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E.L. 9/76


BLUE TIER AREA

PROGRESS REPORT

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SUMMARY

A program of track cutting, soil geochemistry and geological mapping was completed over the northern half of E.L. 9/76 in August - November, 1981. Most of the licence area has now been geologically mapped, soil sampled and gridded.

The licence area can be separated into two geochemically and geologically distinct sub-areas. South and east of Doyles Workings the tin geochemistry clearly distinguishes Alkali Granite (the tin granite at the Anchor Mine) from other lithologies; however north-west of there, this relationship breaks down. In addition the granite contact geometry is apparently different in the two sub-areas.

Geological mapping of the Alkali Granite indicates that it outcrops in a number of elongate domes. These, together with the Crystal Creek Lineament, are considered major controls on the location of stanniferous Anchor-style greisens.

Previous work has shown that the Anchor Deposit probably contains insufficient reserves to justify completion of a Definitive Feasibility Study. As a result exploration on the licence area is now being directed towards finding more Anchor-style mineralization in buried cupolas. A percussion and core drilling program, comprising 2000m in 20 holes, is proposed to test for such targets. This program is estimated to cost \$110,250, and if commenced in May 1982, should be completed by July 1982.

1. INTRODUCTION

E.L. 9/76 is located 25km north-west of St.Helens, north-east Tasmania (Figure 1). The licence area includes the Blue Tier Tinfield which has produced approximately 4000 tonnes of contained tin from primary deposits since the 1870's.

Renison Limited commenced exploration on the licence in 1977 after signing a Joint Venture Agreement with Hellyer Mining and Exploration Pty. Limited. The aim of exploration then was (and still is) to define large tonnage greisen-style tin deposits. Since 1977 work has concentrated mainly on diamond drill evaluation of mineralization in the vicinity of the Anchor Mine, with a lesser effort directed at exploring the remainder of the licence area.

The Anchor Mine drilling was completed in mid-1981. At that time, the deposit's potential size was assessed at 8.8 million tonnes of 0.18%Sn (0.05%Sn cut off) including 0.5 million tonnes of 0.67%Sn (0.2%Sn cut off) and 2.9 million tonnes of 0.23%Sn (0.1%Sn cut off). This was considered insufficient to justify the completion of a definitive Feasibility study on the deposit. Consequently, since September 1981, effort has been redirected towards finding other concealed Anchor-style deposits with the aim of delineating a sufficient tonnage (of similar or better grade, in several orebodies) to permit a mining operation.

This report describes the results of a regional program of gridding, geochemistry and geological mapping on the northern half of the licence area and recommends follow-up drilling.

2. EXPENDITURE

During the current financial year, \$89,137 has been spent on the Blue Tier licence. This sum is reduced in the attached expenditure statement (Appendix 1) by \$34,000, because that sum was accrued but not spent in the previous financial year. Costs associated with the regional exploration program totalled \$37,866. The Joint Venture has spent a total of \$929,667 on the licence to date.

3. LAND TENURE

Renison Limited is the Operator under a Joint Venture Agreement with Hellyer Mining and Exploration Pty. Limited, the holders of E.L. 9/76.

Several mining leases are held by other parties within the licence area, the details of which are dealt with in the 1978 Annual Report. Only two significant changes have occurred since that time:

- (1) M.L.'s IM/77 and 61M/76, totalling 100 ha., over the F.B. Lode, are now held by Mr. P. Reicher of Branhholm (formerly held by R.G. Hyde).
- (2) M.L. 12M/77, totalling 96ha, was situated at the north-west edge of the E.L. In early 1981, after it fell vacant, it was pegged and incorporated into E.L. 9/76, thereby enlarging the licence area to approximately 77km².

4. PREVIOUS WORK

Details of work completed by other companies on the Blue Tier area are given in the 1978 Annual Report.

Since Renison commenced exploration on the E.L., the following work has been carried out:

4.1 Anchor Mine

(a) Diamond Drilling Five drilling programs, comprising 83 exploration and 16 bulk sample (PQ core) holes, have been completed at the Anchor Mine.

(b) Metallurgical Testwork A minor amount of metallurgical testwork was carried out prior to 1981 on crushed exploration drillcore, however the major program of testwork has been on the Anchor bulk samples; this work is currently continuing and will be the subject of a separate report.

4.2 Elsewhere on the Licence Area

(a) Photogeological Study. This was undertaken by Hunting Geology and Geophysics. The results were generally disappointing, however, as the different granite types could not be effectively distinguished photogeologically.

(b) Ground Surveys. Prior to 1981, cut grid totalling 57 line km was established on the southern half of the licence area. Of this, the southern 44 line km ("the Lottah Grid") was covered by geochemical sampling and geological mapping (Ross, 1980).

(c) Diamond Drilling. A total of seven holes have been completed on the Blue Tier Plateau, near Poimena; two were drilled at the Southern Cross Workings and the other five were completed in the vicinity of the Moon Mine.

5. WORK COMPLETED AUGUST - NOVEMBER 1981

5.1 Grid Cutting

A total of 71 line km of grid was cut in lines mostly 600m apart. The lines south of 90N were cut at 300m spacing to conform with the line spacings of an earlier program. The grid lines were connected by three base lines, designated 00, AA and BB.

5.2 Geochemical Sampling

All of the above grid was soil sampled at 50m spacing by contractor N. Poltock. Soil samples were obtained from the B horizon where possible, however only skeletal soil development is present over much of the area.

Samples were sieved to $-180 \mu\text{m}$, and assayed at the Renison Laboratory for Sn by XRF, Cu and Zn by AAS and acid soluble fluorine by a specific ion technique. Some acid soluble fluorine results had still not been received at the time of writing this report.

5.3 Geological Mapping

All of the new grid, as well as the 13km of grid cut before 1981 but after the "Lottah Grid", was mapped by contract geologist, R. Poltock. Mapping traverses were completed along grid lines, as well as through the clear ungridded area on the plateau and along creeks and roads. Poltock's report is attached (Appendix 2).

6. RESULTS

6.1 Geology

The regional geology of this area has been adequately described in previous reports. The relatively detailed geological work of the current and 1979 programs has resulted in the following subdivision of granite types for the licence area, interpreted from younger to older (see Figures 2,3).

- (1) Alkali Granite Also known as the Lottah Granite and Anchor Granite, this is the same lithology which hosts greisen mineralization at the Anchor Mine. It is clearly associated with the pervasive "floor" - style of greisen

mineralization elsewhere on the Blue Tier Tinfield, and is a tin granite. It is generally medium grained (2-5mm grainsize), leucocratic and comprises quartz, feldspars (plagioclase as albite), and minor biotite and muscovite; the biotite is characteristic, occurring as individually separate, pale brown flakes, similar in grainsize to the quartz and feldspar. In general, it is equigranular but it does grade, in places, into a more porphyritic type with quartz and feldspar phenocrysts set in a 2mm quartz, feldspar, mica groundmass.

- (2) Fine Grained to Porphyritic Phases Although these lithologies have been shown as a single unit on the interpretative geology maps, they may be separable into several sub-types. They range from aplites through to fine grained granites (s.l) and quartz/feldspar porphyries; the latter have a much finer groundmass than the Poimena Adamellite.

On the "Lottah Grid" and in the Anchor Mine, Ross (1980,1981) identified a microadamellite (s.s.) which had been correlated with the Alkali Granite previously but is in fact closer petrologically to the Poimena Adamellite. It is assumed that this lithology correlates with the other fine grained to porphyritic phases, however this cannot be demonstrated without additional petrological work; in places field relations suggest that these lithologies are transitional to the Alkali Granite. Minor pervasive-style greisenization occurs within this unit.

- (3) Poimena Adamellite Also known as the Poimena Pluton, this is the older, non-tin granite. Mineralization within it is confined to vein-style greisen bodies which are usually thought to be related to underlying Alkali Granite. It is characteristically feldspar porphyritic with phenocrysts up to 4cm in size and groundmass varying from 2mm to 10mm. It comprises quartz, feldspars (plagioclase as oligoclase-andesine) and biotite; the latter is distinctive compared with Alkali Granite biotite in that it is darker and occurs as fine, irregular aggregates.

This classification differs from that of the Mines Department, who have constructed a detailed classification scheme based on phenocryst, plagioclase and mica composition, texture and grain size (Appendix 3). Although this is a useful scheme for the style of mapping carried out by Mines Department geologists, it tends to complicate an otherwise simple picture from the exploration viewpoint. Although the fine grained to porphyritic phases are not easily pigeonholed, the major contact of exploration significance is that between the Alkali Granite and Poimena Adamellite. This is clearly outlined by the three-way classification described above.

The granites are intruded by minor basic dykes of either Jurassic or Devonian age and overlain by minor Tertiary basalt (except in the Mt. Littlechild area, where basalt outcrop is extensive) and, at one locality, a thin veneer of Permian sediments.

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The Alkali Granite occurs in at least three different forms:

- (1) Domes The mapping indicated the Alkali Granite roof contact occurs in elongate dome- and trough-like features. Three domes were identified by R. Poltock, as the "Wyniford, Michael and Australia Domes". A fourth probably occurs within the "Lottah Grid" and this has been designated the "Crystal Hill Dome" (Figure 2). The roof contacts dip outwards shallowly in all directions from these features, the steepest dip apparently occurring on the southern flank of the "Australia Dome" where it must be 15-20° to explain the outcrop shape. Greisen mineralization typically occurs near the edge of these features, and it is suggested that Anchor-style bodies may once have occurred at their apices.
- (2) Dykes The most obvious of these is the dyke connecting the Southern Cross and Marie Workings. Another possible example occurs at the Moon Mine. Here, several angled drillholes beneath the workings have intersected the sequence Poimena Adamellite-Alkali Granite-Poimena Adamellite.* This is a more complex situation than the first example, however. Mineralization occurs as greisenized "shoots" (not vein-style) well away from the main contact.
- (3) Sheets Despite the earlier "Lottah Sheets" name given to the Alkali Granite, only one

* N.B. The results of the Moon drilling will be the subject of a

example of this type can be identified in the mapped area. This occurs approximately 500m north-west of the Southern Cross Workings. No significant mineralization is associated with it.

In the north-west portion of the licence area, the Alkali Granite roof contact does not fit simply into any of the above categories (see Appendix 2, p.7).

The licence area is traversed from south-east to north-west by the Crystal Creek photo-lineament. At its south-eastern end, it passes through the Anchor Mine. Towards the north-west it bends towards the west between Doyles Workings and the F.B. Lode. Interestingly however, on the Landsat scene of the area, the lineament passes directly through the F.B. Lode and Lake Frome. It therefore connects the most significant, known "floor"-type greisen body and the most significant, known vein-type greisen body (the F.B. Lode) on the Blue Tier Tinfield. Thus it seems likely that this structure is an important mineralization control. In addition, the lineament appears to control the margins of the "Crystal Hill" and "Australian Domes" to some degree. Although the mapped geology precludes these contacts from being entirely fault-bounded, some fault movement may have occurred.

6.2 Geochemistry

It is highly unlikely that a significant outcropping stanniferous greisen body remains undiscovered. Therefore the geochemical program on the regional grid was guided by the need to discover hidden greisenized cupolas. The Anchor greisen is an obvious model. Reasons for selecting the elements assayed are as follows:

- (1) Tin Hidden stanniferous greisens cannot be detected directly by soil geochemistry because tin in cassiterite does not undergo hydromorphic dispersion. Nevertheless tin shed from outcropping stanniferous greisen veins may signal an underlying greisenized cupola. In addition, experience on the "Lottah Grid" showed the usefulness of tin in soils as a means of discriminating granite types (Ross, 1980).
- (2) Copper, Zinc These elements readily undergo hydromorphic dispersion and, if occurring in sufficient quantities within a shallowly hidden greisen body, should cause a soil geochemical anomaly. The soils on Poimena Adamellite overlying the Anchor greisen are not anomalous in copper or zinc, however the greisen only contains patchy, minor amounts of both elements; higher concentrations may be present in other greisen bodies on the Blue Tier.
- (3) Acid Soluble Fluorine This only occurs in simple fluorine compounds (e.g. fluorine, apatite) not fluorine-bearing silicates (e.g. topaz). The fluoride ion is mobile in the surface environment, hence hydromorphic dispersion from hidden, fluorite-bearing greisens may occur.

No attempt was made to treat the geochemical data statistically, however some conclusions from Ross's (1980,p9-11) statistical work have been used. The tin, copper and zinc data are presented on contoured 1:5000 plans (Figures 4-6). The acid soluble fluorine results (Figure 7) have not been contoured because the data is incomplete.

6.2.1 Tin Contour intervals were chosen at 55, 160, 250 and 600ppm, in accordance with the results of Ross's (1980) statistical analysis. On the "Lottah Grid", residual soils overlying the Poimena Adamellite generally contain less than 55ppm Sn, whereas residual soils on Anchor Granite are substantially enriched relative to this level. Over much of the rest of the grid, this pattern persists. Alkali Granite within the domes is overlain by tin-enriched soils. However, west and south-west of the "Wyniford Dome", this relationship breaks down. Here, anomalous and low tin values occur over both major granite types in zones which are unrelated to the intra-granite contact. The following points are relevant:

- (i) Although tin geochemistry was used as a mapping aid on the "Lottah Grid", this change in the geochemical pattern does not reflect major errors in the interpreted geology. There is sufficient outcrop to map effectively and the Alkali Granite is quite distinctive.

- (ii) The north-west portion of the licence area is probably either characterized by a different mineralization style compared with the rest of the area or the bulk chemistry/petrology of the Anchor Granite there is atypical.

Tin responses over the fine grained/porphyritic types are variable - commonly they are similar to the Poimena Adamellite but there are locations (e.g. west end of "Australian Dome") where anomalous tin values can occur. Such examples are perhaps more likely to be transitional to Alkali Granite.

6.2.2 Copper As on the Lottah Grid, copper occurs at low levels in most of the soils overlying the granites. Background levels vary from 10 to 20ppm. Most anomalies are only one or two point "highs" less than 100ppm; as such they are not considered particularly interesting. A number of small anomalies are associated with basic rocks either as scree or outcrop.

The target response was anticipated to be a broad, low-level anomaly reflecting hydromorphic dispersion from a shallowly hidden, chalcopyrite-bearing greisen body. Only one anomaly fits this pattern - this occurs on lines 90 and 96N around 1500E, south-west of the western "arm" of the "Wyniford Dome". Scattered basic scree is recorded in this area, and may account for the anomaly.

6.2.3 Zinc Residual soils over Alkali Granite generally carry 10 to 20ppm zinc, whereas those over Poimena Adamellite contain 20-50ppm. As with the copper, anomalies tend to be one or two point "highs". Again

there is some correlation with scree or outcrop of basic rocks. A broad zinc anomaly coincides with the broad copper anomaly mentioned above.

6.2.4 Acid Soluble Fluorine Values generally range from 40 to 150ppm. Variation is apparently quite random and unrelated to underlying granite type. The source of the fluorine values is either detrital fluorite or some other precipitate from fluorine dissolved in soil waters (absorption on clays?). The widespread presence of fluorine "anomalies" is perhaps indicative of the strong mobility of ionic fluoride in acid surface waters, such as are to be expected at Blue Tier. Alternatively, fluorite on joint facings and the like may be ubiquitous throughout the licence area.

7. DISCUSSION

Anchor-style mineralization is clearly the prime exploration target on the Blue Tier. Bodies of this kind should have the size and geometry appropriate to the low-cost, bulk mining techniques necessary for profitable exploitation of stanniferous greisen. The work to date has been directed mainly at outlining extensions of known mineralization, but there has been little indication that other Anchor-style deposits crop out. There are several reasons for this:

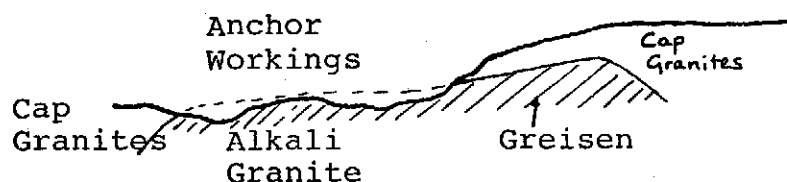
- (1) A number of the known workings were developed on different ore types i.e. mineralized greisen veins (e.g. F.B.Lode, Cambria) and mineralized greisen bodies within Alkali Granite dykes (e.g. Southern Cross, Moon?). Although such ore types may be

economically attractive if a mining operation existed on the Blue Tier, their geometry (thin, steeply dipping, tabular) and limited size potential precludes them from being the major target.

- (2) The Anchor deposit occurs in an unusual situation where topography works "in favour" of exploration. It is a mineralized cupola (Ross, 1981) in which only the flank of the cupola is exposed (or there were two small cupolas side by side) i.e.

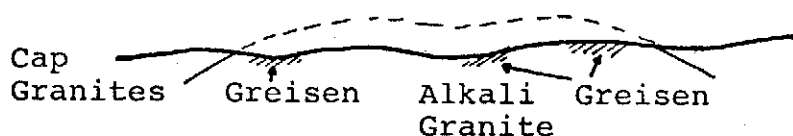
SECTION VIEW:

(Facing NW)



Much of the economic attractiveness of the Anchor deposit derives from the relatively high grade cap of granular greisen which occurs directly beneath the cupola's apex (Lens A). In most cases one would expect this cap to be eroded first. This has apparently occurred where other "floor" style greisens outcrop. These generally occur near the Alkali Granite margin, probably with this configuration:

SECTION VIEW:



As such they have little exploration potential.

The foregoing explains why further exploration on the Blue Tier should be directed at buried, greisenized cupolas. A number of techniques have now been tested as an aid to such exploration, these include:

- (1) Photogeological Analysis This was ineffective in identifying characteristic fracture patterns indicative of hidden cupolas, however it did show the possible importance of the Crystal Creek Lineament.
- (2) Soil Geochemistry As discussed previously, this is useful but results are ambiguous. The presence of anomalies may indicate locations for follow-up drilling but lack of anomalies should not downgrade a prospective area.
- (3) Lithochemisrtry This was tried on drillcore samples from the Anchor Mine, and indicated that anomalies in Li and Rb occur within Alkali Granite and possibly the microadamellite, but not within Poimena Adamellite (see Appendix 6).
- (4) I.P. Depth Sounding This was tested to identify the depth to Alkali Granite but was quite ineffective.

Clearly, drill target definition must rely heavily on a conceptual approach, as other techniques are of limited use. The Anchor greisen is an obvious model. Important features of this deposit are:

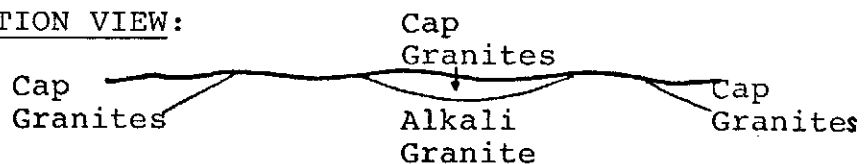
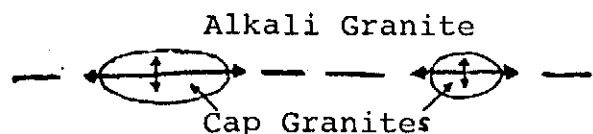
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- (1) It occurs in a cupola. The Alkali Granite contact dips outwards from its apex at 10-20°. The cupola is presumed to have been a structural trap for late magmatic/hydrothermal fluids.
- (2) It is traversed by the Crystal Creek lineament which appears to have been a control on both mineralization and structure.
- (3) Stanniferous greisen is confined to the Alkali Granite and extends over an area elongated in a north-east direction, with approximate dimensions of 700 x 200m²

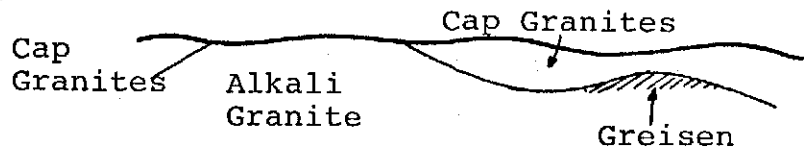
A target greisenized cupola must have its apex within 50m of the surface. A typical deposit (say 30m thick) would therefore have a maximum waste: ore ratio of around 2:1 for an open cut operation. A more deeply buried greisen body is unlikely to be economic unless grades are substantially higher than those at the Anchor. This is considered unlikely.

The outcrop patterns of the Alkali Granite domes are similar to the core shapes of refolded anticlines. R. Poltock (Appendix 1, p.7) has suggested that the domes reflect fold structures in the overlying Mathinna Beds. The Launceston 1:250,000 sheet Explanatory Notes describes Mathinna fold structures thus: "Folding has taken place resulting in elongate domes and basins with steep axial surfaces...." This suggests that the dome axes may be sinuous i.e.

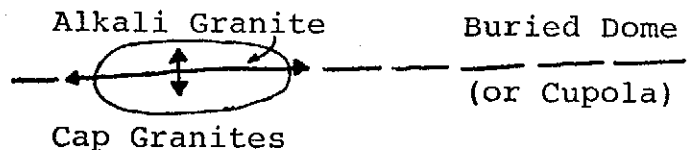
AXIAL PLANE SECTION VIEW:PLAN VIEW:

or if there is an overall plunge to the axes:

AXIAL PLANE SECTION VIEW:



PLAN VIEW:



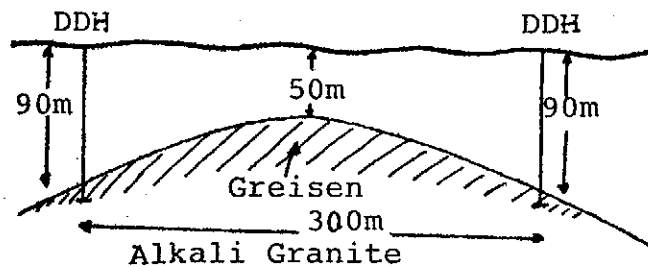
The latter situation is an obvious exploration target.

The planned depth and spacing of drillholes directed at buried greisenized cupolas should be affected by several factors:

- (1) Target Size A greisen body of 6 million tonnes, with an average thickness of 25m and s.g. of 2.65 would have a surface area of 90600m². If equidimensional it would measure 301 x 301m². Smaller targets may be economically attractive but it is unlikely that a completely preserved greisenized cupola would be much smaller than this. Thus a 300m drillhole spacing is suggested. There is a small chance of missing an elongate body but the difficulty of doing this is illustrated by superimposing a 300m square grid on a map of the Anchor greisen.

- (2) Target Shape A cupola with an outward dip of 15° and its apex 50m below surface, centrally placed between two drillholes 300m apart might appear as follows:

SECTION VIEW:

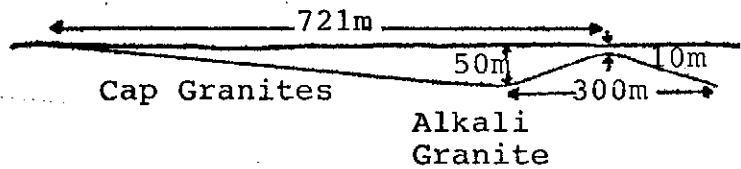


Given that this is a worst case for a cupola with a dip of 15° but that the dip may well be steeper, a planned depth of 100m seems advisable. Should the cupola's outward dip be substantially more than 15° , the economic potential of the greisen would be less because of the increased waste:ore ratios required to reach ore by open-cutting.

(3) Distance from Outcropping Contact If the Alkali Granite contact dips downwards from outcrop, there must be a limiting distance from the contact in which a hidden cupola sufficiently large to host an orebody cannot exist. Assuming that the minimum diameter for an economically attractive greisenized cupola is 300m, the following examples illustrate the point:

(a) Surface horizontal, outcropping contact 5°, cupola contact 15°

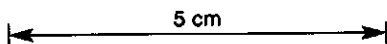
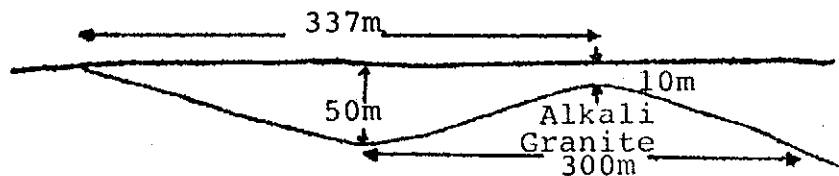
SECTION VIEW:



i.e. for the target to be larger, or deeper than 10m, it must occur more than 721m away from the Alkali Granite contact.

(b) Surface horizontal, outcropping contact 15°, cupola contact 15°

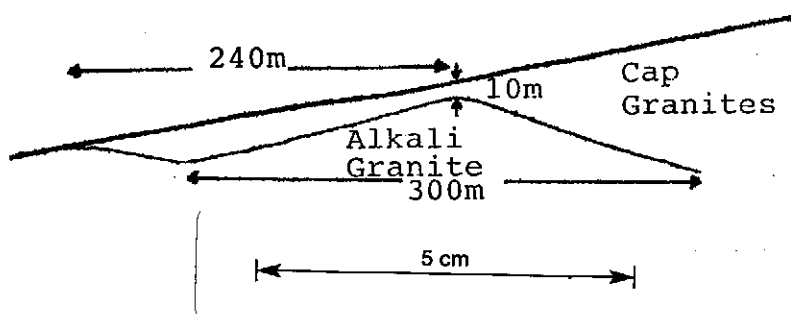
SECTION VIEW:



i.e. for the target to be larger, or deeper than 10m, it must occur more than 337m from the Alkali Granite contact.

(e) Surface sloping upwards at 10°, outcropping contact 5°, cupola contact 15°

SECTION VIEW:



i.e. for the target to be larger or deeper than 10m, it must occur more than 240m from the Alkali Granite contact.

In most situations, one would expect the cupola's apex to be more deeply buried than 10m because, with only slight topographic or granite contact irregularities, windows of Alkali Granite should be exposed. As Alkali Granite contacts are interpreted to dip outwards at less than 10°, the above examples suggest that a "safe" distance from the outcropping Alkali Granite contact to position a drillhole would be 500m on horizontal ground and 250-500m on upwardly sloping ground. Drilling into the cap granites downslope of the Alkali Granite contact is unlikely to be successful within 800m of it.

8. CONCLUSIONS AND RECOMMENDATIONS

- 8.1 Selected areas within the older, non-stanniferous granites should now be tested for buried Anchor-style greisen by reconnaissance drilling.

Percussion drilling is recommended because it should provide sufficient information at the reconnaissance stage at an optimum cost. Although assays of percussion chips may be somewhat inaccurate because of cassiterite loss within drillholes, the most important requirement of the drilling should still be met, namely the identification of stanniferous greisen. If percussion drilling is ineffective because contamination becomes a problem or penetration rates are too slow, the option should be available to complete the holes by diamond drilling.

The drillhole proposals are limited to testing for Alkali Granite cupolas either on line with Alkali Granite dome axes or along the Crystal Creek Lineament, both within areas of outcropping Poimena Adamellite. Drillholes should be 100m deep and spaced 300m apart. The hole (or holes) closest to the Alkali Granite contact should be collared within 250-500m of its outcrop, depending on the topography.

The proposed program comprises 20 holes, totalling 2000m. Details are as follows (Figure 2):

- (1) Wyniford West Area Four vertical holes are recommended here in a slightly distorted square pattern. The drill target is the down-

dip extension of the western "arm" of the "Wyniford Dome". Topography is relatively flat, but three of the hole collars are somewhat closer than 500m to the nearest Alkali Granite contact outcrops because the latter occurs both to the north and east.

- (2) Crystal Creek Lineament Five holes are proposed here. Of these four lie along the Lineament, and one lies south-west of it, targetted at the down-dip extension of the "Australian Dome". The first four holes should be oriented at right angles to the Lineament's strike and angled at -75° to avoid the possibility of drilling down-dip through greisen veins parallel to the lineament (N.B. at 100m depth, these holes should be 97m below surface). The fifth hole should be vertical. Topography rises at an angle of about 15° towards the west, which explains why the easternmost drillholes are only 300m from the Alkali Granite contact's outcrop.
- (3) Wyniford East Area Two vertical holes are proposed here. The drill target is the down-dip extension of the eastern "arm" of the "Wyniford Dome". Topography is relatively flat, but the western collar is somewhat closer than 500m to the nearest Alkali Granite contact outcrops, because the ^{latter} occur both to the north and south.

- (4) Michael-Moon Area Six vertical holes are proposed here in a rectangular pattern. The drill target is the down-dip extension of the "Michael Dome". Topography rises away from the Alkali Granite contact at about 10° , which explains why the northern drillholes are only 300m from the contact's outcrop. Further to the south-east, the topography drops away sharply and it is difficult to envisage an Alkali Granite cupola occurring there without a window being exposed.
- (5) North Anchor Area Three vertical holes are proposed here. Drill intersections and the granite outcrop pattern north of the Anchor Mine indicate that the granite contact is rising shallowly in this direction. At some point, a change of dip is inferred otherwise a window of Alkali Granite should occur.* However, as the slope rises to the north for over 2km (Figure 10), the location of the inflexion point (which may be a greisen "trap") is evidently unclear. However it is possible that a dome of much the same shape and dimensions as the "Australian Dome" occurs in the shallow subsurface (see Figure 2). The holes are designed to test this possibility.

* N.B. If the Alkali Granite contact rises very shallowly, that "window" may be the "Michael Dome".

Clearly this program only covers a small part of the prospective area. Nevertheless it is prudent to undertake this style of exploration in relatively small steps to ensure that there is time to think about the results. There is a real danger of wasting a lot of drilling if the program is pushed on so fast that there is insufficient opportunity to modify the conceptual model in the light of drilling results.

Bearing this in mind, there are several areas on which drilling is suggested, using the present model, which may be covered in a subsequent program. These are east of the "Australia Dome" and west of the "Crystal Hill Dome". A total of 12 vertical holes are recommended, six in each area (see Figure 2).

- 8.2 The area west and north-west of Doyles Workings has been deliberately excluded from the follow-up drilling proposals because of the apparently different nature of geochemistry and mineralization there. Some petrology and lithogeochemistry on granite samples from this area is recommended with a view to understanding whether the area is prospective for Anchor-style greisen bodies.
- 8.3 The best remaining possibility for indirect exploration for hidden cupolas is trace element lithogeochemistry. The early work carried out on the Anchor drillcore was not very encouraging, but a further, more comprehensive sampling program is justified. It is suggested that a series of drillcore samples should be taken within Poimena Adamellite at varying distances from the Anchor greisen and the trace element compositions compared with fresh Adamellite samples taken from elsewhere.

Highly accurate assaying techniques must be used.

9. PROPOSED EXPENDITURE

This program is estimated to cost \$110,250. Details are as follows:

	\$
Salaries	5,000
Drilling*	90,000
Consumables	4,500
Site/access development	3,000
Vehicles	1,250
Travel and Accommodation	1,500
Survey	1,000
Assay	3,000
Petrological Consultants	1,000
	<hr/>
TOTAL	110,250
	<hr/>

* Note: This assumes that 80% of the drilling will be percussion and 20% diamond.

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APPENDIX 1

Expenditure to March 30th 1982

RENISON LIMITED
GEOLOGY DEPARTMENT

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EL 9/76 BLUE TIER

RESPONSIBILITY 078

P/E 30/ 3/82

ACCOUNT NUMBER	ACCOUNT NAME	PERIOD TO DATE		YEAR TO DATE	
		ACTUAL	VARIANCE	ACTUAL	VARIANCE
010780702	SALARIES	714	2067 G	8345	65866 G
010780703	SALARY LOADING	250	580 G	2920	12853 G
010780705	CONSUMABLES		290 G	648	5175 G
010780708	VEHICLES	283	51 L	3378	1183 L
010780710	TRAVEL & ACCOMMODATION	144	146 G	3915	2521 G
010780722	METALLURGICAL RESEARCH-RENISON	786	786 L	7927	3814 L
010780723	R				
010780724	RENISON SERVICES - OTHER	2382	2382 L	7217	5982 G
010780730	CONTRACTORS - GEOLOGICAL	240	240 L	9754	5850 L
010780734	CONTRACTORS - ASSAYING	1365	1365 L	17607	11982 L
010780735	CONTRACTORS - SITE AND ACC. DE			26260	21760 L
010780736	EXPLOR. DRILLING- DIAMOND			34000-	102487 G
010780738	EXPLOR. DRILLING - PERCUSSIVE				42735 G
010780739	CONTRACTORS - SURVEYING				1712 G
010780740	LEASE PAYMENTS	629	629 L	1167	3333 G
010780750	DEF FEASIBILITY AND ASS. STUDY				193525 G
010780760	SUB TOTAL	6793	2370 L	55137	391600 G
010780770	LESS HELLYERS SHARE 40%	1888-	119 G	21227-	157473 L
	ROUNDING	1	1 L	1	
010789999	TOTAL EL9/7L BLUE TIER	4906	2252 L	33911	234127 G

APPENDIX 2

Report by R. Poltock on contract gridding,
soil sampling and geological mapping,
Blue Tier Grid

EL 9/76

BLUE TIER GRID

Contract gridding, soil sampling and geological mapping
by Poltock Bros., Roger Poltock Geological for Renison
Ltd.

August - November, 1981.

CONTENTS

INTRODUCTION

- GRID - Details
- Soil Sampling
 - Mapping - Line Location

GEOLOGYDevonian - Carboniferous Blue Tier Batholith

- Poimena Biotite Granite/Adamellite
- Lottah Sheets/Anchor Granite
- Intermediate Granite
- Aplites
- Basic intrusives - lamprophyres

Permian - Sandstone and ConglomerateTertiary - Basalt and SedimentsRegional Structures, Alteration and Mineralization in
Granite

Appendices:-

- (i) Rock samples grid locations
- (ii) Field note books No. 1 - 4
- (iii) Soil sample descriptions

DWGS.

- | | | |
|----|--|---------|
| 1. | Fact Geology | 1:5,000 |
| 2. | Interpretive Geology | 1:5,000 |
| 3. | Grid line profiles and interpretive
geology | 1:5,000 |

References:

- Tas. Dept. Mines 1977
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- Mt. Lyell Exploration Poimena 1904 - 1906

INTRODUCTION

This contract involved geological mapping, soil sampling and line cutting on an E-W grid system connected by several base lines, a total of 83.3 km. This a northern extension of the Anchor grid, the first regional exploration in the Blue Tier area, previously exploration limited to detailed assessment of primary tin mines/prospects and their immediate environs.

The gridded area covers the northern part of EL 9/76 approx. 40 km², commencing 0.5km north of Lottah; the only ungridded area being

- (a) Rieker's Hyde's lease in the N.W.
- (b) N.E. corner, North of Sunflats Road and east of Mt. Michael.

The grid lies N.W. of Weldsborough, vehicle access either by the Emu Flats or Lottah - Poimena Roads. Topography is dominated by Blue Tier - Mt. Michael plateau, with the Wyniford and Frome Rivers draining to N. & N.W. and tributaries of the Groom and Ransom Rivers draining S.E. Topography is relatively gentle - undulating only becoming steep in the Jubilee Hill - Frome River area and the headwaters of the Groom and Ransom Rivers.

Geology is dominated by Devonian Carboniferous granite - adamellite, part of the Blue Tier batholith with associated greizen and sericitic alteration with cassiterite mineralization. Minor primary tin mining has been carried out but secondary alluvial concentrations have been more significant.

Granite contacts with intruded country rocks don't exist in the gridded area, minor Permian sediments and Tertiary volcanics are the only non granitic lithologies.

GRID

The Blue Tier Grid incorporates three main grid systems and sets of coordinates.

(a) Jubilee Hill - Frome River Grid, consists of three lines cut at 104° (True) at 250 metre intervals connected by an eastern base line - bearing 014° (True). The lines numbered 250-500-750N extend from 00 BL to 1000W.

(b) Main grid extends from 3000E (ALG 577,000E - Western lease boundary) to 5000E (ALG 585,000E) with three base lines at

0000.E (ALG 580,000E)
 2,500.E (A.M.G. 582,500E)
 5,000.E (A.M.G. 585,000E)

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Lines labelled from 126N - 81.5N and are spaced at 600 m. except 81.5 and 84N (250m.)

The only ungridded area in this section is:

- i) Rieker's/Hyde's Lease 1 km² on line 114.N.0 - 1500.W.
- ii) Poimena mining district which has been covered by Mt. Lyell 1904 - 06 detailed exploration.
- iii) North of Sunflats Road, and east of Mt. Michael in the N.E. corner of EL.9/76

Detail in the first two areas was filled in by E-W compass and road traverses.

(c) lines 69 - 84.N, northern extension of the Anchor Grid, grid lines at 300 m. intervals, extending E. & W. of the Lottah-Poimena Road, with the exception of 81 & 84N which are only to the E. The road is the 000 datum all lines except 84N are connected by an eastern base line at A.M.G. 86,800E which has been cut south from the Poimena - Sunflats Road. All grid lines with the exception of the Jubilee Hill/Frome have been cut at 090-270° (True), with base lines at 000-180° (True).

Section c) of the Blue Tier grid was cut by Peter Ashton approx. 2 years ago, some lines tending to be overgrown. Extensions on the western ends of lines 69-78N and sections a) and b) were cut by Poltock Bros. during July - October '81. All recently cut lines are flagged and staked at least each 25m. and coordinates marked on permatags each 50m.

Soil Sampling

All grid lines and base lines listed above have been soil sampled at 50m. intervals. The southern grid cut by Peter Ashton was sampled by him, all western extension and sections a) b) sampled in '81 season, a total of 1390 samples.

Soil samples taken beneath the organic layer and includes material from "B" and "C" horizons, for sample depths and descriptions see appendices iii).

Analysis from Ashton's sampling was available when mapping and '81 season sampling was still being processed at time of writing. Due to lack of time the earlier results won't be discussed at present.

Mapping and Line Locations

Geological mapping and location of grid lines, on 1:5000 plans carried out in the period 7th September - 23rd October 1981. Mapping confined to grid lines with intermediate traversing only in vicinity of major granite contacts see Dwg. 1. With grid lines between 300-600m apart it is possible that significant windows in Poimena or remnants of it on the Anchor granite have been overlooked.

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All lines and extensions north of and including 69N were traversed, a total of approx. 83.3 km. All data systematically recorded in field note books No. 1 - 4 see appendices (ii), notes on geology and clinometre slope angles recorded at least each 50 metres.

This information has then been drafted:

- a) Dwg. 1. Fact Geology, line locations etc. on 1:5000 contour plans compiled by A.A. Surveys Pty. Ltd., sheets No. 1, 2, 4 - lines extending 300 m. west and 1500 m. north of sheet 1.
- b). Dwg. 3 Grid line profiles and interpretive sections.

These profiles have been compiled from clinometre slope angles which were read each 25-50m along lines and base lines. These sections should be fairly accurate, and haven't been distorted to fit contour plans, may be useful as reference if doubts arise as to exact line locations on contour plans.

Grid lines have been located on plans by

- a) definite control points see Dwg. 1, e.g. roads, mines, vegetation changes. This facilitated by using 1:23,000 colour aerial photographs and enlargements of these superimposed on 1:5000 contour plans.
- b) topographic section lines compiled from clinometre readings, these fitted to 1:5000 contour plans using above control points and 100m grid stations marked off.

Frequently difficulties and discrepancies found when fitting profiles to contour plans, this due to

- i) incorrectly located topographic features (mainly streams) on 1:5000 contour plans e.g. Crystal Creek lines 72-78N, 2200-2500W, has been located 100m to far west.
- ii) distortions up to 50 m. common over 2500 m. sections between base lines where streams and hill tops on profiles don't quite coincide with contour plans. This due to slight ground measurement and plotting errors.
- iii) grid line and base line intersections may be up to 75m out due to bearing errors along lines over 2500m between base lines. This most prominent on OCOBL between 81.5N - 108N, some confusion with labelling on the base line occurs - attempt to fit coordinates to line intersections.

GEOLOGY

Blue Tier area has a long history of tin mining, predominantly shallow eluvial and alluvial with scattered open pit hard rock mining. First detailed exploration carried out by Mt. Lyell in 1904-1906 over mines and prospects between the Anchor and Mount Michael. This and more recent Tas. Mines Dept. mapping 1:50,000 Ringarooma Sheet is the only previous work referred to. The Ringarooma Sheet doesn't quite cover the gridded area - extending to just west of Poimena A.M.G. 583,800E approx. 3800-3900 m. grid east. This Mines Dept. data has been enlarged to 1:25,000 scale "EL 9/76 Blue Tier Area - Regional Geology", also shows location of primary tin deposits.

Devonian - Carboniferous Blue Tier Batholith

This a large multiphase granitic intrusive which has been completely unroofed in the licence, the nearest intrusive contact with Siluro-Devonian Mathina Gneiss occurs 3 km. S.W. of Weldborough. Two major granitic phases outcrop in the grid area, the older Poimena Biotite Granite/Adamellite and the younger intrusive Lottah Sheets/Anchor Granite. In addition an intermediate phase, aplites and possible lamprophyres have been mapped the former probably related to the Anchor granite. All rock descriptions are based on hand specimens no thin sections have been described.

Tin mineralization is associated with greizen and sericitic alteration which is directly related to the Anchor granite.

Poimena Biotite Granite/Adamellite.

This is typically pale grey, ranging from fine-coarse grained, consistently porphyritic with abundant white feldspar phenocrysts up to 4 cm. (minor pink feldspar in the Poimena occur N.W. of Mt. Marie in the Wyniford River), occasionally feldspars are roughly orientated. Biotite is the only mafic mineral, occurring in fine irregular aggregates, rarely as distinct large flakes, muscovite is absent except where greizenisation has occurred.

