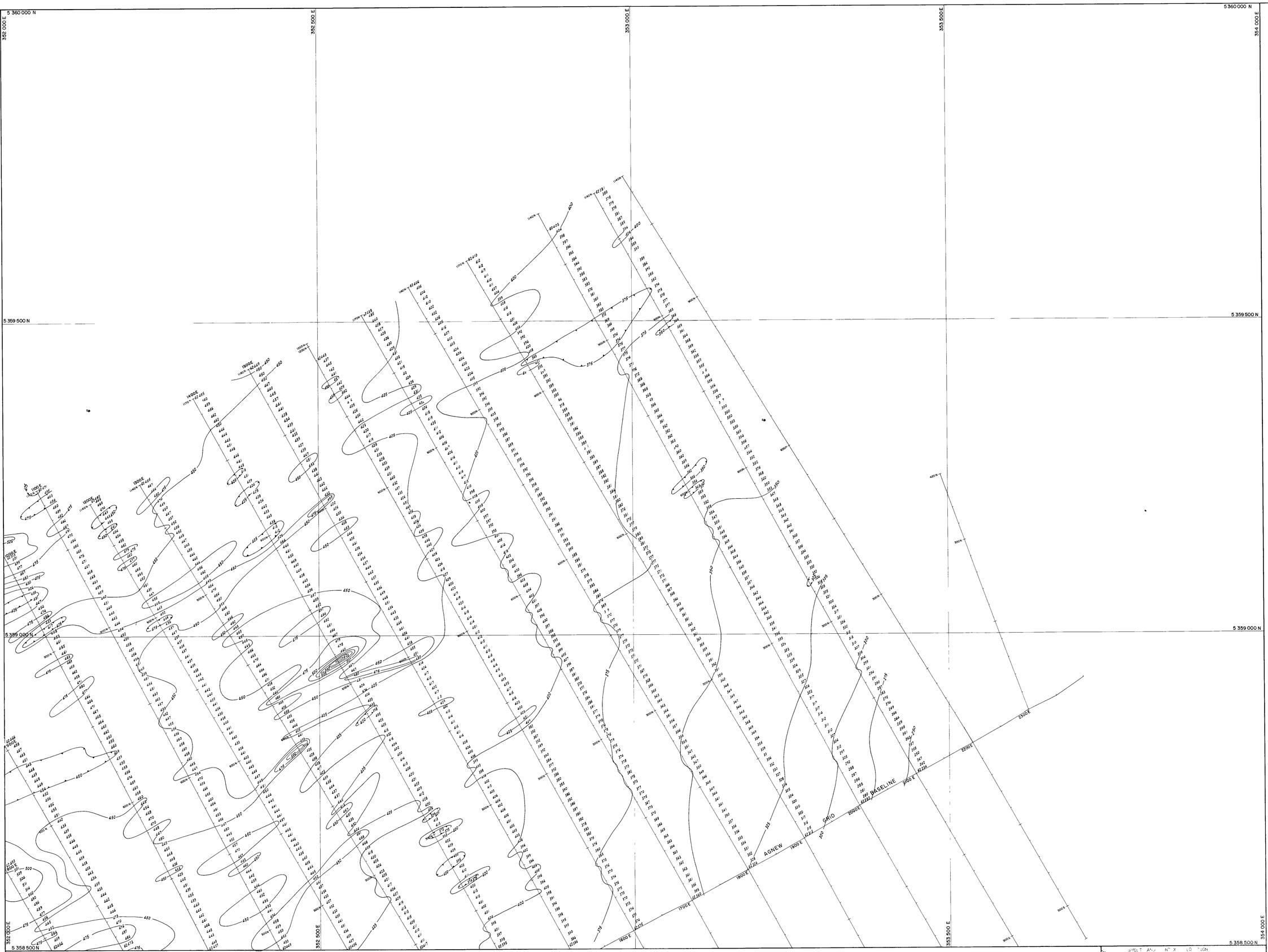
SCALE 1 2000 METRES

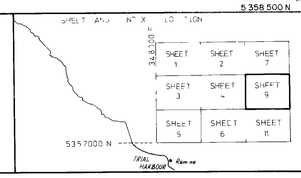
40 0 40 80

DRAWING NO PLAN 24 B

1262

1263





919553

RENISON LIMITED

(81-1605 (V01 4 of 4))

