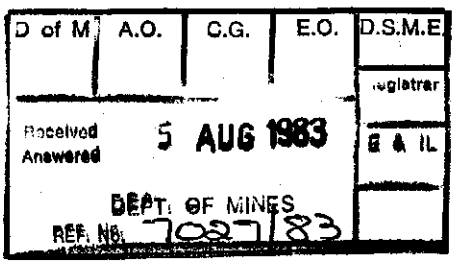
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GOLD FIELDS EXPLORATION PTY. LIMITED

537001

E.L. 17/77 WILSON RIVER AREA

ANNUAL REPORT, MAY 1983



OPEN FILE

MICROFILMED

By: A.J. Cartwright
Geologist

May, 1983

Copies to: G.F.E.L. (2)
Mines Department (1)

MICROFILMED

AMG REFERENCE POINTS ADDED

SUMMARY

The summer field season on E.L. 17/77 was completed in January-March 1983. The results of the I.P. survey completed on the Laurel Creek East grid were not particularly encouraging, however the other geophysical technique used, magnetics, proved most successful in distinguishing anomalous areas on both the Laurel Creek Grids. Power auger sampling was used for the first time in this area and good geochemical results were obtained at Laurel Creek from the power auger samples. At Little Wilson River however, the results were disappointing. Brief geological reconnaissances were made over Tadpole Hill and the Alfred River areas.

A combined magnetic/geochemical anomaly map over the Laurel Creek grids has been made, based on the anomaly compilation of last season and the results obtained this season. Also the regional geology has been re-evaluated using these results. The anomalies with the greatest potential representing stanniferous magnetite skarns occur in the Gordon Limestone where it contacts the Meredith Granite. Proposals for exploration on E.L. 17/77 next season (1983/84) include the drilling of these targets, limited gridding, power auger sampling and ground magnetics at Laurel Creek, geological mapping and sampling at Tadpole Hill, Little Wilson River and the Alfred River, and stream sediment sampling in the centre of the Huskisson Syncline. This programme, which includes six drill holes totalling 600m will be almost totally helicopter supported and is estimated to cost $113,700.

537003

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GOLD FIELDS EXPLORATION PTY. LIMITED

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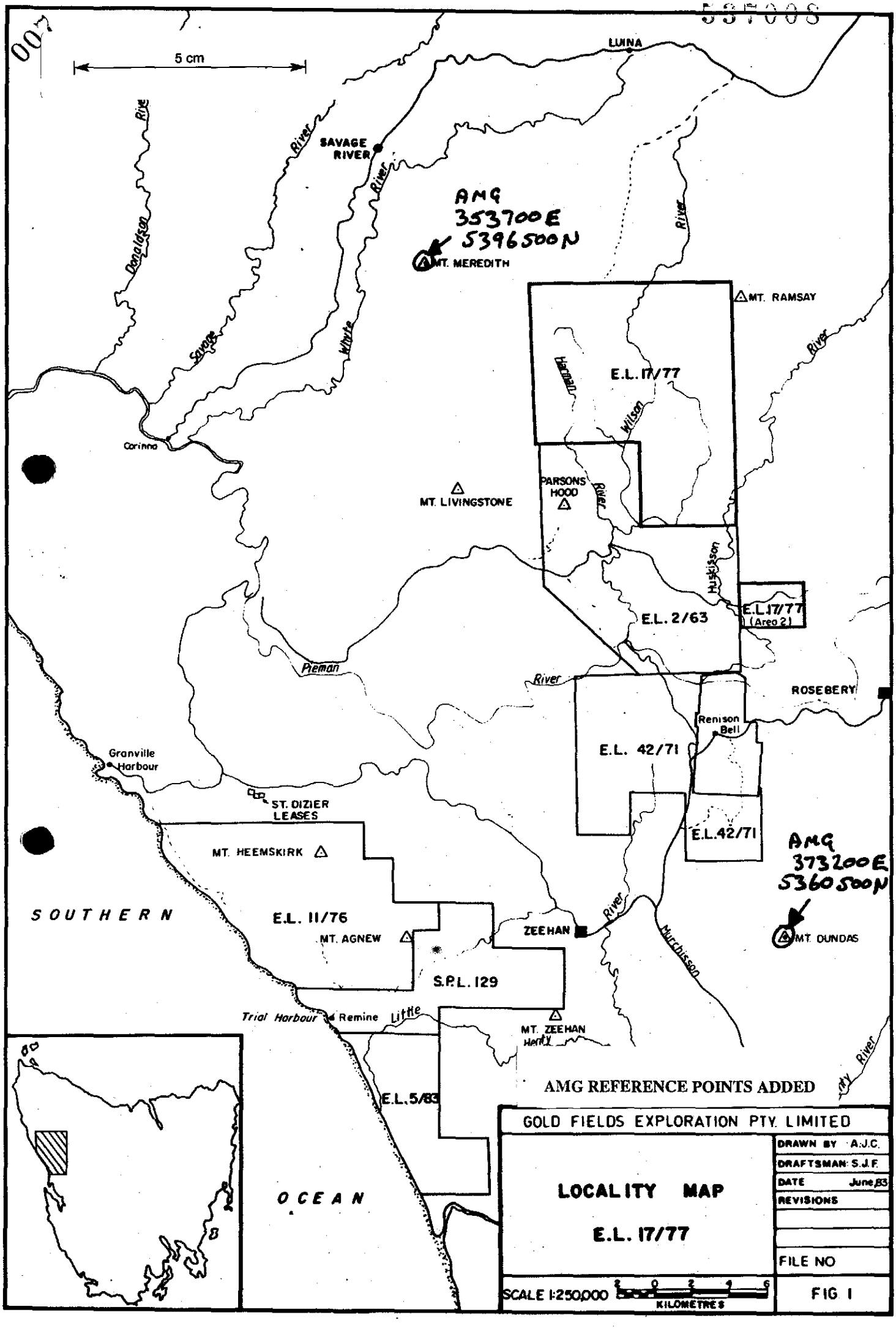
1. INTRODUCTION

E.L. 17/77 is located in an area of relative inaccessibility lying north of the Pieman River in Western Tasmania. The licence encompasses a large portion of country between the Wilson and Huskisson Rivers as well as their catchments (Fig.1). The total area of the licence is 114km².

The primary exploration targets are the hydrothermally altered and metasomatised Cambrian ultrabasic intrusives and Devonian-Ordovician sedimentary rocks in the Huskisson Syncline. The latter sequence includes several calcareous units which are highly prospective for tin-tungsten mineralisation particularly where they occur in contact with the Meredith Granite (Fig. 2). Mineralisation is thought likely to occur in a number of ways; as skarns, as sulphide rich carbonate replacements or fault controlled bodies. The granite itself also has potential for greisen bodies and mineralised tourmaline vein swarms and fractures.