The granite/adamellite has been subdivided into three mapable units on the basis of grainsize:

- coarse 5 - 10 mm
- medium 2 - 5 mm
- fine < 2mm

All are feldspar porphyritic and the finer ones tend to be quartz porphyritic also. Contacts between divisions are gradational and difficult to map, many minor changes occur which have been overlooked.

The Poimena forms the most prominent topography, particularly the coarser grained variety e.g. Mount O'Rielly, Mount Marie, Masher and Poimena Hills. Soils are typically brown - orange brown clayey supporting myrtle - (Nothofagus cunninghamii) - sassafras (Atherosperma moschatum) dominated rainforest with open understory. Abundant myrtle logs cover the ground on cleared Poimena granite, these remnants of the above type of rainforest.

Lottah Sheet/Anchor Granite

This the younger tin granite is associated with late stage aplite/pegmatites. Usually it is fine - medium grained equigranular with both biotite and muscovite, the latter may be secondary associated with alteration which is more prevalent in this granite than the older Poimena. Unlike biotites in the Poimena they occur as distinct flakes which are equigranular with quartz and feldspar.

The anchor granite includes several variations based on grain size and degree of equigranularity:-

-: 2-5 mm equigranular quartz, biotite, cream-pink/orange feldspars.

-: quartz muscovite/biotite 2-5mm dominant with interstitial <2mm groundmass of quartz and feldspar. Coarser quartz tends to be porphyritic, forming an interlocking mesh of crystals. Outcrops typically have a sugary - granular appearance.

-: quartz-feldspar porphyritic in 2 mm. quartz feldspar muscovite/biotite groundmass. This porphyry is distinct from those of the Poimena.

These variations haven't been subdivided into mappable units due to continual variation, and subtle differences which are difficult to consistently recognize regionally. In more detailed local mapping they could be separated.

Typically outcrop of this granite is more subdued but forms some positive features e.g. Australia Hill, and Mount Michael. Soils are grey, tend to sandy, more acid than Poimena, supporting rainforest still dominated by myrtle but with celery top pine subdominant (Phyllocladus asplenifolius) and an epacridaceous understory.

Intermediate Granite

Located between the Poimena and Anchor granites, it is a non descript unit having features of both the major units, and is difficult to allocate to either. On Mines Dept. Ringsarooma sheet there is quite good correspondence to Dbapf: Porphyritic, fine medium grained, biotite-muscovite granite/adamellite with feldspar phenocrysts.

In the Kent mining leases the intermediate type is associated with greisenisation and minor sericitization in Tin Dish Creek 75N/750-800W.

Aplites

These appear to be contemporaneous with the Anchor granite - this assumption based on the fact that they've only been recognised in the Poimena. However aplites only contain muscovite and are always fresh-unaltered indicating that they may be associated with a later phase.

Aplites occur as dykes and sills ranging from a few cm. - 10 metres thick, with no preferred orientation apparently intruding along joints and fractures. Usually they are fine, equigranular, cream-pink, often with feldspar muscovite pegmatite selveages.

Variations of the basic type occurs:

- (a) very fine grained with appearance of a quartzose hornfels/xenolith, but contains scattered quartz phenocrysts.
- (b) fine grained pale grey-green with pink feldspar and rounded quartz phenocrysts.
- (c) fine grained orange-pink equigranular with scattered coarse muscovite segregations.

This latter type forms larger bodies than a & b.

Basic Intrusives

These occur throughout the mapped area predominantly in the Poimena, only in the Wyniford River upstream of Line 114N. were dykes observed in the Anchor granite. These basics are fine-medium grained, crystalline, black, occasionally with feldspar phenocrysts 2000w/120N, the dykes or sills are usually less than 5m thick and are commonly associated with aplites - appear to have intruded the same joint.

There is no certainty about the age of these dykes but they are quite different from Tertiary basalts, may be associated with Jurassic dolerites but due to above spatial relationship with aplites it is presumed that they are Devonian - Carboniferous lamprophyres.

Occasionally the basics are slightly pyritic and have been prospected by pits and an adit 96N/2300E but don't appear to be related to tin mineralization.

Permian Sandstone - Conglomerate.

Outcrop of probably Permian quartzose sandstones and pebble conglomerates is restricted to line 81.5N 1900-2350E. These sediments have probably been derived from hornfelsed

Mathina beds, granitic detritus is a minor component.

The sandstone-conglomerate outcrops as a thin skin of sediment, underlying granite is frequently exposed. The presence of Permian sediments here may be significant indicating that the present Blue Tier plateau may have changed little since the early Permian, widespread secondary tin concentrations may not necessarily indicate significant primary tin source but are the result of a long period of decomposition, erosion and concentration of very low primary tin grades.

Tertiary Basalt & Sediments

Like the Permian these are of very limited extent on the grid, remnants of basalt flows outcropping at 81.5N 000 & 1600E and granite-basalt derived sediments and possible flows at 96N 1600-1700E. This latter location may overly shallow tin bearing deep lead sediments - but would be of limited extent. More extensive basalts occur S.E. of the grid at Mt. Littlechild.

With this range of basalt remnants occurring at elevations from at least 650 - 850 m indicates a rugged early Tertiary terrain. The alluvial tin concentrations in the head of the Frome Valley may be remnants of Tertiary deepleads.

Regional Structures - Alteration and Mineralization

From 1:50,000 Mines Dept. mapping the Blue Tier area is the highest regionally - both topographically and in regards to level of intrusion of the anchor granite. Within this possible domal feature in the licence several northerly trending domes and troughs can be recognized. These may reflect fold trends in the Mathinna Beds and possible associated intrusive granite contacts both with the country rocks and earlier granite phases.

The presence of these domes/troughs is based on interpretations of 1:5,000 line profiles and geological plans see Dwg. 2. & 3. Dips of intergranite contacts weren't observed and in the interpretation it is assumed that faulting is minimal. These domal features have only been interpreted in the north and east where Poimena cover on the anchor granite is very thin or absent see profiles Dwg. 3, in the S.W. Poimena forms a complete cover, interpretations haven't been extended (extrapolated) to here. The most difficult section to interpret is in the Jubilee Hill/Frome River area, here it seems possible that the Poimena may be a remnant sill like megaxenolith within the Anchor granite.

Wyniford Dome

The axis of this feature strikes N.N.W. bifurcating at the southern end between lines 96-108N (axis N.E. & N.W.). To the west it is flanked by gently dipping contacts of approximately 5° which extend 4 km. to a shallow N.N.E. - N.E. trending trough coinciding with the N.W.

limit of Poimena overlying the Anchor granite. An E-W trending dome may be superimposed in this feature trending subparallel to the Emu Flats - Wyniford River track.

Michael Dome

This axis is approximately 1.5 km. east of the above feature and parralleling it, striking through Little Mount Michael and approximately 200m west of Mount Michael. The eastern contacts dip more steeply see Dwg. 2 & 3.

Australia Dome

This centred on Australia Hill the E-W axis parralleling line 78K., this a true domal feature contacts apparently dipping away in all directions, 15° to Sth., $< 5^{\circ}$ to N, E and W. see Dwg. 3. The steep southerly dip explains the odd outcrop pattern of the anchor granite between 69-78N. Within this feature major E.W. jointing and possible alteration may occur, this trend can also be seen in the Little Mount Michael - Line 114N area where strong E-W trending ridges and valleys can be seen in the Anchor granite.

Alteration in the Blue Tier Batholith is of two distinct types, sericitization and greizenisation. The former is more extensive but occurs only in the Anchor granite, where partial replacement of feldspars by pale yellow-green sericite has occurred. Sericitization is diffuse and seems to be associated with domal features with the steepest dipping contacts in the Mt. Michael and Australia Hill area, the latter most extensive and has been interpreted as a contact capping effect in proximity to the Poimena see Dwg. 2. Although sericitization is usually diffuse - partial alteration it becomes more intense in some joints indicated by stoping and trenching in deeper primary tin workings.

The alteration may be more widespread, large areas of Anchor granite outcrops poorly - this may be due to less resistant sericitized granite.

Greizenisation is typically limited to steeply dipping veins a few cm. - 10 cm. thick, the alteration having occurred along joints in the Poimena granite. The greizens vary from predominantly quartz - quartz muscovite, (both quartz remnants of Poimena textures) the alteration commonly has a quartz vein core which occasionally carries coarse cassiterite. This style of alteration is best exposed in shallow alluvial workings 00E 10,050k, 78K 600E, 69K 600J. The most intense greizenization was observed in the Frome River 350m N.W. of the F.B. prospect, a shallow open cut has been excavated with a crusher located nearby.

These two styles of mineralized alteration occur throughout the grid area and have shed cassiterite into most streams encountered in mapping, frequently stream channels have been worked and where these flow in broader valleys alluvium up to 4 metres deep has been sluiced over large areas. The most extensive in the headwaters of the Frome River in Rieker's/Hyde's Lease and further upstream.

APPENDICES (i)

ROCK SAMPLES GRID LOCATIONS

EL 9/76

ROCK SAMPLE LOCATIONS

Total 112

<u>Line 750.N</u>	275W.	640W.	870W		
<u>500.N</u>	750W.				
<u>250.N</u>	1000W				
<u>Line 126.N</u>	150.W	340.W	725.W	975.W	1275.W
	2350.W	2900.W	3300.W		
<u>Line 120.N</u>	10.W	650.W	790.W	1310.W	2000.W
	2825.W	850.E	950.E	1025.E	1450.E
	2100-2150.E	3460.E	3850-3900E,	4050.E	
	4150-4200.E	4830.E			
<u>Line 114.N</u>	3150.N	3250.W			
	540.E	1475.E	2800-2950.E		
	3000-3050E	3650-3700E	3900-3950E		
	4160E	4600-4650.E			
<u>Line 108.N</u>	100.W	3075.W			
	60.E	400.E	1150.E,	3350-3400E,	3750.E
	4950.E				
<u>Line 102.N</u>	1775.W	2175.W			
<u>Line 96.N</u>	1400-1440W				
	520.E	1600.E	2000-2100E		
<u>Line 90.N</u>	1350.E	1500-1550E			
<u>Line 84.N</u>	300.E,	1850.E,	1960.E,	2150.E	
	3300-3315E	84.4N/3150E.			
<u>Line 81.5N</u>	100.E	475.E,	1575.E,	1900.E	
	2175.E -	2275.E	3000.E		
<u>Line 81.N</u>	650.E	2175.E			
<u>Line 78.N</u>	650.W,	725.W	790.W,	1000.W	600.E
	1025.E				
<u>Line 75.N</u>	600.W	800-850W	950-1000W,	1025W	
	1525.W	2090.W	675.E	1550.E	2175.E
<u>Line 72.N</u>	1250.W	2425.W	2525.W	125.E	
	450.E	1175.E	1325.E		
<u>Line 69.N</u>	200.W,	370.W,	560.W,	1150.W,	1350.W
	1725.W,	950.E,	1350.E		
<u>BL 000</u>	100.5N,	104.N,	109.5N,	112.6N	

Jubilee Hill - Frome
River Grid

Samples between grid lines.

<u>No.</u>	<u>Grid Coords approx.</u>
1.	11700N/000E Wyniford River
2	11375N/1100E " "
3	11250N/1275E " "
4	10950N/1450E " "
5	9600N/4100E " "
6	10350N/4725E
7	200N/300E Frome River N.W. Lease
8	10425N/1250E
9	900N/3800E

APPENDIX 3

McClenaghan and Williams, 1981 : Distribution
of major granitoid bodies in the Blue Tier
Quadrangle. Mines Department Unpublished Report
1981/22

1981/22. Distribution of major granitoid bodies in the Blue Tier
Quadrangle.

M.P. McClenaghan
P.R. Williams

Abstract

Granitoid rocks in the Blue Tier 1:50 000 Quadrangle fall into fourteen distinct classes distinguishable by their physical and chemical characteristics. Map distribution patterns show the complex nature of alkali feldspar granite and adamellite relationships in the Blue Tier area and point to the multiplicity of intrusion events in the Blue Tier batholith.

INTRODUCTION

Recently completed geological mapping of the Blue Tier 1:50 000 Quadrangle has led to a revision of the method of subdivision of granitoid rocks in the Blue Tier area. These new criteria are evident from the following legend. The provisional geological map presents the rock distribution of major granitoids in the area only, and ignores several minor granite types and intrusions, the divisions of the Cainozoic deposits and the structural geology of the quadrangle. The purpose of this provisional publication is to make available the revised terminology for granitoids and the detailed rock distribution, in an area of potential economic interest.

LEGEND

Q Quaternary and Tertiary deposits, consisting of alluvium and marsh deposits, beach sand, mobile dune sand and older alluvium. The Tertiary deposits are sand, gravel, granule conglomerate, silcrete and ferricrete.

Sdsm Contact metamorphosed quartz-wacke and mudstone sequences. Mathinna Beds.

IGNEOUS ROCKS

Tb Tertiary alkali-olivine basalt.

Jdl Jurassic dolerite.

DCdl Probably Devonian deuterically altered dolerite dykes.

Devonian Granitoid Rocks

Dbage Fine- to medium-grained biotite and white-mica bearing alkali-feldspar granite. Equigranular varieties.

Dbagm Fine- to medium-grained alkali-feldspar granite with large pale-brown mica aggregates. Pegmatitic patches frequent.

Dbape Porphyritic to equigranular fine-grained greisenised adamellite with small feldspar phenocrysts (<15 mm) and larger than average quartz grains in porphyritic varieties. Muscovite dominant over biotite in equigranular varieties.

Medium- to coarse-grained biotite, minor muscovite adamellite varieties:

Dbapc with K-feldspar phenocrysts of approximately 25 mm mean size.

Dbapm with K-feldspar phenocrysts (<25 mm mean size), plagioclase phenocrysts and quartz phenocrysts in medium-grained matrix.

Dbaec Equigranular.

Fine-grained biotite-muscovite adamellite varieties:

Dbaf Equigranular.

Dbapf with small plagioclase (<15 mm) and quartz phenocrysts.

Coarse- to very coarse-grained biotite adamellite varieties:

Dbasc with very abundant K-feldspar phenocrysts (>30 mm mean size) or with seriate texture.

Dbacg containing garnet.

Granodiorite bodies.

Dbg Medium- to coarse-grained biotite hornblende granodiorite.

Dbb Medium- to coarse-grained biotite granodiorite.

Minor granitic intrusions:

Dbba Aplite

Dbqfp Quartz-feldspar porphyry.

[5 May 1981]

TABLE 2

Plagioclase Composition	Texture	Phenocryst Composition	Phyllosilicate Composition	Grainsize	Symbol Number	Rock Name
Albite	Equigranular	-	Biotite/ muscovite	Medium	1	Equigranular alkali-feldspar granite
Albite	Phyric	Quartz/ K-feldspar	Biotite	Medium	2	Phyric alkali-feldspar granite
Oligoclase/Andesine	Phyric	Orthoclase	Biotite	Coarse	3	Phyric coarse-grained adamellite
Oligoclase/Andesine	Phyric	Plagioclase/ Orthoclase/ Quartz	Biotite/ muscovite	Medium	4	Phyric medium-grained adamellite
Oligoclase/Andesine	Phyric	Plagioclase/ Quartz/ Orthoclase	Biotite/ muscovite	Fine	5	Phyric fine-grained adamellite
Oligoclase/Andesine	Equigranular	-	Biotite	Coarse	6	Equigranular coarse-grained adamellite
Albite/Oligoclase	Equigranular/ Phyric	Quartz/ Orthoclase	Muscovite/ biotite	Fine	7	Altered (greisenized) adamellite

APPENDIX 4

Soil sample descriptions (by contractor
N. Poltock)

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 69 North

DATE Sept 81

OBS P. J. ...

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
950W		4	tan.
1000W		6	grey/brown.
1050W		4	tan.
1100W		5	dark grey
1150W		6	tan/grey
1200W		6	"
1250W		6	"/ brown.
1300W		7	"
1350W		2	tan o/c organic.
1400W		6	red/brown.
1450W		7	buff.
1500W		8	"
1550W		6	"
1600W		2	dark grey.
1650W		7	grey/brown.
1700W		5	tan.
1750W		3	dark grey o/c
1800W		7	grey/brown.
1850W		4	buff.
1900W		5	tan.
1950W		6	"
2000W		5	"
2050W		6	"/ brown.
2100W		7	"
2150W		5	"
2200W		6	"

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers.

TRAVERSE 72 North

DATE Oct '81

OBS P. J. J. J.

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1150W		6	dark grey.
1200W		5	" "
1250W		5	" "
1300W		6	" "
1350W		4	tan.
1400W		5	grey / brown.
1450W		4	" "
1500W		2	grey ofc.
1550W		2	" "
1600W		4	" "
1650W		2	" "
1700W		5	grey.
1750W		5	" / brown.
1800W		6	buff.
1850W		6	grey.
1900W		5	brown.
1950W		6	grey / brown
2000W		5	brown.
2050W		4	grey.
2100W		5	" / brown.
2150W		6	" "
2200W		5	grey organic.
2250W		6	" "
2300W		5	" "
2350W		4	" "
2400W		25	" "
2450W		4	tan / brown.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 75 North

DATE Oct 81 OBS Paol

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1350W		6	brown
1400W		7	"
1450W		6	" workings
1500W		3	"
1550W		3	"
1600W		4	"
1650W		4	grey
1700W		2	" o/c
1750W		2	"
1800W		4	light grey
1850W		6	"
1900W		2	buff o/c organic
1950W		7	light grey
	no soils		
2100		2	grey o/c organic
2150		3	"
2200		25	"
2250W		3	"
2300W		4	Can
2350W		4	olive grey clay
2400W		4	"
2450W		4	Can
2500W		6	"
2550W		4	brown
2600W		6	buff

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 75 North

DATE Oct 81

OBS P. Black

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
000W		4	light brown.
050W		4	grey o/c
100W		2	dark organic.
150W		5	light brown.
200W		2	dark grey o/c organic.
250W		3	" " "
300W		6	brown.
350W		7	"
400W		7	sawn.
450W		7	"
500W		8	light brown.
550W		4	"
600W		9	grey/brown workings.
650W		8	"
700W		5	sawn.
750W		5	brown.
800W		4	"
850W		6	"
900W		6	" workings.
950W		5	"
1000W		9	" "
1050W		4	" "
1100W		5	" -
1150W		4	" -
1200W		5	"
1250W		7	"
1300W		3	"

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers TRAVERSE St. North DATE Oct 81 OBS Polloc

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
2800E		3	light brown
2850E		5	grey / brown
2900E		4	dark brown
2950E		1	skelital soils
3000E		2	

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 81NW 1/4DATE Oct. 8/OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1450E		2	calus soils.
1500E		3	dark grey/brown.
1550E			
1600E		3	light grey.
1650E		3	dark brown.
1700E		4	
1750E		3	light grey.
1800E		3	
1850E		3	grey/orange.
1900E		3	/ cream.
1950E		4	light grey.
2000E		3	/ brown.
2050E		3	/ cream.
2100E		5	grey/brown.
2150E		4	dark "
2200E		4	
2250E		4	light brown.
2300E		3	
2350E		4	dark grey/brown.
2400E		5	light "
2450E		3	brown
2500E		3	
2550E		4	grey.
2600E		1	fine granitic gravels.
2650E		5	grey brown.
2700E		3	light "
2750E		3	

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers TRAVERSE 81 North DATE Oct 81 OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
50E		6	light grey / brown
100E		5	-
150E		6	-
200E		4	-
250E		5	-
300E		5	-
350E		4	-
400E		6	grey / brown
450E		4	light / brown
500E		5	-
550E		4	-
600E		4	-
650E		5	-
700E		5	grey / brown
750E		4	light brown
800E		4	-
850E		4	-
900E		5	-
950E		4	-
1000E		6	-
1050E		7	brown
1100E		7	light
1150E		7	-
1200E		4	brown
1250E		6	-
1300E		8	light brown
1350E		7	-

748071

FIELD SHEET FOR GEOCHEMICAL SURVEY

 AREA Blue Tiers TRAVERSE 84 North DATE Oct 81 OBS Pollack

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1400E		5	Brown
1450E		6	light brown
1500E		4	.
1550E		4	.
1600E		5	Brown
1650E		5	.
1700E		4	light brown
1750E		6	grey /
1800E		4	Brown
1850E		6	light brown
1900E		4	.
1950E		5	Brown
2000E		3	workings
2050E		3	light
2100E		4	.
2150E		4	grey / workings
2200E		3	.
2250E		3	light brown
2300E		4	.
2350E		3	.
2400E		3	.
2450E		5	.
2500E		4	grey / brown
2550E		4	.
2600E		3	.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers TRAVERSE 84 North DATE Oct 81 OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
000		9	light brown
050E		8	-
100E		7	-
150E		7	-
200E		7	-
250E		6	-
300E		6	brown
350E		5	light brown
400E		7	grey brown
450E		6	light brown
500E		5	-
550E		6	-
600E		4	-
650E		5	-
700E		5	-
750E		6	brown
800E		6	-
850E		6	-
900E		5	light brown
950E		6	-
1000E		6	-
1050E		5	grey / brown
1100E		2	-
1150E		5	reddy / brown
1200E		6	light brown
1250E		5	grey brown
1300E		6	light brown
1350E		2	-

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers TRAVERSE 90 North DATE Oct 81 OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1450E		5	light brown
1500E		5	brown
1550E		4	dark grey
1600E		6	light brown
1650E		4	"
1700E		3	dark grey/brown
1750E		4	light brown
1800E		5	"
1850E		5	"
1900E		4	grey/brown
1950E		6	light brown
2000E		5	"
2050E		4	" workings
2100E		5	"
2150E		4	grey
2200E		4	"
2250E		4	"
2300E		3	light brown
2350E		3	"
2400E		3	"
2450E		4	brown
2500E		3	grey brown
2550E		3	"

FIELD SHEET FOR GEOCHEMICAL SURVEY

748074

AREA Blue Tiers

TRAVERSE 90 North

DATE Oct-81

OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
050L		4	light brown
100L		5	grey / workings
150L		6	brown
200L		5	light
250L		4	-
300L		4	-
350L		5	-
400L		4	-
450L		5	-
500L		6	-
550L		4	-
600L		5	brown
650L		5	grey
700L		3	brown
750L		4	-
800L		6	-
850L		5	-
900L		6	-
950L		5	-
1000L		5	-
1050L		7	light brown
1100L		6	grey
1150L		5	-
1200L		3	light brown
1250L		4	-
1300L		5	brown
1350L		4	light
1400L		5	-

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 96 NorthDATE Sept. '81 OBS Rolls

STATION	SAMPLE NO.	DEPTH Metres	DESCRIPTION
1400W		. 6	o/c brown.
1450W		. 4	grey / "
1500W		. 3	dark grey
1550W		. 4	brown.
1600W		. 7	tan.
1650W		. 7	"
1700W		. 7	"
1750W		. 6	"
1800W		. 5	tan.
1850W		. 6	" / brown.
1900W		. 6	" "
1950W		. 4	" "
2000W		. 4	" "
2050W		. 6	" "
2100W		. 5	" "
2150W		. 5	" "
2200W		. 6	" "
2250W		. 7	" "
2300W		. 6	" "
2350W		. 5	tan.
2400W		. 6	"
2450W		. 8	brown.
2500W		. 6	"
2550W		. 4	"
2600W		. 2	o/c dark grey - organic
2650W		. 5	red/brown.
2700W		. 4	brown.

AREA Blue Tiers

TRAVERSE 96 North

DATE Sept '81 OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
50W		. 7	Can
100W		. 6	-
150W		. 4	o/c Brown
200W		. 8	Can/Brown
250W		. 4	-
300W		. 6	-
350W		. 6	workings - -
400W		. 4	Can.
450W		. 4	-
500W		. 5	-
550W		. 5	-
600W		. 4	grey gravels
650W		. 5	Can.
700W		. 5	-
750W		. 7	-
800W		. 8	-
850W		. 6	- / Brown.
900W		. 6	-
950W		. 7	-
1000W		. 6	-
1050W		. 7	-
1100W		. 5	Brown.
1150W		. 5	-
1200W		. 4	o/c -
1250W		. 6	-
1300W		. 8	-
1350W		. 6	grey/brown.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA

Blue Tiers

TRAVERSE

96 North

DATE

Oct 81

OBS

P. Black

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1450E		3	yellow brown.
1500E		3	.
1550E		2	dark brown.
1600E		4	.
1650E		4	.
1700E		4	.
1750E		4	.
1800E		5	yellow brown.
1850E		5	grey brown
1900E		4	alluvial ground clays.
1950E		3	orange brown.
2000E		3	grey. gritty.
2050E		3	.
2100E		3	.
2150E		3	brown.
2200E		4	clay.
2250E		3	yellow / brown.
2300E		3	brown
2350E		3	.
2400E		2	.
2450E		2	dark brown
2500E		4	grey / orange / brown
2550E		3	grey sands.
2600E		5	tan / brown
2650E		3	ok
2700E		4	dark grey.
2750E		5	grey / brown ok
2800E		0	.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers TRAVERSE 96 North DATE Oct '81 OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
50E		. 4	tan / brown.
100E		. 4	.
150E		. 3	dark grey o/c.
200E		. 5	tan / brown.
250E		. 6	brown.
300E		. 5	tan.
350E		. 4	.
400E		. 5	.
450E		. 3	brown.
500E		. 6	tan / brown
550E		. 5	-
600E		. 6	"
650E		. 5	"
700E		. 2	orange / brown
750E		. 4	brown
800E		. 3	yellow / - crumbly
850E		. 3	.
900E		. 4	dark brown
950E		. 2	.
1000E		. 2	-
1050E		. 5	cream yellow
1100E		. 5	-
1150E		. 3	yellow brown
1200E		. 2	brown
1250E		. 4	.
1300E		. 4	grey / brown
1350E		. 3	brown
1400E		. 2	.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 102 North

DATE Sept 81

OBS PLK

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
000E.			
050E.		. 5	grey gravels workings
100E		. 6	orange
150E.		. 6	grey/
200E.		. 6	
250E		. 5	tan.
300E.		. 4	/ brown.
350E		. 6	
400E		. 4	grey gravels.
450E.		. 6	tan / brown.
500E.		. 5	
550E.		. 3	red / brown.
600E.		. 6	
650E.		. 7	
700E		. 4	grey. o/c
750E		. 6	/ buff.
800E.		. 5	orange / brown.
850E.		. 4	
900E		. 3	
950E.		. 6	/ buff.
1000E		. 4	grey o/c
1050E		. 5	red / brown
1100E		. 6	
1150E		. 6	
1200E.		. 4	dark brown o/c
1250E.		. 5	red/
1300E		. 2	grey o/c
1350E		. 0	

FIELD SHEET FOR GEOLOGICAL SURVEY

AREA Blue Tiers

TRAVERSE 102 North

DATE Sept 81

OBS T. J. Lock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1400E		. 2	grey o/c
1450E		. 6	gravel
1500E		. 6	tan
2000E		. 6	tan brown grey gravel
2050E		. 5	orange grey
2100E		. 4	grey gravel
2150E		. 2	o/c
2200E		. 4	.
2250E		. 4	.
2300E		. 4	red / grey
2350E		. 3	grey o/c
2400E		. 7	.
2450E		. 4	Crack
2500E		. 2	grey o/c
2550E		. 4	.
2600E		. 2	o/c
2650E		. 3	grey gravel o/c
2700E		. 4	tan
2750E		. 5	grey
2800E		. 5	.
2850E		. 6	.
2900E		1 2	workings flood plains
2950E		1 0	" "
3000E		1 1	" fawn
3050E		. 4	dark grey
3100E		. 5	fawn / tan clay
3150E		. 4	o/c

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 102 North

DATE Sept '81

OBS J. J. J.

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
3200E		. 6	Can / brown
3250E		. 6	-
3300E		. 8	Workings grey sands
3350E		. 5	Can
3400E		. 5	dark grey
3450E		. 6	Can
3500E		. 6	- / grey workings
3550E		. 6	-
3600E		. 5	-
3650E		. 6	yellow fawn
3700E		. 7	Can / brown
3750E		. 6	- workings
3800E		. 5	grey
3850E		. 6	-
3900E		. 5	-
3950E		. 5	light grey
3950E	4000E	. 4	grey
4050E		. 5	-
4100E		. 3	-
4150E		. 5	light
4200E		. 2	-
4250E		. 8	grey / brown
4300E		. 4	-
4350E		. 8	dark / grey
4400E		. 5	-
4450E		/ 00	- - clay
4500E		/ 00	- -

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 102 NorthDATE August 81 OBS Peak

STATION	SAMPLE NO.	DEPTH metres	DESCRIPTION
050W		. 8	orange / brown.
100W		. 6	buff.
150W		. 8	.
200W		. 25	grey
250W		. 5	- / brown.
300W		. 5	grey
350W		. 8	.
400W		. 7	tan.
450W		. 25	grey
500W		. 6	tan.
550W		. 7	.
600W		. 9	.
650W		. 7	.
700W		. 6	workings orange.
750W		. 2	o/c grey
800W		. 7	tan.
850W		. 6	workings tan.
900W		. 6	.
950W		. 4	.
1000W		. 7	brown.
1050W		. 6	- workings
1100W		. 4	.
1150W		. 4	.
1200W		. 25	.
1250W		. 4	.
1300W		. 5	grey
1350W		. 4	buff workings.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 102 NorthDATE August '81 OBS P. Black

STATION	SAMPLE NO.	DEPTH metres	DESCRIPTION
1400W		3	grey workings.
1450W		6	fawn.
1500W		5	-
1550		4	-
1600W		5	-
1650W		4	-
1700W		6	grey
1750		5	-
1800W		4	fawn.
1850W		3	-
1900W		6	Red/brown.
1950		7	orange/brown.
2000W		5	brown.
2050W		7	Red/brown.
2100W		6	-
2150W		5	-
2200W		45	-
2250W		5	brown.
2300W		8	fawn.
2350W		100	orange/brown
2400W		7	-
2450		8	-
2500		12	-
2550		9	brown.
2600		8	grey/brown
2650		5	fawn
2700		6	taw.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers TRAVERSE 108 North DATE August 81 OBS Ellis

STATION	SAMPLE NO.	DEPTH metres	DESCRIPTION
1350w.		5	Brown
1400w.		6	-
1450w		7	-
1500w		5	-
1550w		6	-
1600w		7	-
1650w		6	-
1700w.		8	workings red/brown.
1750w.		6	-
1800 ~ 1950		holes	washed out.
2000w		5	red brown
2050		5	-
2100		4	-
2150		5	Brown
2200		6	-
2250		8	faun.
2300		7	- / brown
2350		6	-
2400		7	orange brown
2450		8	-
2500w		6	Brown
2550w		5	faun clay
2600		5	-
2650		25	grey/brown
2700w.		6	Brown
2750w		6	-
2800w		5	faun / brown

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 108 NorthDATE August 81 OBS Black

STATION	SAMPLE NO.	DEPTH metres	DESCRIPTION
000W		3	grey
050W		4	Red/brown clay
100W		6	"
150W		6	"
200W		7	workings grey
250W		3	"
300W		25	" Sawm.
350W		4	" orange
400W		3	" grey
450W		6	"
500W		2	"
550W		5	"
600W		3	"
650W		4	orange/brown.
700W		5	"
750W		4	brown.
800W		3	flood plain gravels - been worked
850W		3	"
900W		3	workings orange brown.
950W		2	"
1000W		2	"
1050W		4	"
1100W		8	"
1150W		3	brown.
1200W		5	"
1250		8	workings brown.
1300		5	"

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 108 NorthDATE Oct 81OBS PLK

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
050K		. 5	Brown
100K		. 5	"
150K		. 6	"
200K		. 6	"
250K		. 4	"
300K		. 5	"
350K		. 7	"
400K		. 2	dark brown.
450K		. 6	brown workings
500K		. 7	"
550K		. 6	"
600K		. 6	"
650K		. 6	"
700K		. 6	"
750K		. 7	" workings.
800K		. 4	"
850K		. 8	"
900K		. 7	red/- workings.
950K		. 5	Brown.
1000K		. 5	"
1050K		. 8	grey/ "
1100K		. 6	"
1150K		. 8	"
1200K		. 8	grey/ "
1250K		. 8	"
1300K		. 6	"
1350K		. 7	Can.

AREA Blue Tiers

TRAVERSE 108 North

DATE Oct. 81

OBS Pollak

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1400E		.6	Brown
1450E		.3	grey
1500E		.3	Brown
1550E		.2	o/c
1600E		.7	Brown
1650E		.7	
1700E		.5	Can.
1750E		.6	
1800E		.6	grey
1850E		.7	Brown
1900E		.2	o/c dark grey
1950E		.3	o/c
2000E		.2	o/c
2050E		.3	o/c grey
2100E		.8	
2150E		.4	o/c grey/Brown
2200E		.2	o/c dark grey
	Line starts @ 'BB' Base line (2600E)		
2650E		.3	grey/Can.
2700E		.5	Brown
2750E		.8	Can.
2800E		.9	dark grey gravels
2850E		.4	" "
2900E		.2	" "
2950E		.9	grey Can gravels
3000E		.7	" "
3050E		.8	clay

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 108 North

DATE Oct-81

OBS Black

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
3100E		3	light grey sandy gravels.
3150E		6	
3200E		8	grey / tan.
3250E		7	fawn clay.
3300E		6	light grey gravels.
3350E		6	
3400E		5	
3450E		4	
3500E		3	
3550E		7	grey / tan.
3600E		3	gravels.
3650E		6	
3700E		7	
3750E		2	
3800E		4	grey clay.
3850E		5	
3900E		7	gravels
3950E		4	
4000E		3	o/c
4050E		6	
4100E		4	
4150E		5	
4200E		5	clay.
4250E		4	
4300E		7	
4350		8	cream.
4400E		6	grey gravels.

AREA Blue Tiers.TRAVERSE 114 NorthDATE Sept 81OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
			<u>Starts at 1500W on Linn Road.</u>
1500W		5	dark sawn
1550W		6	orange/brown
1600W		5	brown workings
1650W		5	grey
1700W		5	buff
1750W		6	light grey
1800W		8	orange
1850W		7	
1900W		6	buff
1950W		5	dark grey
2000W		6	tan
2050W		8	
2100W		10	1/brown
2150W		6	workings
2200W		5	sawn clay
2250W		4	tan workings
2300W		3	
2350W		5	
2400		6	sawn
2450		7	workings
2500W		8	grey/brown
2550W		6	
2600W		5	
2650W		4	brown
2700W		5	
2750W		6	dark grey workings

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 114 North

DATE Sept 81

OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
2850L		3	grey / brown.
2900L		4	"
2950L		4	"
3000L		8	"
3050L		2	" o/c
300L		7	light brown.
3150L		6	grey / brown.
3200L		3	"
3250L		3	"
3300L		4	"
3350L		3	"
3400L		2	" o/c
3450L		3	"
3500L		4	grey
3550L		8	" / brown.
3600L		2	"
3650L		5	"
3700L		7	"
3750L		4	"
3800L		5	"
3850L		3	" o/c
3900L		3	" workings
3950L		3	"
4000L		2	"
4050L		4	"
4100L		7	brown.
4150L		6	"

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 114 NorthDATE Sept '81OBS Black

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1450E		3	dark grey
1500E		4	brown
1550E		4	dark brown
1600E		9	
1650E		7	
1700E		6	grey
1750E		6	brown
1800E		3	grey/brown
1850E		9	brown
1900E		7	grey
1950E		7	
2000E		4	
2050E		3	/brown
2100E		3	brown
2150E		5	
2200E		5	light
2250E		2	grey/brown etc
2300E		2	
2350E		3	
2400E		4	
2450E		3	
2500E		5	
2550E		4	
2600E			base line BB
2650E		4	grey/brown
2700E		5	
2750E		5	

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 114 North

DATE Sept 81

OBS Pat.

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
050L		. 4	light brown.
100L		. 8	-
150L		. 4	-
200L		. 7	grey /
250L		. 6	tan.
300L		. 8	light brown.
350L		. 6	tan brown.
400L		. 9	- workings.
450L		. 6	brown.
500L		. 4	-
550L		. 9	grey.
600L		. 7	light brown.
650L		. 5	grey workings.
700L		. 4	- / brown
750L		. 7	dark grey.
800L		. 3	o/c -
850L		. 7	-
900L		. 6	grey brown.
950L		. 2	o/c dark grey - organic.
1000L		. 5	grey brown
1050L		. 2	dark grey o/c
1100L		. 3	-
1150L		. 4	grey brown
1200L		. 5	-
1250L		. 5	light brown
1300L		. 4	grey.
1350L		. 4	brown

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers TRAVERSE 120 North DATE Oct 81 OBS Pollack

STATION	SAMPLE NO.	DEPTH		DESCRIPTION
2850E		.	5	Brown
2900E		.	2	grey/ Brown o/c
2950E		.	4	" "
3000E		.	3	" "
3050E		.	6	" "
3100E		.	7	" "
3150E		.	5	" "
3200E		.	7	o/c "
3250E		.	3	o/c "
3300E		.	3	" "
3350E		.	6	" "
3400E		.	8	" "
3450E		.	5	" "
3500E		.	2	" "
3550E		.	6	" "
3600E		.	7	" "
3650E		.	6	" "
3700E		.	5	" "
3750E		.	6	" "
3800E		.	3	" "
3850E		.	3	" "
3900E		.	6	" "
3950E		.	4	" "
4000E		.	2	o/c " " organic
4050E		.	4	" "
4100E		.	5	" "
4150E		.	8	light Brown

AREA Blue Tiers

TRAVERSE 120 North

DATE Oct 21

OBS Pollock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1450E		6	light brown.
1500E		8	" "
1550E		4	" "
1600E		3	" "
1650E		3	" "
1700E		7	" grey
1750E		3	" "
1800E		4	grey / brown.
1850E		5	light grey
1900E		4	grey / brown
1950E		7	" "
2000E		5	" "
2050E		5	" "
2100E		4	" "
2150E		4	" "
2200E		5	" "
2250E		7	" "
2300E		4	" "
2350E		3	brown.
2400E		5	" "
2450E		4	grey / brown.
2500E		3	" "
2550E		3	" "
2600E		4	" "
2650E		3	" "
2700E		3	" "
2750		3	" "

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 120 North

DATE Oct '81

OBS Pollack

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
050L		. 7	brown
100L		. 6	"
150L		. 6	"
200L		. 6	"
250L		. 6	"
300L		. 9	"
350L		. 8	"
400L		. 8	"
450L		. 5	grey
500L		. 9	dark grey
550L		. 6	"
600L		. 9	"
650L		. 9	"
700L		. 7	"
750L		. 4	"
800L		. 8	"
850L		. 3	"
900L		. 3	"
950L		. 4	"
1000L		. 6	"
1050L		. 6	grey / brown
1100L		. 3	dark / etc.
1150L		. 9	"
1200L		. 8	"
1250L		. 7	"
1300L		. 4	grey etc.
1350L		. 9	brown

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 120 NorthDATE Sept 81 OBS. P. J. J.

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
50W		5	fawn.
100W		5	"
150W		6	"
200W		5	grey
250W		5	fawn.
300W		4	"
350W		5	brown.
400W		6	"
450W		3	o/c dark grey
500W		7	brown / fawn
550W		6	"
600W		7	"
650W		6	"
700W		9	o/c grey gravels.
750W		4	"
800W		2	"
850W		8	taw.
900W		4	"
950W		7	"
1000W		5	"
1050W		5	"
1100W		5	"
1150W		6	"
1200W		8	"
1250W		7	"
1300W		6	"
1350W		7	orange brown.

FIELD SHEET FOR GEOCHEMICAL SURVEY

748106

AREA Blue Tiers TRAVERSE 120 North DATE Sept 81 OBS Pollack

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
1400w		4	Brown.
1450w		5	-
1500w.		4	-
1550w		8	light / Brown.
1600w		8	.
1650w		6	.
1700w		5	.
1750w		5	grey
1800w		4	workings light brown.
1850w		3	o/c dark grey
1900w		5	Brown.
1950w		5	fewer.
2000w		3	tan.
2050w		3	.
2100w		4	workings grey clay.
2150w		25	.
2200w		5	.
2250w		7	.
2300w		7	grey.
2350w		4	light brown.
2400w		4	.
2450w		3	.
2500w		9	yellow / brown.
2550w		6	dark.
2600w		9	grey brown.
2650w		7	.
2700w		3	.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE 126 North

DATE Sept 81

OBS Black

STATION	SAMPLE NO.	DEPTH		DESCRIPTION
1400W		-	5	grey brown.
1450W		-	5	"
1500W		-	3	tan.
1550W		-	3	"
1600W		-	3	" / brown.
1650W		-	3	" "
1700W		-	4	" "
1750W		-	5	Brown.
1800W		-	6	tan / brown.
1850W		-	5	"
1900W		-	4	" "
1950W		-	5	"
2000W		-	3	o/c grey.
2050W		-	6	"
2100W		1	00	dark brown.
2150W		-	7	" "
2200W		-	5	dark grey.
2250W		-	7	grey brown.
2300W		-	3	o/c dark grey.
2350W		-	8	grey.
2400W		-	7	o/c dark grey.
2450W		-	5	" "
2500W		-	8	grey.
2550W		-	7	o/c dark grey.
2600W		-	6	" "
2650W		-	4	" "
2700W		-	7	" "

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Ties.TRAVERSE 126 North.DATE Sept 81OBS P.A.

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
50W		4	buff / grey.
100W		4	" "
150W		3	" "
200W		5	" "
250W		4	" "
300W		4	" "
350W		3	grey.
400W		5	brown.
450W		5	"
500W		5	tan.
550W		2	olive / grey etc
600W		4	" "
650W		6	" "
700W		6	buff.
750W		2	grey etc organic.
800W		5	" "
850W		4	" "
900W		2	" "
950W		2	" "
1000W		4	light grey etc.
1050W		3	" "
1100W		8	" "
1150W		8	" "
1200W		5	tan.
1250W		6	"
1300W		7	grey brown.
1350W		6	" "

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Tiers

TRAVERSE Baseline AA

DATE Oct. 81

OBS S. L. L.