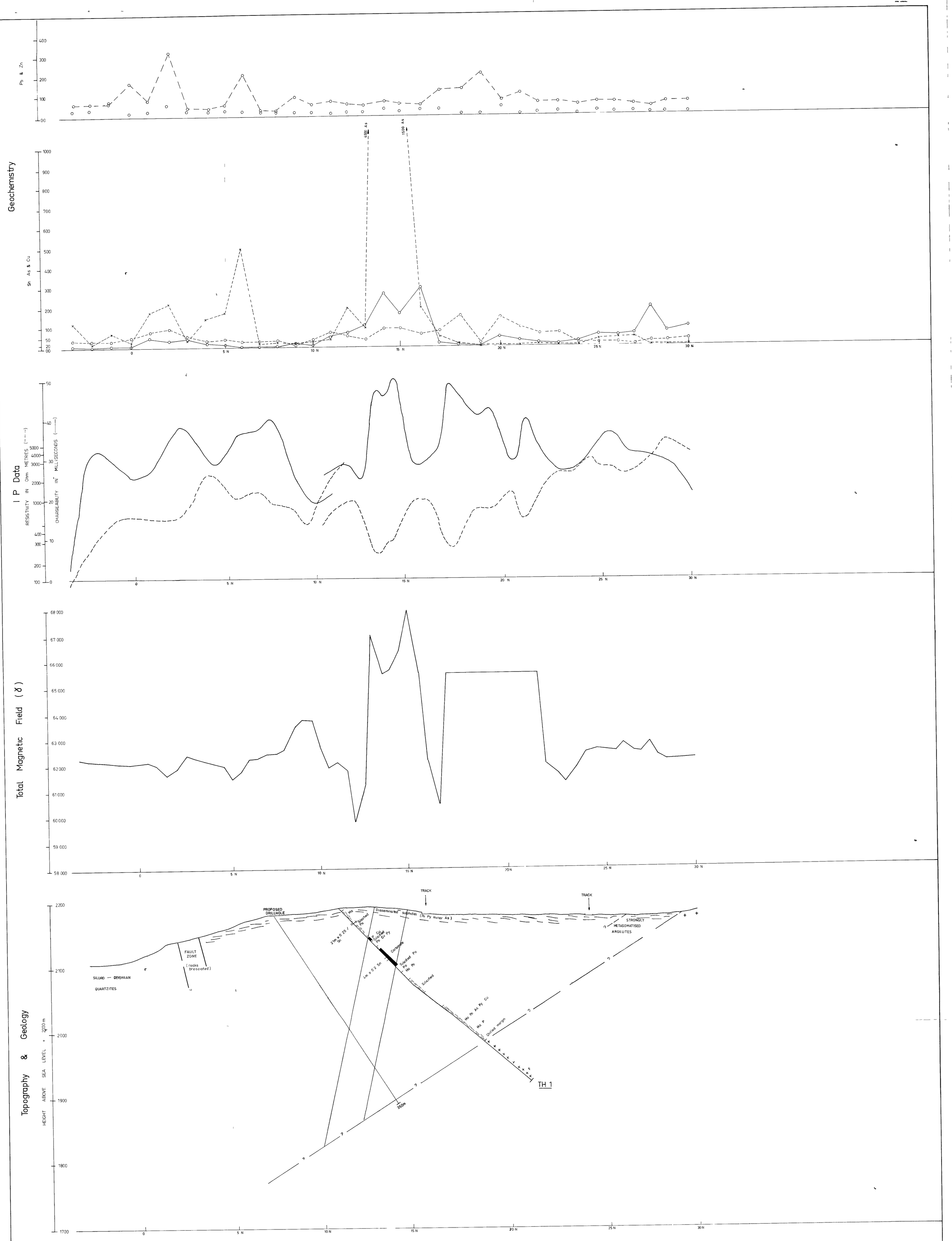
HEEMSKIRK AREA

GROUND MAGNETICS (TOTAL FIELD)

GEOLOGIST	P ROBERTS	SCALE 1:2000 METRES
DRAUGHTSMAN	T G D S	
DATE	JUNE 1981	
REVISIONS		DRAWING No. PLAN 24 C

1263

1265



919555

81-1629
C 101 4147

RENISON LIMITED

S P L 129

TRIAL HARBOUR AREA

LINE 25E PROFILE

GEOLOGIST	K WELLS
DRAUGHTSMAN	J MATTHEWS
DATE	MAY 1976
REVISIONS	1265
DRAWING No	TH62 PLAN 25

SCALE 1 2000 METRES

40 0 40 80

I P

CHARGEABILITY

RESISTIVITY

5 cm

GEOCHEMISTRY

Sn

Cu

Pb

Z

As

W

DEVONIAN

ADAMELLITE (Heemskirk Granite)

SILURO – DEVONIAN

QUARTZITES

CAMBRIAN

ARGILLITES — Partly tuffaceous — (Exploiting lineation hornfels & silicous) — (Crimson Creek formation)