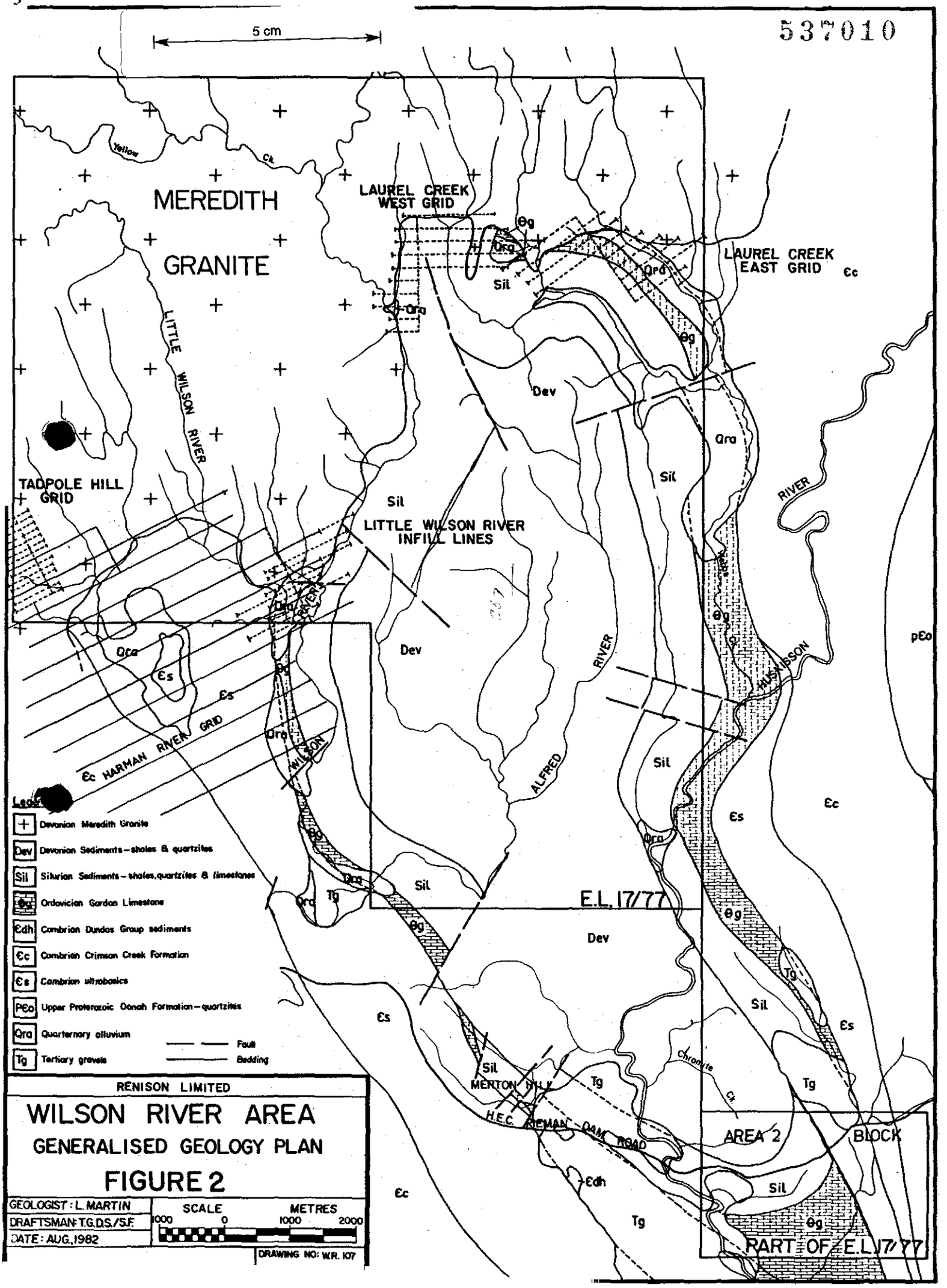
Renison Ltd. began exploration when the licence was granted in 1977. Since mid-1982, Gold Fields Exploration Pty Limited has been the operator on the licence area. Throughout the six years of exploration, an effort has been made to maintain the undisturbed nature of the area, predominantly through the use of helicopters during the summer months. Besides ensuring minimal environmental damage this approach has the added benefit of being the most efficient method.

Successive exploration programmes on the licence have involved airborne geophysics, photogeological mapping, gridding and detailed ground surveys. During the 1982/83 summer season, a bedrock sampling


007
5 cm
LUINA
SAVAGE RIVER
Donaldson River
Savage River
White River
AMG
353700E
5396500N
MT. MEREDITH
MT. RAMSAY
Huskisson River
E.L. 17/77
Wilson
Corinna
MT. LIVINGSTONE
PARSONS HOOD
E.L. 2/63
E.L. 17/77 (Area 2)
Pieman River
ROSEBERY
Renison Bell
E.L. 42/71
Granville Harbour
ST. DIZIER LEASES
MT. HEEMSKIRK
E.L. 42/71
AMG
373200E
5360500N
MT. DUNDAS
SOUTHERN
E.L. 11/76
MT. AGNEW
ZEEHAN
Murchison River
S.P.L. 129
Trial Harbour
Remine
Little Henty
MT. ZEEHAN
E.L. 5/83
OCEAN
AMG REFERENCE POINTS ADDED
GOLD FIELDS EXPLORATION PTY. LIMITED
LOCALITY MAP
E.L. 17/77
DRAWN BY A.J.C.
DRAFTSMAN: S.J.F.
DATE June/83
REVISIONS
FILE NO
SCALE 1:250,000
KILOMETRES
FIG 1

programme over the areas showing the best potential from the previous year's field work, was undertaken, together with the completion of the geophysical and geochemical surveys initiated during the 1981/82 season. The results of these programmes are detailed and discussed in this report, and drilling recommendations are made.

537010



RENISON LIMITED

WILSON RIVER AREA
GENERALISED GEOLOGY PLAN
FIGURE 2

GEOLOGIST: L. MARTIN
DRAFTSMAN: T.G.D.S./S.F.
DATE: AUG. 1982

SCALE METRES
1000 0 1000 2000

DRAWING NO: W.R. 107

2. LAND TENURE

E.L. 17/77 is held by Renison Ltd. and is due for renewal on the 8th March, 1984. The operator on the licence area is Gold Fields Exploration Pty. Limited.

3. EXPENDITURE

A total of $58,519 has been spent during the current financial year, up until the end of April. A large proportion of this expenditure was incurred during a six week period in January-February 1983. The total expenditure to date on E.L. 17/77 is $444,081.

4. PREVIOUS WORK

4.1 Prior to 1981

Previous work carried out on E.L. 17/77 by other companies before 1977, is described in the 1978 Progress Report (Schellekens, 1978). Exploratory programmes undertaken by Renison Ltd. between 1977 and 1981 comprised:

(i) An airborne Input E.M./ Magnetics survey over the area in 1978 and a regional photo-geological study in 1979 (Schellekens, 1978 and Wells, 1979).

(ii) The establishment of the Harman River Grid and the associated geochemical, geological and geophysical work in 1980 (Ross,1980).

(iii) Regional stream sediment sampling and reconnaissance geological mapping in 1981 (Martin, 1981).

4.2 1981-82

Work carried out during the last field season comprised:

(i) Extension of the 1980-81 regional stream sediment sampling to include the southern part of the licence area.

(ii) Extension and infilling of the Harman River Grid over the Tadpole Hill and Little Wilson River areas, together with the establishment of new grids at Laurel Creek East and West. The associated geophysical, geological and geochemical surveying was also completed or undertaken.

The results of this work delineated several anomalies. A stream sediment anomaly was discovered in the Alfred River area, an altered tourmalinised zone in the granite at Tadpole Hill, two geochemical/ geophysical anomalies at Little Wilson River and a number of major magnetic anomalies on the Laurel Creek Grids. It was recommended that all of these areas be examined further in order to better define the anomalies.

5. WORK COMPLETED 1982-83

The work carried out on E.L. 17/77 during this summer field season falls into three main catagories:-

(i) Follow up work on the anomalies defined by the previous year's programmes.