STATION	SAMPLE NO.	DEPTH		DESCRIPTION
97N		.	7	Brown.
97.5		.	8	light brown.
98		.	9	Brown.
98.5		.	9	grey
99		.	9	Brown.
99.5		.	9	"
100		.	7	"
100.5		.	8	workings
101		.	8	"
101.5		.	6	"
102		.	5	"
102.5		.	5	light "
103		.	7	"
103.5		.	7	Brown.
104		.	6	light "
104.5		.	7	"
105		.	5	" " workings.
105.5		.	5	" "
106		.	6	Brown.
106.5		.	5	light "
107		.	4	tan.
107.5		.	8	dark brown.
108		.	4	"
108.5		.	5	grey.
109		.	6	Brown.
109.5		.	5	grey.
110		.	3	light brown.
110.5		.	1	"

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE Base Line 'BB'DATE Sept '81OBS Patlock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
108.5N			
109N		. 6	grey brown
109.5N		. 3	grey.
110N		. 4	tan / brown
110.5N		2.5	o/c grey
111N		. 4	-
111.5N		. 6	o/c - / brown
112N		. 4	-
112.5N		. 3	- grey
113N		. 4	-
113.5N		. 2	-
114N		. 6	brown
114.5N		. 3	-
115N		. 4	light brown.
115.5N		. 4	grey / brown.
116N		. 8	-
116.5N		. 3	-
117N		. 5	-
117.5N		. 6	-
118N		. 6	-
118.5N		. 9	-
119N		. 6	-
119.5N		. 5	-
120N		. 3	dark grey / brown etc.
120.5N		. 4	-
121N		. 5	grey / brown.

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue TiersTRAVERSE 000 W. Base Line DATE Sept '81 OBS Black

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
81.5N		3	brown
82N		7	light
82.5		5	-
83		6	-
83.5		8	-
84A		8	-
84B		8	-
84		9	-
85			
85.5		4	grey brown
86		4	grey brown
86.5		4	light brown
87		4	brown
87.5		4	grey brown
88		6	-
88.5		6	brown
89		5	light brown
89.5		4	fawn
90		3	tan
90.5		7	fawn
91		3	brown
91.5		4	fawn
92		8	olive/fawn
92.5		8	brown
93		8	fawn
93.5		3	tan
94		5	.

FIELD SHEET FOR GEOCHEMICAL SURVEY

748118

 AREA Blue Tiers TRAVERSE 000W. Base Line DATE Sept '81 OBS PLS

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
94.5N		. 3	o/c fawn.
95		. 8	tan
95.5'		. 4	o/c brown.
96N.		. 5	"
96.5N.		. 8	"
96.5' BN.		. 6	"
96B		. 8	tan.
96.5		1 0	brown.
97		. 4	"
97.5		. 7	"
98N.		. 7	workings light tan.
98.5		. 7	" "
99		. 6	brown.
99.5		. 4	"
100		. 4	fawn.
100.5		. 8	workings fawn.
101		. 7	"
101.5		. 7	" tan.
102		. 6	orange
102.5		. 6	workings "
103		. 4	" cream clay.
103.5		. 4	" grey.
104		. 5	" "
104.5		. 6	brown.
105		. 4.5	grey.
105.5		. 4	dark grey.
106		. 3	" "

FIELD SHEET FOR GEOCHEMICAL SURVEY

AREA Blue Ties

TRAVERSE 0001 Base line

DATE Sept 81

OBS Stock

STATION	SAMPLE NO.	DEPTH	DESCRIPTION
106.5N		. 7	Red / Brown.
107N.		. 4	- -
107.5'		. 4	Sand.
108		. 4	dark grey.
108.5		. 4	
109		. 6	grey brown
109.5		. 5	- - workings.
110		. 9	Brown
110.5'		. 5	grey brown
111		. 5	light brown
111.5		. 4	Brown
112		. 4	light Brown workings
112.5		. 5	grey / -
113		. 7	light -
113.5		. 3	- -
114		. 3	- -
114.5		. 7	Brown
115		. 7	tan
115.5'		. 5	light Brown.
116.		. 4	Brown.
116.5'		. 7	light -
117		. 8	grey brown
117.5		. 6	Brown
118		. 8	Brown
118.5'		. 8	-
119.			
119.5'			

APPENDIX 5

Soil geochemical assay results

GEOCHEMICAL ASSAY RESULTS

748122

Area: .. Blue Tick
Grid Line: .. BT .. 69N
Date: .. Jan .. 1982 ..

Page 1 of

SOX F

	As	Cu	Pb	Zn	SN
000 W					
50					20
100					20
150					20
200					20
250					20
300					40
350					20
400					20
450					30
500					20
550					80
600					110
650					70
700					60
750					40
800					20
850					750
900					20
950	184	210	40	50	50
1000	156	10	30	30	20
1050	105	10	30	40	20
1100	44	20	30	20	20
1150	100	10	30	30	10
1200	120	10	30	30	40

GEOCHEMICAL ASSAY RESULTS

748123

Area: Blue Tier
 Grid Line: BT 69N
 Date: Jan 1982

Page 2 of

		SA. F	As	Cu	Pb	Zn	Sn
1250	W	144		30	30	70	45
1300		116		70	20	40	30
1350		96		30	30	30	55
1400		64		40	40	20	30
1450		96		40	30	50	60
1500		122		40	30	50	45
1550		114		30	30	40	80
1600		32.4		10	40	10	40
1650		64		10	30	20	20
1700		110		30	30	30	40
1750		32.4		40	10	10	320
1800		64		40	40	10	210
1850		84		40	10	20	140
1900		115		40	10	30	120
1950		56		10	30	30	30
2000		58		10	30	20	45
2050		56		10	40	60	80
2100		70		40	40	20	20
2150		120		40	30	30	40
2200		111		10	40	20	10
2250		179		10	30	30	40
2300		216		40	40	30	10
2350		226		10	40	30	10
2400		171		40	40	20	10
2450		249		10	10	30	20

GEOCHEMICAL ASSAY RESULTS

748125

Area: Blue Tier
 Grid Line: BF 69N
 Date: Jan 1982

Page 1 of

	Sn	As	Cu	Pb	Zn
00 E	10				
50	20				
100	10				
150	210				
200	210				
250	10				
300	20				
350	10				
400	210				
450	210		/		
500	210		/		
550	210				
600	10				
650	30				
700	20				
750	50				
800	10				
850	20				
900	10				
950	10				
1000	20				
1050	10				
1100	20				
1150	20				
1200	20				

GEOCHEMICAL ASSAY RESULTS

748127

Area: Blue Tier
 Grid Line: BT-1 RN
 Date: January 1982

Page 1 of

	Sn	As	Cu	Pb	Zn
00	210				
50 E	10				
100	10				
150	210				
200	20				
250	10				
300	210				
350	10				
400	210				
450	210				
500	10		/		
550	10				
600	40				
650	30				
700	210				
750	10				
800	20				
850	20				
900	30				
950	10				
1000	20				
1050	10				
1100	20				
1150	210				
1200	10				

GEOCHEMICAL ASSAY RESULTS

748129

Area: ... Blue Tr
 Grid Line: BT 72N
 Date: Jan 1962

Page 1 of

	Sn	As	Cu	Pb	Zn	SOLF
000 W						
50	10					
100	10					
150	210					
200	10					
250	20					
300	20					
350	10					
400	210					
450	10					
500	40					
550	20					
600	20					
650	40					
700	370					
750	110					
800	10					
850	120					
900	20					
950	30					
1000	40					
1050	100					
1100	20					
1150	30		10	20	20	171
1200	40		10	20	20	171

GEOCHEMICAL ASSAY RESULTS

748130

...Blk. TICP.....
 id Line: ...BT...R.N.....
 Date: ...Jan 1982.....

	Sn	As	Cu	Pb	Zn	S.G.F
1250 W	30	.	30	20	20	143
1300	50	.	50	20	30	143
1350	55	.	130	30	50	304
1400	70	.	40	20	20	275
1450	75	.	40	20	20	206
1500	45	.	50	10	10	2101
1550	120	.	10	10	10	206
1600	440	.	10	160	20	336
1650	290	....	40	40	10	105
1700	190	.	40	10	10	466
1750	170	.	40	10	20	629
1800	170	.	40	10	20	494
1850	190	.	40	40	10	261
1900	145	.	40	10	20	304
1950	170	....	40	40	10	494
2000	70	.....	40	30	20	417
2050	245	.	40	40	10	289
2100	190	..	40	50	10	466
2150	125	.	40	10	20	629
2200	120	.....	40	40	10	137
2250	110	.....	40	10	20	716
2300	100	.....	40	10	20	523
2350	130	.	40	10	10	466
2400	55	.....	40	40	40	115
2450	140	.	10	20	50	261

GEOCHEMICAL ASSAY RESULTS

748132

Area: Blue Tier
 Grid Line: B175 N
 Date: Jan 1982

Page 1 of

	Sn	As	Cu	Pb	Zn
60					
50 E	50				
100	10				
150	10				
200	40				
250	210				
300	210				
350	10				
400	30				
450	50				
500	30				
550	210				
600	210				
650	210				
700	210				
750	210				
800	20				
850	210				
900	20				
950	20				
1000	10				
1050	10				
1100	10				
1150	10				
1200	20				

GEOCHEMICAL ASSAY RESULTS

748133

Page 2 of

Blue Tick

ad Line:

BF 75 N

Date:

Jan 1982

	Sn	As	Cu	Pb	Zn	SOL F
1250 E	210					
1300	40					
1350	20					
1400	30					
1450	20					
1500	10					
1550	370					
1600	210					
1650	210					
1700	10					
1750	20					
1800	210					
1850	20					
1900	210					
1950	210					
2000	20					
2050	20					
2100	10					
2150	20					
2200	90					
2250	20					
2300	20					

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tick
 Grid Line: BT 75 N
 Date: Jan 1982

Page 1 of

	Sn	As	Cu	Pb	Zn	SOL F.
000 W	75		<10	20	10	179
50	20		<10	40	10	110
100	30		20	20	50	206
150	40		10	20	36	196
200	20		10	10	30	<101
250	70		20	20	40	115
300	40		10	30	30	319
350	30		10	20	30	304
400	80		10	30	30	249
450	55		10	20	40	304
500	40		10	30	70	394
550	100		10	10	30	216
600	140		10	30	60	466
650	70		<10	10	10	304
700	245		10	10	20	319
750	130		10	20	20	196
800	130		10	10	10	261
850	320		10	<10	<10	171
900	105		20	<10	10	275
950	15		20	10	20	336
1000	210		20	<10	10	266
1050	330		10	<10	10	261
1100	2680		10	<10	10	143
1150	1120		<10	<10	10	120
1200	190		<10	<10	<10	110

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tier
 Grid Line: BF 75 N
 Date: Jan 1982

	Sn	As	Cu	Pb	Zn	
1250 W.	175		L10	L10	10	249
1300	90		L10	L10	10	187
1350	290		L10		10	35
1400	250		L10		10	40
1450	230		L10		10	70
1500	285		L10		10	15
1550	230		L10		10	20
1600	195		L10		10	25
1650	245		L10		10	40
1700	400		L10		10	60
1750	380		L10		10	35
1800	185		L10		10	50
1850	490		L10		10	20
1900	270		L10		10	15
1950	540		L10		10	15
2000	390		L10		10	15
2050	260		L10		10	15
2100	315		L10		10	25
2150	245		L10		10	55
2200	170		L10		20	55
2250	10		10		50	100
2300	20		L10		30	45
2350	L10		L10		10	35
2400	10		10		50	130
2450	20		30		30	65

GEOCHEMICAL ASSAY RESULTS

748137

Area: Blue Tier
 Grid Line: BT 78N
 Date: Jan. 1982

Page 1 of

	Sn	As	Cu	Pb	Zn
00 E	40				
50	10				
100	40				
150	30				
200	20				
250	30				
300	10				
350	20				
400	L10				
450	L10				
500	20				
550	30				
600	30				
650	70				
700	20				
750	10				
800	10				
850	10				
900	10				
950	L10				
1000	L10				
1050	20				
1100	10				
1150	10				
1200	20				

GEOCHEMICAL ASSAY RESULTS

748138

Page 2 of

Loc: Blue Tier
 Grid Line: BT 78 N
 Date: Jan 1982

	Sn	As	Cu	Pb	Zn
1250 E	210				
1300	210				
1350	210				
1400	20				
1450	210				
1500	20				
1550	210				
1600	20				
1650	10				
1700	10		/		
1750	10		/		
1800	10				
1850	210				
1900	210				
1950	10				
2000	10				
2050	10				
2100	210				
2150	10				
2200	10				
2250	10				
2300	210				
2350	210				

GEOCHEMICAL ASSAY RESULTS

748139

Area: Blue Tier
 Grid Line: B1.....78.....N
 Date: Nov.....1982

Page 1 of

	Sn	As	Cu	Pb	Zn	SoIF
000 W						
50						
100						
150						
200						
250						
300						
350						
400	45	.....	10		50	100
450	110		30		60	220
500	40		20		30	95
550	110		10		30	90
600	40		10		10	70
650	20		30		40	180
700	40	.....	40		30	90
750	110	.....	10		20	35
800	100		10		10	50
850	100	.....	20		20	75
900	500		110		110	35
950	400	.....	110		110	20
1000	1950	.....	110		10	25
1050	230	.....	110		110	15
1100	450		110		110	15
1150	150	.....	110		110	15
1200 W	140		110		110	40

GEOCHEMICAL ASSAY RESULTS

748140

Area: ... Blk...Trev
 Grid Line: .BT...78.N
 Date: Jan...1982

Page 2 of

		Sn	As	Cu	Pb	Zn	SolF.
1250	W	90	.	<10		<10	1.5
1300		45		<10		<10	15
1350		30		<10		<10	20
1400		60		<10		<10	20
1450		220		<10		<10	15
1500		290		<10		<10	15
1550		300		<10		<10	20
1600		260		<10		<10	30
1650		320		<10		<10	20
1700		250		<10		<10	40
1750		270		<10		<10	30
1800		910		<10		<10	15
1850		465		<10		<10	20
1900		1310		<10		<10	40
1950		680		<10		<10	50
2000		240		<10		<10	65
2050		370		<10		<10	65
2100		360		<10		20	120
2150		80		10		10	60
2200		80		10		60	230
2250		10		10		20	65
2300		10(45)		<10		10	60
2350		20(40)		10		30	70
2400		20(40)		20		40	90
2450							

GEOCHEMICAL ASSAY RESULTS

748142

Area: BLUE TIER
 Grid Line: BT 81 N
 Date: Jan 1982

Page | of

	Sn	As	Cu	Pb	Zn	SOL F
000 W	10		30	10	80	249
50 E	40		20	20	60	237
100	30		20	10	20	82
150	50		10	20	10	83
200	40		10	20	20	108
250	35		10	30	50	184
300	110		20	20	30	118
350	10		10	20	20	126
400	50		10	10	80	102
450	70		10	20	30	160
500	40		20	20	30	132
550	50		20	20	40	116
600	70		20	20	40	110
650	85		10	20	40	130
700	60		110	110	10	118
750	25		10	20	20	180
800	55		20	20	30	192
850	40		10		30	180
900	40		10		30	106
950	30		110		30	110
1000	35		10		70	188
1050	45		10		20	86
1100	50		10		50	158
1150	60		20		80	184
1200	65		10		20	108

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tier
 Grid Line: ... BT 81 N
 Date: ... Jan 1982

Page 2 of

	Sn	As	Cu	Pb	Zn	S.F.
1250 E	40	.	10		50	194
1300	50		10		30	97
1350	40		20		60	150
1400	60		20		50	116
1450	40		10		40	62
1500	50		30		80	70
1550	40		10		30	68
1600	40		10		40	110
1650	50		10		10	50
1700	60		130		80	116
1750	35		30		10	76
1800	10		210		10	52
1850	50		20		70	130
1900	50		210		10	56
1950	50		10		10	72
2000	40		210		10	60
2050	25		210		10	45
2100	120		40		10	72
2150	50		210		20	72
2200	70		10		30	130
2250	85		210		10	70
2300	105		210		10	70
2350	60		10		20	82
2400	105		10		20	86
2450	150		10		20	71

GEOCHEMICAL ASSAY RESULTS

748145.

Area: Blk. TIC
 Grid Line: B.T. 81 N
 Date: BT Jan. 1982

Page 1 of

	Sn	As	Cu	Pb	Zn
45 E	40				
45.5	150				
46	30				
46.5	20				
47	10				
47.5	10				
48	20				
48.5	30				
49	20				
49.5	40		/		
50	20		/		
50.5	20				
51	20				
51.5	10				
52	210				
52.5	210				
53	60				
53.5	40				
54	10				
54.5	30				
55	10				
55.5	10				
56	10				
56.5	10				
57	210				

GEOCHEMICAL ASSAY RESULTS

748146

Page 2 of

Hill Top
 Line: BT: 61 N
 Date: Jan 1982

	Sn	As	Cu	Pb	Zn
575 E	30	.	.	.	.
58	20	.	.	.	.
58.5	20	.	.	.	.
59	210	.	.	.	.
59.5	210	.	.	.	.
60	210	.	.	.	.
60.5	10	.	.	.	.
61	10	.	.	.	.
61.5	20	.....	.....	.	.
62	10	.	/	.	.
62.5	10	.	/	.	.
63	10	.	.	.	.
63.5	210	.	.	.	.
64	210	.	.	.	.
64.5	210	.....	.....	.	.
65	210	.....	.....	.	.
65.5	10	.	.	.	.
66	10	.	.	.	.
66.5	10	.	.	.	.
67	210	.....	.....	.	.
67.5	210	.....	.....	.	.
68	10	.....	.....	.	.
68.5	210	.	.	.	.
69	10	.....	.....	.	.
69.5	10	.	.	.	.

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tier
 Grid Line: BT 84 N
 Date: Jan 1952

Page 1 of

	Sn	As	Cu	Pb	Zn	SOLF
000 W	30		10		20	50
50 E	20		10		30	70
100	50		10		30	56
150	70		20		30	56
200	20		10		30	48
250	40		10		20	47
300	15		10		40	48
350	35		10		30	44
400	40		10		30	86
450	60		40		40	70
500	25		10		30	54
550	20		40		20	54
600	30		10		30	51
650	30		10		30	74
700	30		10		30	78
750	40		20		20	52
800	40		10		30	70
850	30		40		30	76
900	35		10		30	68
950	30		20		70	104
1000	60		20		40	63
1050	130		10		40	82
1100	70		30		100	142
1150	175		30		70	142
1200	470		70		80	93

GEOCHEMICAL ASSAY RESULTS

748149

Area: Blue Tier
 Grid Line: BT 84 N
 Date: Jan 1988

Page 2 of

	Sn	As	Cu	Pb	Zn	Sulf
1250 E	70	.	20		50	84
1300	170		30		80	82
1350	30		10		30	46
1400	40		10		40	74
1450	40		10		50	89
1500	40		20		50	104
1550	45		20		40	72
1600	65		10		30	61
1650	70	....	20		40	65
1700	95		20		30	72
1750	80		10		50	114
1800	60		20		40	89
1850	70		10		30	90
1900	65		10		30	64
1950	60	....	10		30	56
2000	50	.....	10		40	84
2050	60		10		150	158
2100	130		10		20	75
2150	80		60		80	112
2200	75	.....	10		10	43
2250	150	.....	10		30	78
2300	90	.....	10		40	80
2350	70		10		30	89
2400	140	.....	10		10	65
2450	80		20		30	120

GEOCHEMICAL ASSAY RESULTS

748151

Area: BLUE TIER
 Grid Line: Bl-84N
 Date: Jan. 1982

Page 1 of

00	50 Sn	As	Cu	Pb	Zn
42 E	40	.	.	.	.
42.5	40	.	.	.	.
43	10	.	.	.	.
43.5	20	.	.	.	.
44	40	.	.	.	.
44.5	10	.	.	.	.
45	10	.	.	.	.
45.5	20	.	.	.	.
46	<10	.....	.	.	.
46.5	110	.	/	.	.
47	40	.	/	.	.
47.5	10	.	.	.	.
48	<10	.	.	.	.
48.5	10	.	.	.	.
49	40	.....	.....	.	.
49.5	100	.....	.....	.	.
50	30	.	.	.	.
50.5	50	..	.	.	.
51	30	.	.	.	.
51.5	40	.....	.....	.	.
52	10	.....	.....	.	.
52.5	<10	.....	.....	.	.
53	20	.	.	.	.
53.5	20	.....	.....	.	.
54	10	.	.	.	.

GEOCHEMICAL ASSAY RESULTS

748153

Area: Blue Tier
 Grid Line: BF 90 N
 Date: Jan 1982

Page 1 of

	Sn	As	Cu	Pb	Zn	SOL F
000 W	30	.	10		50	106
50 E	40		40		20	50
100	40		40		10	174
150	40		40		20	48
200	50		10		30	84
250	45		40		20	58
300	40		10		40	84
350	25		10		40	80
400	30	....	40		20	50
450	35		10		50	104
500	50		30		50	100
550	50		10		20	116
600	35		10		20	64
650	40		40		20	36
700	20	....	10		20	66
750	30	.....	10		30	68
800	45		20		30	52
850	70		10		50	105 120
900	50		10		40	92
950	70	.....	30		40	64
1000	40	.....	20		70	108
1050	40	.....	10		60	112
1100	30		60		70	65
1150	490	.....	30		110	102
1200	50		10		60	50

GEOCHEMICAL ASSAY RESULTS

748154

Area: Blue Tier
 Grid Line: BT 90 N
 Date: Jan 1982

Page 2 of

	Sn	As	Cu	Pb	Zn	S.F.
1250 E	70		20		30	56
1300	55		20		20	50
1350	150		20		70	62
1400	140		40		40	86
1450	90		40		60	118
1500	115		30		90	116
1550	90		10		20	48
1600	180		30		50	122
1650	160		30		50	106
1700	110		10		30	50
1750	40		20		60	130
1800	40		10		40	174
1850	80		90		220	102
1900	150		20		80	58
1950	60		10		40	82
2000	90		20		40	50
2050	40		10		30	60
2100	60		10		30	50
2150	70		10		20	68
2200	50		20		70	160
2250	10		10		10	34
2300	20		10		30	80
2350	40		20		40	102
2400	105		10		10	49
2450	45		10		20	36

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: ... BT 96 N
 Date: ... December 1981

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	Sn	As	Cu	Pb	Zn	Sol F
000 W	<10		10		40	130
50 W	<10		20		50	120
100	30		20		80	150
150	30		10		20	35
200	30		10		40	80
250	40		10		30	70
300	50		20		70	160
350	10		30		50	170
400	35		20		50	280
450	45		20		50	130
500	40		10		40	95
550	50		10		60	100
600	45		<10		10	30
650	30		10		40	140
700	20		10		30	60
750	35		10		20	60
800	20		10		30	110
850	20		10		20	70
900	20		<10		20	65
950	30		<10		20	110
1000	20		<10		30	85
1050	30		<10		40	150
1100	10		10		50	150
1150	20		10		30	60
1200	20		10		30	60

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tiers
 Grid Line: ... BT 96 N
 Date: ... December 1981

	Sn	As	Cu	Pb	Zn	SQF
1250	25		10		20	30
1300	10		10		40	70
1350	30		10		20	25
1400	40		10		20	40
1450	40		10		20	40
1500	20		10		20	50
1550	40		10		20	55
1600	50		210		40	100
1650	45		210		10	50
1700	40		210		20	50
1750	10		210		20	40
1800	30		20		70	55
1850	40		10		30	35
1900	40		10		30	50
1950	25		10		40	50
2000	20		10		40	40
2050	30		20		70	45
2100	20		20		50	35
2150	30		20		70	40
2200	30		10		50	40
2250	30		10		40	50
2300	15		210		30	55
2350	30		10		30	70
2400	20		10		40	60
2450	<10		10		30	60

GEOCHEMICAL ASSAY RESULTS

Area: Blue Ties
 Grid Line: BT. 96 N
 Date: December 1981

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	Sn	As	Cu	Pb	Zn	SOLF
50 E	50		10		20	29.9
100	20		<10		40	70
150	60		10		10	23.6
200	45		10		30	84
250	15		10		40	54
300	20		10		40	72
350	20		<10		30	66
400	20		10		30	48
450	<10		30		20	33
500	55		30		20	28
550	90		20		10	25
600	75		20		30	29
650	80		40		70	42
700	20		<10		20	38
750	65		<10		20	66
800	30		<10		30	92
850	30		<10		30	75
900	20		10		30	76
950	30		10		30	54
1000	160		<10		20	64
1050	10		10		60	88
1100	50		10		50	28
1150	40		<10		10	24
1200	10		10		10	32
1250	20		10		20	42

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tier
 Grid Line: BT 96 N
 Date: December 1981

	Sn	As	Cu	Pb	Zn	SOL F
1300 E	40		10		60	130
1350	40		10		30	80
1400	20		10		30	50
1450	65		20		70	60
1500	70		40		70	110
1550	105		20		40	75
1600	20		60		140	140
1650	10		40		80	110
1700	35		30		70	110
1750	10		50		100	170
1800	20		30		50	110
1850	40		40		80	140
1900	295		10		20	95
1950	70		40		10	100
2000	130		40		40	30
2050	190		40		40	25
2100	600		40		40	30
2150	40		30		60	100
2200	60		20		30	90
2250	60		20		50	95
2300	50		10		40	160
2350	35		10		30	130
2400	50		10		20	80
2450	60		40		10	60
2500	50		40		20	30

GEOCHEMICAL ASSAY RESULTS

Area: ..Blue..Ticr.....
 Grid Line: BT...102...N:.....
 Date: ..December...1981.....

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	Sn	As	Cu	Pb	Zn	SOL F.
50 E	150		<10		10	40
100	35		20		60	40
150	75		10		30	35
200	80		10		20	30
250	45		10		30	40
300	60		10		30	45
350	40		10		20	40
400	145		10		20	75
450	65		20		30	140
500	70		60		60	135
550	150		30		30	70
600	165		20		20	60
650	70		30		30	70
700	75		20		40	60
750	45		10		10	50
800	30		<10		20	60
850	55		10		20	110
900	20		10		40	90
950	50		<10		10	60
1000	40		<10		20	50
1050	30		10		40	80
1100	50		10		50	75
1150	40		<10		10	35
1200	30		10		20	70
1250	95		10		40	80

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tick
 Grid Line: BT 102 N
 Date: December 1981

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	Sn	As	Cu	Pb	Zn	S.O.F
1300 E	45		10		30	10
1350	40		<10		10	5
1400	20		<10		10	25
1450	35		<10		<10	5
1500	10		10		20	60
1550	20		10		20	90
1600	15		10		30	40
1650	30		20		30	90
1700	30		10		<10	30
1750	30		30		40	190
1800	40		10		20	90
1850	190		<10		10	30
1900	650		<10		<10	25
1950	290		<10		10	20
2000	340		<10		10	20
2050	250		<10		10	100
2100	190		<10		10	50
2150	275		<10		10	20
2200	140		<10		10	25
2250	180		<10		10	25
2300	155		<10		20	50
2350	245		<10		10	30
2400	170		<10		10	25
2450	226		<10		10	20
2500	230		<10		10	20

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT 102 N
 Date: December 1981

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	Sn	As	Cu	Pb	Zn	S.O.F
2550 E	190		<10		<10	
2600	160		<10		10	
2650	160		<10		10	
2700	110		<10		20	
2750	280		<10		10	
2800	160		<10		10	30
2850	375		<10		10	25
2900	415		10		40	90
2950	540		10		40	110
3000	500		10		50	110
3050	115		<10		10	30
3100	30		<10		80	200
3150	60		<10		20	130
3200	<10		<10		40	180
3250	165		10		50	160
3300	40		<10		20	95
3350	10		<10		30	100
3400	70		10		40	120
3450	<10		10		40	100
3500	<10		<10		40	140
3550	10		10		40	90
3600	<10		<10		30	150
3650	<10		10		80	200
3700	40		10		40	190
3750	110		<10		40	160

GEOCHEMICAL ASSAY RESULTS

Area: ... *Blue Tier*
 Grid Line: *BT..... 102.. N.....*
 Date: ... *December... 1981*

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		Sn	As	Cu	Pb	Zn	SO ₄ F
3800	E	270		<10		10	40
3850		250		<10		10	90
3900		230		<10		10	40
3950		70		<10		10	45
4000		20		<10		10	40
4050		60		<10		10	65
4100		45		<10		10	40
4150		70		<10		<10	40
4200		90		<10		10	25
4250		100		<10		10	60
4300		45		<10		10	35
4350		150		<10		10	60
4400		265		<10		10	38
4450		190		<10		10	60
4500		85		<10		20	110
4550		250		<10		10	50
4600		210		<10		10	30
4650		160		<10		10	25
4700		280		<10		10	35
4750		120		10		10	35
4800		260		<10		20	50
4850		10		<10		20	70
4900		<10		<10		50	100
4950		<10		<10		50	110
5000		<10		<10		20	70

GEOCHEMICAL ASSAY RESULTS

Area: Blk...Tier.....
 Grid Line: BT...102...N.....
 Date: ...December...1981.....

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	Sn	As	Cu	Pb	Zn	S.F
000 W	40		<10		10	40
50	50		<10		<10	40
100	70		<10		<10	30
150	60		<10		20	55
200	120		10		10	45
250	10		<10		<10	40
300	200		<10		<10	35
350	120		<10		<10	10
400	130		<10		10	20
450	40		<10		<10	30
500	70		10		20	40
550	70		<10		20	40
600	10		10		30	80
650	60		30		20	45
700	70		30		20	50
750	20		<10		10	30
800	50		<10		20	70
850	35		10		10	35
900	70		10		30	35
950	50		10		20	40
1000	50		10		20	35
1050	50		10		10	40
1100	40		10		20	40
1150	40		<10		20	55
1200	50		<10		10	35

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tick.....
 Grid Line: BT...102...N.....
 Date: ..December...1981.....

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	Sn	As	Cu	Pb	Zn	S&F
1250 N	60		210		20	40
1300	70		10		210	35
1350	60		210		210	30
1400	85		210		210	10
1450	30		210		20	35
1500	40		10		20	30
1550	20		210		20	50
1600	30		210		20	30
1650	20		10		60	35
1700	50		10		20	35
1750	40		10		20	10
1800	50		20		30	10
1850	50		20		20	30
1900	30		10		20	40
1950	30		20		30	105
2000	70		20		30	50
2050	140		20		30	55
2100	60		20		30	45
2150	40		20		50	75
2200	55		20		30	40
2250	90		10		20	50
2300	20		10		50	75
2350	20		10		40	75
2400	30		10		40	110
2450	310		20		40	70

GEOCHEMICAL ASSAY RESULTS

Area: ..Blue Tier.....
 Grid Line: BT 108 N.....
 Date: ..December.....1981.....

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	Sn	As	Cu	Pb	Zn	S&F
000 E	110		<10		<10	30
50	90		<10		<10	20
100	50		<10		<10	10
150	30		<10		<10	10
200	20		<10		<10	10
250	30		<10		<10	30
300	40		<10		10	25
350	40		<10		10	40
400	40		<10		20	45
450	40		<10		10	25
500	40		<10		10	20
550	10		<10		10	20
600	20		<10		10	20
650	20		<10		10	30
700	30		<10		20	60
750	25		<10		20	35
800	40		<10		10	25
850	36		<10		20	70
900	<10		<10		30	60
950	40		<10		20	45
1000	40		<10		20	30
1050	70		<10		<10	10
1100	60		<10		<10	10
1150	100		<10		<10	25
1200						

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GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT. 108. N.
 Date: December 1981

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		Sn	As	Cu	Pb	Zn	S.F.
1250	E	40		<10		10	30
1300		60		<10		10	20
1350		30		<10		30	55
1400		40		<10		<10	10
1450		50		<10		<10	10
1500		65		<10		<10	10
1550		<10		<10		10	10
1600		25		<10		<10	10
1650		50		<10		<10	10
1700		25		<10		10	30
1750		20		<10		20	35
1800		230		<10		<10	10
1850		60		<10		20	30
1900		20		<10		<10	10
1950		20		<10		10	30
2000		85		<10		<10	10
2050		170		<10		<10	10
2100		130		<10		10	10
2150		400		<10		<10	10
2200		125		<10		<10	10
2250							
2300							
2350							
2400							
2450							

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tier
 Grid Line: BT...108...N
 Date: December 1981

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	Sn	As	Cu	Pb	Zn	S.F.
2500 E						
2550						
2600						
2650	70		<10		10	100
2700	50		<10		10	130
2750	60		<10		20	110
2800	140		<10		10	95
2850	50		<10		10	60
2900	55		<10		10	60
2950	85		<10		10	45
3000	230		<10		<10	30
3050	145		<10		<10	50
3100	70		<10		10	40
3150	90		<10		10	30
3200	120		<10		10	75
3250	90		<10		20	100
3300	120		<10		10	30
3350	150		<10		10	30
3400	170		<10		10	60
3450	140		<10		<10	30
3500	220		<10		<10	20
3550	280		<10		10	85
3600	350		<10		10	30
3650	280		<10		<10	20
3700	220		<10		<10	20

GEOCHEMICAL ASSAY RESULTS

Area: ... Blk. TICV
 Grid Line: BT 108 N
 Date: December 1981

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	Sn	As	Cu	Pb	Zn	S&F
3750	265		<10		<10	15
3800	55		<10		<10	20
3850	180		<10		10	35
3900	340		<10		10	30
3950	215		<10		10	50
4000	260		<10		10	30
4050	250		<10		<10	30
4100	270		<10		10	30
4150	200		<10		10	40
4200	280		<10		10	50
4250	405		<10		10	25
4300	635		<10		<10	20
4350	510		<10		10	20
4400	340		<10		10	20
4450	350		<10		10	20
4500	200		<10		10	15
4550	70		<10		10	40
4600	180		<10		<10	25
4650	260		<10		10	40
4700	110		<10		10	20
4750	35		<10		10	25
4800	30		<10		30	30
4850	35		<10		10	20
4900	110		<10		10	20
4950	10		<10		20	40

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tier
 Grid Line: BT ... 108 ... N
 Date: ... December ... 1981

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	Sn	As	Cu	Pb	Zn	SS.F
50 W	<10		<10		<10	10
100	100		<10		<10	30
150	50		<10		10	40
200	45		<10		<10	40
250	20		<10		30	70
300	215		<10		<10	20
350	940		<10		20	55
400	100		<10		<10	10
450	40		<10		<10	50
500	250		10		20	10
550	110		<10		<10	10
600	<10		<10		20	10
650	40		<10		<10	20
700	45		<10		<10	10
750	20		<10		20	70
800	20		<10		20	70
850	1330		10		25	45
900	3660		20		30	40
950	80		<10		20	40
1000	20		<10		20	25
1050	120		<10		30	40
1100	50		<10		20	30
1150	70		<10		20	50
1200	<10		<10		10	45
1250	65		<10		20	25

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT 108 N
 Date: December 1981

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		Sn	As	Cu	Pb	Zn	St.F
1300	N	40		<10		30	10
1350		90		<16		20	25
1400		95		10		20	20
1450		140		<10		40	35
1500		100		25		20	35
1550		815		<10		30	50
1600		75		30		20	25
1650		45		10		20	25
1700		85		<10		20	20
1750		260		<10		10	10
1800		70		<10		30	30
1850		40		<10		20	50
1900		205		10		<10	10
1950		70		<10		10	30
2000		35		<10		20	40
2050		25		<10		10	40
2100		30		<10		20	45
2150		30		<10		<10	10
2200		40		<10		20	35
2250		50		<10		10	20
2300		40		<10		20	40
2350		50		<10		20	30
2400		50		<10		20	55
2450		40		<10		20	45
2500		70		10		50	150

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Ticker
 Grid Line: BT 114 N
 Date: ... December 1981

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	Sn	As	Cu	Pb	Zn	SOLF
1500 N	40		10		40	170
1550	70		<10		20	110
1600	70		10		30	120
1650	160		<10		10	25
1700	80		20		30	90
1750	90		10		50	80
1800	70		40		40	45
1850	70		10		80	160
1900	80		<10		40	100
1950	50		10		30	100
2000	70		30		70	85
2050	80		20		70	150
2100	60		20		60	130
2150	70		20		30	65
2200	80		20		60	90
2250	50		20		50	130
2300	70		20		60	380
2350	65		20		50	260
2400	55		10		30	140
2450	70		56		160	340
2500	40		<10		30	140
2550	35		20		30	120
2600	25		10		50	170
2650	50		<10		40	140
2700	40		20		50	430

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT 114 N
 Date: December 1981

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	Sn	As	Cu	Pb	Zn	SOLF
000 W	50		<10		20	80
050 E	40		<10		20	120
100	70		20		50	120
150	50		<10		20	65
200	40		<10		20	75
250	40		<10		20	80
300	30		10		50	110
350	40		<10		30	140
400	40		<10		40	120
450	60		10		20	130
500	50		10		30	160
550	565		<10		<10	45
600	240		<10		10	85
650	180		<10		10	90
700	130		10		10	60
750	120		<10		10	50
800	55		<10		10	20
850	75		<10		10	45
900	85		<10		10	60
950	80		<10		10	35
1000	60		<10		20	90
1050	30		<10		10	30
1100	3		<10		10	20
1150	150		<10		20	30
1200	60		<10		10	40

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT 114 N
 Date: December 1981

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	Sn	As	Cu	Pb	Zn	Sulf
1250 E	80		210		20	65
1300	40		210		10	30
1350	55		<10		20	80
1400	30		10		30	80
1450	80		410		20	120
1500	90		410		10	110
1550	300		10		10	45
1600	240		410		10	180
1650	130		410		20	190
1700	170		410		10	65
1750	150		410		10	95
1800	210		410		10	40
1850	160		410		10	60
1900	130		410		10	130
1950	165		410		<10	50
2000	150		<10		10	50
2050	110		<10		<10	30
2100	110		<10		10	120
2150	100		<10		20	240
2200	105		<10		20	130
2250	140		<10		410	35
2300	150		<10		<10	30
2350	210		<10		<10	30
2400	176		<10		<10	25
2450	90		<10		<10	25

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tigr
 Grid Line: BF 114 N
 Date: December 1981

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	Sn	As	Cu	Pb	Zn	SOL F
2500 E	110		<10		210	35
2550	175		<10		<10	30
2600	180					
2650	190		<10		<10	35
2700	150		<10		10	40
2750	310		<10		40	55
2800	470		<10		<10	40
2850	230		<10		<10	35
2900	150		<10		<10	25
2950	70		<10		10'	60
3000	75		<10		<10	35
3050	<10		<10		<10	40
3100	10		<10		20	100
3150	30		<10		10	55
3200	160		<10		<10	20
3250	245		<10		<10	15
3300	140		<10		<10	15
3350	125		<10		<10	15
3400	160		<10		<10	15
3450	100		<10		<10	30
3500	350		<10		<10	40
3550	220		<10		<10	55
3600	330		<10		<10	30
3650	400		<10		<10	25
3700	200		<10		<10	60

GEOCHEMICAL ASSAY RESULTS

Area: ... Blue Tier
 Grid Line: ... BF ... 114 ... N
 Date: ... December ... 1951

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 4

	Sn	As	Cu	Pb	Zn	S.O.F
3750 E	380		<10		<10	35
3800	180		<10		<10	25
3850	130		<10		10	20
3900	225		<10		<10	15
3950	400		<10		<10	35
4000	570		<10		<10	25
4050	360		<10		10	25
4100	380		10		10	25
4150	480		<10		10	25
4200	350		<10		10	20
4250	475		<10		<10	20
4300	320		<10		<10	20
4350	235		<10		<10	20
4400	65		<10		10	25
4450	70		10		20	25
4500	50		<10		10	25
4550	50		<10		10	30
4600	46		<10		10	20
4650	50		<10		10	40
4700	50		<10		10	45
4750	55		<10		20	80
4800	95		<10		10	50
4850	30		<10		10	50
4900	40		<10		<10	25
4950	35		<10		<10	20

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT...120.N
 Date: December...1981

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 1

		Sn	As	Cu	Pb	Zn	S.O.F
50	E	180		30		30	35
100		410		10		410	55
150		410		10		40	60
200		410		10		40	50
250		50		10		40	50
300		410		10		40	50
350		35		10		40	70
400		50		10		20	40
450		30		410		10	10
500		10		410		10	10
550		60		410		10	10
600		50		410		10	10
650		45		410		20	10
700		20		410		10	10
750		35		410		10	10
800		105		410		10	20
850		20		10		20	25
900		15		410		10	10
950		80		410		20	25
1000		235		410		10	20
1050		70		410		10	10
1100		30		10		20	30
1150		410		10		20	30
1200		20		10		20	20
1250		410		10		20	20

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
Grid Line: RT... 120... N:
Date: December... 1981...