ARENITES

OBSERVED MINERALISATION

Massive – semi massive — pyrite with pyrrhotite

Mo – molybdenite

Po pyrrhotite

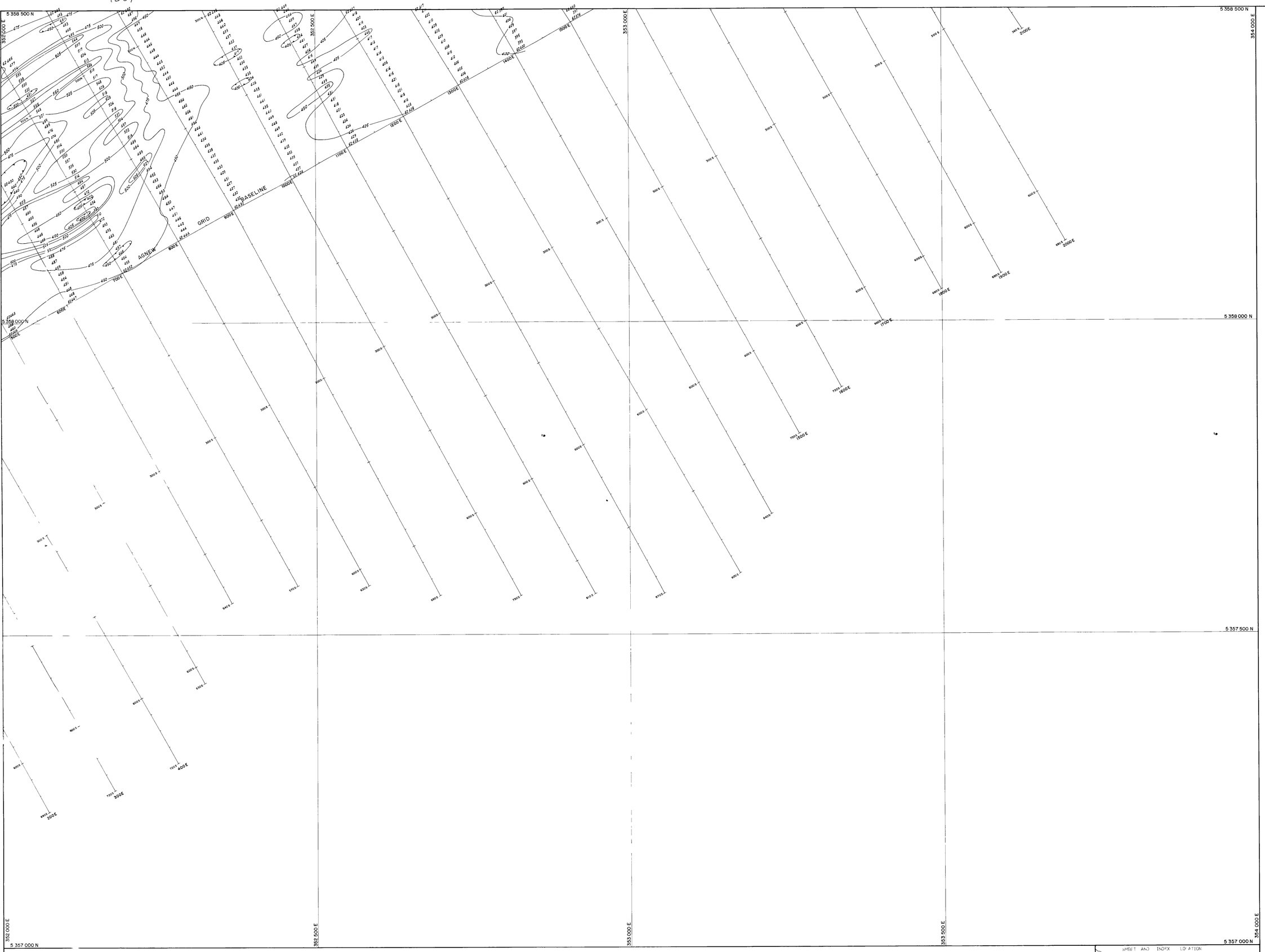
Cu chalcopyrite

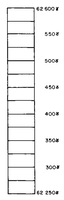
Py pyrite

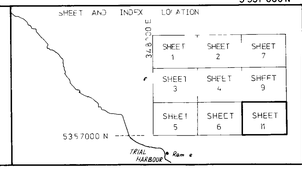
As arsenopyrite

F fluorite

1264







5 cm

919551

81-1649
C(01 414)

RENISON LIMITED

HEEMSKIRK AREA

GROUND MAGNETICS (TOTAL FIELD)

GEOLOGIST	P ROBERTS	SCALE 1:2000 METRES
DRAUGHTSMAN	T G D S	
DATE	JUNE 1981	
REVISIONS		DRAWING No. PLAN 24 D

1264