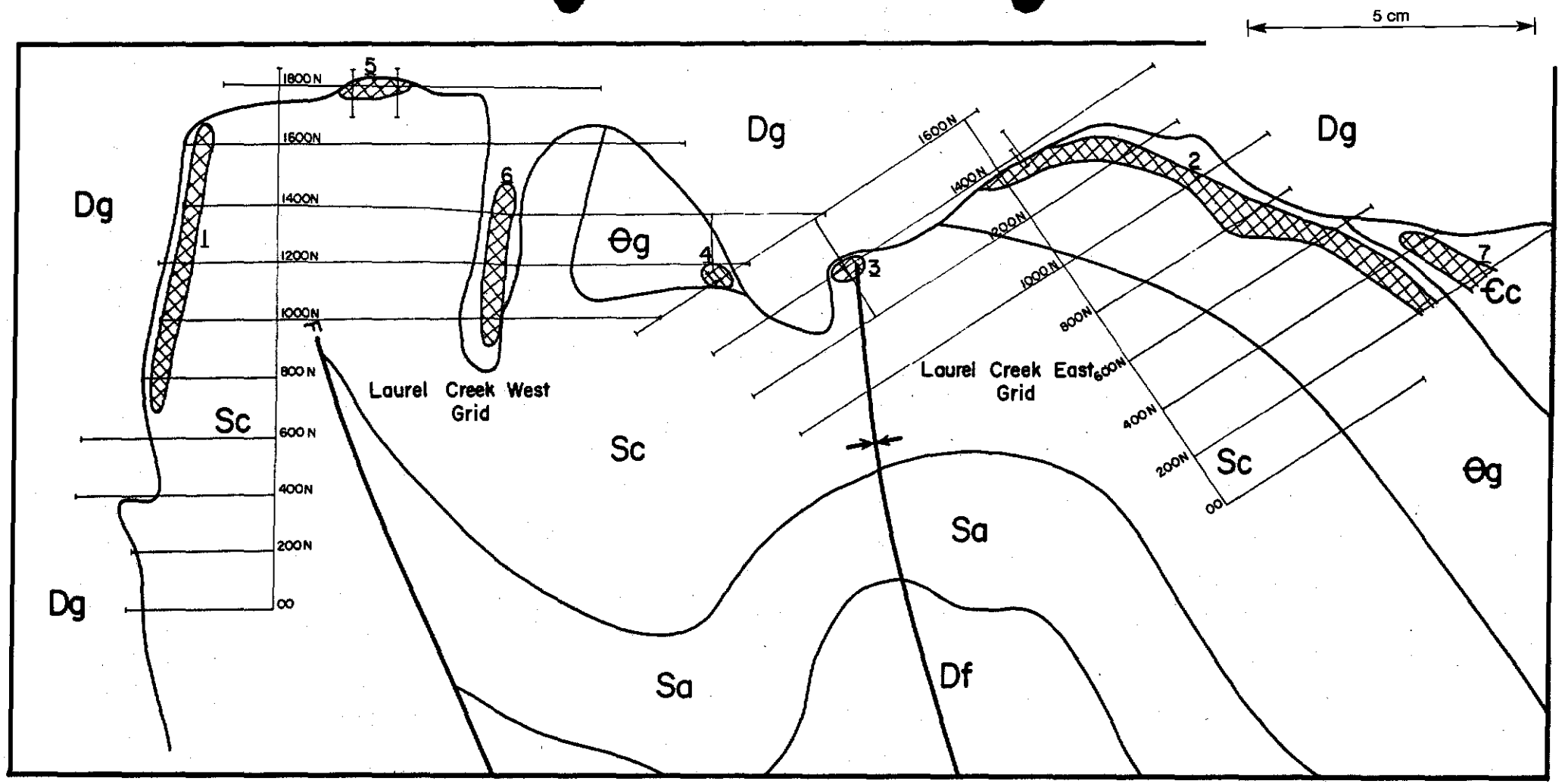
(ii) Completion of the geophysical survey initiated at Laurel Creek last season.

(iii) Reconnaissance geological examinations at Tadpole Hill and Alfred River.

5.1 Laurel Creek Grids

At Laurel Creek this year the emphasis of exploration was towards more accurately outlining the five magnetic anomalies discovered last year (anomalies 1-5, Fig. 3). In order to achieve this, a power auger sampling crew was engaged as per the recommendations of Roberts and Martin (1982). Contractor N. Poltock together with one offsider performed this task, during the helicopter supported programme in January-February 1983.

Samples were taken at 12.5m intervals along the existing Laurel Creek Grid lines. The sampled sections were determined by a re-surveying of the magnetic anomalies, where the lengths of grid line sampled correspond to the greatest magnetic anomalies. Also, new grid lines, totalling 1.1km, were cut at right angles to the existing lines, over the areas where the strike of the anomlies parallel the existing grid. Line 1000N on the Laurel Creek East grid was extended east a further 200m. These new lines were also sampled.



Df Devonian Florence Quartzite

Sa Silurian Amber Shale

Sc Silurian Crotty Quartzite

Eg Ordovician Gordon Limestone

Cc Crimson Creek Formation

Igneous Rocks

Dg Devonian Meredith Granite

Contact

F Fault

Synclinal axis

Cut grid line

Anomaly

GOLD FIELDS EXPLORATION PTY. LIMITED

LAUREL CREEK GRIDS
1981/82
INTERPRETATIVE GEOLOGY AND ANOMALY LOCATION

DRAWN BY : P.R.
DRAFTSMAN: S.F.
DATE : Oct.,82
REVISIONS :
FILE NO. WR.329

SCALE 1:20000 200 0 200 400 Metres

FIG. 3

In all cases, the power auger was driven to bedrock or until no further penetration was possible and the last soil/weathered rock horizon was sampled. In areas of known alluvium on Laurel Creek East selected samples were taken approximately every 1m down hole, in order to test the alluvial potential.

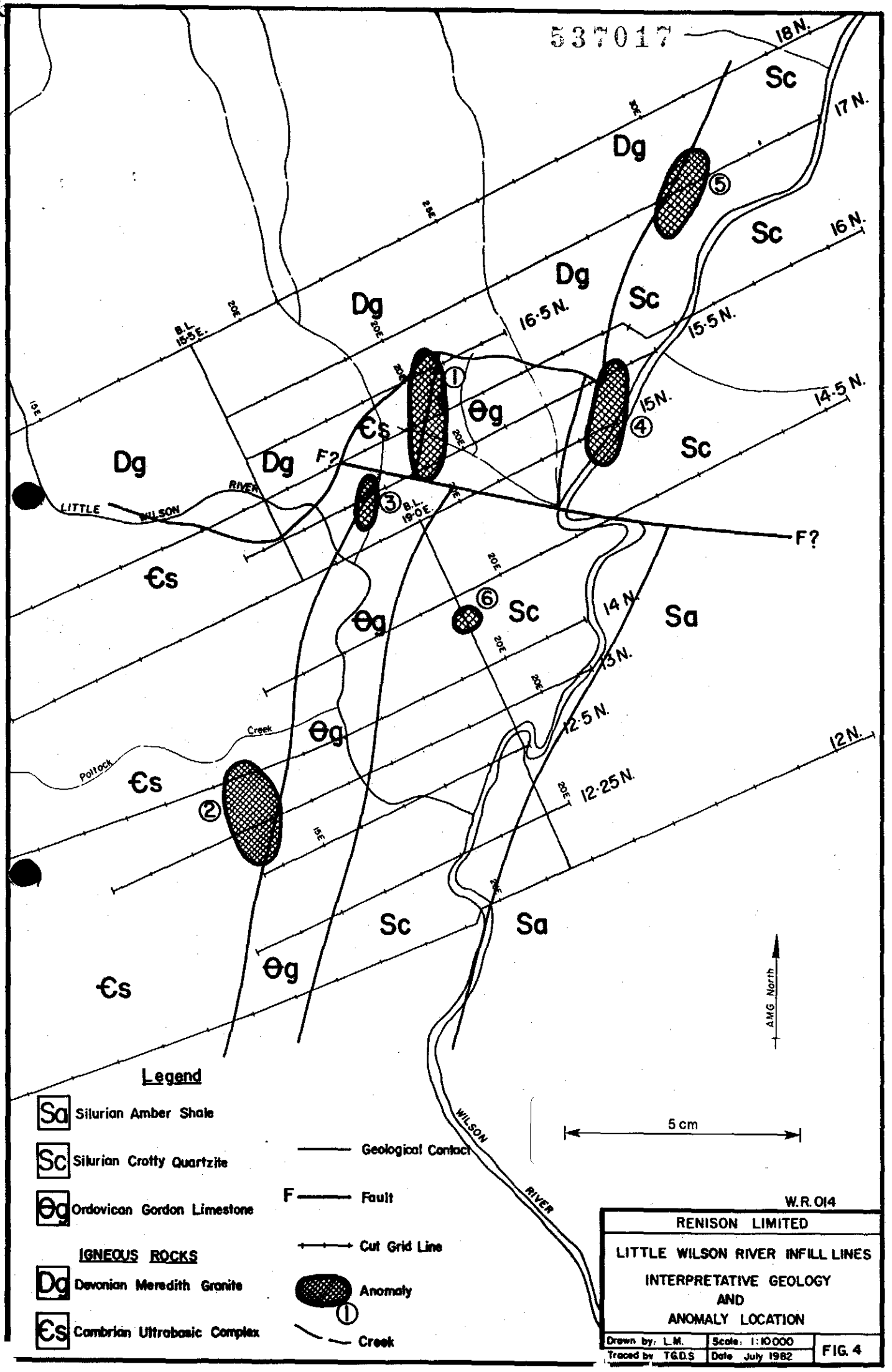
Reconnaissance geological mapping and checking of the areas with the most potential was undertaken together with associated rock chip sampling.