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2

	Sn	As	Cu	Pb	Zn	SO.F
1300 E	5		10		10	10
1350	10		10		40	30
1400	20		10		30	30
1450	210		10		30	45
1500	20		10		40	60
1550	20		210		20	40
1600	10		210		10	10
1650	370		210		210	10
1700	200		210		210	10
1750	180		210		210	10
1800	110		210		10	10
1850	180		210		10	10
1900	110		210		10	10
1950	130		210		20	10
2000	190		210		20	25
2050	220		210		10	10
2100	180		210		210	10
2150	50		210		210	10
2200	50		210		10	10
2250	30		210		210	10
2300	20		210		210	10
2350	30		210		10	10
2400	15		10		20	35
2450	110		210		10	10
2500	170		210		210	10

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT...120.N
 Date: December...1981

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 3

		Sn	As	Cu	Pb	Zn	S.F
2550	E	185		<10		<10	10
2600		120		<10		<10	10
2650		210		<10		<10	10
2700		165		<10		<10	10
2750		80		<10		10	10
2800		140		<10		<10	10
2850		90		<10		10	20
2900		60		<10		10	10
2950		90		<10		10	10
3000		125		<10		10	20
3050		180		<10		10	20
3100		140		<10		10	45
3150		290		<10		<10	10
3200		265		<10		<10	10
3250		120		<10		<10	10
3300		170		<10		<10	10
3350		360		<10		<10	10
3400		240		<10		<10	10
3450		160		<10		<10	10
3500		140		<10		<10	10
3550		215		<10		<10	10
3600		165		<10		<10	10
3650		190		<10		10	10
3700		150		<10		<10	10
3750		245		<10		<10	10

RENISON LIMITED

748187

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tick
 Grid Line: BT. 120 N.
 Date: December 1981

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 4

	Sn	As	Cu	Pb	Zn	S.F.
3800 E	500		<10		<10	10
3850	145		<10		10	10
3900	195		<10		<10	10
3950	30		<10		<10	10
4000	20		<10		20	10
4050	110		<10		10	10
4100	40		<10		<10	10
4150	10		<10		10	10
4200	40		<10		10	10
4250	15		<10		10	20
4300	30		<10		10	10
4350	30		10		30	30
4400	20		<10		<10	10
4450	20		<10		10	20
4500	50		<10		10	10
4550	30		10		20	35
4600	30		<10		<10	10
4650	15		<10		<10	10
4700	30		<10		10	10
4750	15		10		<10	10
4800	40		10		10	20
4850	60		<10		10	20
4900	80		<10		10	10
4950	20		<10		10	10
5000	20		<10		30	10

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT...120..N.....
 Date: ...December...1981....

Page of
1

	Sn	As	Cu	Pb	Zn	S.F.
000 W	20		<10		10	10
50	10		<10		10	30
100	<10		<10		10	10
150	15		<10		10	10
200	10		<10		10	20
250	30		<10		10	20
300	10		<10		20	45
350	<10		<10		20	50
400	<10		<10		30	40
450	<10		<10		30	30
500	95		<10		20	20
550	15		<10		20	10
600	10		<10		20	30
650	10		<10		<10	10
700	10		<10		<10	10
750	10		<10		<10	10
800	20		<10		<10	10
850	10		<10		10	90
900	40		<10		20	45
950	50		<10		20	30
1000	75		<10		10	40
1050	60		10		20	50
1100	160		10		20	30
1150	55		40		30	40
1200	130		20		10	30

RENISON LIMITED

748190

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT. 120 N.
 Date: December 1981

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2

	Sn	As	Cu	Pb	Zn	S&F
1250 N.	70		20		15	35
1300	40		10		10	30
1350	20		210		20	35
1400	30		<10		20	20
1450	20		<10		20	25
1500	20		10		30	25
1550	26		10		50	30
1600	20		10		40	50
1650	20		10		40	60
1700	55		10		30	50
1750	30		<10		10	10
1800	20		<10		10	10
1850	80		10		10	10
1900	<10		10		10	20
1950	120		<10		10	30
2000	25		10		40	25
2050	20		20		<10	40
2100	35		20		60	80
2150	45		20		10	10
2200	60		<10		20	20
2250	80		40		160	75
2300	10		65		50	130
2350	10		50		40	130
2400	50		20		50	50
2450	30		20		50	55

GEOCHEMICAL ASSAY RESULTS

Area: .. BLUE TIER ..
 Grid Line: BT-126 N ..
 Date: .. JANUARY 1982 ..

Page 1 of

	Sn	As	Cu	Pb	Zn	S.F.
000 A	20		10		20	20
000 E	50		10		30	30
50 W.	40		10		30	10
100	50		10		30	25
150	115		10		20	10
200	50		10		50	40
250	30		10		20	30
300	80		10		30	10
350	25		10		20	10
400	50		10		20	10
450	10		10		20	35
500	50		10		40	40
550	30		20		100	40
600	100		10		80	30
650	20		10		30	30
700	50		10		20	20
750	20		10		10	10
800	40		10		10	10
850	35		10		10	10
900	10		10		20	10
950	15		10		20	10
1000	25		10		10	10
1050	40		10		10	10
1100	50		10		10	10
1150	90		10		10	10

GEOCHEMICAL ASSAY RESULTS

Area: Blue Tier
 Grid Line: BT. 126 N
 Date: JANUARY 1982

Page of
 2

	Sn	As	Cu	Pb	Zn	Sn.F
1200 W	90		10		20	10
1250	40		20		20	10
1300	60		10		20	10
1350	70		10		20	10
1400	120		10		20	40
1450	40		10		10	10
1500	20		110		20	30
1550	55		10		30	10
1600	20		10		30	30
1650	40		110		10	10
1700	10		10		50	30
1750	20		10		30	25
1800	20		20		50	50
1850	45		110		30	10
1900	40		110		10	10
1950	35		110		20	40
2000	15		110		10	10
2050	30		110		20	25
2100	20		110		20	40
2150	15		10		10	30
2200	15		110		10	10
2250	40		110		10	10
2300	110		110		20	10
2350	20		110		10	10
2400	20		110		10	10

GEOCHEMICAL ASSAY RESULTS

748195

Area: .. Blc. Til
 Grid Line: .. BT 128.5N
 Date: .. Jan 1982

Page 1 of 1

	Sn	As	Cu	Pb	Zn	S.F
000 W	210		210		20	20
50						
100	50		0		20	45
150	30		10		30	65
200	40		10		20	35
250	15		10		40	75
300	20		10		30	100
350	210		210		20	100
400	20	.....	10		30	130
450	210		10		40	160
500	10		10		40	110
550	30		210		20	30
600	10		210		20	25
650	20		210		10	20
700	30	.....	210		10	20
750	15	.....	210		20	30
800	16		210		10	20
850	210		10		20	50
900	20		210		20	40
950	210	.....	210		20	15
1000	210	.....	210		210	10

GEOCHEMICAL ASSAY RESULTS

748197

Area: Buc. Tiev
 Grid Line: BT 133.5 N
 Date: Jan 1982

Page | of

	Sn	As	Cu	Pb	Zn
000 W	<10		210		10 20
50	20		210		10 25
100	210		210		10 25
150	210		10		30 140
200	210		10		20 100
250	210		210		10 40
300	20		210		210 25
350	20		210		210 150
400	40		210		10 15
450	30		210		10 15
500	310		210		10 30
550	25		210		10 35
600	25		210		10 70
650	70		210		10 50
700	60		10		20 170
750	10		210		10 30
800	130		20		30 130
850	65		20		20 140
900	30		210		10 25
950	40		210		10 120
1000	50		210		10 120

GEOCHEMICAL ASSAY RESULTS

748198

Area: Blue Ticv
 Grid Line: B6 00W
 Date: Jan 1982

Page 1 of

	Sn	As	Cu	Pb	Zn	SOLF
94 N	20		20		50	160
94.5	20		110		10	25
95 95(B) ¹⁰⁾	10		10		40	110(9)
95.5 BN	10		10		30	130
95.5	20		10		50	55
96	30		10		40	80
96.5	50		10		20	40
97	65		110		20	35
97.5	30		10		20	60
98	60		110		10	55
98.5	30		30		60	110
99	40		10		40	55
99.5	80		20		40	60
100	70		10		20	40
100.5	90		10		40	55
101	145		10		20	45
101.5	70		10		40	65
102						
102.5	30		110		20	110
103	10		110		110	40
103.5	310		10		10	45
104	145		110		110	35
104.5	30		20		10	65
105	20		10		20	55
105.5	20		10		20	40

GEOCHEMICAL ASSAY RESULTS

748199

Page 2 of

as: Blue Tier
 Grid Line: BT.B.000.W.
 Date: Jan. 1982

	Sn	As	Cu	Pb	Zn	S.F.
106 N	40	.	10	.	20	35
106.5	40	.	10	.	20	35
107	35	.	10	.	20	35
107.5	95	.	210	.	10	30
108		.		.		
108.5	80	.	210	.	10	30
109	55	.	210	.	10	40
109.5	40	.	210	.	10	45
110	100	.....	210	.	30	65
110.5	30	.	210	.	10	48
111	5	.	210	.	20	80
111.5	30	.	210	.	10	65
112	30	.	210	.	20	85
112.5	30	.	210	.	10	25
113	30	...	210	.	10	45
113.5	20	.....	210	.	10	40
114		.		.		9
114.5	25	..	10	.	30	75
115	20	.	10	.	30	130
115.5	40	.....	10	...	20	80
116	25	.....	210	.	20	110
116.5	530	.....	10	.	30	150
117	20	.	10	.	40	290
117.5	10	.....	20	.	30	150
118	210	.	10	.	30	80

GEOCHEMICAL ASSAY RESULTS

748201

Area: Blue Tier
 Grid Line: BT Bw AA
 Date: Jan 1982

Page | of

	Sn	As	Cu	Pb	Zn	Sol F.
96.5 N			10		20	
97	30		10		10	120
97.5	40		40		20	130
98	25		40		10	65
98.5	10		20		50	220
99	20		10		20	35
99.5	100		40		20	60
100	170		40		40	15
100.5	10		40		10	30
101.0	20		40		10	85
101.5	40		10		30	70
102	20		40		20	
102.5	10		40		20	100
103	15		40		30	60
103.5	50		40		10	60
104	25		40		10	40
104.5	35		40		20	120
105	40		40		20	45
105.5	25		10		30	45
106	30		40		30	30
106.5	30		40		30	20
107	30		40		20	15
107.5	20		40		10	5
108	20		40		15	25
108.5	15		40		10	10

GEOCHEMICAL ASSAY RESULTS

748202

Loc: Blue Tier

Page 2 of

Grid Line: BT BL MA

Date: Nov 1982

	Sn	As	Cu	Pb	Zn	Sol. F
109 N	15	.	<10	.	20	45
109.5	10	.	<10	.	10	25
110	30	.	<10	.	10	25
110.5	30	.	<10	.	10	20
111	20	.	<10	.	20	45
111.5	10	.	<10	.	20	65
112	35	.	<10	.	20	65
112.5	70	.	<10	.	10	35
113	<10	....	<10	.	10	20
113.5	40	.	<10	.	20	75
114	20	.	<10	.	10	-
114.5	25	.	<10	.	10	40
115	10	.	<10	.	10	35
115.5	20	.	<10	.	10	35
116	30	....	<10	.	20	60
116.5	<10	.....	<10	.	20	65
117	30	.	<10	.	20	85
117.5	<10	..	<10	.	20	20
118	<10	.	<10	.	20	30
118.5	<10	.....	<10	.	10	45
119	<10	.....	<10	.	10	40
119.5	<10	.....	<10	.	20	55
120	120	.	<10	.	<10	20
120.5	<10	.....	<10	.	10	40
121	10	.	<10	.	40	15

Area: Blue Tier
 Grid Line: BT BL BB N
 Date: Jan 1982

	Sn	As	Cu	Pb	Zn	S&F
106.5 W						
107						
107.5						
108	75					
108.5	70		<10		10	150
109	55		<10		<10	130
109.5	55		<10		10	35
110	60		<10		10	270
110.5	120		<10		10	60
111	80		<10		<10	40
111.5	105		<10		10	170
112	70		<10		10	75
112.5	80		<10		<10	35
113	100		<10		<10	25
113.5	145		<10		<10	15
114	180					
114.5	150		<10		<10	20
115	140		<10		10	90
115.5	40		<10		<10	110
116	30		<10		<10	30
116.5	75		<10		<10	25
117	115		<10		<10	30
117.5	120		<10		<10	25
118	195		<10		<10	20
118.5	195		<10		<10	20

GEOCHEMICAL ASSAY RESULTS

748205

Area: Blue Tier
 Grid Line: BT N 8 E
 Date: Jan 1982

Page 1 of

	Sn	As	Cu	Pb	Zn
6650 N	30				
6700	40				
6750	10				
6800	30				
6850	30				
6900	30				
6925	30				
6950	50				
7000	20				
7050	30				
7100	50				
7150	30				
7200	20				
7250	20				
7300	40				
7350	30				
7400	70				
7450	<10				
7500	60				
7550	<10				
7600	10				
7650	<10				
7700	30				
7750	10				
7800	<10				

APPENDIX 6

Diamond Drillhole Plots with trace element
analysis (DDH BT42,43).


RENISON LIMITED
DIAMOND DRILL HOLE PLOT

HOLE No.: B.T.42

NWFS 28408

F (wt.%)
-1.0
-0.8
-0.6
-0.4
-0.2
0

% F

SCALE: 

Li ppm
-200
-400
-600
-800
-1000

Li ppm

Mn ppm

Mn ppm
-2000
-1500
-1000

RL 349.5

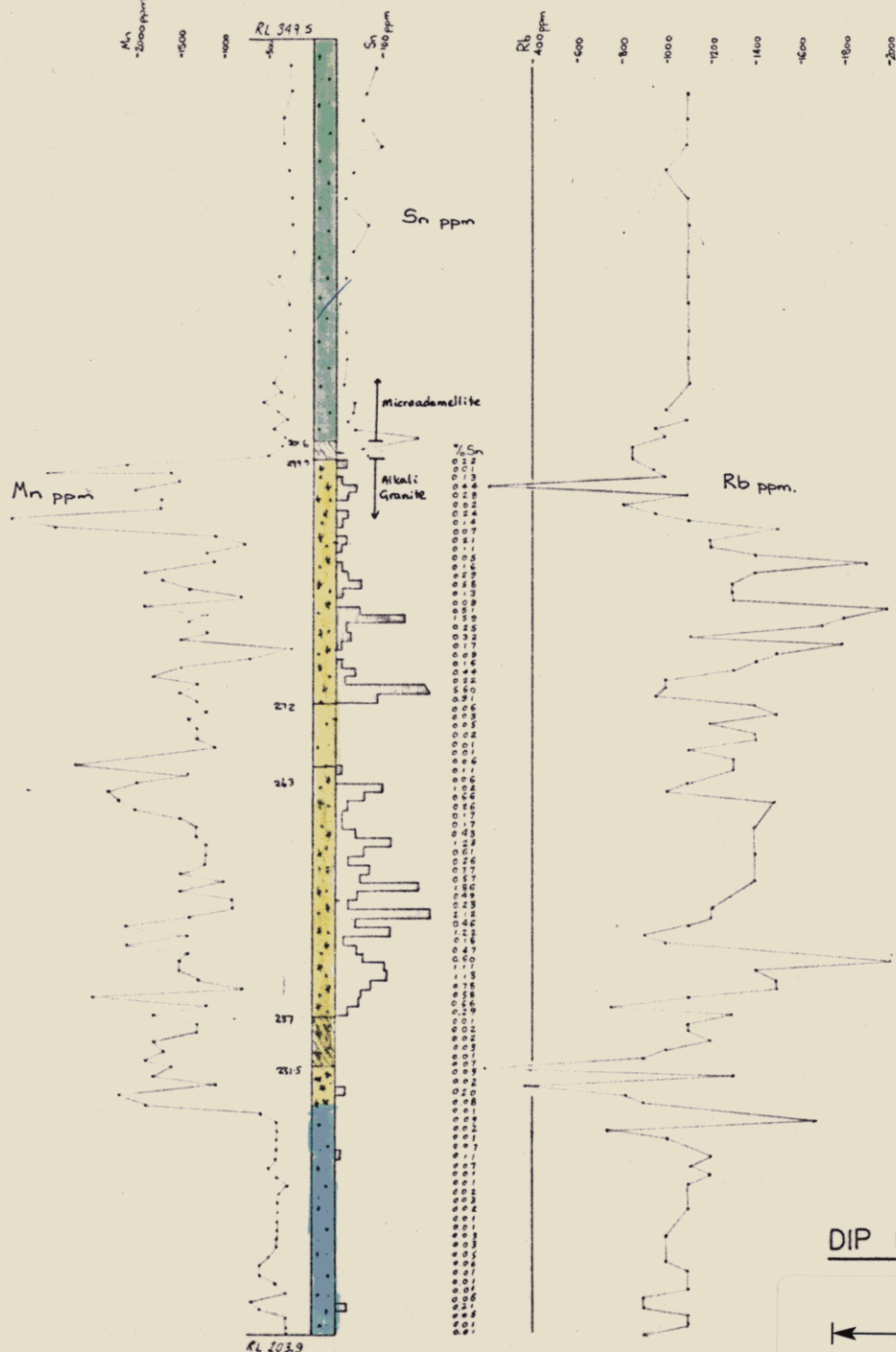
Sn ppm

Rb ppm
-400
-600
-800
-1000
-1200
-1400
-1600
-1800
-2000

Rb ppm

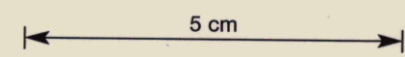
SAISSA: J M
GASTON: J E

PLAN



- LEGEND
- Potassic Adamellite
 - Microadamellite
 - Gneissized granite
 - Weakly or un-altered Alkali Granite

DIP PROFILE

 5 cm

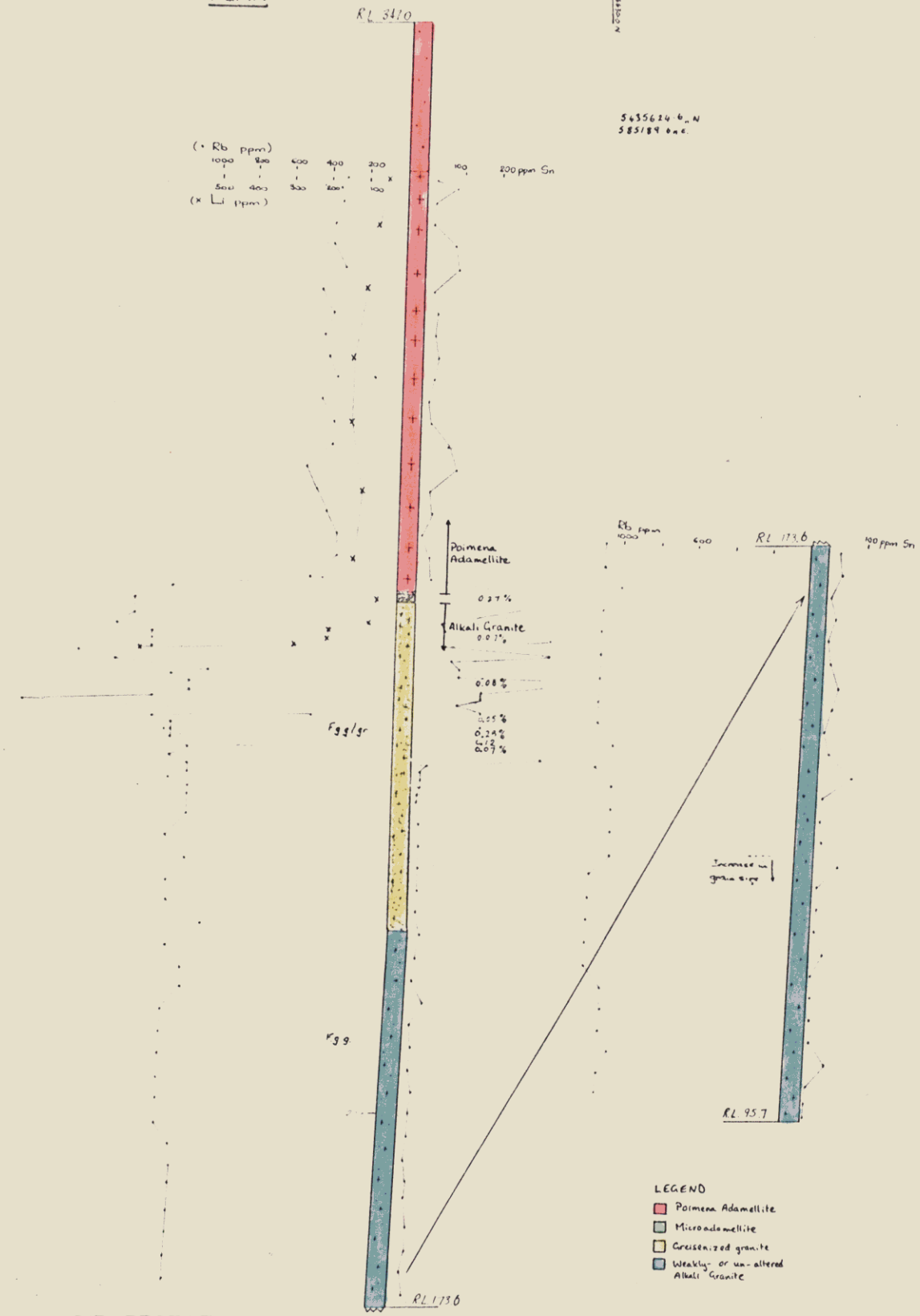
748208

PLAN

RL 3470

5435624 6, N
585187 6, c.

(• Rb ppm) 1000 800 400 200 100 200 ppm Sn
 (+ Li ppm) 500 400 300 200 100



DIP PROFILE

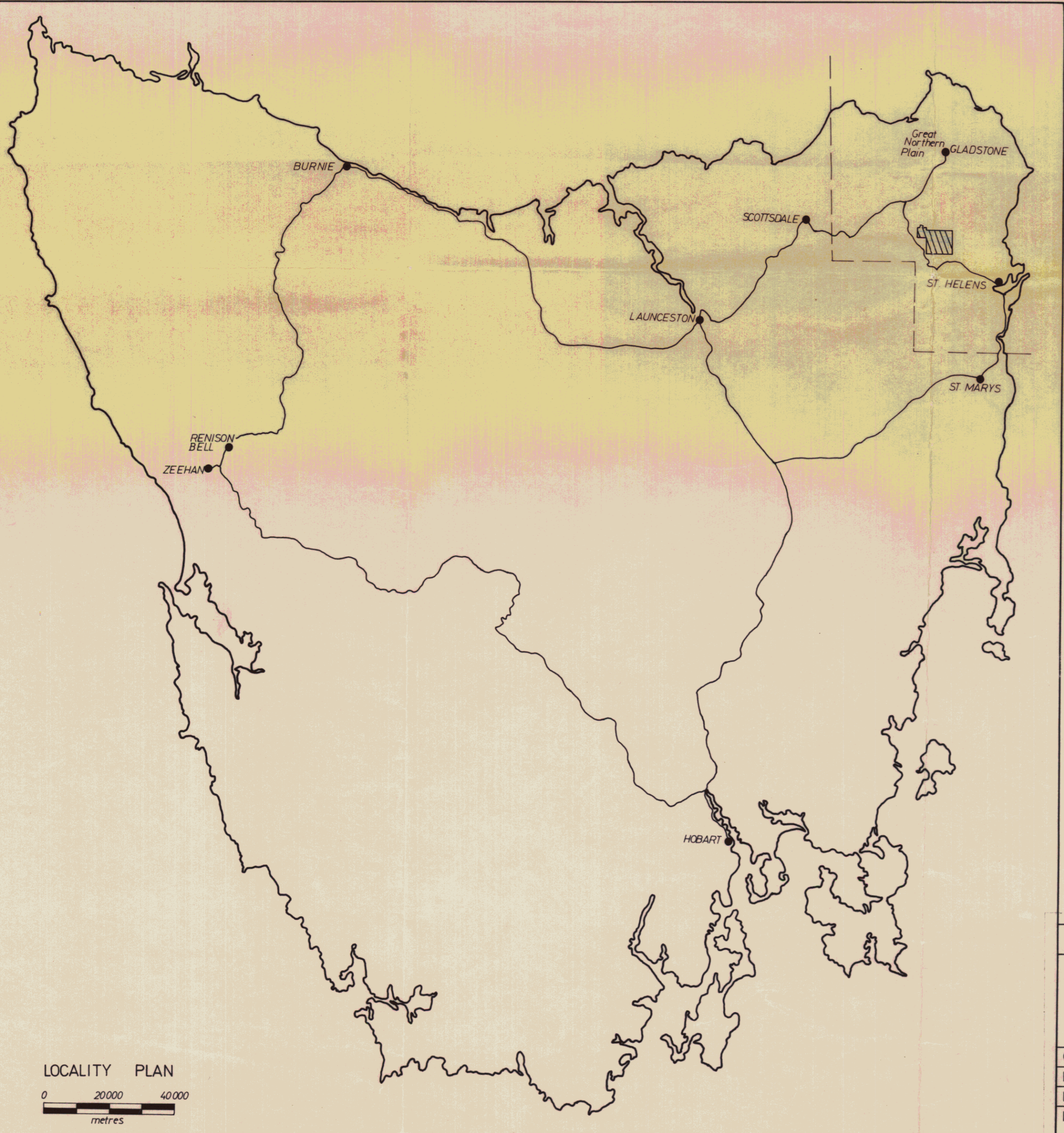
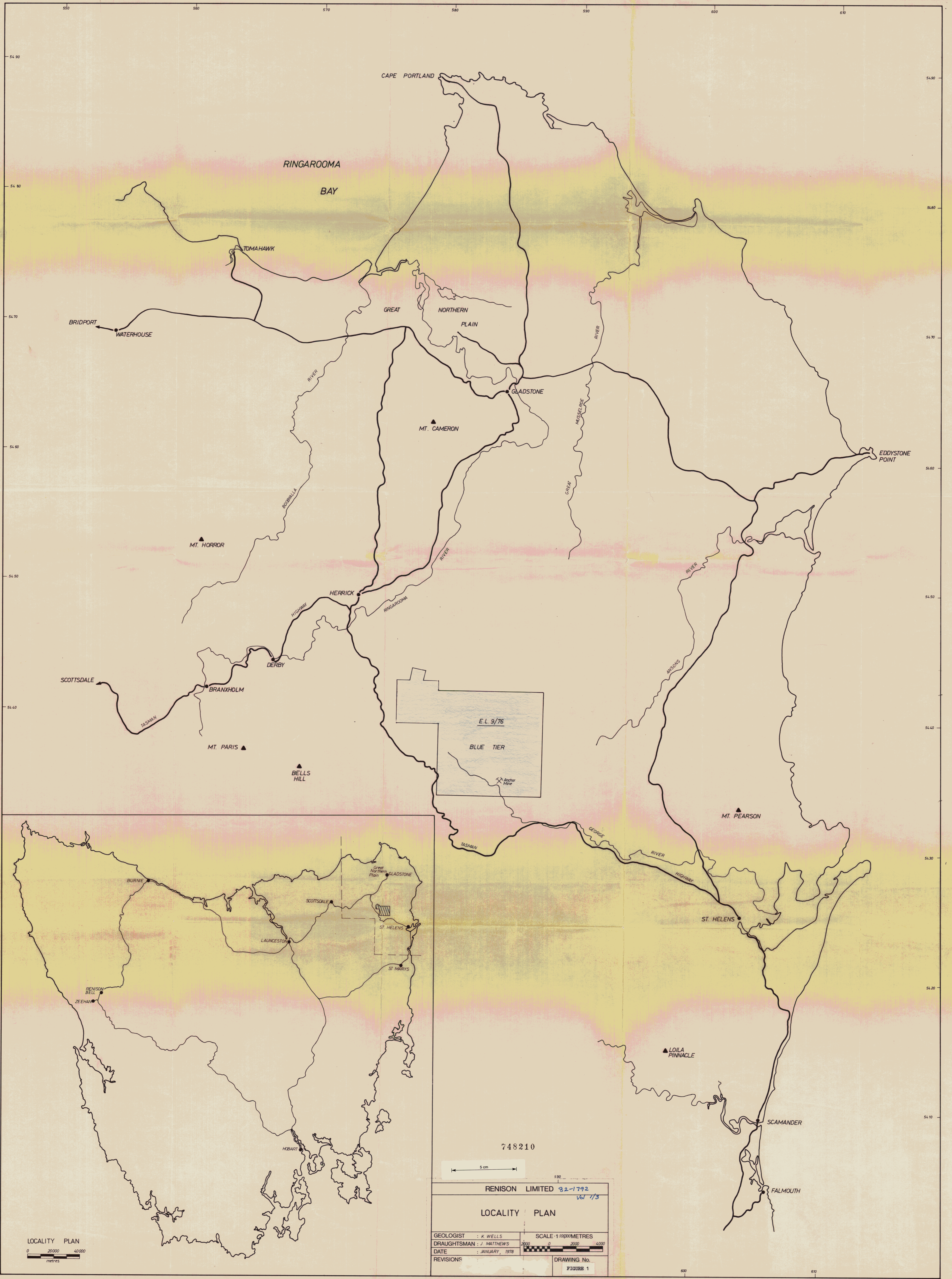
5 cm

- LEGEND
- Paimena Adamellite
 - Microadamellite
 - Gresenized granite
 - Weakly or un-altered Alkali Granite

SCALE: 0 20

RENISON LIMITED
DIAMOND DRILL HOLE PLOT

HOLE No.: BT 43



LOCALITY PLAN
0 20000 40000
metres

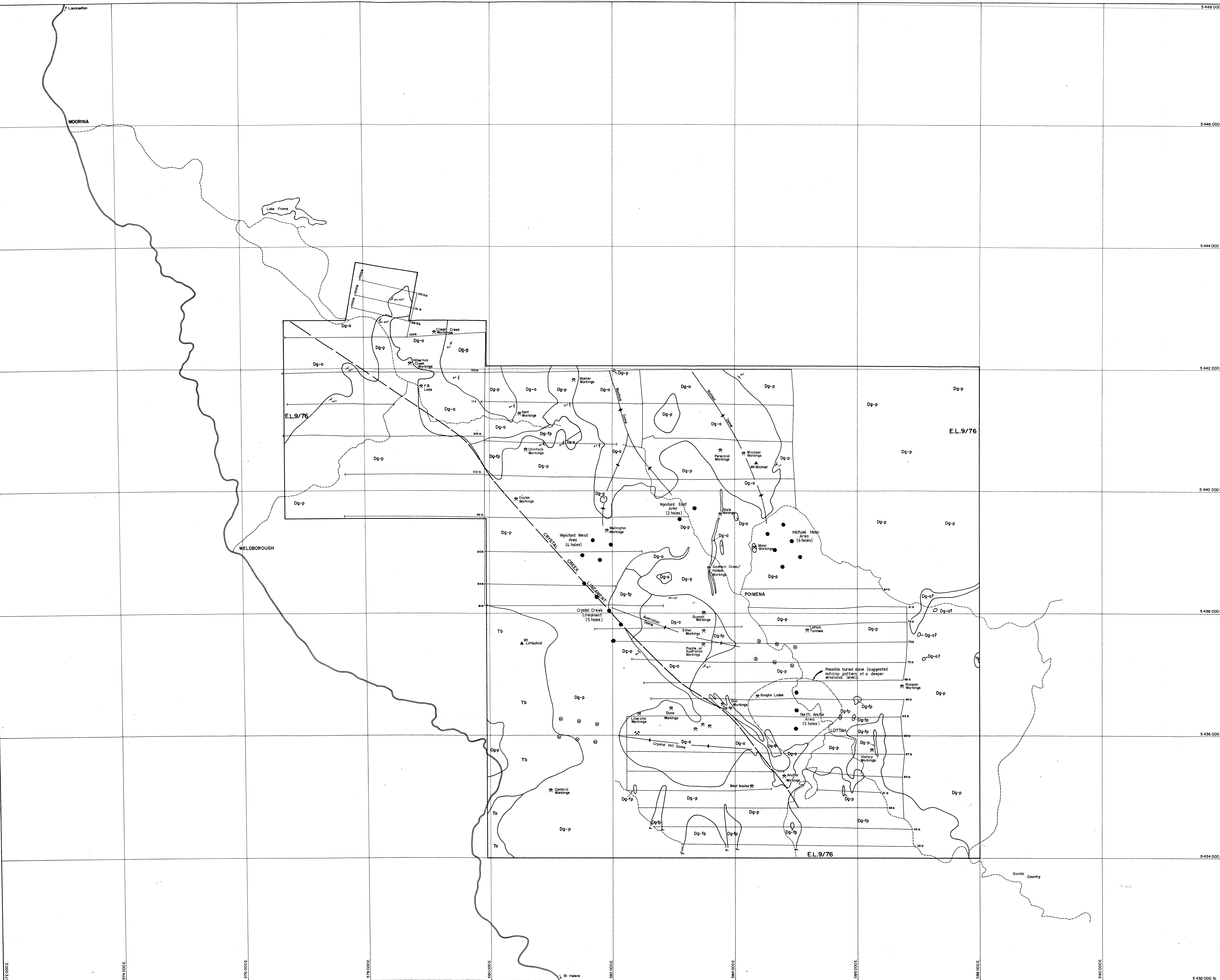
748210

5 cm

RENISON LIMITED 82-1792
Vol 1/3

LOCALITY PLAN

GEOLOGIST : K. WELLS	SCALE 1:10000 METRES
DRAUGHTSMAN : J. MATTHEWS	0 2000 4000
DATE : JANUARY, 1978	
REVISIONS	DRAWING No. FIGURE 1



LEGEND

Quaternary
 Td Alluvium, calicheum
 Tg Gravel, sand, clay
 Tt Basalt
 Tc Apllonarite and tuff

Tertiary
 Tt Basalt
 Tc Apllonarite and tuff

Siluro-Devonian
 Mf Mathinna Beds

BLUE TIER COMPOSITE BATHOLITH

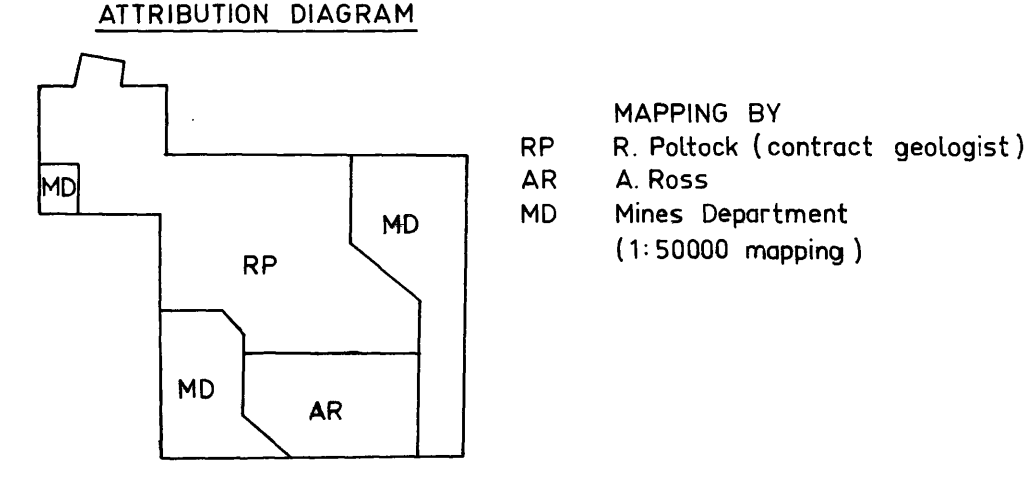
Dg-a Alkali Granite - similar to granite in Anchor Mine, medium grained
 Dg-fp Fine to medium grained, includes all other leucocratic types, e.g. quartz-feldspar porphyry, etc.
 Dg-p Porphyritic Admetite - megacrystic porphyritic biotite granite/cadmite
 Dg-g Granodiorite

Leucocratic Granite Types

Apparent fault feature in roof of alkali granite
 Dip of granite contact
 Interpreted geological contact
 Photo-lineament
 Old Workings
 Cut Grid Line
 Vehicle Track
 Sealed Road
 Licence Boundary
 Proposed drillhole
 Suggested drillhole (subsequent program)

748211

5 cm

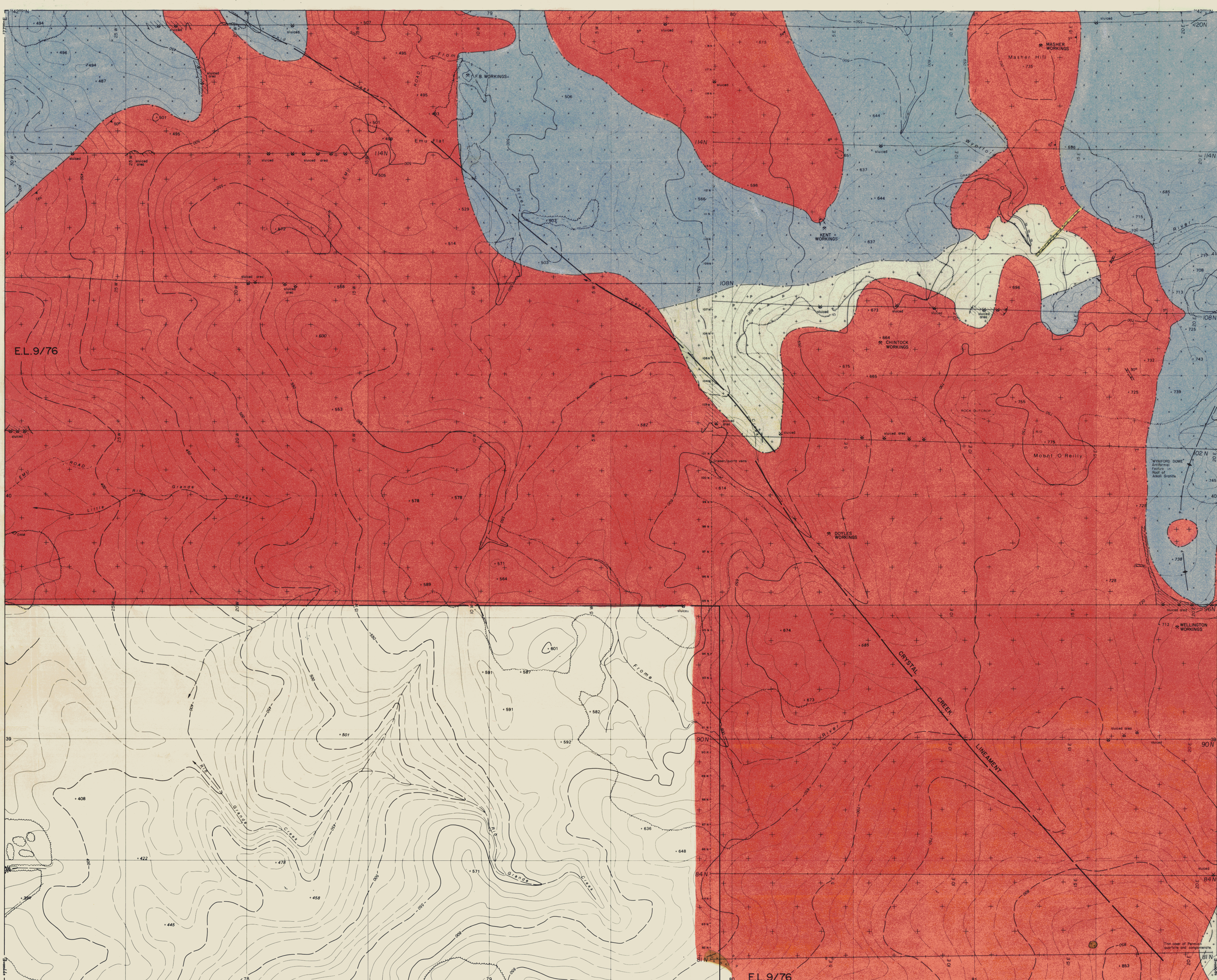


RENISON LIMITED 82-1792/1/3

BLUE TIER AREA

INTERPRETIVE GEOLOGY AND PROPOSED DRILL HOLES

GEOLOGIST : P.A.R. SCALE 1:50000 METRES
 DRAUGHTSMAN : T.G.S. 0 200 400 600
 DATE : APRIL 1982
 REVISIONS : DRAWING No. FIGURE 2



E.L. 9/76

E.L. 9/76

GEOLOGY LEGEND

Recent	Sheet stone workings, river alluvium
	Best soils
Tertiary	Basalt
	Sediments beneath granite, which may include shales
Jurassic / Devonian	Basal intrusions
Devonian / Cambrian	Mafic sills, selenitic lenses
BLUE TIER COMPOSITE BATHOLITH	
Younger intrusions	Alkali Granite (leucite-bearing) similar to granite in Masher Hill, western granite
	Fine to medium grained, includes all other batholith types e.g. quartz-diorite, quartzite, quartzite
Permian / Devonian	Granite cores (small 1-3km granodiorites, with felsic phenocrysts to 40cm)
	Granite, medium grained, 20-30km granodiorites, with felsic phenocrysts to 30cm
	Granite, medium grained, 20-30km granodiorites, with felsic phenocrysts to 30cm
	Granite, medium grained, 20-30km granodiorites, with felsic phenocrysts to 30cm
	Granite, medium grained, 20-30km granodiorites, with felsic phenocrysts to 30cm
	Granite, medium grained, 20-30km granodiorites, with felsic phenocrysts to 30cm