5.2 Little Wilson River Grid

Two major geochemical/geophysical anomalies were delineated here in 1981-82 and these were also power auger sampled by contractor N. Poltock and crew in February 1983. The sampling conditions were the same as those for the Laurel Creek Grids, however as the period of helicopter supported work was nearing an end when the sampling at Little Wilson River commenced, the sampling interval was increased to 25m. The two anomalies shown on Fig. 4, are numbers 1,3 and 2.

5.3 Geophysics

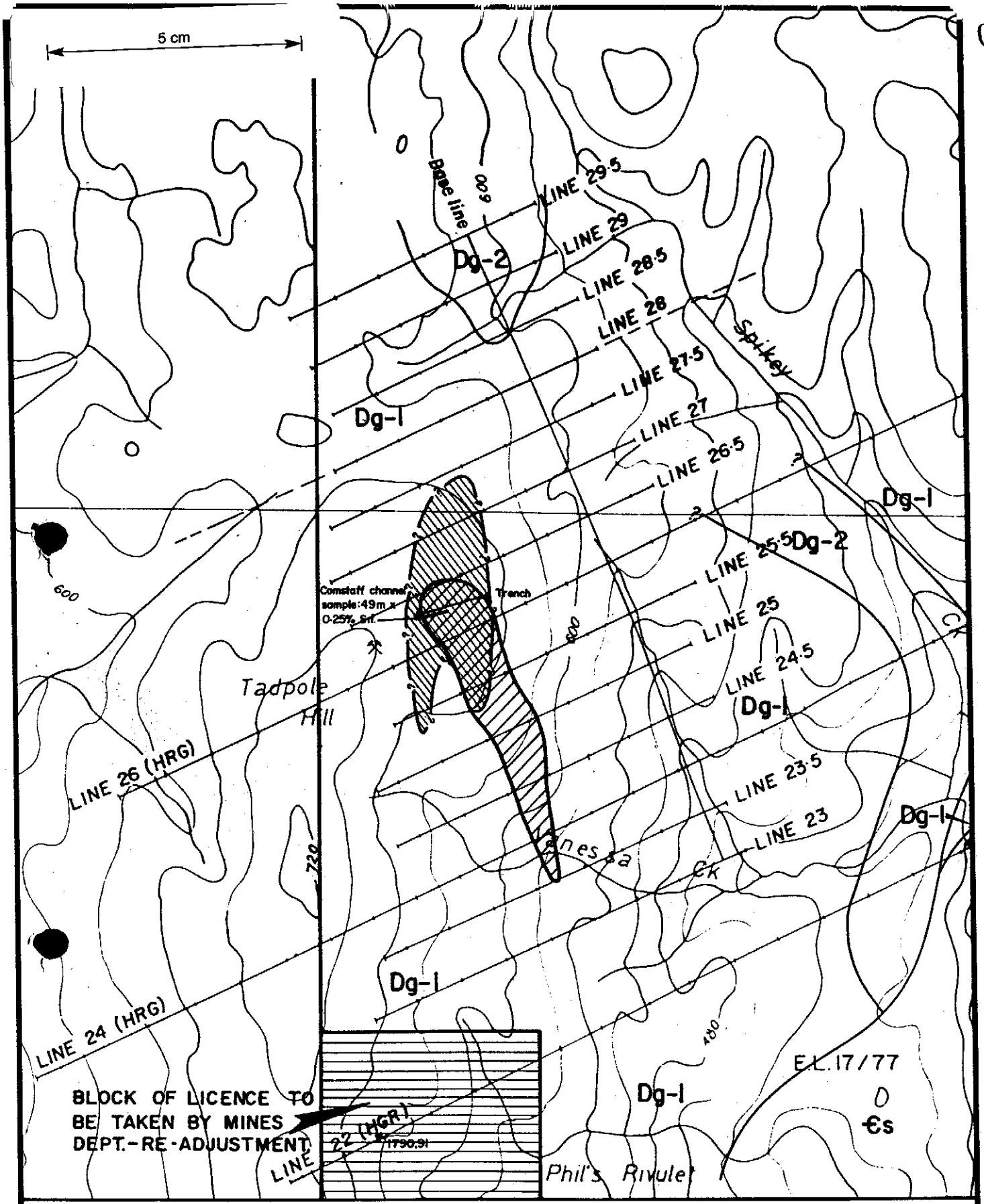
During January-February 1983, completion of the gradient array I.P. survey to cover the Laurel Creek Grids was performed by Scintrex, who began the survey last season. Also a magnetic survey was undertaken on line 12N Laurel Creek West, which was not read the previous year due to lack of time. As already mentioned in 5.1, detailed magnetic surveys (not base station corrected) over the anomalous sections of the lines, were made in order to facilitate the positioning of the power auger sampling sites.


537017
18 N.
17 N.
16 N.
15 N.
14 N.
13 N.
12 N.
16·5 N.
15·5 N.
14·5 N.
12·5 N.
12·25 N.
B.L. 15·5 E.
B.L. 19·0 E.
15 E.
20 E.
Dg
Sc
Sa
Θg
Cs
F?
F2
LITTLE WILSON RIVER
Pollock Creek
WILSON RIVER
AMG North
5 cm
Legend
Sa Silurian Amber Shale
Sc Silurian Crotty Quartzite
Θg Ordovican Gordon Limestone
IGNEOUS ROCKS
Dg Devonian Meredith Granite
Cs Cambrian Ultrabasic Complex
Geological Contact
F Fault
Cut Grid Line
Anomaly
Creek
W.R. 014
RENISON LIMITED
LITTLE WILSON RIVER INFILL LINES
INTERPRETATIVE GEOLOGY
AND
ANOMALY LOCATION
Drawn by: L.M.
Scale: 1:10000
Traced by: T.G.D.S
Date: July 1982
FIG. 4

5.4 Tadpole Hill and Alfred River

No work was planned for Tadpole Hill this summer, however a request from the Mines Department to relinquish a small corner block of E.L. 17/77 which affected this prospect, necessitated a field visit to the relevant area (Fig. 5). Several rock chip samples were taken and a brief appraisal of the exploration potential of the block, was made in February 1983.

A geological reconnaissance to the Alfred River region in the centre of the Huskisson syncline (Fig. 6) was made in March 1983. The area was accessed from the H.E.C. Pieman Road by cut-track (Contractor N. Poltock). The track was originally intended to continue to the stream sediment anomaly shown on Fig. 6, however insufficient time was available and the only area examined was Limestone Creek.



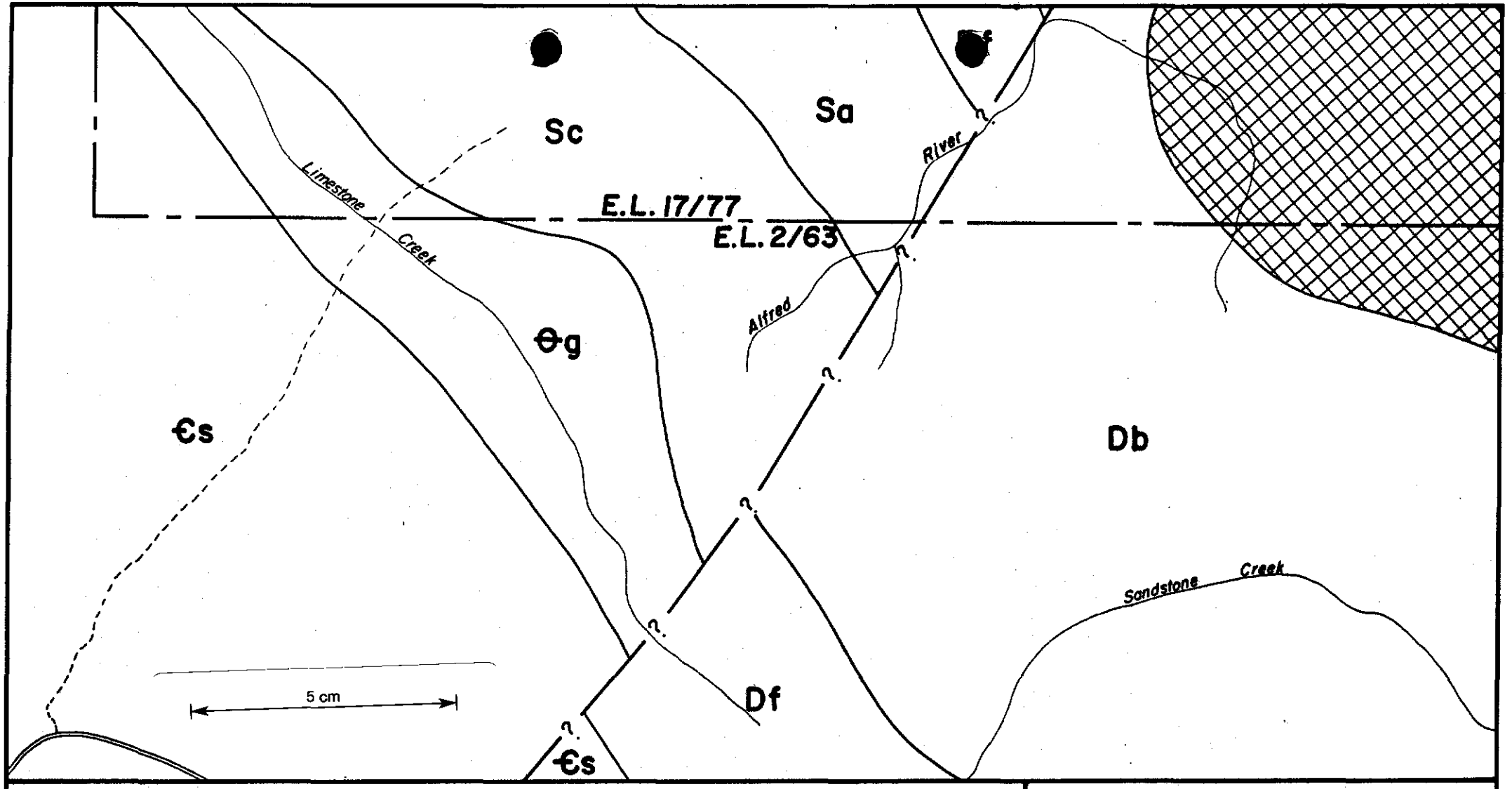
Legend

Devonian Meredith Granite

- Dg-1 Coarse grained adamellite
- Dg-2 Porphyry or fine grained Porphyritic granite
- Cs Cambrian ultrabasic complex
- Tourmalinized granite *
- Chargeability > 15 mV/V

* Note: Area of tourmalinized granite uncertain - outcrop poor

GOLD FIELDS EXPLORATION PTY. LTD.	
TADPOLE HILL GRID INTERPRETATIVE GEOLOGY AND I.P. ANOMALY LOCATION	DRAWN BY : P.R. DRAFTSMAN: S.F. DATE : Oct. 82 REVISIONS : FILE NO. H.R.G.360
SCALE 1:10000 (100 0 100 200 Metres)	FIG. 5



GOLD FIELDS EXPLORATION PTY. LIMITED

ALFRED RIVER AREA

INTERPRETATIVE GEOLOGY & ANOMALY LOCATION

DRAWN BY	A.J.C.
DRAFTSMAN	S.J.F.
DATE	June 65
REVISIONS	
FILE NO.	
SCALE 1:10000	FIG. 6

100 0 200 Metres

537020

019

6. RESULTS

6.1 Tadpole Hill

Only a short visit was made to this area, as it had been proposed (Roberts and Martin, 1982) that any major work on the Meredith Granite in this region, be initiated in 1983-84. The tourmalinized zone was examined (Fig. 5), as was the block affected by the Mines Department request. From the latter area, two rock chip samples of tourmaline veined granite were taken (Fig. 5) and assayed (see Appendix 2), with weakly anomalous tin and base metal values returned.

6.2 Little Wilson River

The only work carried out in this location, was power auger sampling over previously discovered geochemical/geophysical anomalies. The geochemical results from this season's sampling (displayed on Figs. 7-12) were generally disappointing. Several isolated tin values, greater than 100 ppm were recorded and base metal values were weakly anomalous over most of the lines sampled, with copper being particularly noticeable over the ultramafic/limestone contact (lines 1300N and 1400N). The Little Wilson River assay results are displayed on the old line profiles (Figs. 13-17). Full analyses, sample numbers, descriptions and grid references are given in Appendix 2.

6.3 Laurel Creek

6.3.1 Laurel Creek West (L.C.W.)

The results of the power augering and the re-surveying of the magnetic anomalies

were encouraging over both the L.C.W. and L.C.E. grids. Several areas shown to have anomalous soil geochemistry in 1981/82, proved to be even more anomalous (several thousand ppm values for tin and base metals) in bedrock geochemistry. A full list of results is given in Appendix 2 and displayed on plan in Figs 18-23). High geochemical values from some of the new lines cut at right angles to the estimated strike of anomalous bodies discovered in 1981/82 were also recorded. These include the western extremities of lines 1400N, 1000N and 1200N, particularly the latter and cross-lines 450E and 250E. Lines 800N and cross-line 1550E exhibited disappointing geochemical results.

Magnetic surveying of line 1200N significantly altered the interpreted magnetic anomaly contour map of 1981/82. The results have been plotted on the 1200N line profile (Fig. 24) and the altered magnetic anomaly contour map also included (Fig. 33). The new cross-lines, 250E and 400E, also discovered or extended known magnetic anomalies and these alterations are again shown in Fig. 33. Line profiles of the newly cut lines on L.C.W.(and L.C.E.) displaying both geochemistry and geophysics results are shown on Figs. 36-40. A full discussion and evaluation of the geophysical results from both L.C.E. and L.C.W. is given in Appendix 5 by Dr. J. Bishop. Magnetic suvey field sheets containing all the data collected in 1982/83 can be seen in Appendix 4.

6.3.2 Laurel Creek East (L.C.E.)

The power auger sampling over the anomalous areas on the L.C.E. grid was particularly successful. The original findings of 1981/82 were enhanced on the eastern sides of lines 1400N, 1200N and 1000N. The samples from cross-lines 87.5E and 75E also gave several tin assays in the order of several thousand ppm (values are displayed on plan in Figs. 18-23 and given in Appendix 2). Lines 400N, 600N, 800N and cross lines 1025W and 675W exhibited assay values little above background.