748212

5 cm

LEGEND

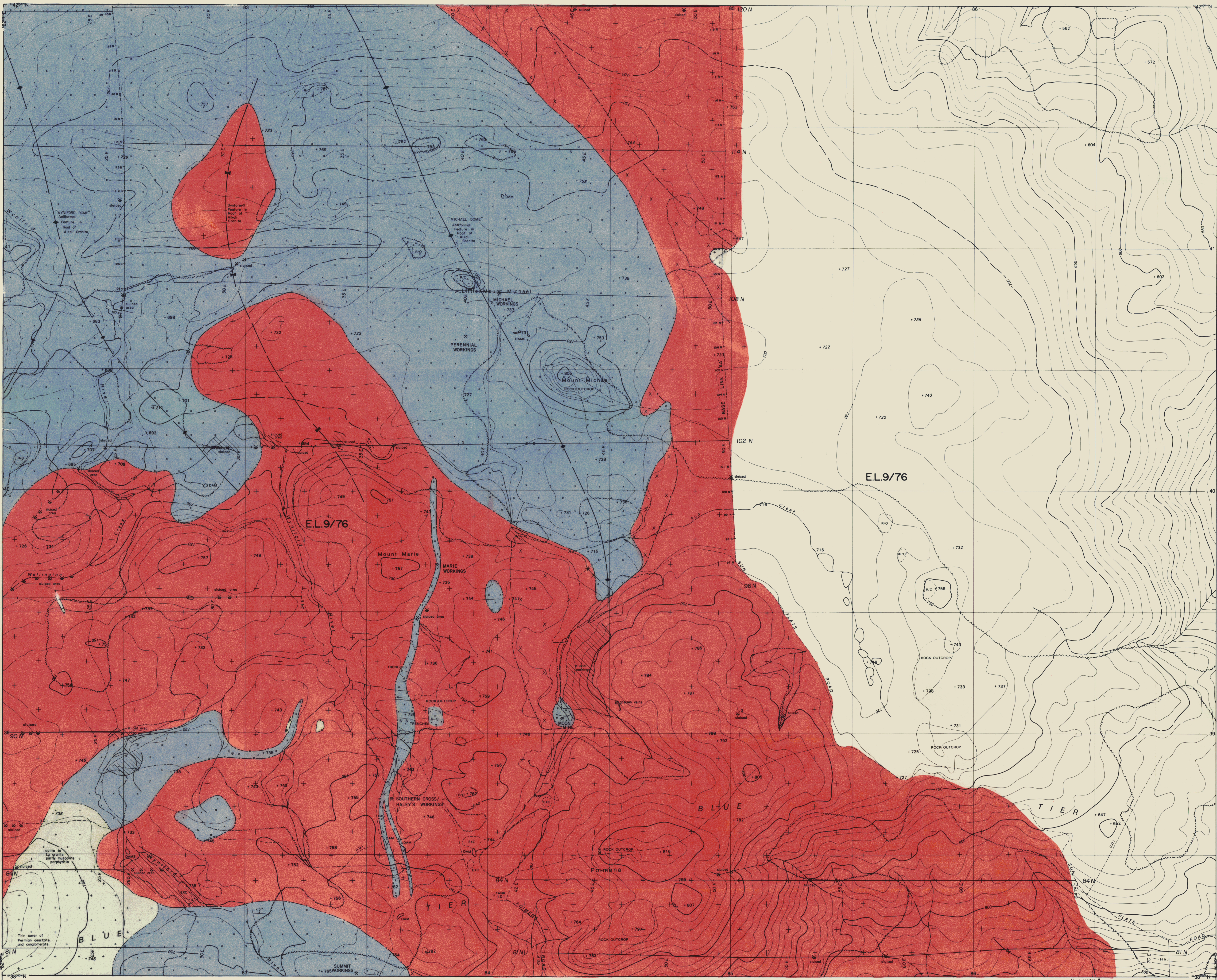
Sealed Road	Unsealed Road	Contour
Major Track	Minor Track	From Line
Watercourse	Bridge	Spot Elevation
Building	Fence	Approx. Spot Elevation
Power Line	Range Boundary	N.B.
(P.D.) Position Doubtful	Interpretation Doubtful	Datum
		Horizontal - Australian Map Grid
		Vertical - Australian Height Datum
		Grid Interval - 500 metres

RENISON LIMITED
BLUE TIER AREA
INTERPRETATION GEOLOGY

GEOLOGIST: R POLLOCK
 DRAUGHTSMAN: T G D S
 DATE: APRIL 1982

SCALE: 1:5000 METRES

FIGURES 3a



GEOLOGY LEGEND

Recent: Shaded steep slope, river channel; Shaded area

Tertiary: Sandstone

Jurassic/Devonian: Sandstone; Basal shales

Devonian/Carboniferous: Sandstone; Basal shales (lower)

BLUE TIER COMPOSITE BATHOLITH

Younger intrusions: Shaded granite (center to granite - Anchor Mine, medium grained); Fine to medium grained granite of other intrusions (type 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 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599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

748213

5 cm

LEGEND

CONTOUR INTERVAL 10 METRES

Sealed Road	Unsealed Road	Contour
Major Track	Minor Track	Form Line
Watercourse	Bridge	Spot Elevation
Building	Fence	Approx. Spot Elevation
Power Line	Timber Boundary	Form lines and italic spot elevations indicate lower reliability due to dense vegetation cover
(P.D.) Position Doubtful	(I.D.) Interpretation Doubtful	Datum: Horizontal - Australian Map Grid; Vertical - Australian Height Datum
	Grid Interval: 500 metres	

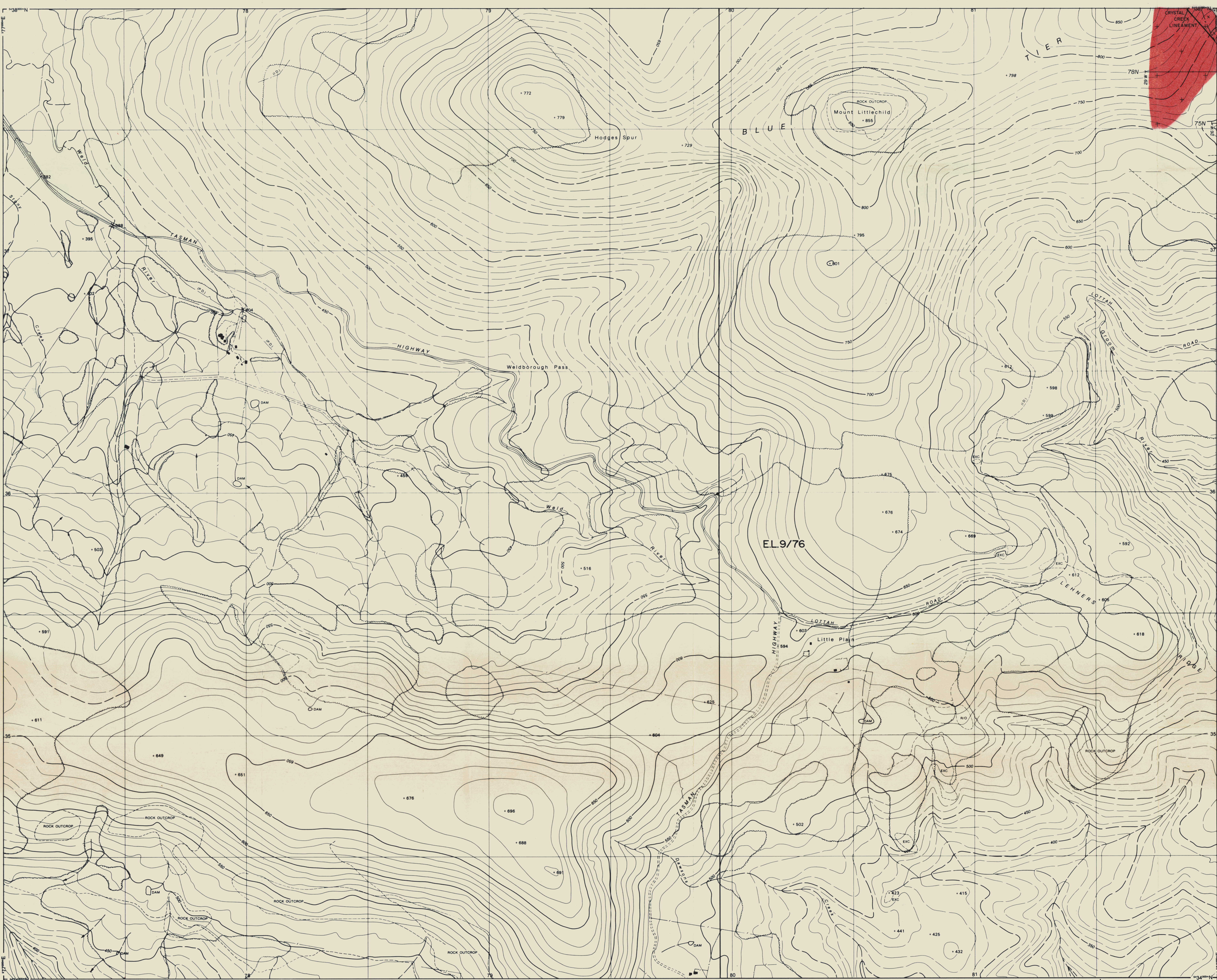
Map compiled photogrammetrically by Associated Aerial Surveys Pty Ltd. Compilation date: November 1978 from aerial photographs dated 12-12-1977.

RENISON LIMITED
BLUE TIER AREA
INTERPRETIVE GEOLOGY

GEOLOGIST: R. POLLOCK
 DRAUGHTSMAN: T.G.S.S.
 DATE: APRIL 1982

SCALE 1:5,000 METRES
 100 50 0 100 200

DRAWING No. FIGURE 3b



GEOLOGY LEGEND

Recent: Shaded alluvial workings, river alluvium; Best area

Tertiary: Basalt; Basaltic basalt, gneiss, calcareous may include flows

Jurassic / Devonian: Basalt intrusion

Devonian / Cambrian: Metabas. Bas. (metabas. basalt)

BLUE TIER COMPOSITE BATHOLITH

Younger intrusions: Alkali granites (except basalts) similar to granite in major they, medium grained; Fine to medium grained, include all other varieties, light to dark, medium grained, porphyry; Leucocratic, medium grained, darkly crystalline, granitic, gneissic

Porphyro Andesite: Generally coarse grained, 5-10cm granules, with talus fragments to 40cm; Generally medium grained, 0.5-1cm granules, with talus fragments to 20cm; Mesocratic, porphyritic, darkly crystalline, granitic, gneissic

5-5: Banded granite

5-4: Dip of granite contact

5-3: Granitoid rock

5-2: Contact based on old information

5-1: Inferred, approximate contact

5-0: Photo-interpretation (Latter mapping work)

748214

5 km

LEGEND

CONTOUR INTERVAL 10 METRES

Sealed Road	Unsealed Road	Contour	Form Line
Major Track	Minor Track	+ 494	Spot Elevation
Watercourse	Bridge	+ 826	Approx. Spot Elevation
Building	Fence	N.B.	Form lines and spot elevations indicate lower reliability due to dense vegetation cover
Power Line	Timber Boundary	Delium	Horizontal - Australian Map Grid
(P.D.)	Position Doubtful	Grid Interval	Vertical - Australian Height Datum
(D.)	Interpretation Doubtful	Grid Interval	500 metres

Mapping photogrammetrically compiled by Associated Aerial Surveys Pty Ltd
Compilation date November 1978 from aerial photographs dated 12-12-1977

To Launceston
To St. Helens

Scale 1:50,000

Grid coordinates: 577000m, 578000m, 579000m, 580000m, 581000m, 582000m, 583000m, 584000m, 585000m, 586000m, 587000m, 588000m, 589000m, 590000m, 591000m, 592000m, 593000m, 594000m, 595000m, 596000m, 597000m, 598000m, 599000m, 600000m, 601000m, 602000m, 603000m, 604000m, 605000m, 606000m, 607000m, 608000m, 609000m, 610000m, 611000m, 612000m, 613000m, 614000m, 615000m, 616000m, 617000m, 618000m, 619000m, 620000m, 621000m, 622000m, 623000m, 624000m, 625000m, 626000m, 627000m, 628000m, 629000m, 630000m, 631000m, 632000m, 633000m, 634000m, 635000m, 636000m, 637000m, 638000m, 639000m, 640000m, 641000m, 642000m, 643000m, 644000m, 645000m, 646000m, 647000m, 648000m, 649000m, 650000m, 651000m, 652000m, 653000m, 654000m, 655000m, 656000m, 657000m, 658000m, 659000m, 660000m, 661000m, 662000m, 663000m, 664000m, 665000m, 666000m, 667000m, 668000m, 669000m, 670000m, 671000m, 672000m, 673000m, 674000m, 675000m, 676000m, 677000m, 678000m, 679000m, 680000m, 681000m, 682000m, 683000m, 684000m, 685000m, 686000m, 687000m, 688000m, 689000m, 690000m, 691000m, 692000m, 693000m, 694000m, 695000m, 696000m, 697000m, 698000m, 699000m, 700000m, 701000m, 702000m, 703000m, 704000m, 705000m, 706000m, 707000m, 708000m, 709000m, 710000m, 711000m, 712000m, 713000m, 714000m, 715000m, 716000m, 717000m, 718000m, 719000m, 720000m, 721000m, 722000m, 723000m, 724000m, 725000m, 726000m, 727000m, 728000m, 729000m, 730000m, 731000m, 732000m, 733000m, 734000m, 735000m, 736000m, 737000m, 738000m, 739000m, 740000m, 741000m, 742000m, 743000m, 744000m, 745000m, 746000m, 747000m, 748000m, 749000m, 750000m, 751000m, 752000m, 753000m, 754000m, 755000m, 756000m, 757000m, 758000m, 759000m, 760000m, 761000m, 762000m, 763000m, 764000m, 765000m, 766000m, 767000m, 768000m, 769000m, 770000m, 771000m, 772000m, 773000m, 774000m, 775000m, 776000m, 777000m, 778000m, 779000m, 780000m, 781000m, 782000m, 783000m, 784000m, 785000m, 786000m, 787000m, 788000m, 789000m, 790000m, 791000m, 792000m, 793000m, 794000m, 795000m, 796000m, 797000m, 798000m, 799000m, 800000m, 801000m, 802000m, 803000m, 804000m, 805000m, 806000m, 807000m, 808000m, 809000m, 810000m, 811000m, 812000m, 813000m, 814000m, 815000m, 816000m, 817000m, 818000m, 819000m, 820000m, 821000m, 822000m, 823000m, 824000m, 825000m, 826000m, 827000m, 828000m, 829000m, 830000m, 831000m, 832000m, 833000m, 834000m, 835000m, 836000m, 837000m, 838000m, 839000m, 840000m, 841000m, 842000m, 843000m, 844000m, 845000m, 846000m, 847000m, 848000m, 849000m, 850000m, 851000m, 852000m, 853000m, 854000m, 855000m, 856000m, 857000m, 858000m, 859000m, 860000m, 861000m, 862000m, 863000m, 864000m, 865000m, 866000m, 867000m, 868000m, 869000m, 870000m, 871000m, 872000m, 873000m, 874000m, 875000m, 876000m, 877000m, 878000m, 879000m, 880000m, 881000m, 882000m, 883000m, 884000m, 885000m, 886000m, 887000m, 888000m, 889000m, 890000m, 891000m, 892000m, 893000m, 894000m, 895000m, 896000m, 897000m, 898000m, 899000m, 900000m, 901000m, 902000m, 903000m, 904000m, 905000m, 906000m, 907000m, 908000m, 909000m, 910000m, 911000m, 912000m, 913000m, 914000m, 915000m, 916000m, 917000m, 918000m, 919000m, 920000m, 921000m, 922000m, 923000m, 924000m, 925000m, 926000m, 927000m, 928000m, 929000m, 930000m, 931000m, 932000m, 933000m, 934000m, 935000m, 936000m, 937000m, 938000m, 939000m, 940000m, 941000m, 942000m, 943000m, 944000m, 945000m, 946000m, 947000m, 948000m, 949000m, 950000m, 951000m, 952000m, 953000m, 954000m, 955000m, 956000m, 957000m, 958000m, 959000m, 960000m, 961000m, 962000m, 963000m, 964000m, 965000m, 966000m, 967000m, 968000m, 969000m, 970000m, 971000m, 972000m, 973000m, 974000m, 975000m, 976000m, 977000m, 978000m, 979000m, 980000m, 981000m, 982000m, 983000m, 984000m, 985000m, 986000m, 987000m, 988000m, 989000m, 990000m, 991000m, 992000m, 993000m, 994000m, 995000m, 996000m, 997000m, 998000m, 999000m, 1000000m

RENISON LIMITED

BLUE TIER AREA

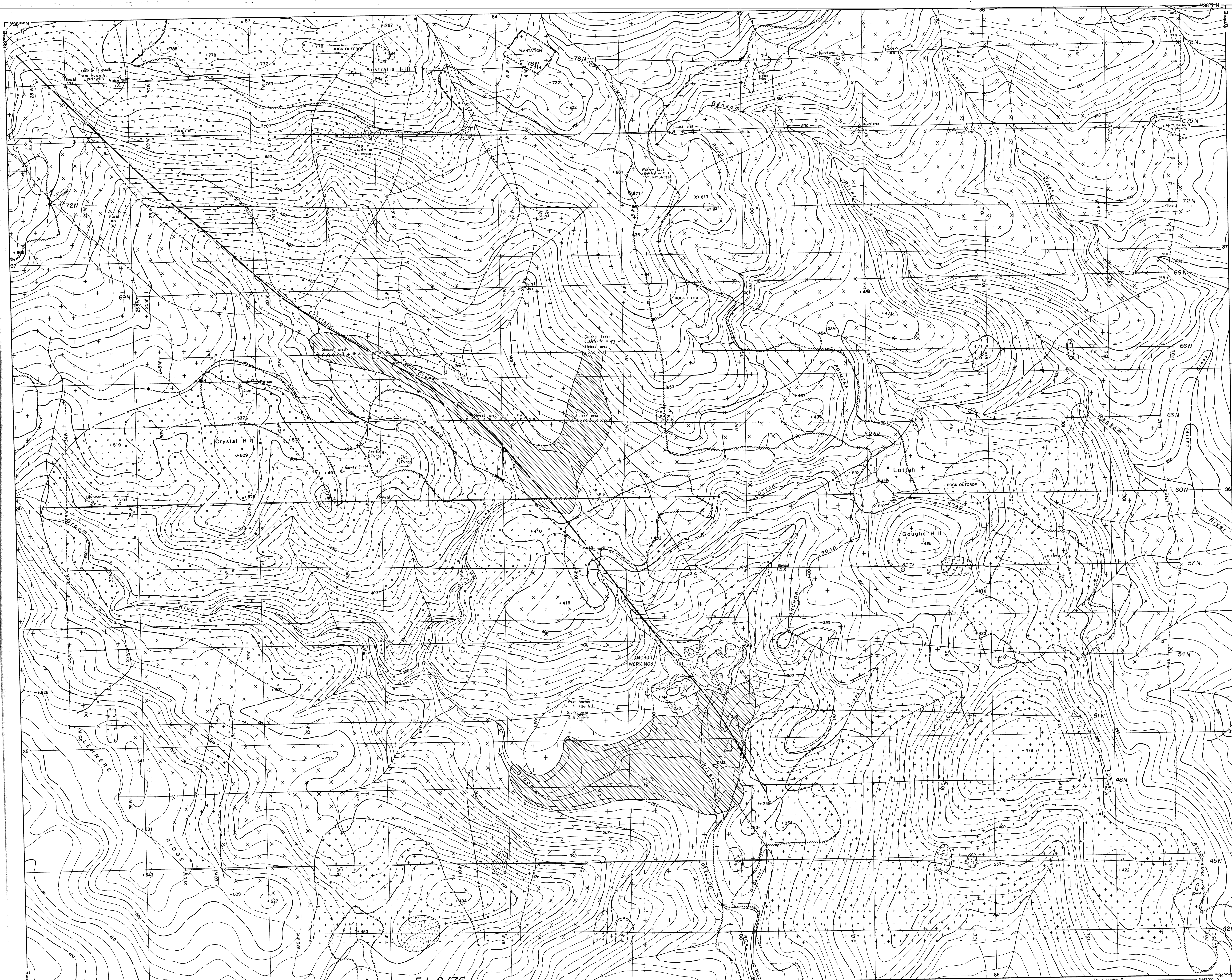
INTERPRETIVE GEOLOGY

GEOLOGIST: R. POLLOCK
 DRAUGHTSMAN: T.S.D.S.
 DATE: APRIL 1982

SCALE 1:50,000 METRES

REVISIONS: 10

FIGURE 30



E.L. 9/76

GEOLOGY LEGEND

Recent	Recent alluvial workings, river channel	Basalt	Basalt
Tertiary	Basalt	Basalt	Basalt
Quaternary	Basalt	Basalt	Basalt
Devonian	Devonian	Devonian	Devonian
Younger	Younger	Younger	Younger
Palaeozoic	Palaeozoic	Palaeozoic	Palaeozoic

BLUE TIER COMPOSITE BATHOLITH

Granite	Granite	Granite	Granite
Granite	Granite	Granite	Granite
Granite	Granite	Granite	Granite
Granite	Granite	Granite	Granite

LEGEND

Stated Road	Unsealed Road	Contour	Contour
Major Track	Minor Track	Form Line	Form Line
Watercourse	Bridge	Spot Elevation	Spot Elevation
Building	Fence	Spot Elevation	Spot Elevation
Power Line	N.B.	Spot Elevation	Spot Elevation
Timber Boundary		Spot Elevation	Spot Elevation
(P.D.)		Spot Elevation	Spot Elevation
(D.D.)		Spot Elevation	Spot Elevation

RENISON LIMITED
BLUE TIER AREA
INTERPRETIVE GEOLOGY

GEOLOGIST: R. Pollock
 DRAUGHTSMAN: A. Ross
 DATE: March 1982

SCALE 1:5,000 METRES

1099

Mapping photogrammetrically compiled by Associated Aerial Surveys Pty. Ltd.
 Completion date November 1978, from aerial photographs dated 12-12-1977.



GEOLOGY LEGEND

Recent: Based on aerial photographs, river channel, road sites

Tertiary: Tertiary

Jurassic / Devonian: Basic intrusions

Devonian / Cambrian: Metamorphic rocks, sediment (minor)

BLUE TIER COMPOSITE BATHOLITH

Younger intrusions: Alkali granites (Lecher Granite) similar to granite in Blue Tier, medium grained

Pleistocene / Admire: Generally coarse grained, 5,000m groundmass, with 'knappe' phenocrysts to 50mm

S & S Serotined granite

D: Di of granite contact

G: Grenada rock

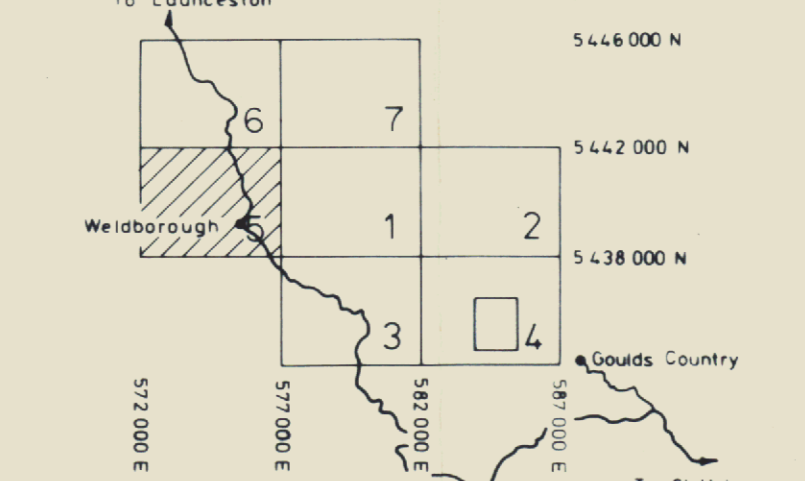
Contact based on drill information

Inferred, approximate contact

Photo-interpretation (Location: Harting work)

748216

50m



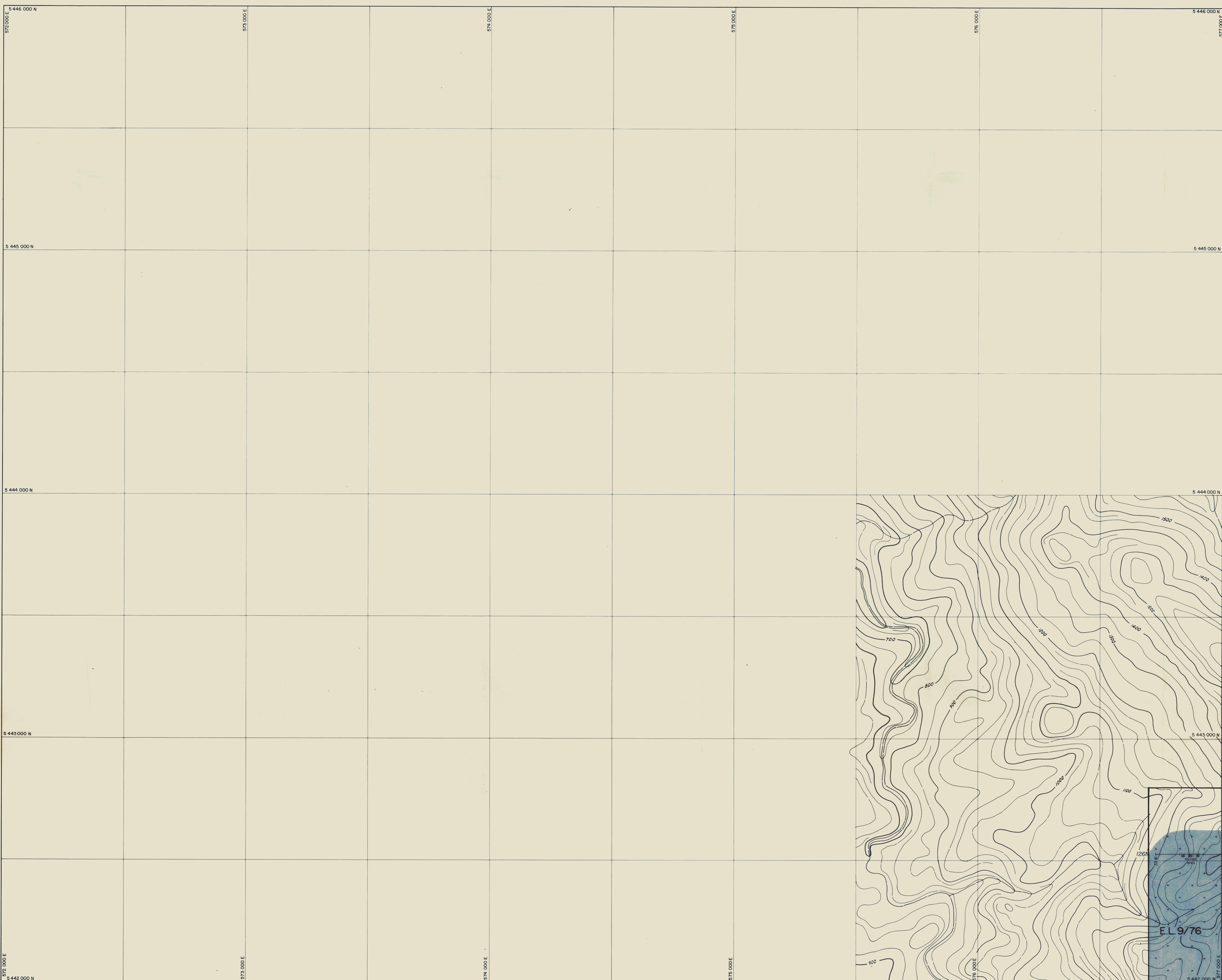
NOTE: Contours are in feet. Enlarged from 1:50,000 topographic map.

RENISON LIMITED
BLUE TIER AREA
INTERPRETIVE GEOLOGY

GEOLOGIST: R. POLLOCK
 DRAUGHTSMAN: T.G.D.S.
 DATE: APRIL 1982

SCALE: 1:5,000 METRES
 100 50 0 100 200

REVISIONS: 1
 FIGURE: 3e 10

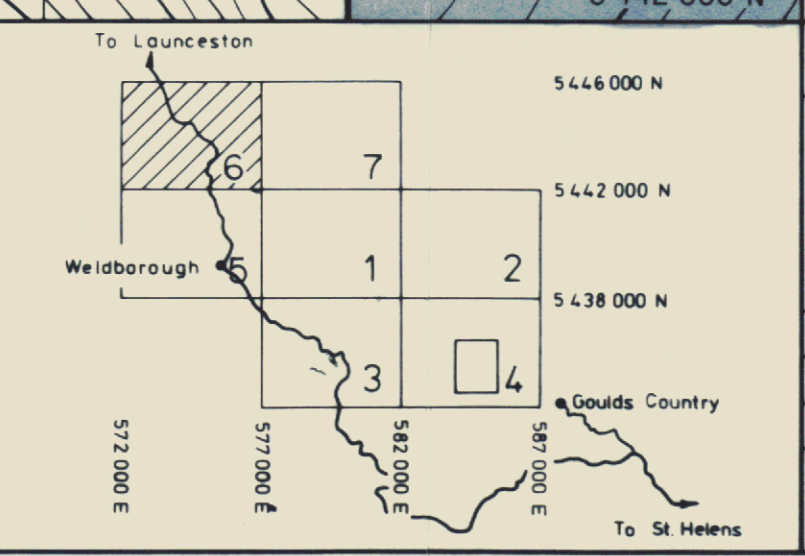


GEOLOGY LEGEND

Recent	Shaded strand workings, near situation	
	Shaded area	
Tertiary	Basalt	
	Sediments basalt, granitic, carboniferous, etc. (see notes)	
Jurassic / Devonian	Basic intrusives	
Devonian / Carboniferous	Metasediments, basic, sedimentary (see notes)	
BLUE TIER COMPOSITE BATHOLITH		
Younger intrusions	Alkali granites (Ankerite Group) - similar to granite in Anker Mine, medium grained	Leucocratic, microgranitic, granite types
	Granite to medium grained, includes all other Ankerite Group, e.g. Ankerite, Ankerite, Ankerite, etc. (see notes)	
Primary Admettite	Generally coarse grained, 5-10cm granitoids, with feldspar phenocrysts to 10mm	Microcrystic, porphyritic, coarse grained, granitic, adamellite
	Generally medium grained, 10-20cm granitoids, with feldspar phenocrysts to 20mm	
	Secordite granite	
	Diapiric granite contact	
	Granite contact	
	Granite contact	
	Contact based on drill information	
	Inferred, approximate contact	
	Photo-interpretation (Lithon mapping work)	

748217

5 cm



RENISON LIMITED
BLUE TIER AREA
INTERPRETATIVE GEOLOGY

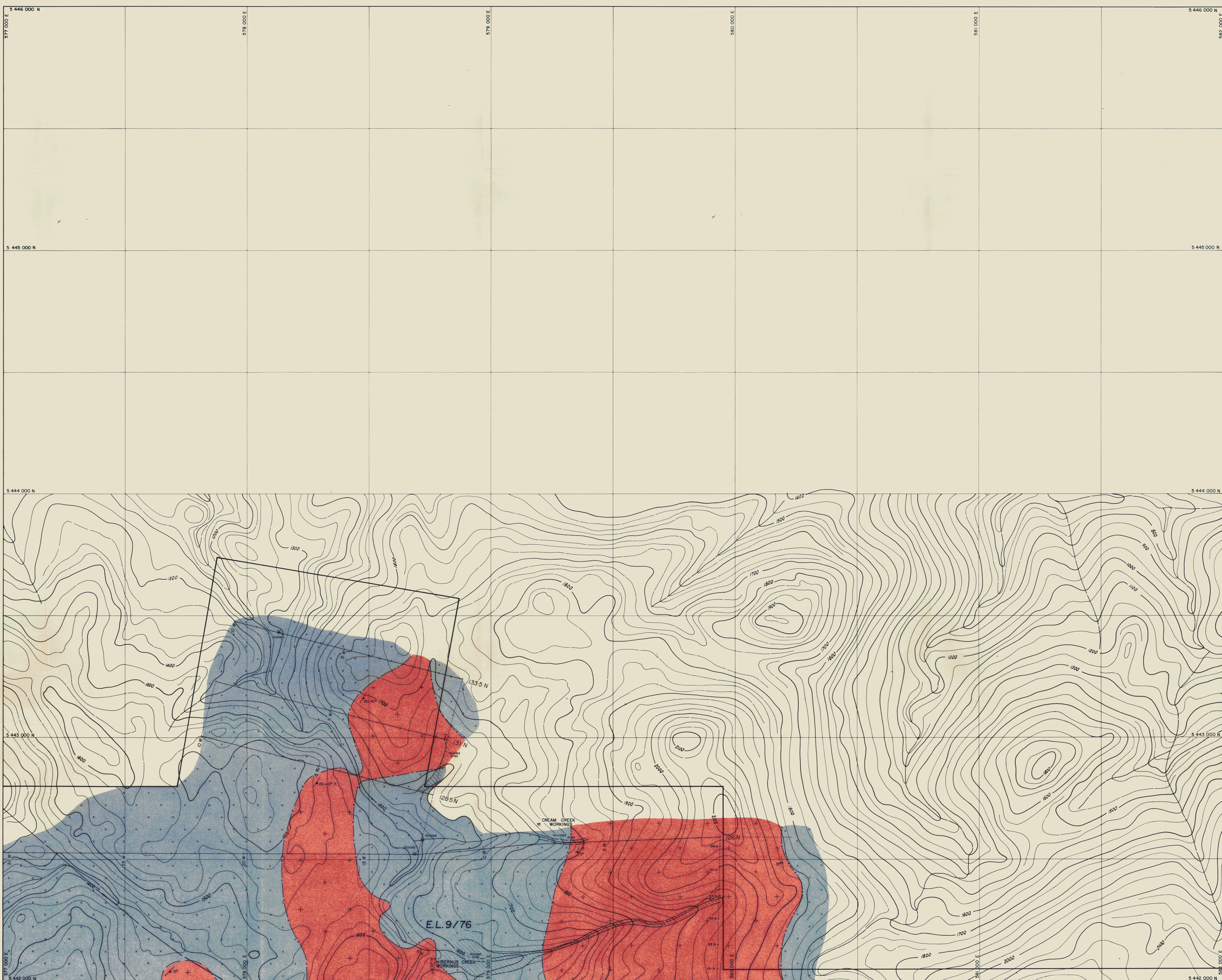
GEOLOGIST: R. POLLOCK
 DRAUGHTSMAN: T.G.D.S.
 DATE: APRIL 1982

SCALE 1:5,000 METRES
 100 50 0 50 100

REVISIONS: 10

FIGURE 3f

NOTE: Contours are in feet. Enlarged from 1:50,000 topographic map.

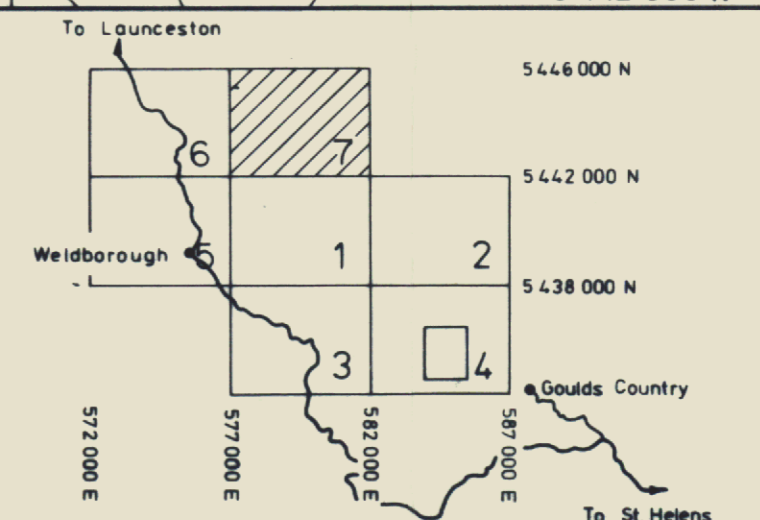


GEOLOGY LEGEND

Recent	Recent alluvial workings, river channel	Recent mine
Tertiary	Basalt	Basalt, basalt, gabbro, diorite, may include flows
Quaternary / Devonian	Basic intrusives	
Devonian / Cambrian	Metabasite (Bas. (metabasite) (basalt))	
BLUE TIER COMPOSITE BATHOLITH		
Younger intrusions	Basic granite (Anorthositic) - coarse to fine to medium grained, includes all other granites, 1571, white, massive granite, pegmatite	Leucocratic, microgranular granite types
Plutonic Subvolcanic	Granite, coarse grained, 5-10mm groundmass, with feldspar phenocrysts to 40mm	Microcrystic, porphyritic granite
	Granite, medium grained, 10-20mm groundmass, with feldspar phenocrysts to 20mm	Granite, medium grained, 10-20mm groundmass, with feldspar phenocrysts to 20mm
	5-5 Sericitized granite	
	5-5 Dip of granite contact	
	5-5 Brecciated rock	
	5-5 Contact based on air information	
	5-5 Inferred, approximate contact	
	5-5 Photo-interpretation (Laser, bearing marks)	

748218

50m



RENISON LIMITED
BLUE TIER AREA
INTERPRETATIVE GEOLOGY

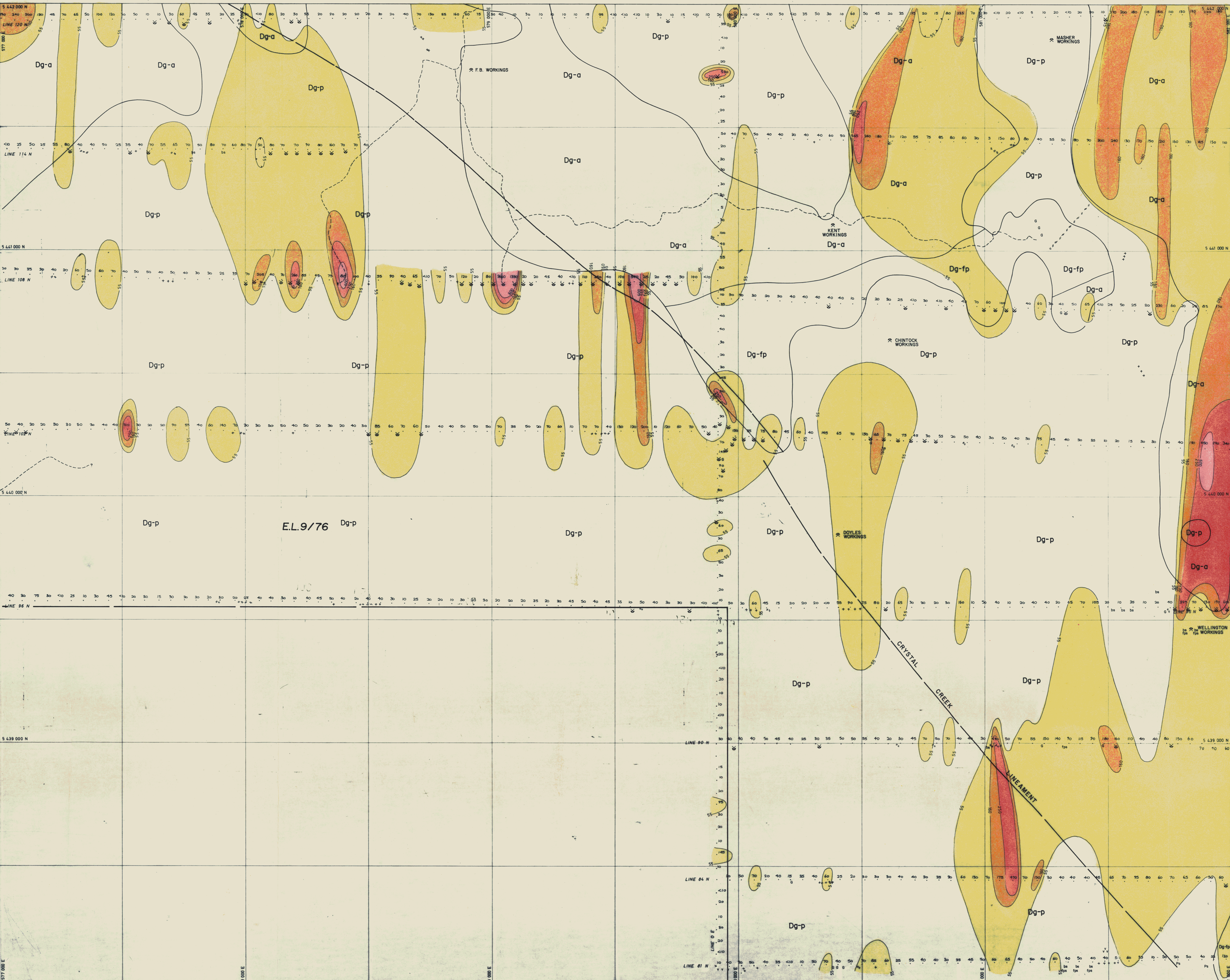
GEOLOGIST: R. POLLOCK
 DRAUGHTSMAN: T.G.D.S.
 DATE: APRIL, 1982

SCALE: 1:5,000 METRES
 100 50 0 100 200

REVISIONS: No. 1

FIGURES: No. 1

NOTE: Contours are in feet. Enlarged from 1:15,840 topographic map.