The I.P.survey which completed the coverage of both Laurel Creek Grids, failed to find any outstanding anomalies, apart from a 74mV/V chargeability high over the Crimson Creek Group on the eastern end of line 200N. This area was geologically examined and the abundant disseminated pyrite found in these rocks is thought to be the cause of this high. The completed profiles (Figs. 25-32) are presented together with the completed chargeability (Fig. 34) and resistivity (Fig. 35) contour plans. Magnetic surveys over the new cross-lines and the power augered portions of the existing lines adjusted the existing magnetic anomalies (Fig. 33). As with the L.C.W. geophysics, these results are more fully interpreted in Appendix 5.

Not rock sampled?

6.4 Alfred River

A brief visit was made to this area by P. Roberts in March 1983. The Gordon Limestone in the vicinity of the cut track (Fig. 6) was examined and found to be fresh and unaltered. The anomalous (stream sediment) region further to the east, has yet to be assessed.

7. CONCLUSIONS

7.1 Tadpole Hill

An examination of the area requested by the Mines Department (Fig. 5) showed that it was an area of little interest. It was therefore decided to relinquish the area as requested. The zone of tourmalinised granite to the north east of this area, was also visited. It was decided that the initial mapping of the zone, performed in 1981/82 should be supplemented with a more detailed appraisal in order to define any likely drilling targets. The possibility of a large tonneage, low grade tin deposit still exists at Tadpole Hill and quite possibly within other parts of the Meredith Granite, which remains a relatively unmapped portion of the licence area at this stage.

7.2 Wilson River

The results of the power auger sampling, the only work carried out on the Little Wilson River grid this season, only slightly enhanced the soil geochemical survey results from the previous season. While this was not particularly encouraging, a detailed geological assessment of the two anomalies sampled has yet to be made. However the potential of the area and of the two best anomalies in particular, to contain a suitable tonnage of skarn type mineralisation has not been increased by these results.

7.3 Laurel Creek

The most promising results from last seasons work were obtained in the Laurel Creek grids.

Anomalies 1-7 (Fig. 3) delineated in 1981/82 by Roberts and Martin (1982), were all re-evaluated using a combined geophysical (chiefly magnetics)/geochemical (bedrock sampling) method. Line profiles (Figs. 36-40) show the results and interpretative geology, from this field season.

The results of the geophysical surveys are reported and summarised in full in Appendix 5. From these results it is obvious that the most successful technique for defining skarns at Laurel Creek is magnetics. A narrow belt of magnetic rock appears to be developed in the country rocks around the Meredith Granite margins and in areas of poor exposure, this is a useful tool for mapping the Granite contacts. The actual values registered are variable, but are usually significantly higher in the Gordon Limestone than they are in the Crotty Quartzite (Figs. 36-40). The other geophysical technique used I.P., only results in weak anomalies over the zones of high magnetic intensity.

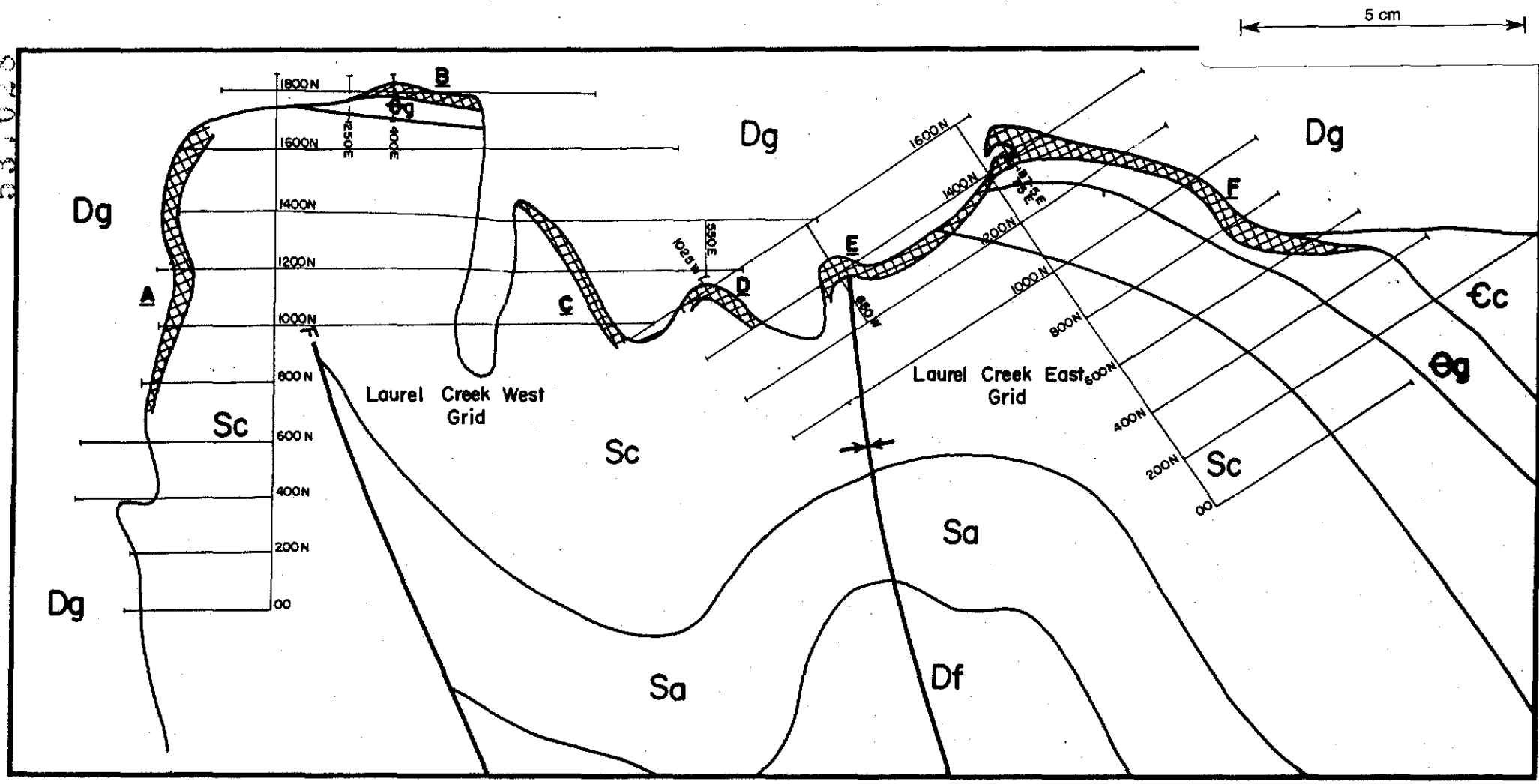
The bedrock geochemical sampling programme, like the magnetic survey was quite successful (a 70-80% penetration to bedrock) with the two methods defining coincident anomalies. Not only was the geochemical aspect useful, but a geological interpretation of the samples obtained could also be attempted. In certain terrains however, it did prove difficult (N. Poltock pers. comm.) to penetrate to bedrock and in areas such as the creek-valleys close to the Granite margins, the effects of large granite alluvial boulders hindering penetration was also noted. This meant that the proposal (Roberts and Martin, 1982) to test the creek beds for their alluvial tin potential became practically impossible. The information gained by the power auger sampling combined with

the magnetic survey data has been used to re-interpret the geology at Laurel Creek (Fig. 41). The main change to the geological map in the 1981/82 report (Roberts and Martin, 1982) is the position of the granite boundaries. There are based predominantly on magnetics with variations according to outcropping geology or auger sample geology/geochemistry (Figs. 36-40). Also areas of skarn development or calc-silicate metasomatism are depicted, being based primarily on geology with geochemical and magnetic parameters also affecting their positioning (Fig. 41).

The granite contact on the western part of the L.C.W. grid runs north-south in a quite linear fashion indicating that it is probably a steeply dipping contact. A metasomatised calc-silicate sequence is inferred to have developed against this margin. Geological and mineralogical (Appendix 3) evidence suggests that the Crotty Quartzite in the region contains semi-calcareous units, which upon metasomatism produce potentially stanniferous magnetite skarns. This zone is thought to stretch for approximately 1000m (Fig. 41) and has been labelled Anomaly A (Fig. 42) replacing the previous name of anomaly 1 (Fig. 3) given in (Roberts and Martin, 1981). Further east, several similar zones of calc-silicates in the Crotty Quartzite are believed to have developed against the granite contact. These anomalous areas have also been re-labelled (Anomalies C,D and E. Fig. 42). It should be noted that the variable strike of these zones means that they are not completely covered by the grid and although there are some areas of Crotty Quartzite in contact with the granite that are not altered, the possibility of uncovering

further anomalous zones is strong in these ungridded areas. Changes to the interpreted granite boundary have also been made on Line 1400 N, L.C.E. where it is more complex than first thought and on the eastern ends of Lines 1200N and 1400N L.C.W. where a large lobe of granite projects in a southerly direction. This interpreted lobe of granite underlies a swampy flat area (Fig. 41) which is quite unlike the typical granite topography found elsewhere. The area has previously (Roberts & Martin, 1982) been regarded as Gordon Limestone (Fig. 3) however, the low magnetic signature encountered on Line 1200N L.C.W. in the mapped limestone/granite region, together with the lack of supporting geological and geochemical evidence indicated that the area was either unaltered quartzite or granite. Anomaly C (Fig. 42) supported the granite possibility and the unusual topography could be a result of the granite being argillised or altered in some way (Fig. 41). Magnetite skarns developed in the Gordon Limestone against the grainte have also been mapped (Fig. 41) and re-labelled (Fig. 42) as anomalies B and F (5 and 2 respectively on Fig. 3). These zones appear to be present wherever the limestone abuts the granite and they produce both the highest magnetic and geochemical anomalies. The limited mineralogical work (Appendix 3) performed on the limestone indicates that they are extensively altered (argillised) and replaced. A complex interfingering of granite and skarn occurs on Line 1400N L.C.E. where detailed gridding and mapping has been performed. It seems likely that similar complicated contacts will be discovered elsewhere with further detailed examinations. The magnetic anomaly curves (Figs. 36-40) over the skarn zones exhibit shapes that are typical of remnance

23M02S



Df Devonian Florence Quartzite

Sa Silurian Amber Shale

Sc Silurian Crotty Quartzite

Eg Ordovician Gordon Limestone

Cc Crimson Creek Formation

Igneous Rocks

Dg Devonian Meredith Granite

Contact

F Fault

Synclinal axis

Cut grid line

Anomaly

GOLD FIELDS EXPLORATION PTY. LIMITED

LAUREL CREEK GRIDS
1982/83
INTERPRETATIVE GEOLOGY
AND
ANOMALY LOCATION

DRAWN BY : P.R.
DRAFTSMAN: S.F.
DATE : Oct.,82
REVISIONS :

FILE NO. W.R.329

SCALE 1:20000 200 0 400 800 Metres

FIG.42

220

effects, thus introducing the likelihood of several phases of skarn development, producing zoned skarns.

In summary, the seven anomalies resulting from the 1981/82 work (Fig. 3), have been cut down to six (A-F Fig. 42) better defined and evaluated anomalies. Of these, the best potential for stanniferous mineralisation occurs in B and F (Fig. 42) because these two represent skarn zones in the Gordon Limestone and this unit appears to be far more altered and metasomatised than the Crotty Quartzite. At present a zone of potentially stanniferous metasomatised sediments with a strike length of approximately 4100m exists and the possibility of another 1000m also occurs.

7.4 Alfred River

No real conclusions on the Alfred River area can be made at this stage, as a full exploration into the anomalous region (Fig. 6) has not been completed.

8. RECOMMENDATIONS

A total of 600m of diamond drilling has been budgetted (Appendix 1) for the Wilson River Area in 1983/84. This should be used to drill the promising targets found on the Laurel Creek Grids this year. Associated with this, further detailed ground work and drill site preparation should also be carried out. In addition, detailed geological assessments of the Alfred River stream sediment anomaly, the Little Wilson River anomalies and the Tadpole Hill altered/ mineralised granite are recommended. Access, stream sediment sampling and geological reconnaissance mapping should be made into the unexplored centre of the Huskisson Syncline. Fig. 43 shows a general summary of the proposed work in the 1983/84 field season, which should again be helicopter supported. Detailed proposals for each of the areas are given below.

8.1 Tadpole Hill, Little Wilson River, Alfred River and the Huskisson Syncline

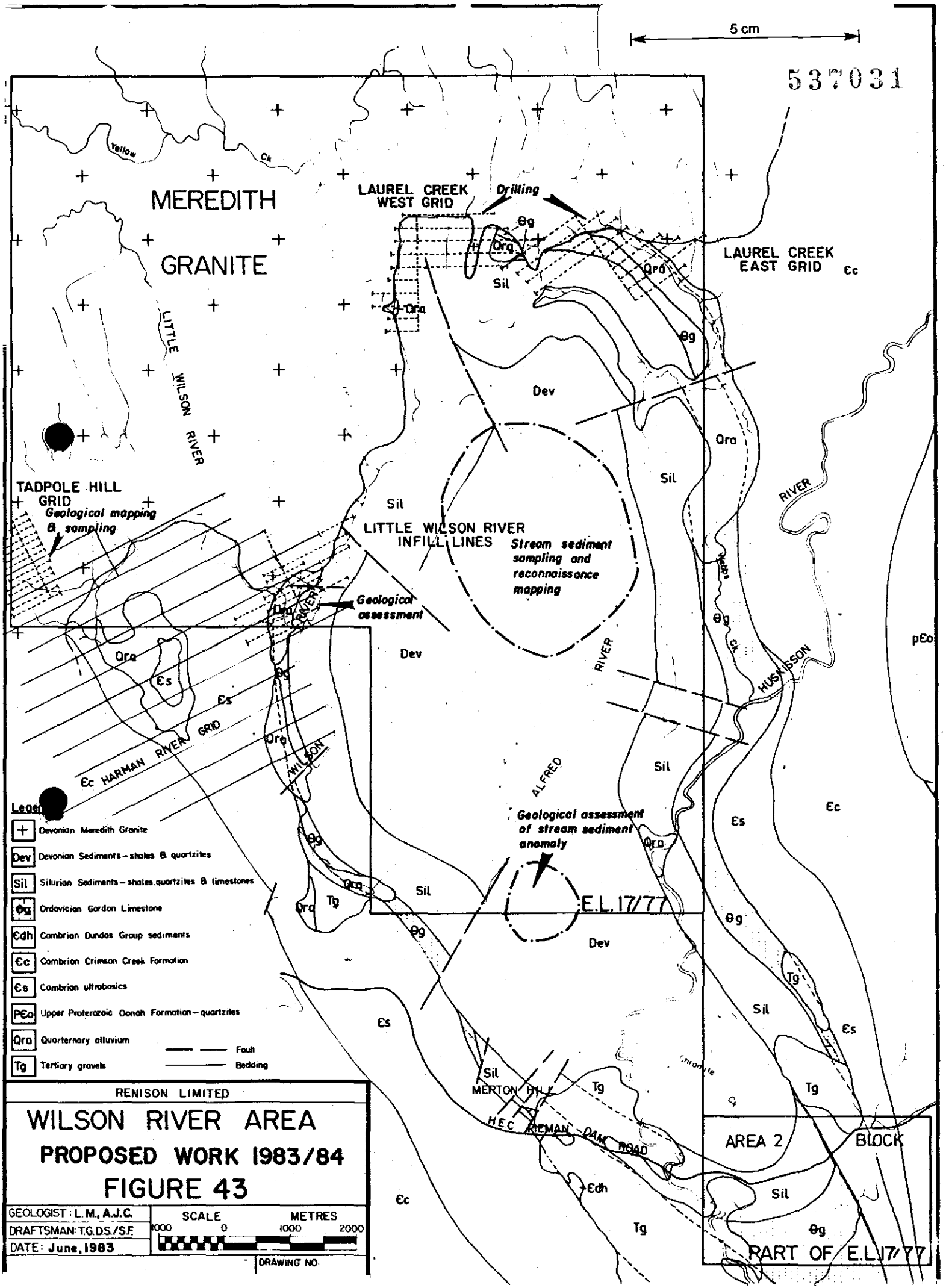
A brief visit to the two anomalous areas on the Little Wilson River grid should be made to fully evaluate the potential of the anomalies. At Tadpole Hill, detailed mapping and sampling should enable the generation of possible drilling targets. Also a better understanding of the granite itself may prove useful in the long term approach to exploration within the granite itself and the shorter term exploration for skarn mineralisation at the granite contacts. Both the Little Wilson River and Tadpole Hill areas will have to be accessed by helicopter.