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-a Palmyra Admetite
- Dg-fp Fine grained to porphyritic granite phases (not small granites)
- Dg-p Alkali granites (associated with the mineralization of Anchor Mine)

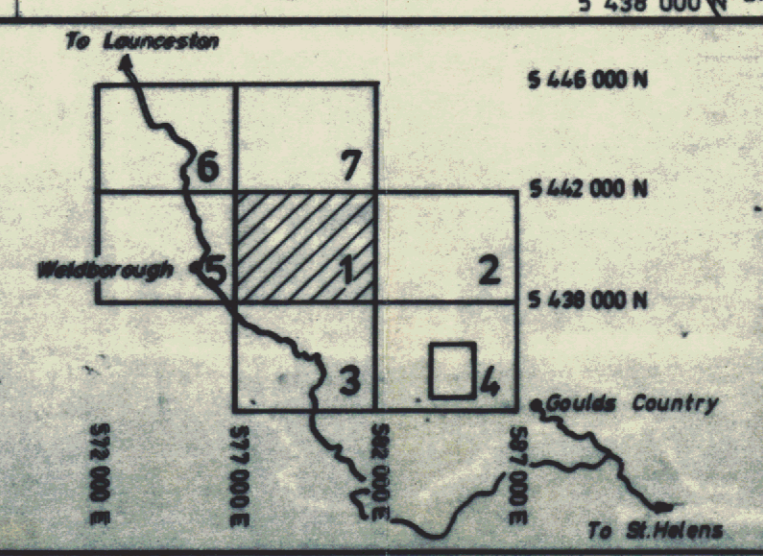
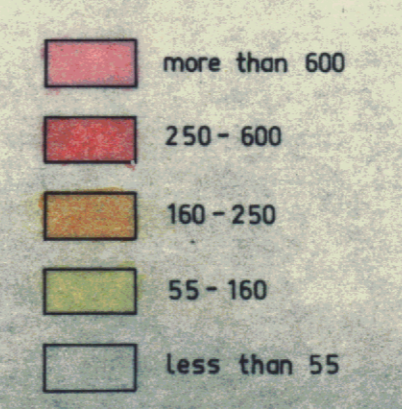
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granites - small bodies or dikes
- ±±± Basic intrusive rocks
- ±±± Basic volcanic rocks
- ±±± Permian quartzite and conglomerate thin cover over older rocks
- ±±± Drieston
- ±±± Sore of basic rocks (both intrusive and extrusive)
- ±±± Sore of fine grained to porphyritic granites

OTHER FEATURES

- ⊙ Old workings (primary deposit)
- ⊙ Staked area (alluvial or alluvial workings)
- Interpreted geological boundary
- Photo lineament

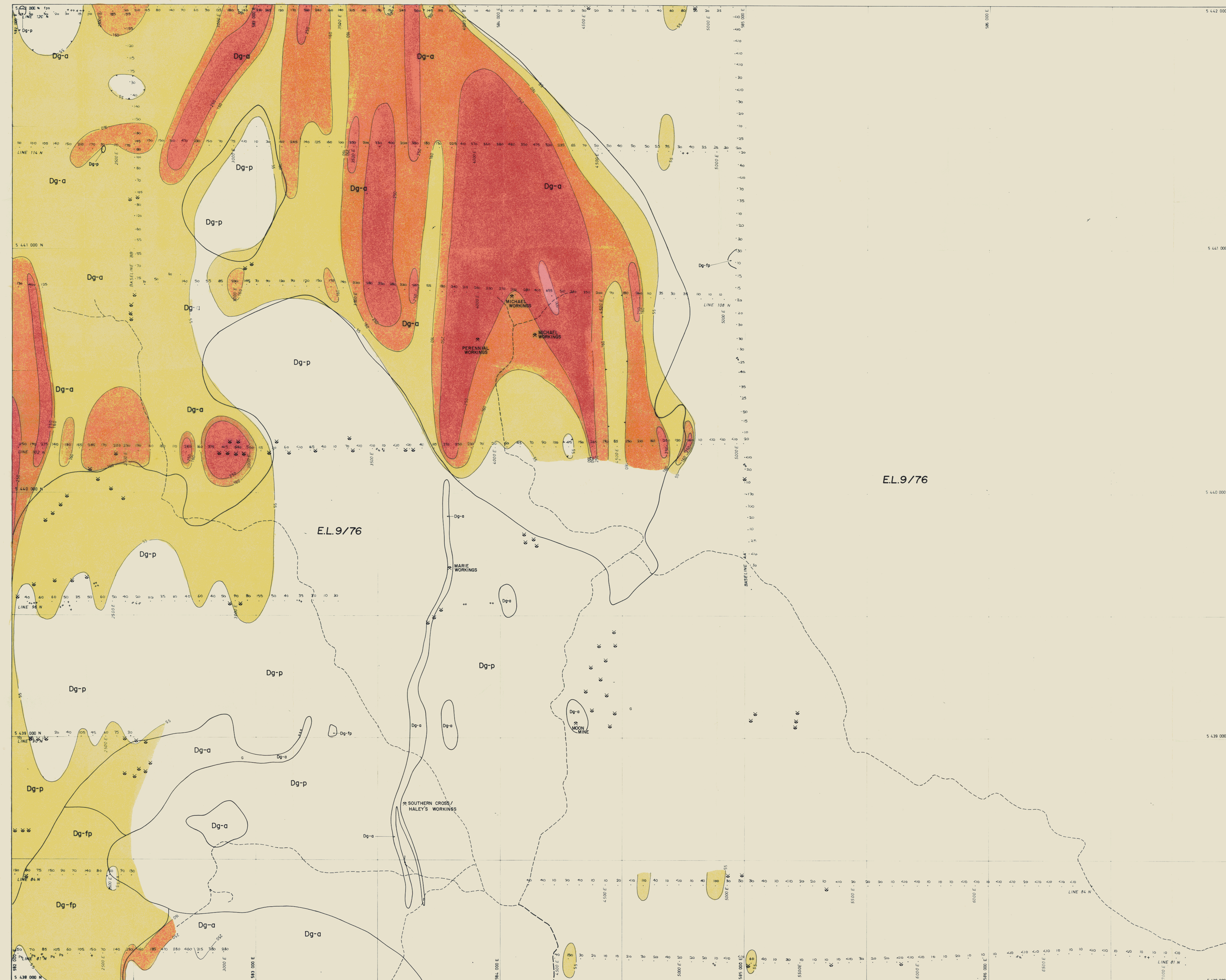
5 cm



74521 RENISON LIMITED
 8.2-1792 Vol 2/3
BLUE TIER AREA
SHEET 1 Sn (ppm)

GEOLOGIST: _____ SCALE: 1:500 METRES
 DRAUGHTSMAN: _____
 DATE: _____
 REVISIONS: _____

FIGURE 4a



EL.9/76

EL.9/76

LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-p Poimene Admetite
- Dg-fp Fine grained to porphyritic granite phases (see sheet granite)
- Dg-a Aged granite (associated with its mineralization of Zambor Mine)

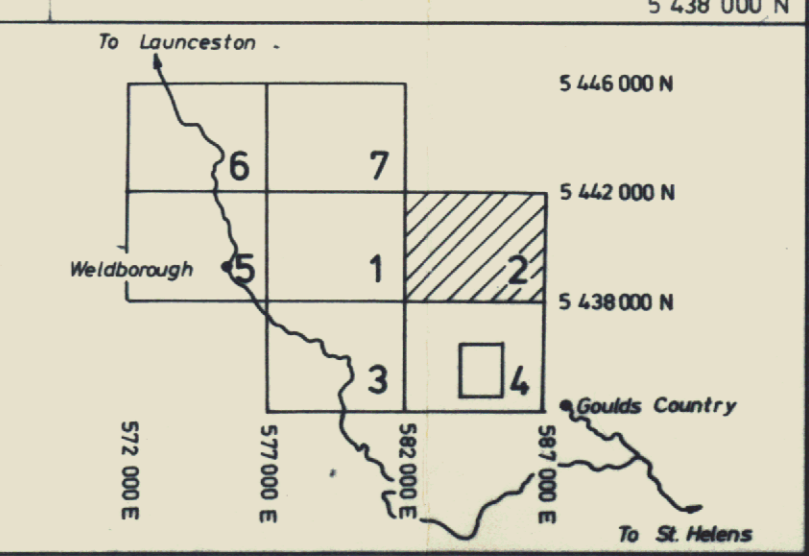
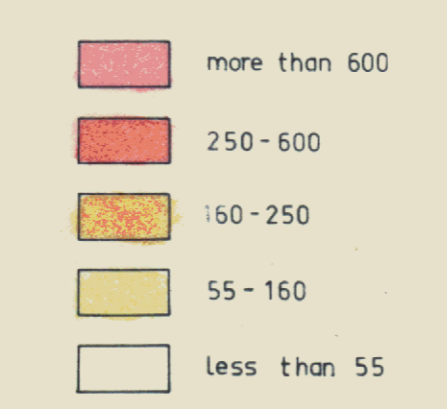
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granite - small bodies or sphares
- Basic intrusive rocks
- Basic volcanic rocks
- Ps Permian quartzite and conglomerate (thin cover over older rocks)
- GG Gneiss
- bs Sore of basic rocks (both intrusive and extrusive)
- Sore of fine grained to porphyritic granite

OTHER FEATURES

- Old workings (primary deposit)
- Shaded area (alluvial or eluvial workings)
- Interpreted geological boundary
- Photo lineament

748220



RENISON LIMITED

BLUE TIER AREA

Sheet 2 (ppm)

GEOLOGIST: _____ SCALE 1:5000 METRES

DRAUGHTSMAN: _____

DATE: _____

REVISIONS: _____

591 000 E

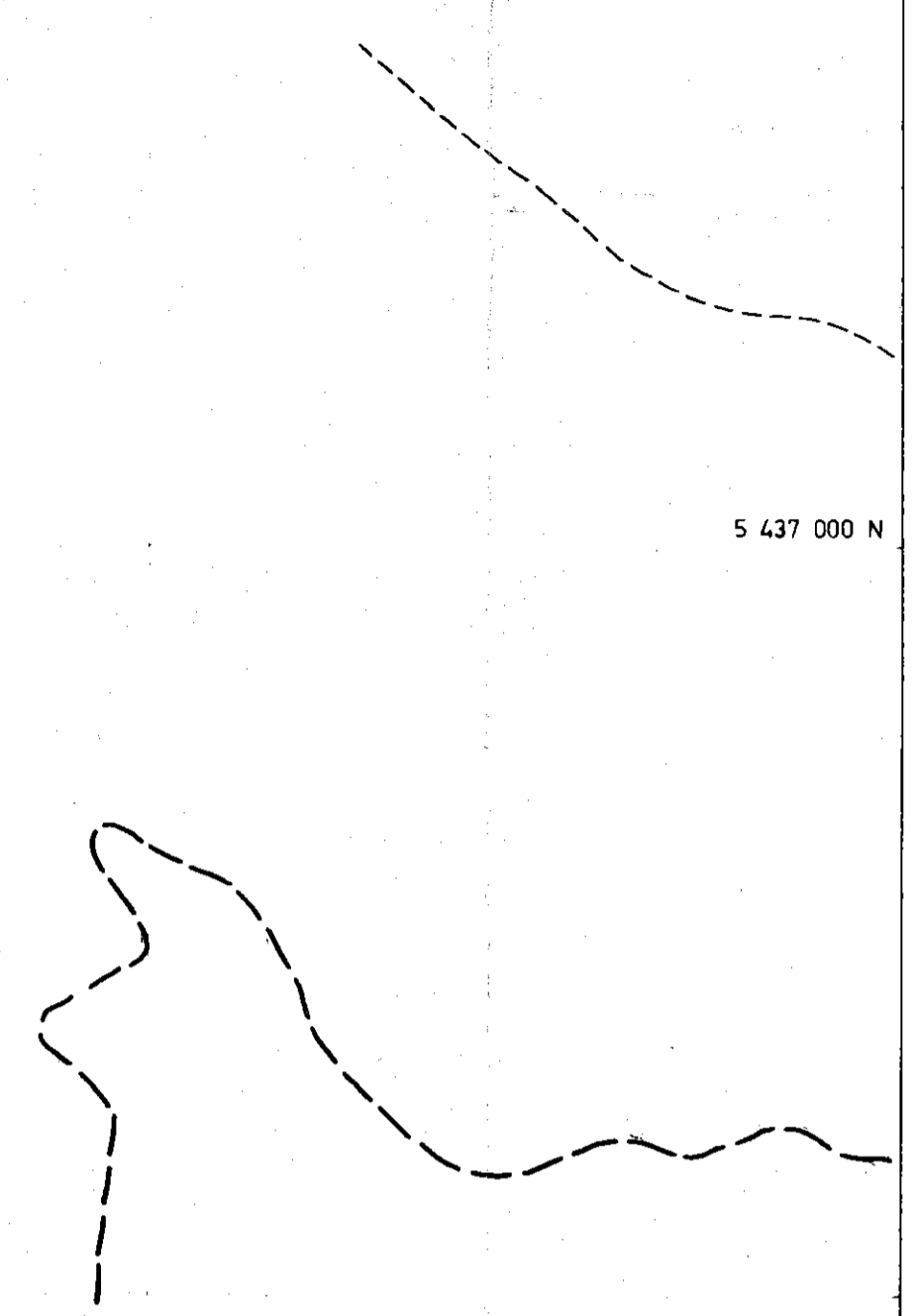
5 438 000 N
591 000 E

Dg-p

3000 W - 8
30 20 50 40 40 55 30
LINE 78 N

50
LINE 75 N

5 437 000 N



E.L.9/76

LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Poinena Adamelite
- Fine grained to porphyritic granite phases (not alkali granite)
- Alkali Granite (associated with tin mineralization of Anchor Mine)

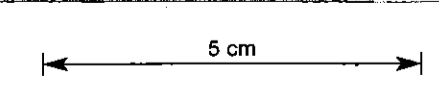
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- Fine grained or porphyritic granite - small bodies or dykes
- Basic intrusive rocks
- Basic volcanic rocks
- Permian quartzite and conglomerate (thin cover over older rocks)
- Gneiss
- Scree of basic rocks (both intrusive and extrusive)
- Scree of fine grained to porphyritic granite

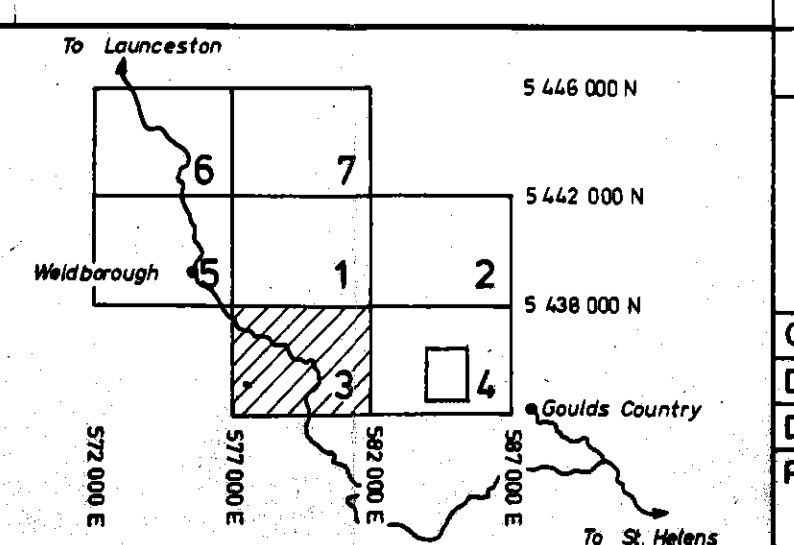
OTHER FEATURES

- Old workings (primary deposit)
- Staked area (alluvial or eluvial workings)
- Interpreted geological boundary
- Photo landmark

748221

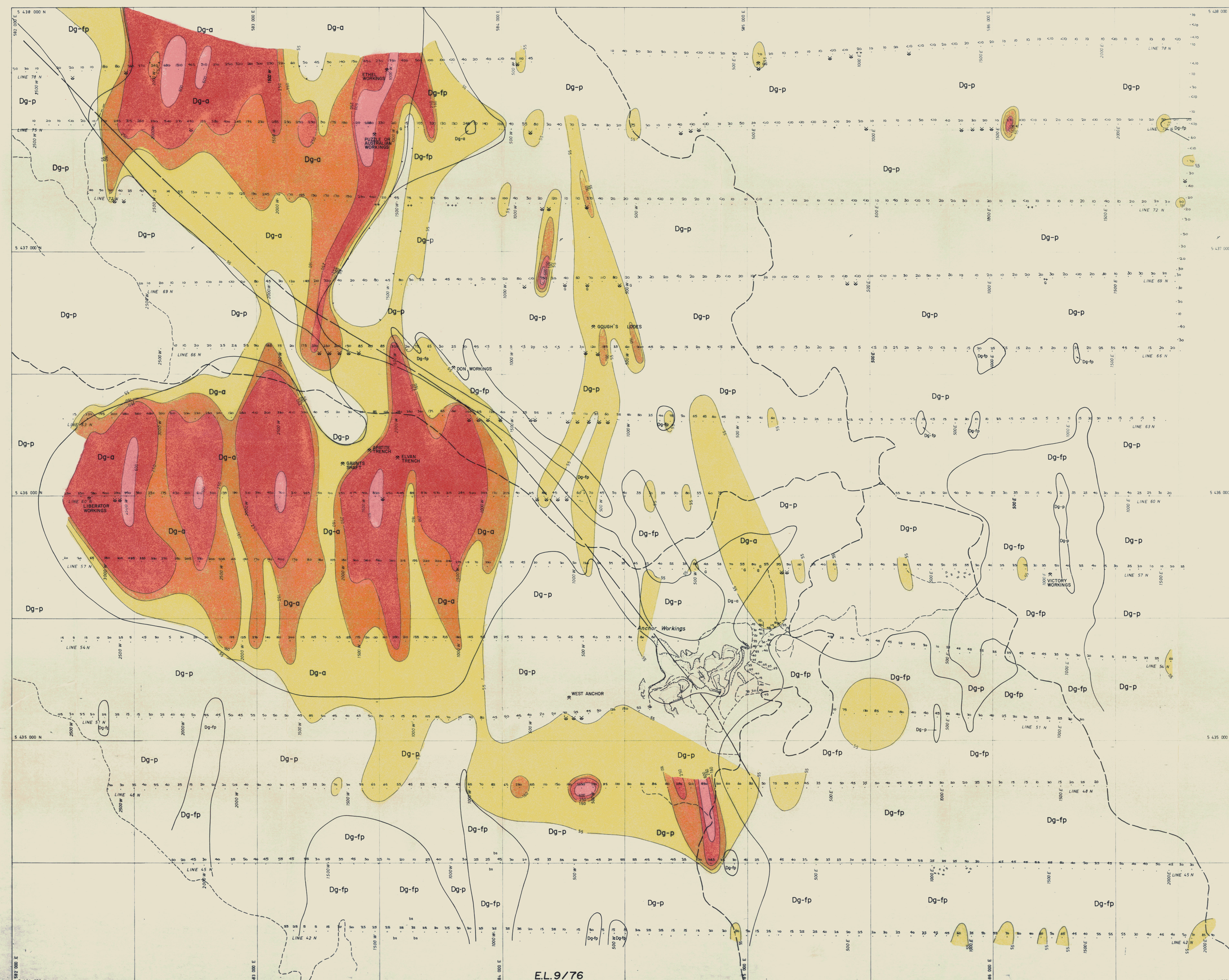


less than 55



RENISON LIMITED
 5.2-1792 Vol 2/5
BLUE TIER AREA
Sheet 3 Sn (ppm)

GEOLOGIST	SCALE 1:5000 METRES
DRAUGHTSMAN	
DATE	FIGURES 40
REVISIONS	



E.L.9/76



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-p Palaeozoic Admetite
- Dg-fp Fine grained to porphyritic granite phases (not small grained)
- Dg-a Alkali Granite (associated with its mineralization of Anchor Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granite - small bodies or dykes
- *** Basic intrusive rocks
- *** Basic volcanic rocks
- Pg Permian quartzite and conglomerate (this cover over older rocks)
- Gg Gneiss
- bs Sides of basic rocks (both intrusive and extrusive)
- fpa Sides of fine grained to porphyritic granite

OTHER FEATURES

- Old workings (primary deposit)
- Stucco area (alluvial or eluvial workings)
- Interpreted geological boundary
- Photo treatment

748222

RENSON LIMITED

BLUE TIER AREA

Sheet 4 Sn (ppm)

SCALE 1:500 METRES

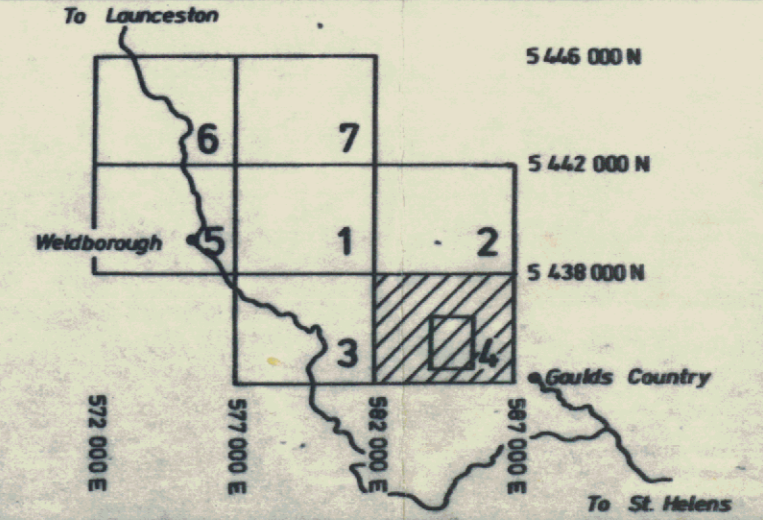
GEOLOGIST: _____

DRAUGHTSMAN: _____

DATE: _____

REVISIONS: _____

FIGURE 44



576 000 E

576 000 E

LINE 120 N
LINE 114 N
LINE 108 N
LINE 102 N
LINE 96 N

5 442 000 N
5 441 000 N
5 440 000 N
5 439 000 N
5 438 000 N

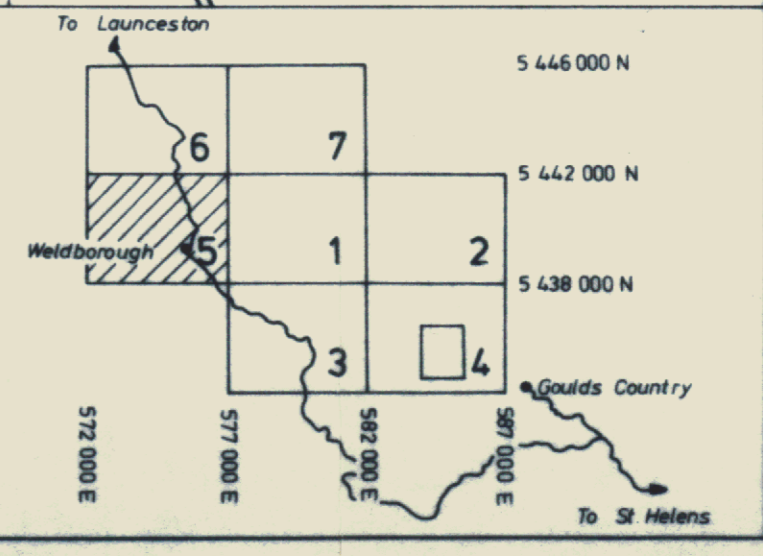
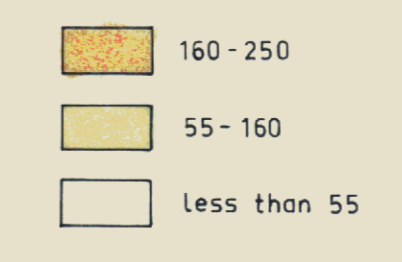
30 40 50 60 70 80 90 100
30 40 50 60 70 80 90 100
30 40 50 60 70 80 90 100
30 40 50 60 70 80 90 100
30 40 50 60 70 80 90 100

Dg-a
Dg-a
Dg-p
Dg-p
Dg-p

E.L. 9/76

WELDBOROUGH

748223



- LEGEND**
- BLUE TIER BATHOLITH - MAJOR GRANITE TYPES**
- Dg-p** Palena Adamellite
 - Dg-pb** Fine grained to porphyritic granite phases (not Shash granite)
 - Dg-a** Alkali Granite (associated with Fe mineralization at Anchor Mine)
- MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING**
- *** Fine grained or porphyritic granite - small bodies or dykes
 - # # # Basic intrusive rocks
 - v v v Basic volcanic rocks
 - Pa Permian quartzite and conglomerate (thin cover over older rocks)
 - Gg Gressan
 - ba Sere of basic rocks (both intrusive and extrusive)
 - fx Sere of fine grained to porphyritic granite
- OTHER FEATURES**
- ☼ Old workings (primary deposit)
 - ☼ Sluiced area (alluvial or eluvial workings)
 - Interpreted geological boundary
 - Photo lineament

RENISON LIMITED
 BLUE TIER AREA
 Sheet 5 Sn (ppm)
 GEOLOGIST: DRALIGHTSMAN
 DATE: _____
 REVISIONS: _____
 SCALE: 1:500 METRES
 FIGURES: 40
 748223

5 443 000 N

576 000 E

LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Poimene Adamellite
- Fine grained to porphyritic granite phases (not shock granites)
- Alkali Granite (associated with tin mineralization at Anchor Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- Fine grained or porphyritic granite - small bodies or dikes
- Basic intrusive rocks
- Basic volcanic rocks
- Permian quartzite and conglomerate (thin cover over older rocks)
- Gneiss
- Sere of basic rocks (both intrusive and extrusive)
- Sere of fine grained to porphyritic granite

OTHER FEATURES

- Old workings (primary deposit)
- Sluiced area (alluvial or eluvial workings)
- Interpreted geological boundary
- Photo lineament

748224

RENISON LIMITED

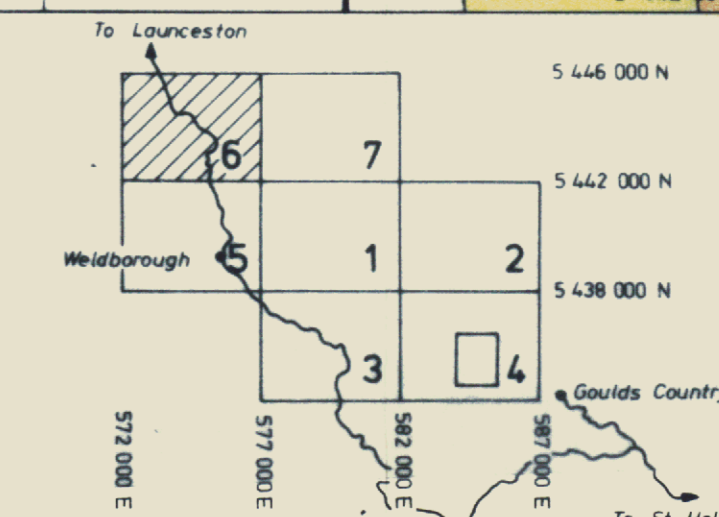
8.2-1792 Ver 2/3

BLUE TIER AREA

Sheet 6 Sn (ppm)

GEOLOGIST	SCALE 1:5000 METRES
DRAUGHTSMAN	0 50 100 200
DATE	
REVISIONS	FIGURE 4E

- 160-250
- 55-160
- less than 55





LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

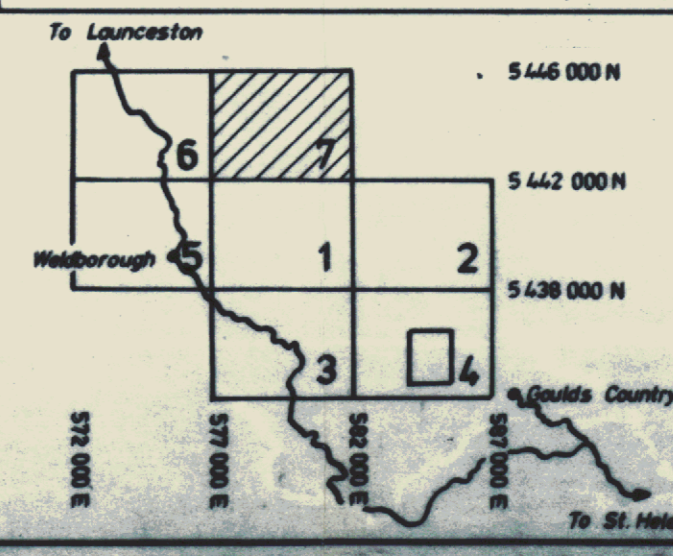
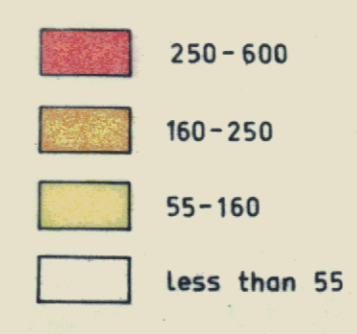
- Dg-p Porcino Adoninite
- Dg-ty Fine grained to porphyritic granite phases (not blue granite)
- Dg-a Ankle Granite (associated with the mineralization of Ankle Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granite - small bodies or dykes
- #.#.# Basic intrusive rocks
- v.v.v Basic volcanic rocks
- Pv Permian quartzite and conglomerate (thin cover over older rocks)
- GG Gneiss
- bs Series of basic rocks (both intrusive and extrusive)
- gpa Series of fine grained to porphyritic granite

OTHER FEATURES

- * Old workings (primary deposit)
- Stripped area (terrestrial or alluvial workings)
- Interpreted geological boundary
- Photo transect



748225

RENISON LIMITED

82-1742 Vol 3/5

BLUE TIER AREA

Sheet 7 Sn (ppm)

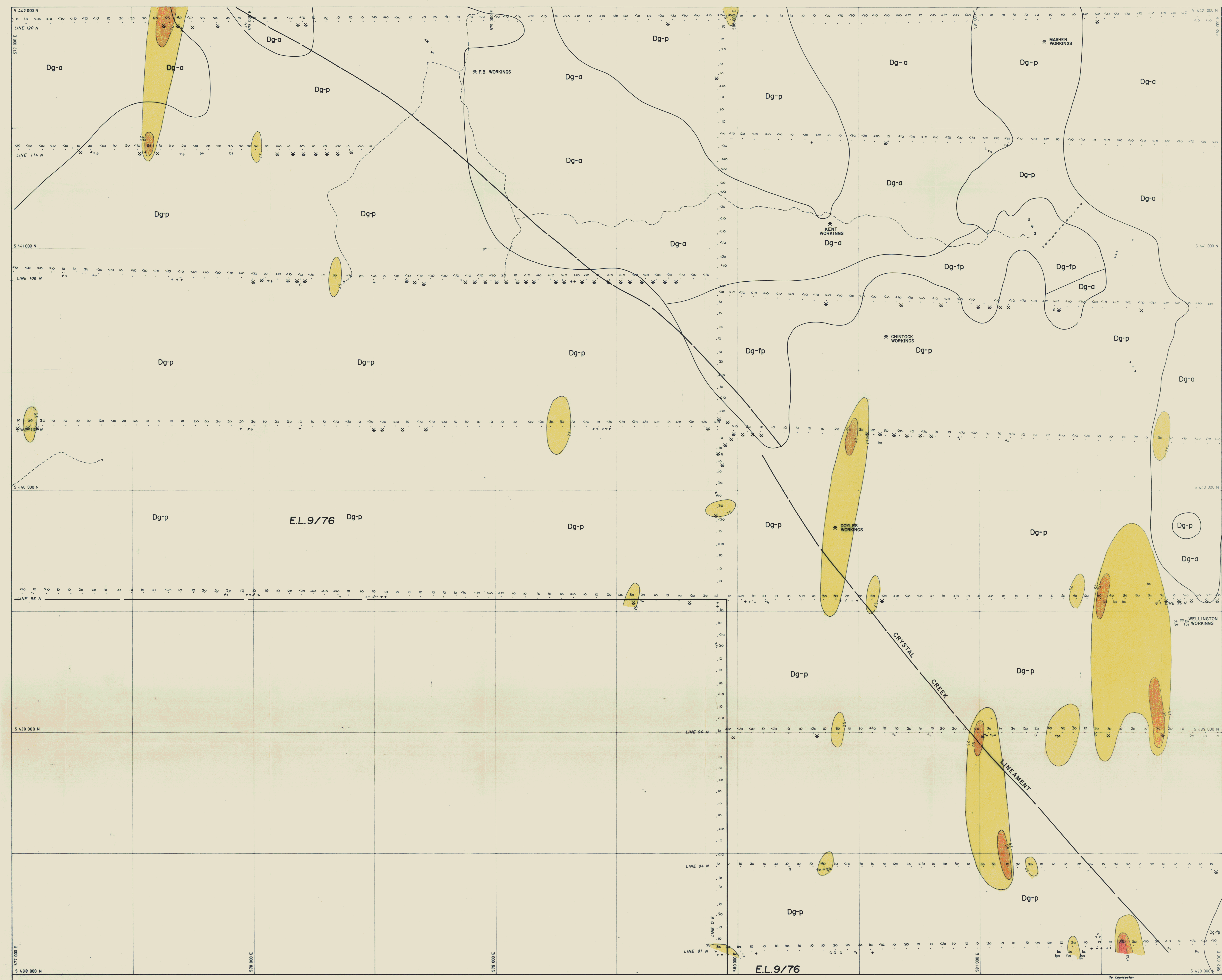
GEOLOGIST : _____ SCALE: 1:5000 METRES

DRAUGHTSMAN : _____

DATE : _____

REVISIONS : _____

FIGURE 4g



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

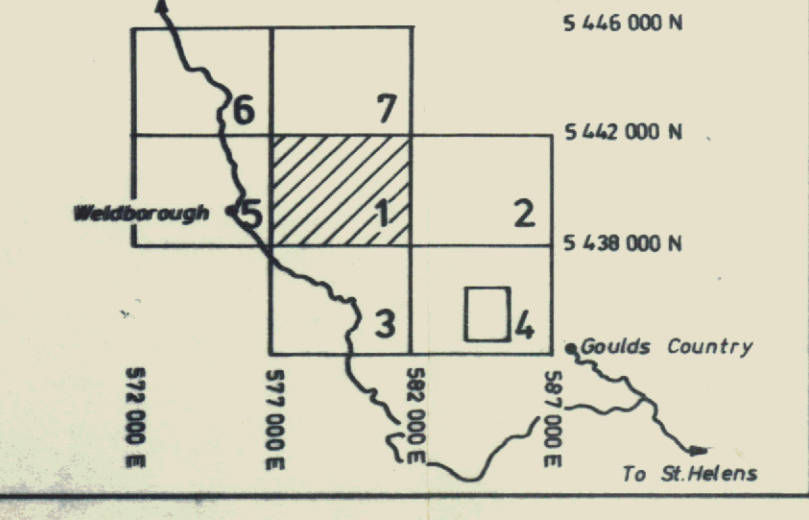
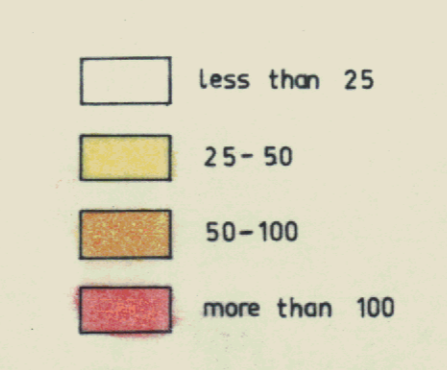
- Dg-p Porphyro Admetite
- Dg-fp Fine grained to porphyritic granite phases (not small granite)
- Dg-a Alkali Granite (associated with mineralization of Andover Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- *** Fine grained or porphyritic granite - small bodies or dykes
- Basic intrusive rocks
- Basic volcanic rocks
- P₁ Permian quartzite and conglomerate (this cover over older rocks)
- G₁ Gneiss
- bs Sore of basic rocks (both intrusive and extrusive)
- fps Sore of fine grained to porphyritic granite

OTHER FEATURES

- Old workings (primary deposit)
- Shaded area (alluvial or silvial workings)
- Interpreted geological boundary
- Photo lineament



748226

RENISON LIMITED

BLUE TIER AREA

Sheet 1 Cu (ppm)

SCALE 1:5000 METRES

GEOLOGIST: _____
 DRAUGHTSMAN: _____
 DATE: _____
 REVISIONS: _____

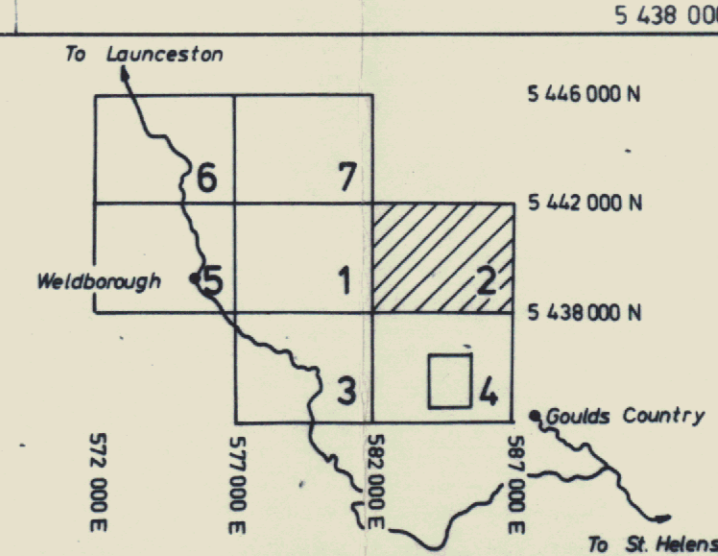
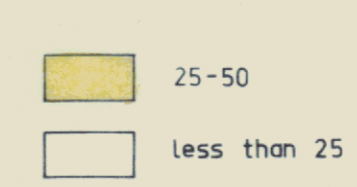
FIGURES 5a



E.L.9/76

E.L.9/76

- LEGEND**
- BLUE TIER BATHOLITH - MAJOR GRANITE TYPES**
- Dg-p Fumano Adonellite
 - Dg-fp Fine grained to porphyritic granite phases (see also granite)
 - Dg-a Alkali Granite (associated with tin mineralization at Anchor Mine)
- MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING**
- +++ Fine grained or porphyritic granite - small bodies or dykes
 - ▲▲▲ Basic intrusive rocks
 - ▽▽▽ Basic volcanic rocks
 - Permian quartzite and conglomerate (thin cover over older rocks)
 - Gneiss
 - ss Sore of basic rocks (both intrusive and extrusive)
 - fps Sore of fine grained to porphyritic granite
- OTHER FEATURES**
- ⊙ Old workings (primary deposit)
 - ⊗ Sluiced area (alluvial or alluvial workings)
 - Interpreted geological boundary
 - Photo lineament



748227

RENISON LIMITED

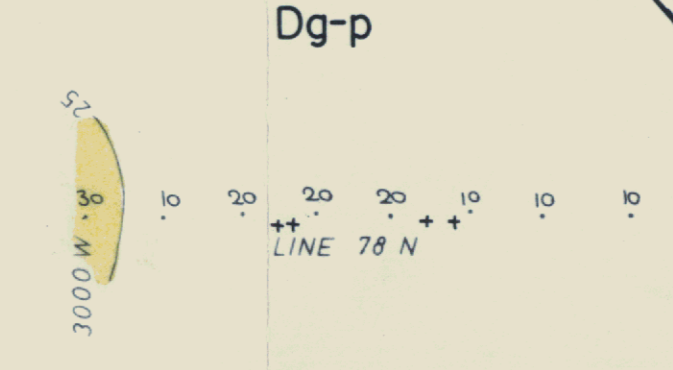
BLUE TIER AREA

Sheet 2 Cu (ppm)

GEOLOGIST	SCALE: 1:5000 METRES
DRAUGHTSMAN	DATE
DATE	REVISIONS
REVISIONS	FIGURE NO.

541 000 E

5 438 000 N
5 437 000 N



LINE 75 N

5 437 000 N

E.L.9/76

LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Poiner Admetite
- Fine grained to porphyritic granites phases (not sheet granites)
- Alkali granites (associated with tin mineralization at higher level)

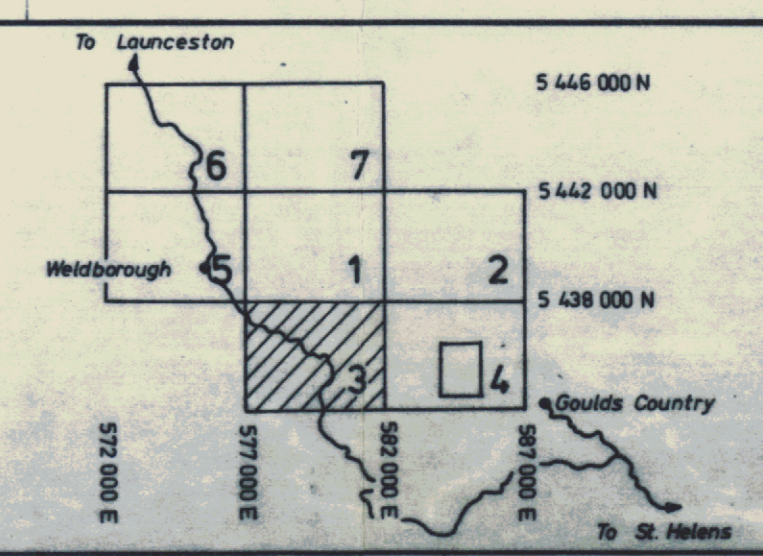
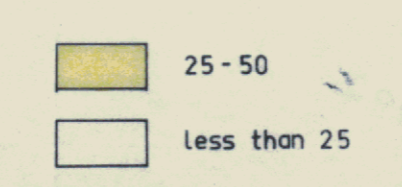
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- Fine grained or porphyritic granites - small bodies or dykes
- Basic intrusive rocks
- Basic volcanic rocks
- Permian quartzite and conglomerate (thin cover over older rocks)
- Gneiss
- Slate of basic rocks (both intrusive and extrusive)
- Slate of fine grained to porphyritic granites

OTHER FEATURES

- Old workings (primary deposit)
- Shaded area (alluvial or alluvial workings)
- Interpreted geological boundary
- Photo lineament

74822S



RENISON LIMITED

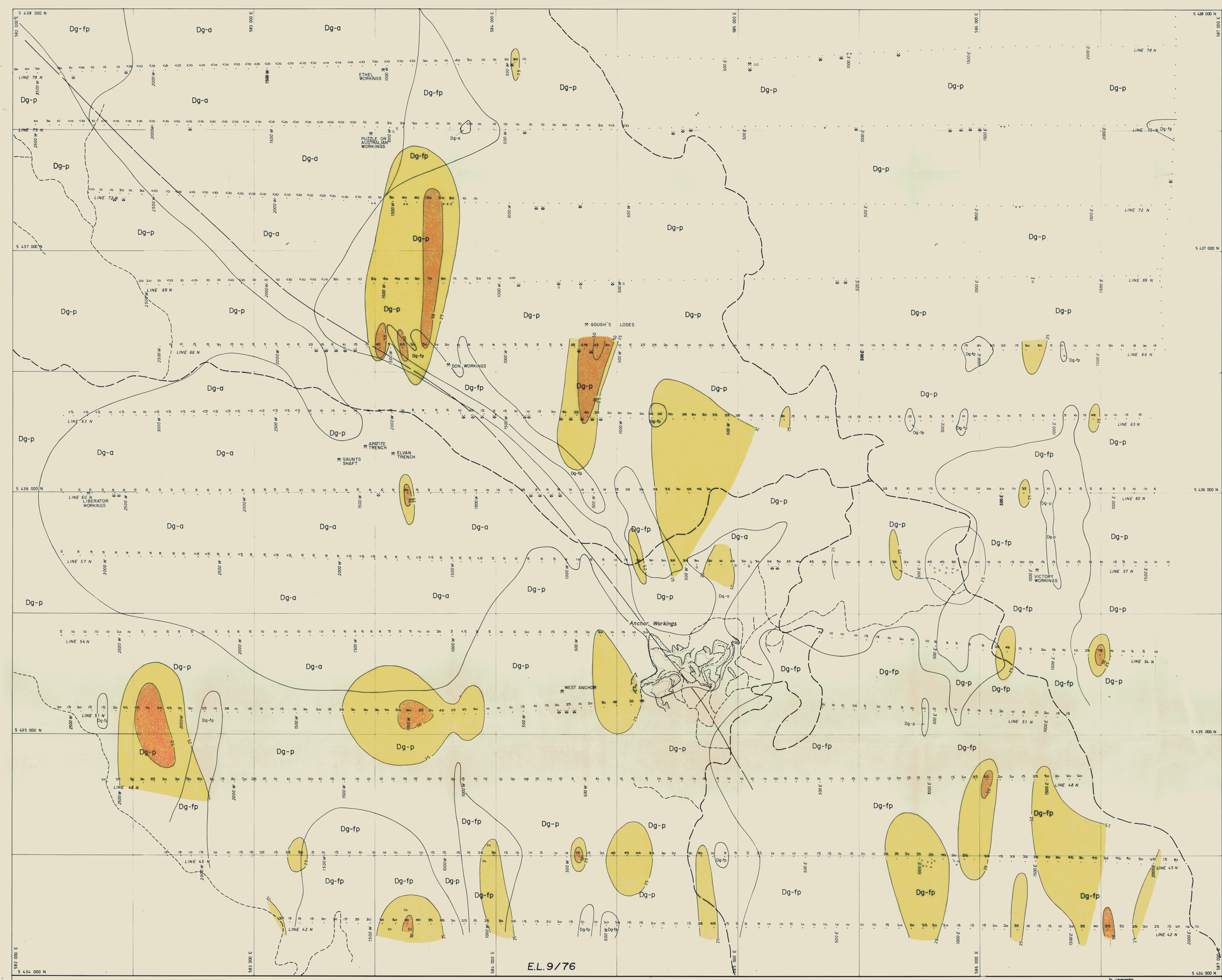
BLUE TIER AREA

Sheet 3 Cu (ppm)

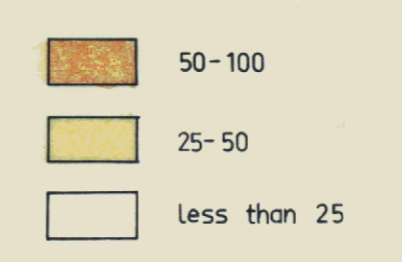
SCALE - 1:5000 METRES

GEOLOGIST :
DRAUGHTSMAN :
DATE :
REVISIONS :

FIGURE 5c



EL 9/76



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-p Permo Admetta
- Dg-fp Fine grained to porphyritic granite phases (see sheet group)
- Dg-a Small granite (associated with tin mineralization at Anchor Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granite - small bodies or dykes
- ▲▲▲ Basic intrusive rocks
- ▲▲▲ Basic volcanic rocks
- P₁ Permian quartzite and conglomerate (thin cover over older rocks)
- GG Gneiss
- bs Sore of basic rocks (both intrusive and extrusive)
- fpa Sore of fine grained to porphyritic granite

OTHER FEATURES

- ▲ Old workings (primary deposit)
- ▲ Staked area (alluvial or staked workings)
- Interpreted geological boundary
- Photo lineament

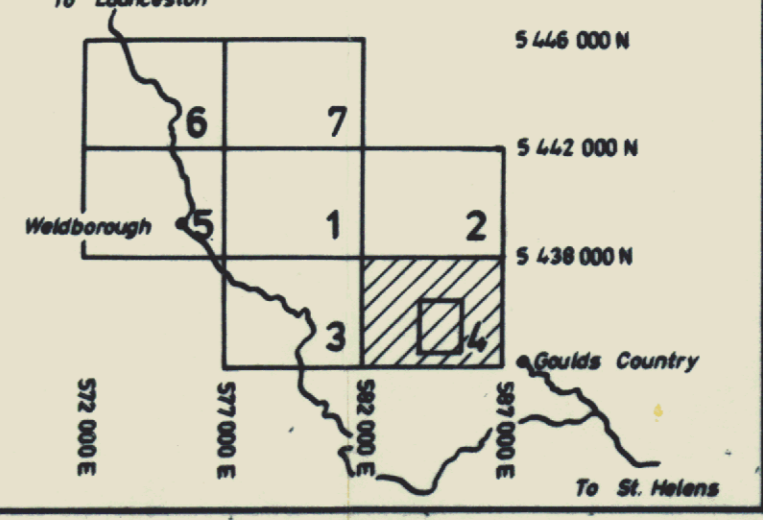
748229

RENISON LIMITED

BLUE TIER AREA

Sheet 4 Cu (ppm)

Geologist	ORALIGHTSMAN	SCALE 1:1000 METRES
Date		
Revisions		



576 000 E

5 442 000 N

Dg-a

LINE 120 N

Dg-a

Dg-p

E.L. 9/76

Dg-p

Dg-p

LINE 96 N

5 439 000 N

WELDBOROUGH

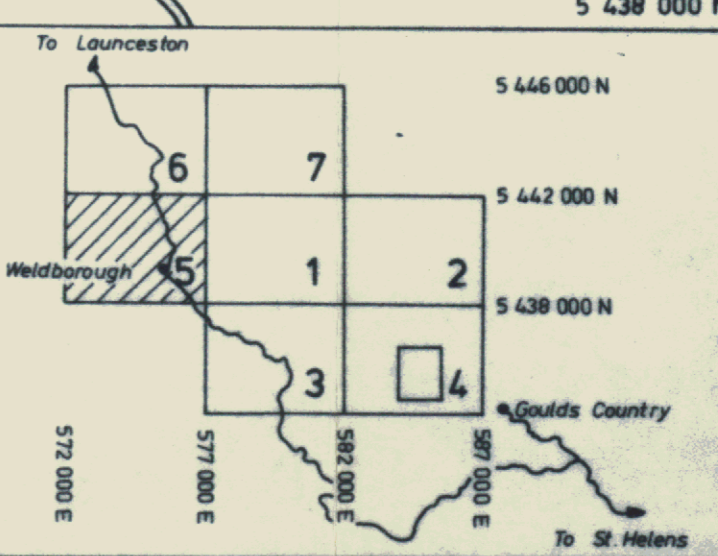
5 438 000 N

576 000 E

577 000 E

- LEGEND**
- BLUE TIER BATHOLITH - MAJOR GRANITE TYPES**
- Dg-p Palenok Adometite
 - Dg-p Fine grained to porphyritic granite phases (see sheet granite)
 - Dg-a Alkali Granite (associated with tin mineralization of Anchor Mine)
- MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING**
- +++ Fine grained or porphyritic granite - small bodies or dikes
 - Basic intrusive rocks
 - Basic volcanic rocks
 - Ps Permian quartzite and conglomerate (thin cover over older rocks)
 - Gr Green
 - bs Some of basic rocks (both intrusive and extrusive)
 - gpa Some of fine grained to porphyritic granite
- OTHER FEATURES**
- Old workings (primary deposit)
 - Staked area (alluvial or alluvial workings)
 - Interpreted geological boundary
 - Photo lineament

- 50-100
- 25-50
- less than 25



748230

RENISON LIMITED

BLUE TIER AREA

Sheet 5 Cu (ppm)

GEOLOGIST: _____ SCALE: 1:5000 METRES

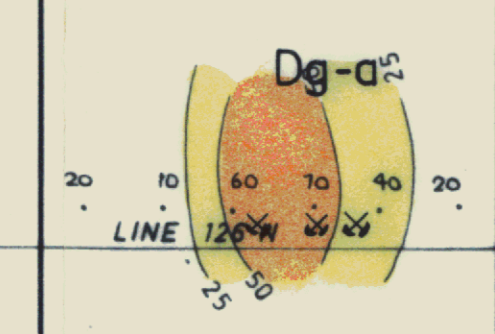
DRAUGHTSMAN: _____

DATE: _____

REVISIONS: _____

FIGURE 5e

5 442 000 N

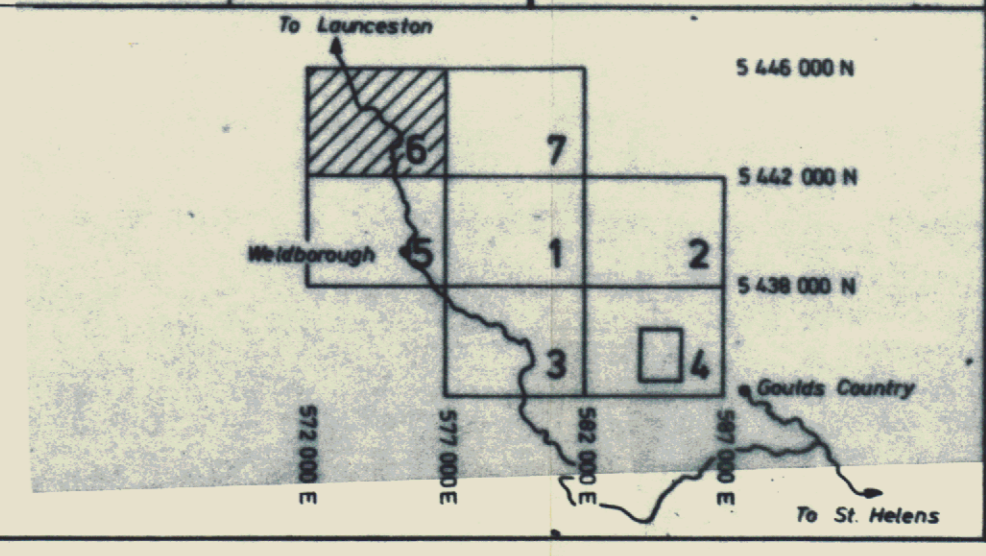
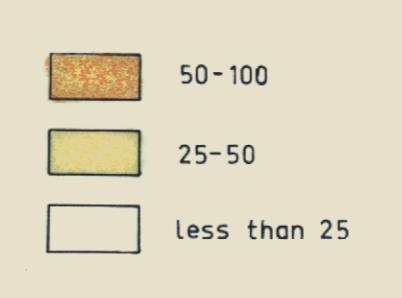


Dg-a
E.L. 9/76

5 442 000 N

5 442 000 E

- LEGEND**
- BLUE TIER BATHOLITH - MAJOR GRANITE TYPES**
- Dg-p Polished Adonellite
 - Dg-tp Fine grained to porphyritic granite phases (not Adonellite granite)
 - Dg-a Adonellite granite (associated with the mineralization of Anchor Mine)
- MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING**
- +++ Fine grained or porphyritic granite - small bodies or dykes
 - Basic intrusive rocks
 - Basic volcanic rocks
 - Permian quartzite and conglomerate (thin cover over older rocks)
 - Greisau
 - Serie of basic rocks (both intrusive and extrusive)
 - Serie of fine grained to porphyritic granite
- OTHER FEATURES**
- Old workings (primary deposit)
 - Staked area (alluvial or stuvial workings)
 - Interpreted geological boundary
 - Photo lineament



748231

RENISON LIMITED

BLUE TIER AREA

Sheet 6 Cu (ppm)

GEOLOGIST: ORLAUGHTSMAN

SCALE: 1:5000 METRES

DATE: _____

REVISIONS: _____

FIGURE 5f



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

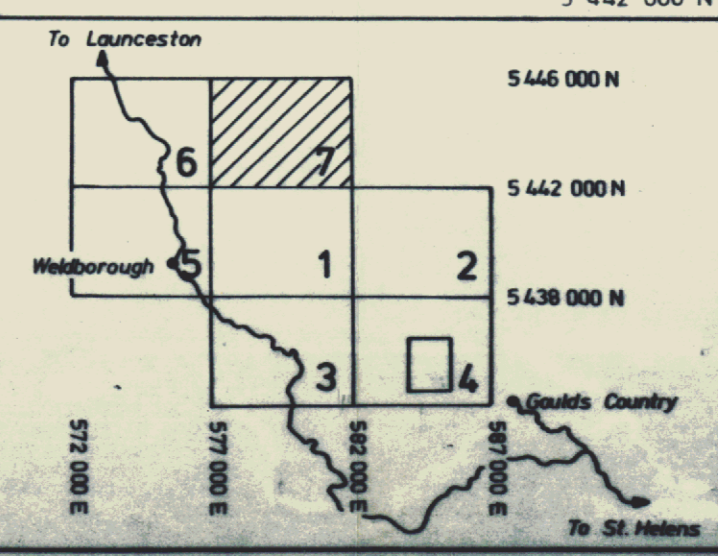
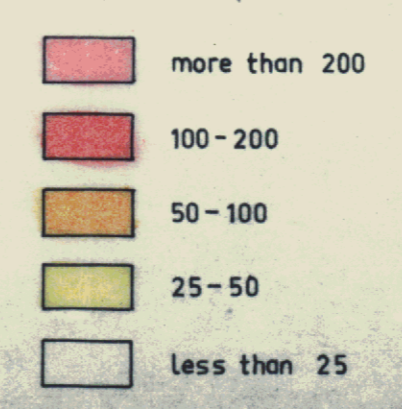
- Dg-p Pomona Adonellite
- Dg-a Fine grained to porphyritic granite phases (not skull granites)
- Dg-s Anhyd granite (associated with its mineralization of Anhyd line)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- *** Fine grained or porphyritic granite - small bodies or dykes
- Basic intrusive rocks
- Basic volcanic rocks
- Pq Permian quartzite and conglomerate (thin cover over older rocks)
- GG Gneiss
- br Series of basic rocks (both intrusive and extrusive)
- fpa Series of fine grained to porphyritic granite

OTHER FEATURES

- Old workings (primary deposits)
- Sluiced area (alluvial or alluvial workings)
- Interpreted geological boundary
- Photo treatment



748232

RENISON LIMITED

BLUE TIER AREA

Sheet 7 Cu (ppm)

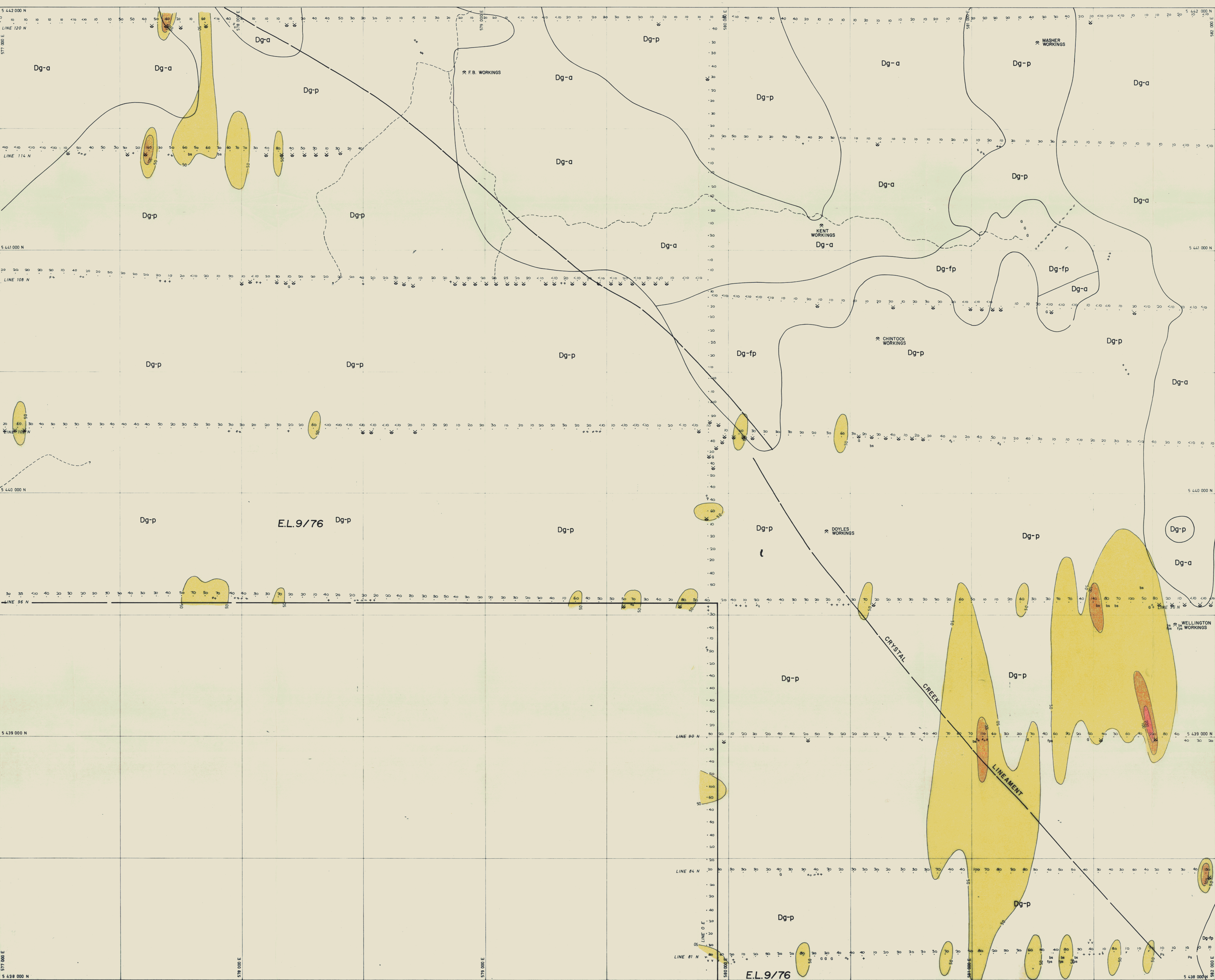
GEOLOGIST: _____ SCALE 1:2000 METRES

DRAUGHTSMAN: _____

DATE: _____

REVISIONS: _____

FIGURE 5c



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-p Porphyro Adenite
- Dg-fp Fine grained to porphyritic granite phases (not small grained)
- Dg-a Adakite Granites (associated with tin mineralization at Sucker Mine)

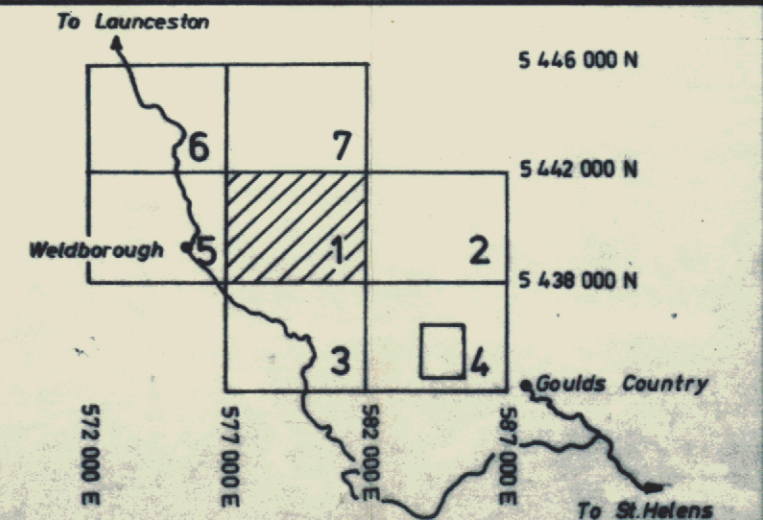
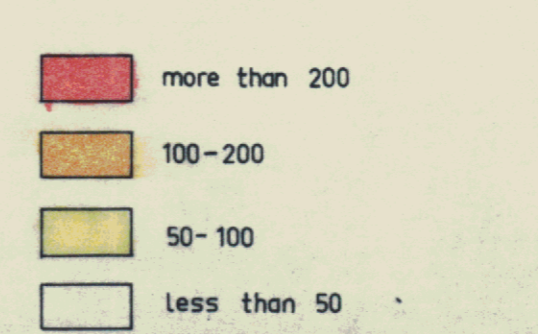
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granite - small bodies or dykes
- ▲▲▲ Basic intrusive rocks
- ▲▲▲ Basic volcanic rocks
- Pz Permian quartzite and conglomerate (thin cover over older rocks)
- GS Gneiss
- bs Sides of basic rocks (both intrusive and extrusive)
- fpa Sides of fine grained to porphyritic granite

OTHER FEATURES

- ⊗ Old workings (primary deposit)
- ⊗ Shaded area (alluvial or eluvial workings)
- Interpreted geological boundary
- Photo lineament

5 cm



748233

RENISON LIMITED

BLUE TIER AREA

SHEET 1 Zn (ppm)

62-1792 v6/3.3

SCALE 1:500 METRES

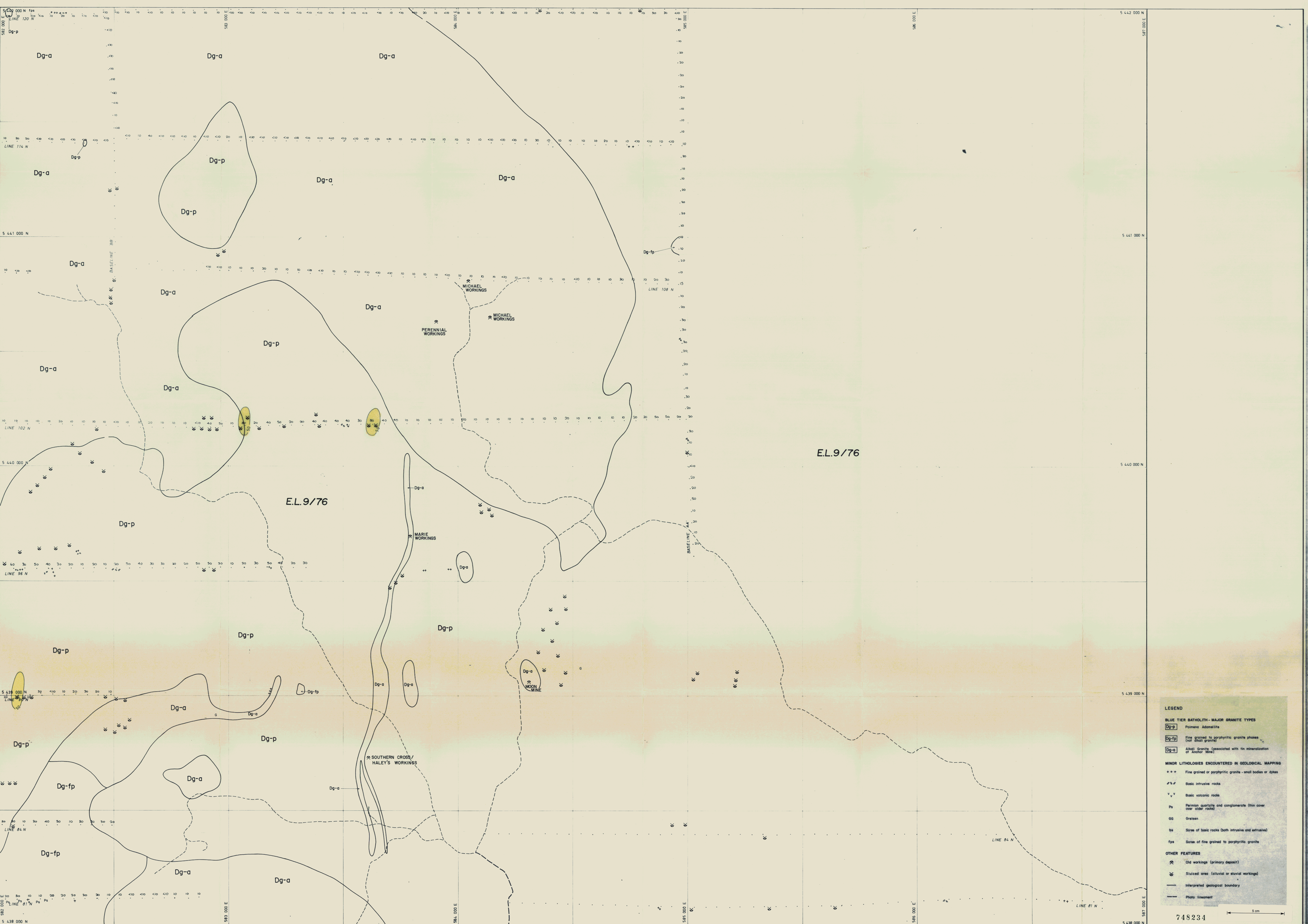
GEOLOGIST:

DRAWN BY:

DATE:

REVISIONS:

FIGURES 6a



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

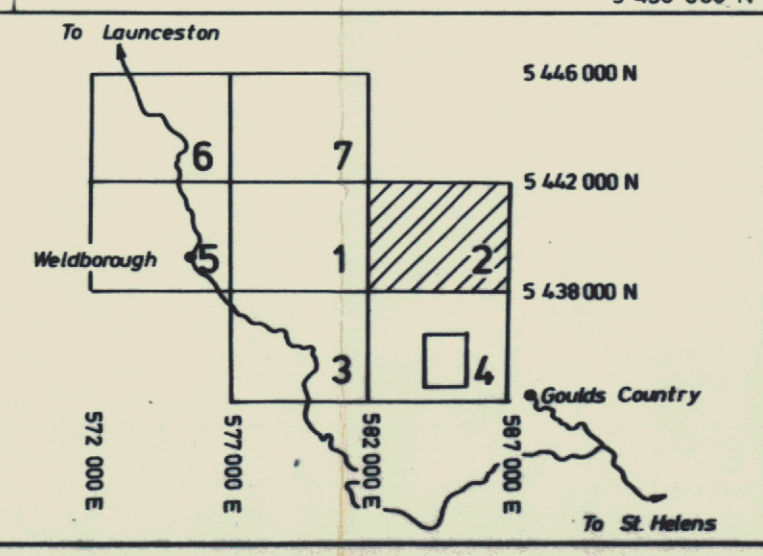
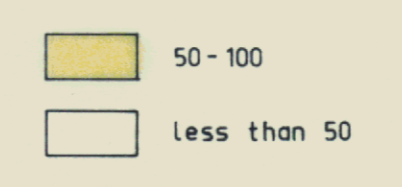
- Dg-p Porphyritic Admetite
- Dg-fp Fine grained to porphyritic granite phases (not shall granite)
- Dg-a Apatite Granite (associated with tin mineralization of Ansook Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granite - small bodies or dikes
- ▲▲▲ Basic intrusive rocks
- ▲▲▲ Basic volcanic rocks
- Pq Permian quartzite and conglomerate (thin cover over older rocks)
- GQ Gneiss
- bb Scales of basic rocks (both intrusive and extrusive)
- fpa Scales of fine grained to porphyritic granite

OTHER FEATURES

- ⊛ Old workings (primary deposit)
- ⊛ Staked area (alluvial or staked workings)
- Interpreted geological boundary
- Photo lineament



748234

RENISON LIMITED

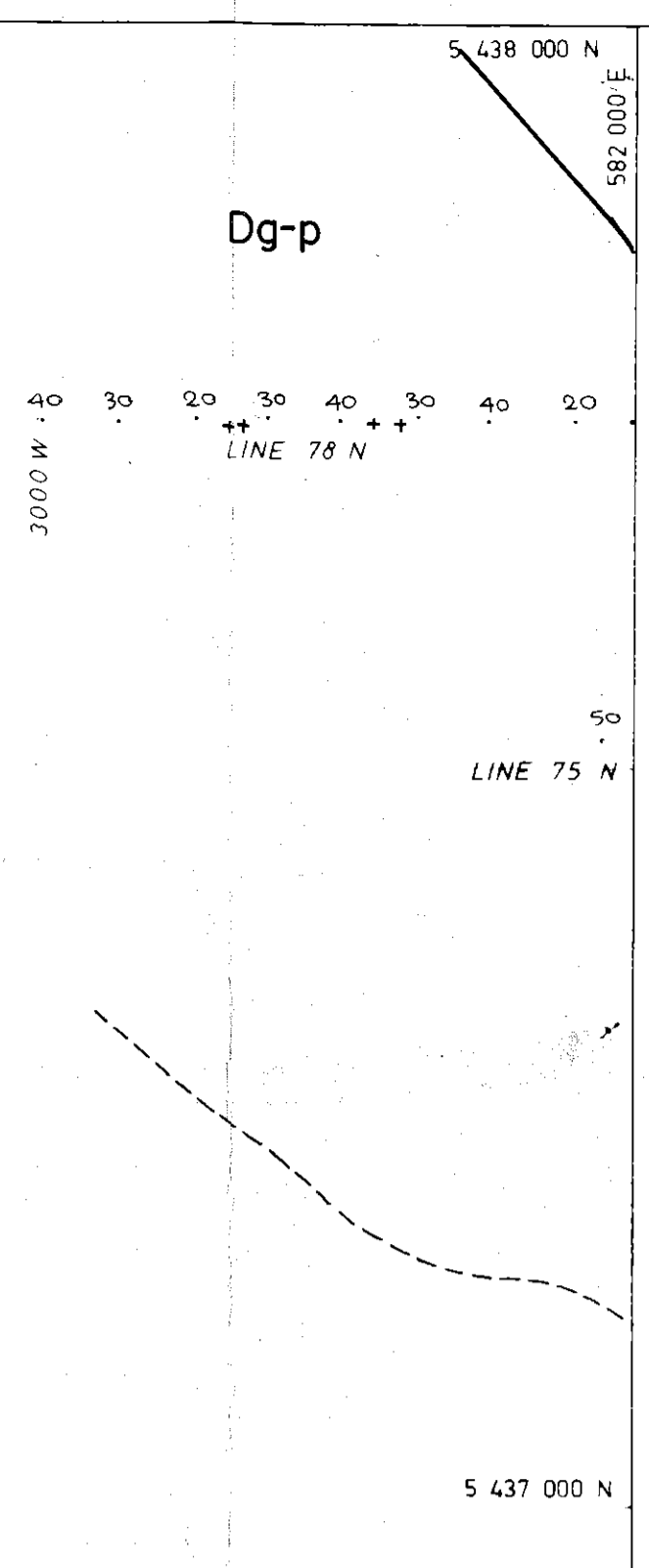
BLUE TIER AREA

Sheet 2 Zn (ppm)

GEOLOGIST	SCALE 1:500 METRES
DRAUGHTSMAN	DATE
REVISIONS	FIGURES 6b

E.L.9/76

591 000 E



LEGEND

BLUE TIER BATHOLYTH - MAJOR GRANITE TYPES

Dg-p Potomac Adzeinite

Dg-fp Fine grained to porphyritic granite phases (and alkali granite)

Dg-a Alkali Granite (associated with the mineralization at Anchor Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

*** Fine grained or porphyritic granite - small bodies or dykes

Basic intrusive rocks

Basic volcanic rocks

Ps Permian quartzite and conglomerate (thin cover over older rocks)

Gs Gneiss

Ss Sore of basic rocks (both intrusive and extrusive)

Sps Sore of fine grained to porphyritic granite

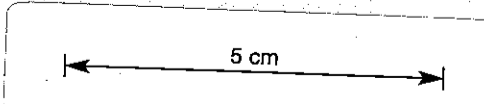
OTHER FEATURES

Old workings (primary deposit)

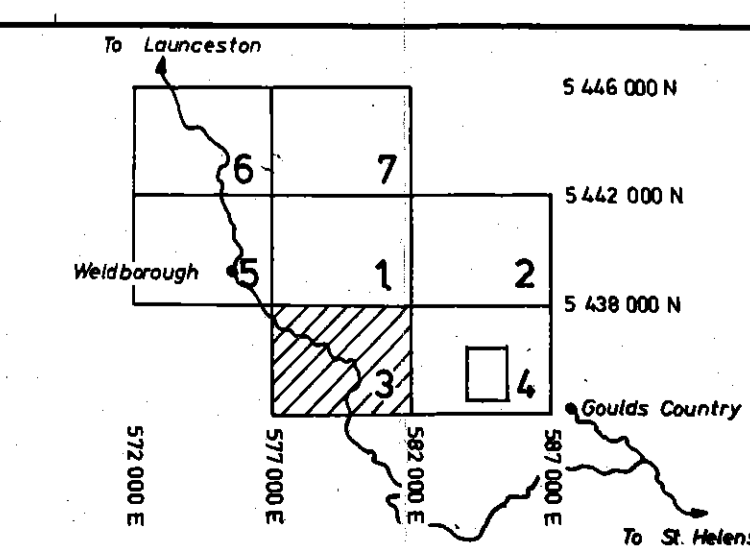
Staked area (alluvial or eluvial workings)

Interpreted geological boundary

Photo lineament



less than 50



745255

RENISON LIMITED

62-1192 Vol 3/3

BLUE TIER AREA

Sheet 3 Zn (ppm)

GEOLOGIST : _____

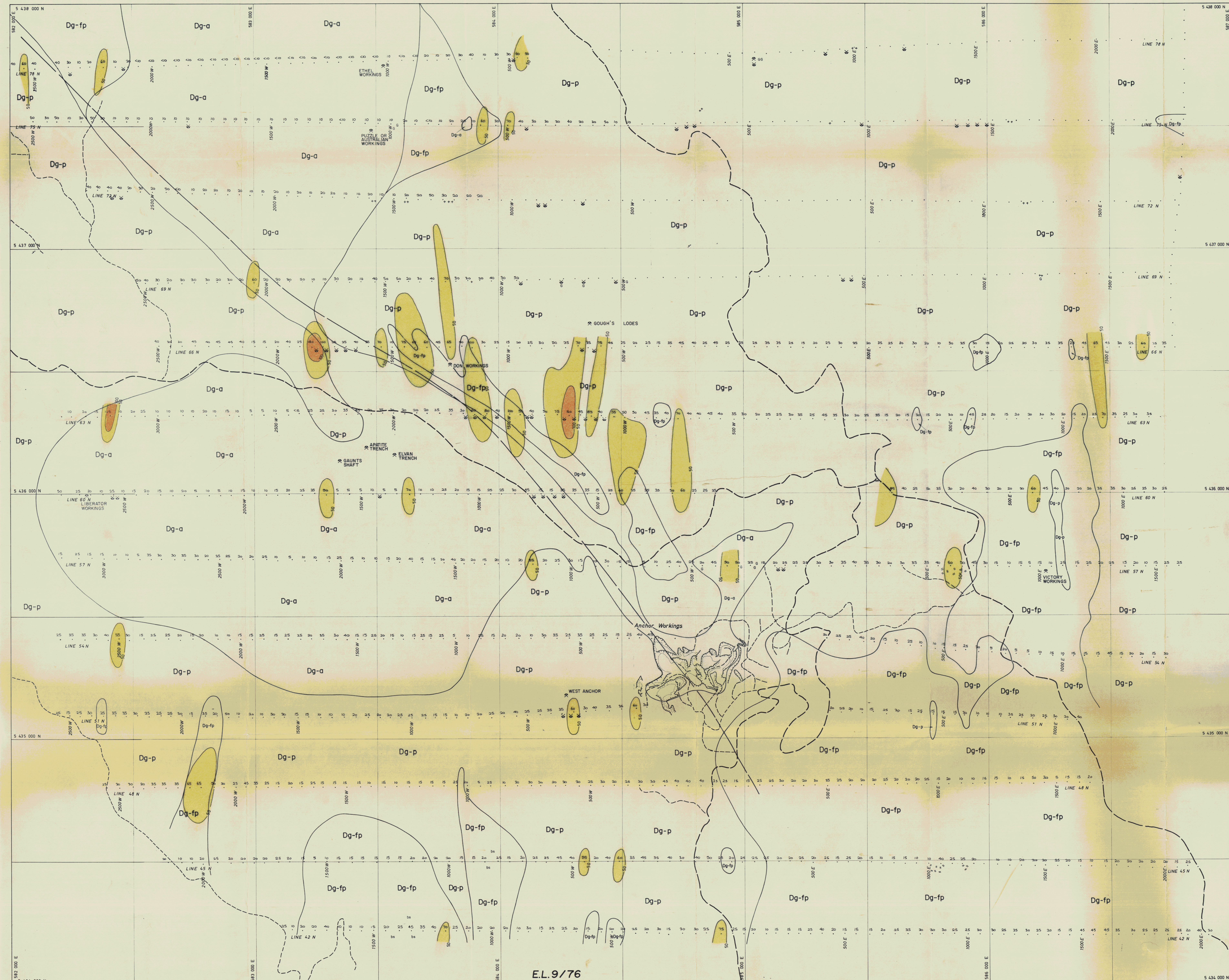
DRAUGHTSMAN : _____

DATE : _____

REVISIONS : _____

SCALE 1:5000 METRES

FIGURE 60



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-a Alkali Granite
- Dg-p Fine grained or porphyritic granite phases (see also granite)
- Dg-fp Alkali Granite (associated with the mineralization of Anchor Mine)

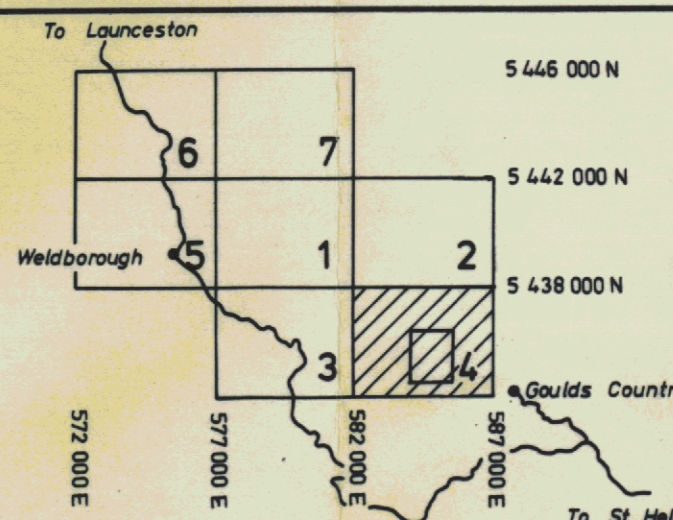
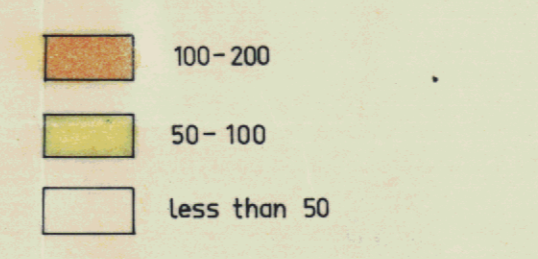
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- *** Fine grained or porphyritic granite - small bodies or dykes
- ††† Basic intrusive rocks
- ††† Basic volcanic rocks
- ††† Permian quartzite and conglomerate (thin cover over older rocks)
- GG Gneiss
- bs Series of basic rocks (both intrusive and extrusive)
- fpz Series of fine grained to porphyritic granite

OTHER FEATURES

- Old workings (primary deposit)
- Sluiced area (alluvial or eluvial workings)
- Interpreted geological boundary
- Photo lineament

E.L.9/76



748236

REVISIONS LIMITED

BLUE TIER AREA

Sheet 4 Zn (ppm)

62-772 Vol 5/3

GEOLOGIST : _____ SCALE 1:5000 METRES

DRAUGHTSMAN : _____

DATE : _____

REVISIONS : _____

FIGURES 6d

576 000 E

5 442 000 N
3000 M
577 000 E

Dg-a

LINE 114 N
3000 M

Dg-a

5 441 000 N

Dg-p

E.L. 9/76

Dg-p

LINE 102 N
3000 M

5 440 000 N

Dg-p

LINE 96 N
3000 M

5 439 000 N

WELDBOROUGH

LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-a Palmyra Adamellite
- Dg-fs Fine grained to porphyritic granite phases (not alkali granite)
- Dg-a Alkali granite (associated with mineralization of Anchor Mine)

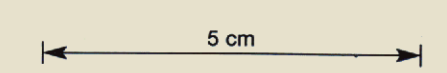
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained to porphyritic granite - small bodies or dykes
- Basic intrusive rocks
- Basic volcanic rocks
- Permian quartzite and conglomerate (thin cover over older rocks)
- Graisen
- Scree of basic rocks (both intrusive and extrusive)
- Scree of fine grained to porphyritic granite

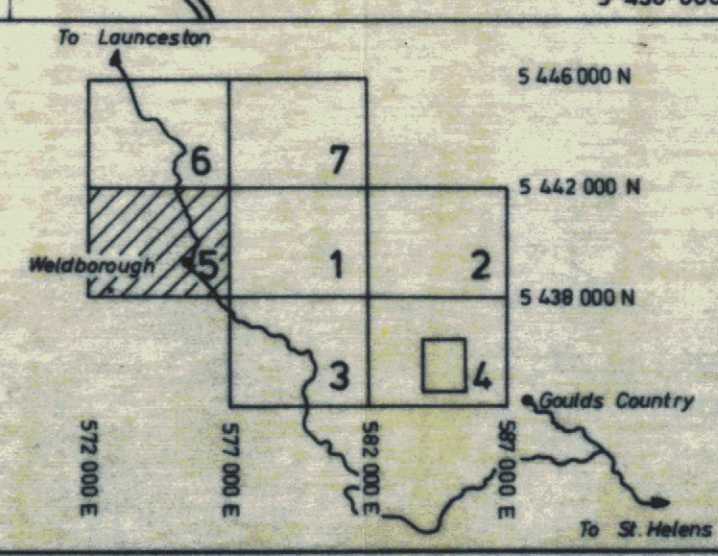
OTHER FEATURES

- Old workings (primary deposit)
- Staked area (alluvial or eluvial workings)
- Interpreted geological boundary
- Photo lineament

748237



- 50-100
- less than 50

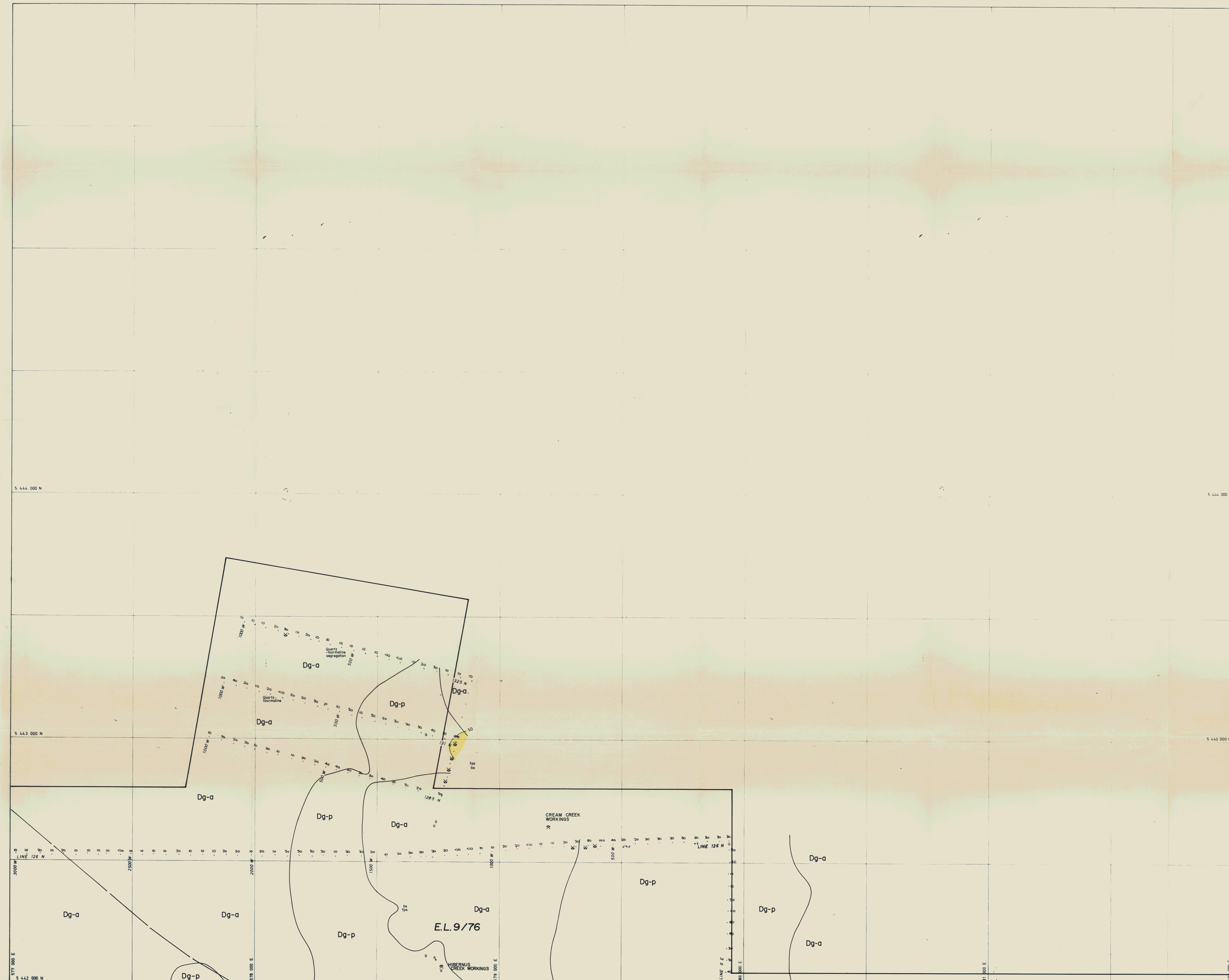


RENISON LIMITED

BLUE TIER AREA

Sheet 5 Zn (ppm)

GEOLOGIST	SCALE 1:5000 METRES
DRAUGHTSMAN	DATE
REVISIONS	



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

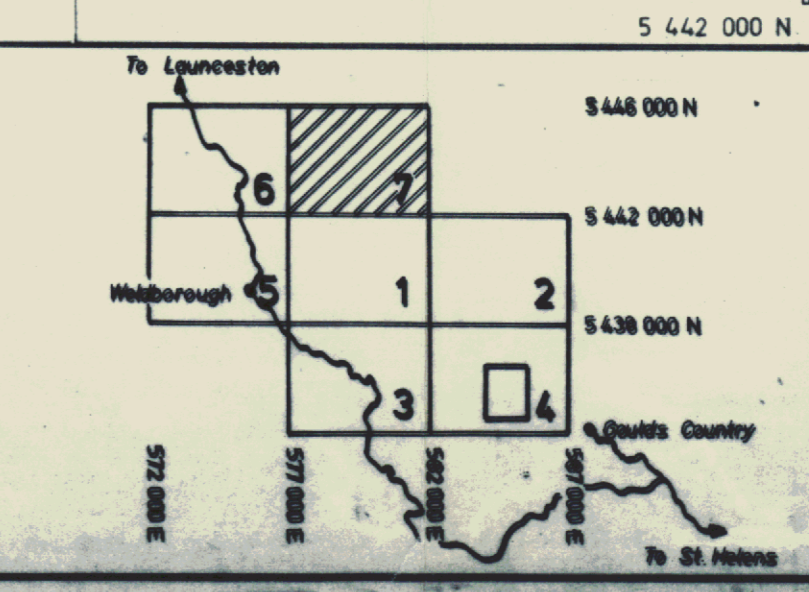
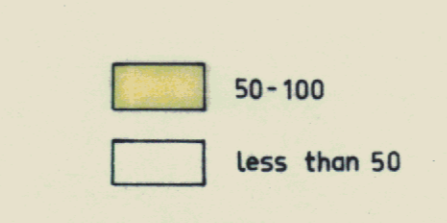
- Dg-p Palomares Admetolite
- Dg-pf Fine grained to porphyritic granite phases (see Small granite)
- Dg-a Alkali granites (associated with tin mineralization at Anchor Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granite - small bodies or dykes
- Basic intrusive rocks
- Basic volcanic rocks
- Porphyry quartzite and conglomerate (thin cover over gneiss rocks)
- Gneiss
- Serie of basic rocks (both intrusive and extrusive)
- Serie of fine grained to porphyritic granite

OTHER FEATURES

- Old workings (primary deposit)
- Sluiced area (alluvial or sluvial workings)
- Interpreted geological boundary
- Photo transect



748239

RENSON LIMITED

BLUE TIER AREA

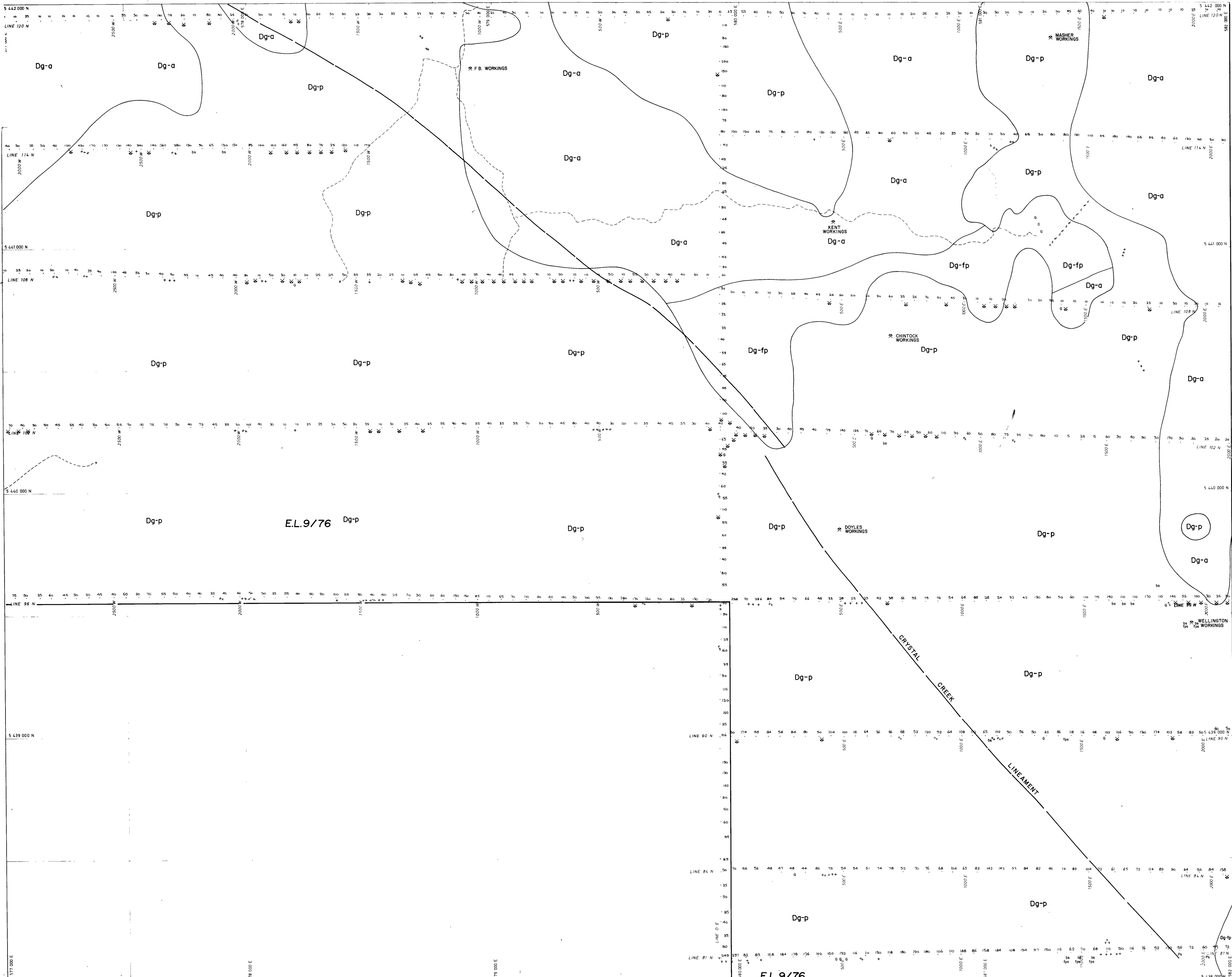
Sheet 7 Zn (ppm)

6.2.1992 Vol. 3/5

GEOLOGIST: []
 DRAUGHTSMAN: []
 DATE: []
 REVISIONS: []

SCALE: 1:5000 METRES

FIGURE 6c



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-p Permitted Admetrite
- Dg-a Blue granite associated with the north-south lineament
- Dg-fp Blue granite associated with the north-south lineament

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL SURVEY

- g.g. Fine grained or porphyritic granite - small bodies or dykes
- g.i. Basic intrusive rocks
- g.s. Gneiss
- g.t. Metasediments
- g.w. Metavolcanic rocks
- g.y. Metagraywacke and conglomerate (blue cover over blue rock)
- g.z. Gneiss
- g.aa. Gneiss of basic rocks (both intrusive and extrusive)
- g.ab. Gneiss of the gneiss to porphyritic granite

OTHER FEATURES

- Workings (primary deposit)
- Workings (secondary deposit)
- Workings (tertiary deposit)
- Workings (quaternary deposit)
- Workings (unclassified)

748240

5cm

RENISON LIMITED

BLUE TIER AREA

Sheet 1 Sol. F (ppm)

GEOLOGIST _____ **SCALE** 1:5000 METRES

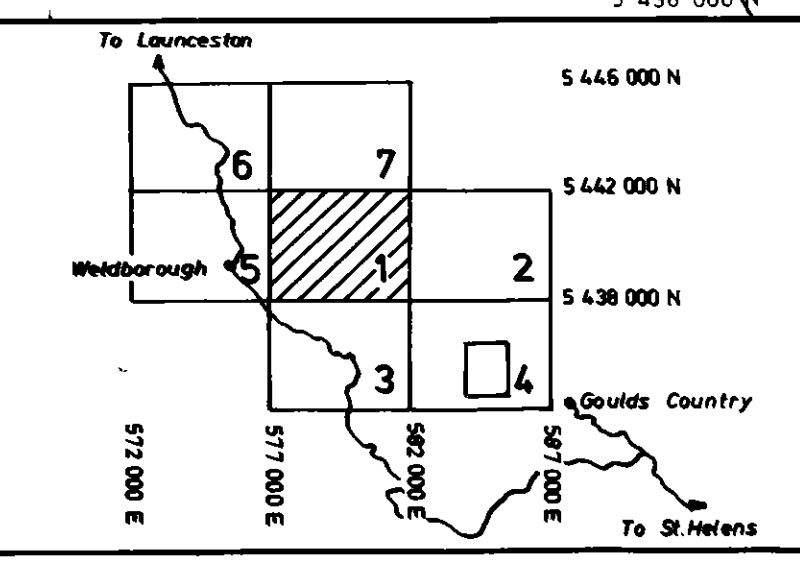
DRAUGHTSMAN _____

DATE _____

REVISIONS _____

DRAWING No. _____

PAGES 7a



58 000 E

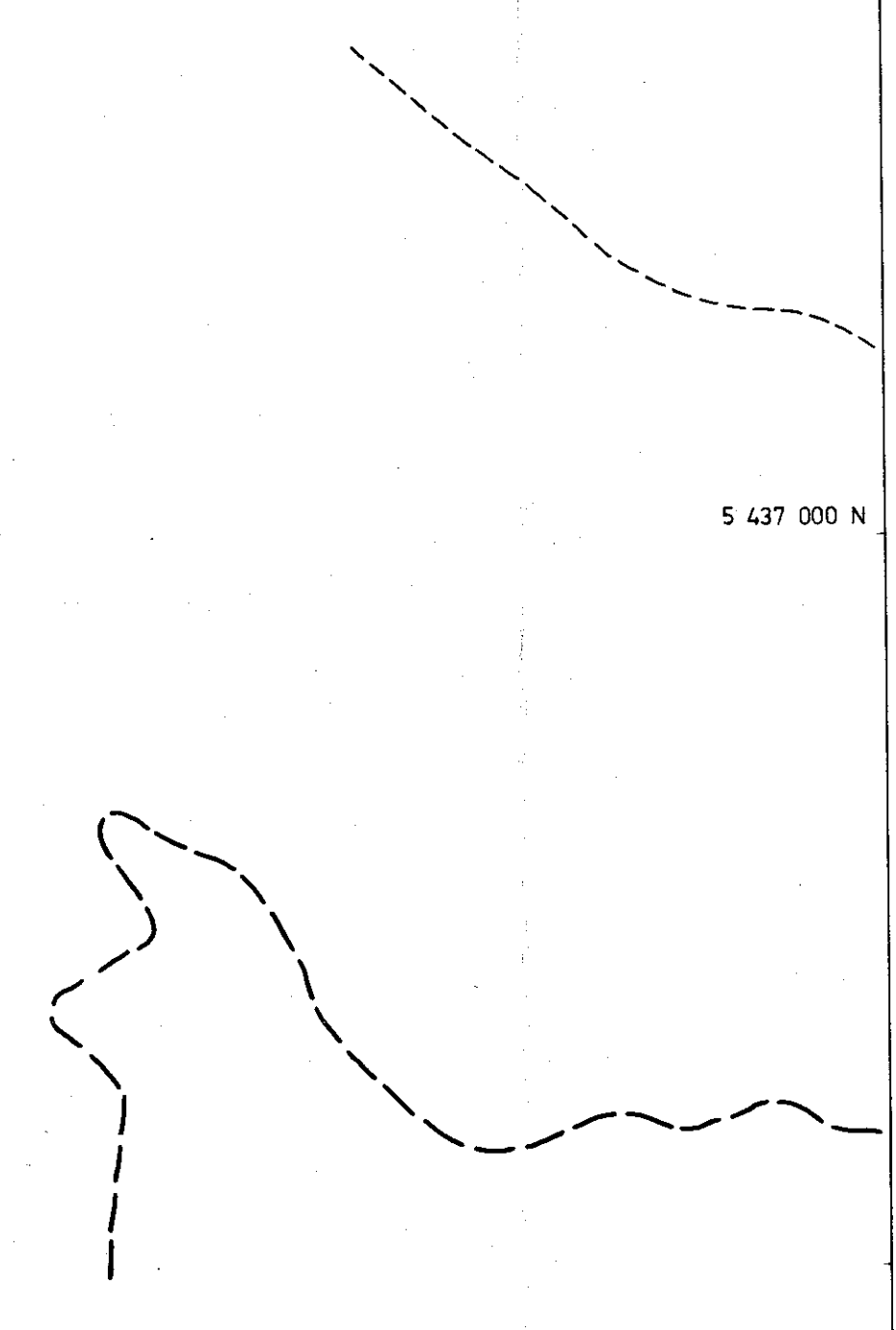
5 438 000 N
SECTION

Dg-p

30000 N 75 75 75 75 75 75 75 75 75 75
LINE 76 N

150
LINE 75 N

5 427 000 N



E.L.9/76

LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-1** Felsic Adamellite
- Dg-2** Fine grained to porphyritic granite phases
- Dg-3** Alkal. Granite (associated with the mineralization of "Blue" zone)

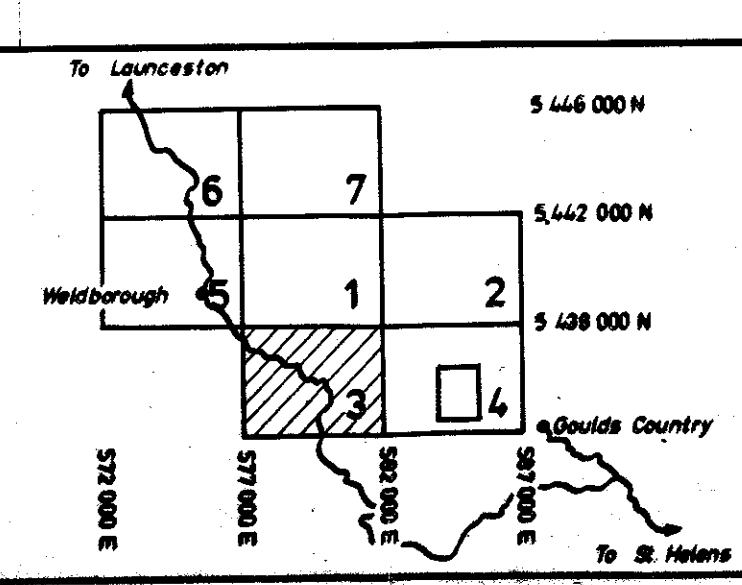
OTHER LITHOLOGIES ENCOUNTERED IN GEOLOGICAL SURVEY

- *** Fine grained or porphyritic granite - small bodies or dykes
- ▲▲▲ Basic intrusive rocks
- ▲▲▲ Basic volcanic rocks
- ▲▲▲ Peridotite and conglomerate thin over layer basic rocks
- Green
- Gneiss of basic rocks (both intrusive and extrusive)
- Gneiss of the gneiss to porphyritic granite

OTHER FEATURES

- Old workings (primary deposit)
- Shaded area (shaded in aerial photographs)
- Interpreted geological boundary
- Photo boundary

748242 5cm



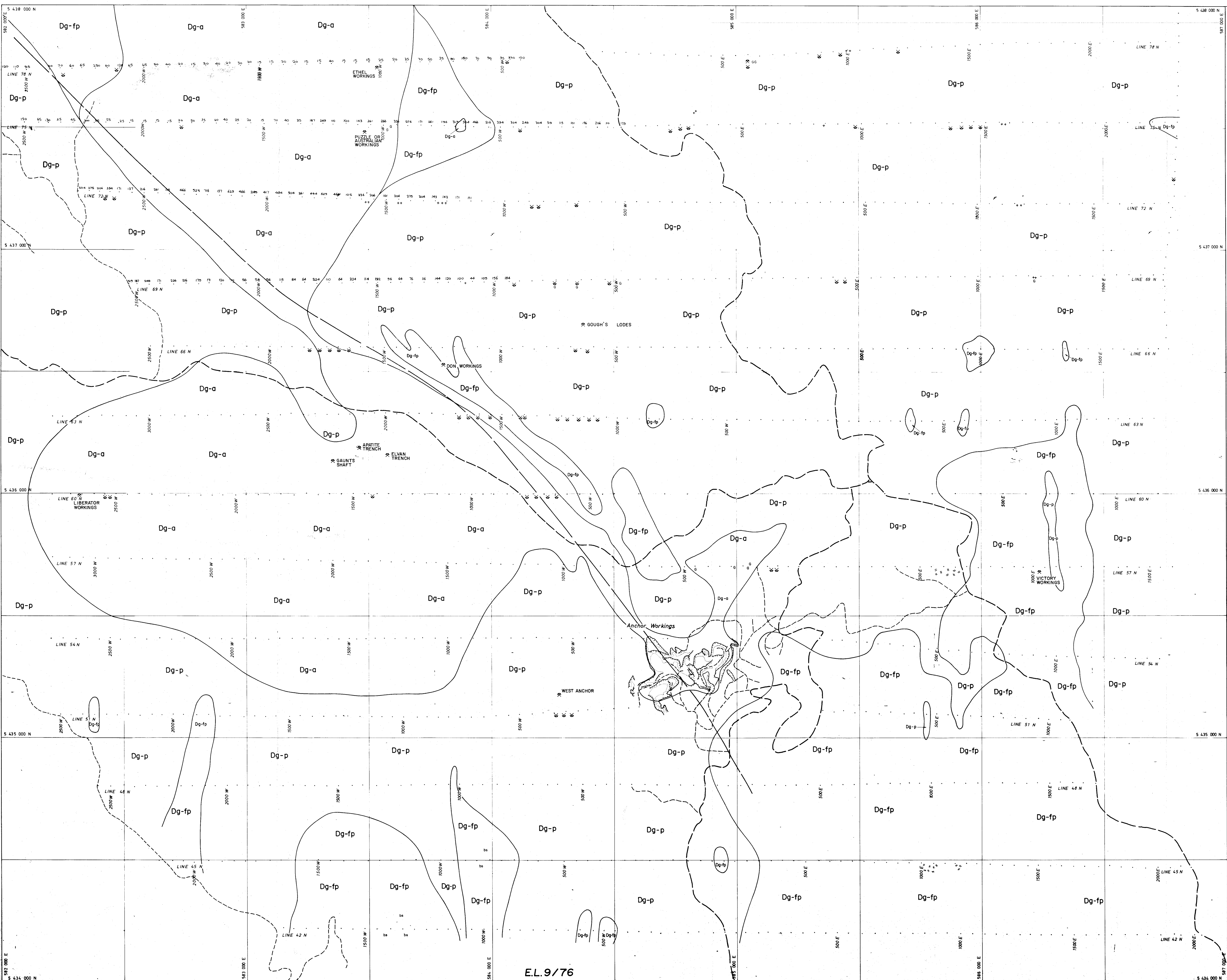
RENISON LIMITED

9.2-792 Vol 3/3

BLUE TIER AREA

Sheet 3 Sol. F. (ppm)

GEOLOGIST	SCALE 1:500 METRES
DRAUGHTSMAN	0 50 100
DATE	
REVISIONS	DRAWING No.
	FIGURE To



LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-p Plagioclase Anorthosite
- Dg-fp Fine grained to porphyritic granite phases and small granites
- Dg-a Small granites (associated with the mineralization at Anchor Mine)

MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- *** Fine grained or porphyritic granite - small bodies or dykes
- g.g. Basic intrusion rocks
- g.v. Basic volcanic rocks
- g.c. Permian quartzite and conglomerates (that cover over older rocks)
- g. Green
- g.s. Sand of basic rocks from intrusion and gill-waves
- g.f. Sand of fine grained to porphyritic granites

OTHER FEATURES

- W Workings (primary mine)
- S Shaded area (shown in white on photograph)
- I Interpreted geological boundary
- P Main Road

745243

RENISON LIMITED

BLUE TIER AREA

Sheet 4 Sol. F (ppm)

22-1792 Vol 5/3

SCALE 1:500 METRES

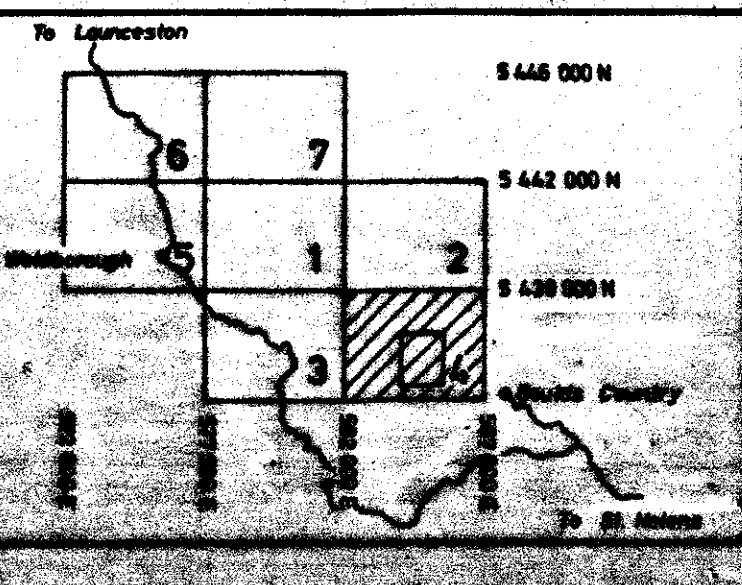
GEOLOGIST _____

DRAWN BY _____

DATE _____

REVISIONS

FIGURE 7d





LEGEND

BLUE TIER BATHOLITH - MAJOR GRANITE TYPES

- Dg-a** Pomona Adamellite
- Dg-p** Fine grained to porphyritic granite phases (not alkali granite)
- Dg-q** Alkali granite (associated with tin mineralization or anchor mine)

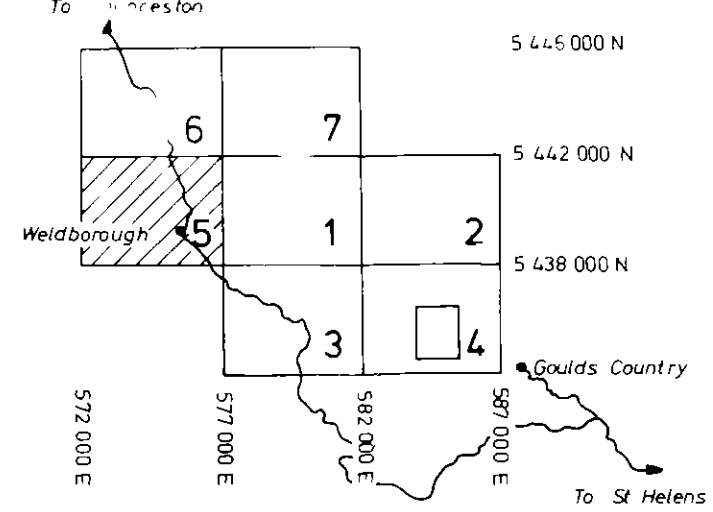
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- +++ Fine grained or porphyritic granite - small bodies or dykes
- Basic intrusive rocks
- Basic volcanic rocks
- Pq Permin quartzite and conglomerate (thin cover over older rocks)
- Gr Green
- bs Sore of basic rocks (both intrusive and extrusive)
- fsa Sore of fine grained to porphyritic granite

OTHER FEATURES

- Old workings (primary deposit)
- Staked area (alluvial or eluvial workings)
- Interpreted geological boundary
- Photo lineament

748244



RENISON LIMITED

BLUE TIER AREA

Sheet 5 Sol. F (ppm)

GEOLOGIST _____ SCALE 1:5000 METRES

DRAUGHTSMAN _____

DATE _____

REVISIONS _____

DRAWING No. _____

FIGURES 7a

5 443 000 N

5 442 000 N

5 442 000 N

5 438 000 N

5 438 000 N

5 438 000 N

5 438 000 N

5 438 000 N

5 438 000 N

5 438 000 N

5 438 000 N

5 438 000 E

Dg-a

50 25 50 45 70

LINE 1200m

Dg-a

E.L. 9/76

5 438 000 E

- LEGEND**
- BLUE TIER BATHOLITH - MAJOR GRANITE TYPES**
- Dg-p Palmaro Admetite
 - Dg-fp Fine grained to porphyritic granite phases (not alkali granite)
 - Dg-a Alkali Granite (associated with the mineralization of Anchor Mine)
- MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING**
- Fine grained or porphyritic granite - small bodies or dykes
 - ▲▲▲ Basic intrusive rocks
 - ▲▲▲ Basic volcanic rock
 - PA Palmaro quartzite and conglomerate (thin cover over older rocks)
 - GG Gneiss
 - bx Sill of basic rock (both intrusive and extrusive)
 - fpa Sill of fine grained to porphyritic granite
- OTHER FEATURES**
- ⚡ Old workings (primary deposit)
 - ⚡ Staked area (alluvial or eluvial workings)
 - Interpreted geological boundary
 - Photo lineament

748245

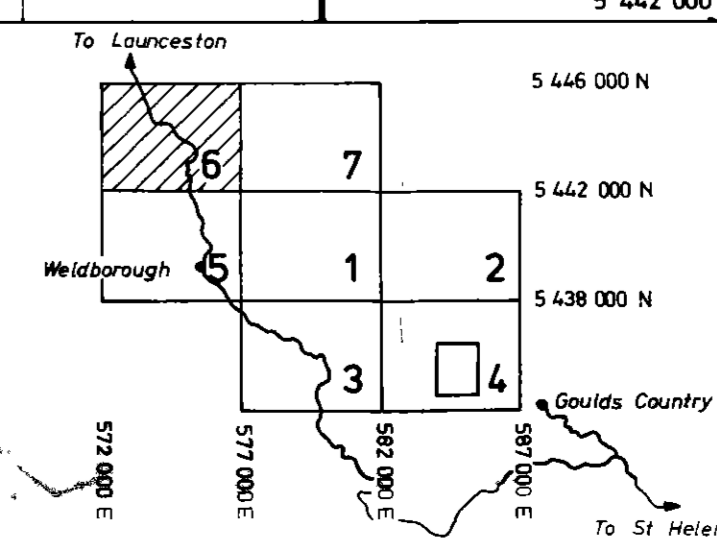
RENISON LIMITED

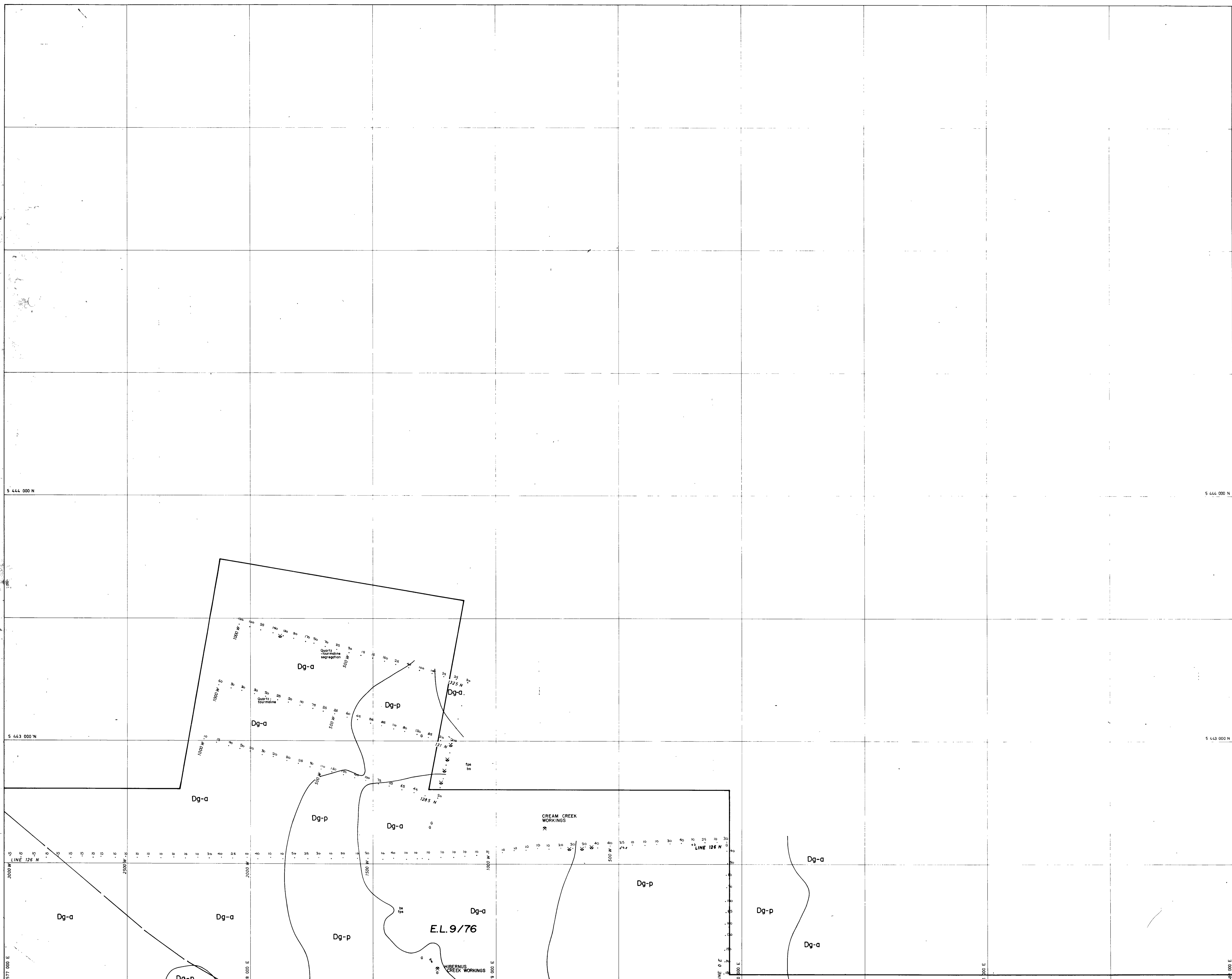
748245

BLUE TIER AREA

Sheet 6 Sol. F (ppm)

GEOLOGIST	SCALE 1:5000 METRES
DRAUGHTSMAN	10 0 100 200
DATE	
REVISIONS	DRAWING No
	FIGURES 7F





LEGEND

BLUE TIER BATHOLY-MAJOR GRANITE TYPES

- Dg-a Admetus
- Dg-p Pelona Admetus

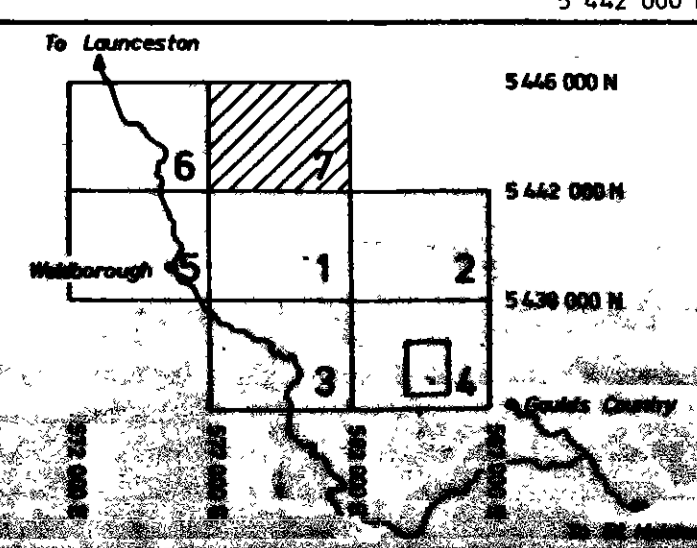
MINOR LITHOLOGIES ENCOUNTERED IN GEOLOGICAL MAPPING

- Fine grained or porphyritic granite - small bodies or dikes
- Basic intrusive rocks
- Basic volcanic rocks
- Porous quartzite and conglomerate (fine grained)
- Gneiss
- Gneiss of basic rocks (both intrusive and extrusive)
- Gneiss of fine grained to porphyritic granites

OTHER FEATURES

- Old workings (primary deposit)
- Surface water (stream or dike channel)
- Topographic contour boundary
- Peak (isolated)

748246



RENISON LIMITED

BLUE TIER AREA Vol. 3/5

Sheet 7 Sol. F (p.p.m.)

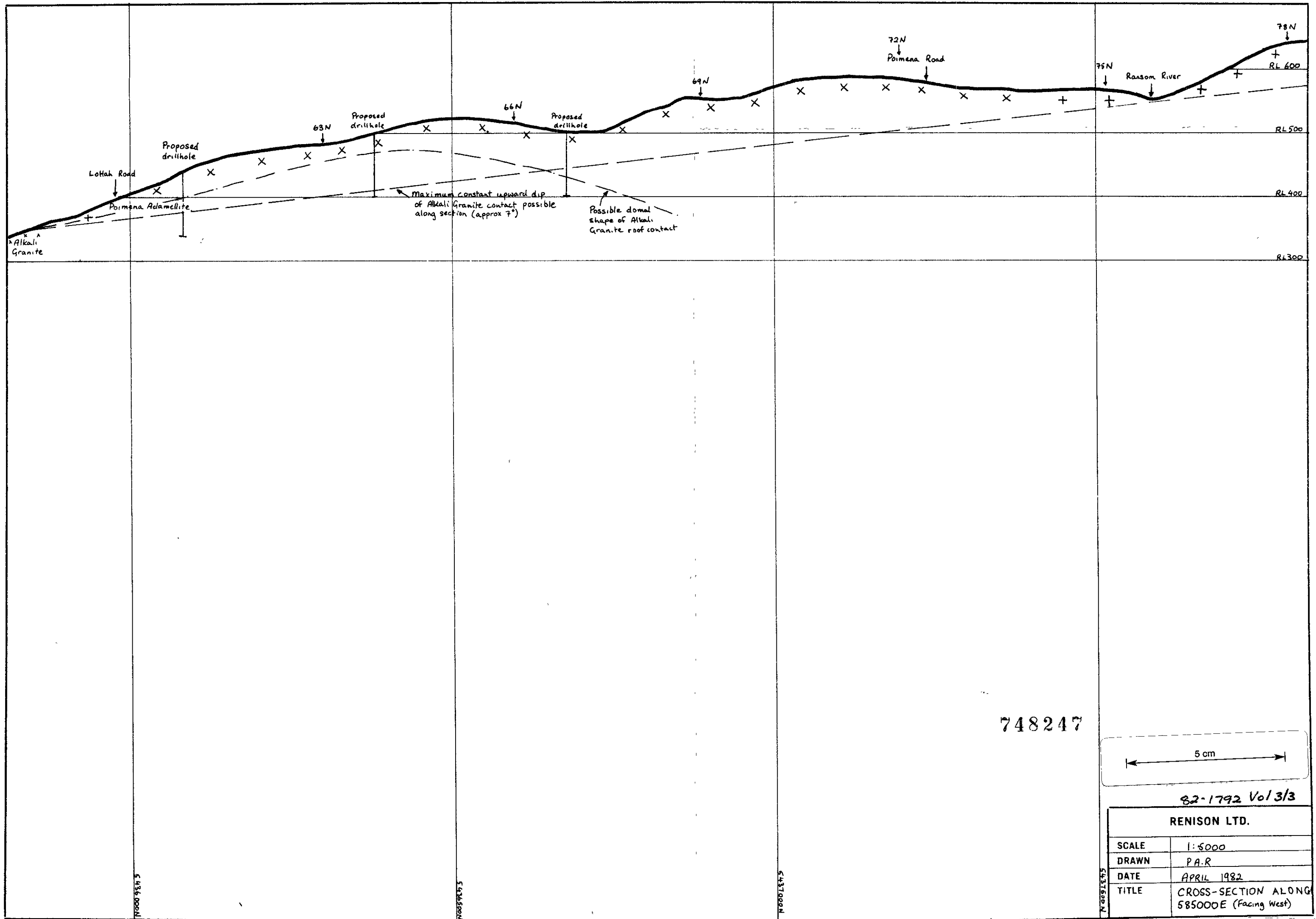
GEOLOGIST: _____ **SCALE:** 1:500 METRES

DRAWN BY: _____

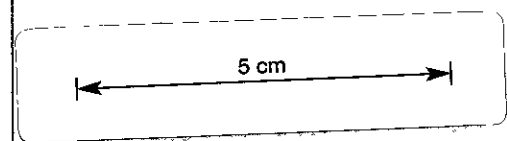
DATE: _____

REVISIONS: _____

FIGURE 76



748247



82-1792 Vol 3/3

RENISON LTD.

SCALE	1:5000
DRAWN	P.A.R.
DATE	APRIL 1982
TITLE	CROSS-SECTION ALONG 585000E (Facing West)