The Alfred River stream sediment anomaly should be followed up with mapping and check re-sampling

030

5 cm

537031



Legend

- Devonian Meredith Granite
- Devonian Sediments – shales & quartzites
- Silurian Sediments – shales, quartzites & limestones
- Ordovician Gordon Limestone
- Cambrian Dundas Group sediments
- Cambrian Crimson Creek Formation
- Cambrian ultrabasics
- Upper Proterozoic Oonah Formation – quartzites
- Quarternary alluvium
- Tertiary gravels
- Fault
- Bedding

RENISON LIMITED

WILSON RIVER AREA

PROPOSED WORK 1983/84

FIGURE 43

GEOLOGIST : L. M., A.J.C.
DRAFTSMAN: T.G.D.S./S.F.
DATE : June, 1983

SCALE METRES
1000 0 1000 2000

DRAWING NO.

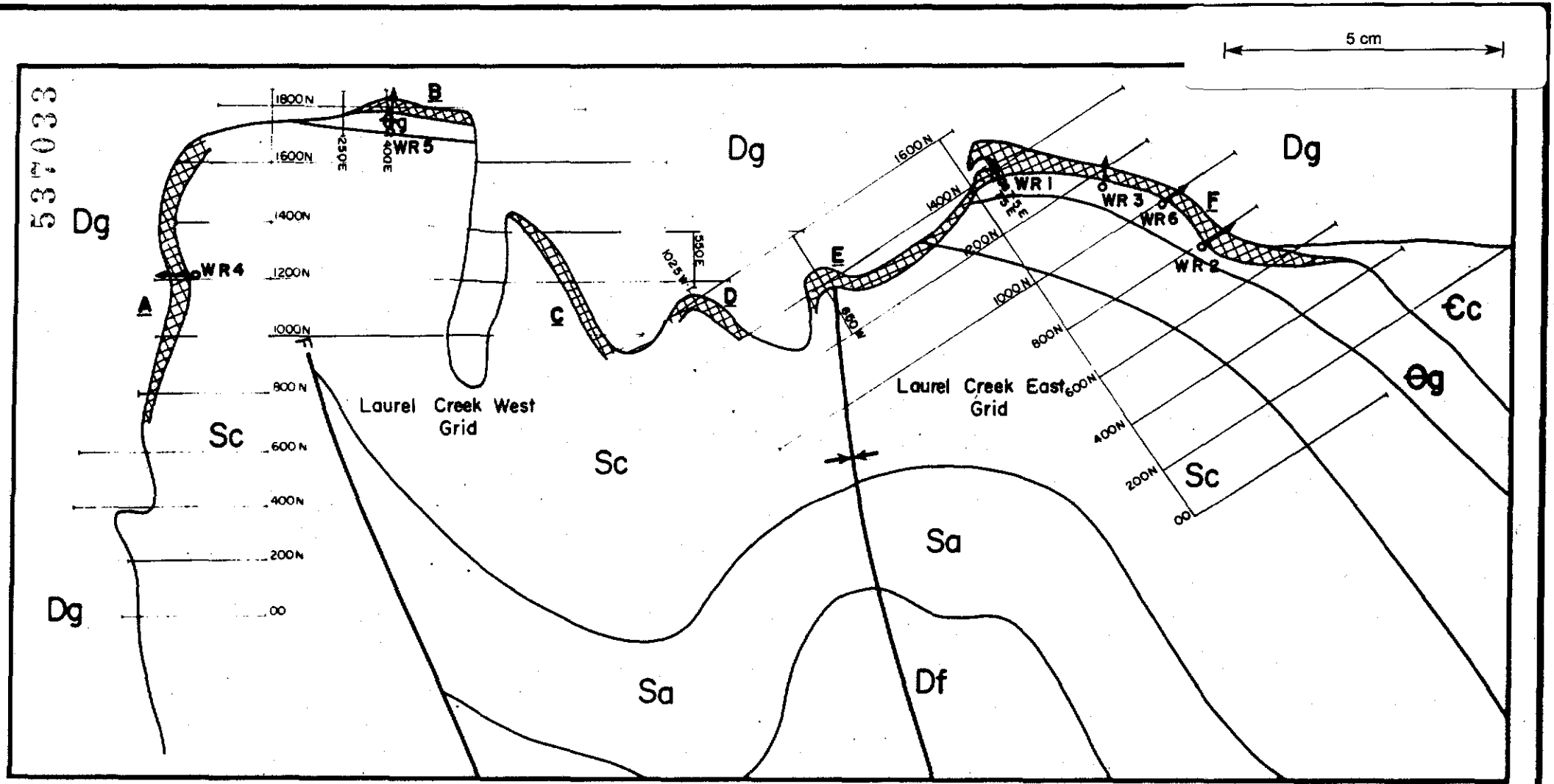
of the stream sediments. Also excavation of some hand-dug pits may be necessary as stanniferous Tertiary gravels may occur in this region. The centre of the Huskisson Syncline has yet to be looked at closely and as a result has become significantly 'out of step' with the rest of the exploration on the licence area. Therefore it is recommended that cut track access be made with stream sediment sampling and geochemistry follow up, into the region shown on Fig. 43.

8.2 Laurel Creek

Six targets have been chosen to be tested by drilling on the Laurel Creek grids. The best combined magnetic/geochemical responses determined which lines over the anomalies, were selected. The six sites occur on lines 1200N and 400E on the Laurel Creek West grid and lines 87.5E, 800N, 1200N and 1000N on the Laurel Creek East grid. The proposed holes are displayed in section on Figs. 36, 37, 39, 40 and in plan on Fig. 44. All the drilling, site preparation and ground work must be helicopter supported. The site preparation should be made so as to keep ahead of the drilling. The following drilling order is suggested:-

	WR 1	1332N, 87.5E	L.C.E.
	WR 2	800N,486E	L.C.E.
(each	WR 3	1200N, 340E	L.C.E.
approx-	WR 4	1200N, 285W	L.C.W.
imately	WR 5	1710N, 400E	L.C.W.
100m in	WR 6	1000N, 500E	L.C.E.
length)			

The last hole, WR 6, is on a weaker anomaly than some of the others and is between and within several hundred metres along strike


5 cm
53/033
Dg
Sc
Sa
Df
Dg
Dg
Dg
Sc
Sa
Sa
Dg
Dg
Dg

of two other proposed drillholes (WR 2 and 3). If any of the other proposed holes are extended so as to use 'extra meterage', this hole should not be drilled. On the other hand, if 'extra meterage' is available after all six have been drilled, then an extra site should be made if the results have been sufficiently encouraging. WR3 and WR5 ideally have to be drilled later in the programme, as some ground work should be completed and evaluated before they are commenced. Anomaly B (WR5) appears to extend east of the two cross-lines (Fig. 42) and it would be desirable to drill the centre of this anomaly. Therefore further cross-lines should be cut and fully tested magnetically in order to better define this anomaly (shown on Fig. 44) prior to drilling. It is proposed that WR3 be drilled perpendicular to the postulated strike of anomaly F (the proposed drill hole projection is shown on Fig. 40). A line should be cut over the proposed drill line and magnetically surveyed to ensure that the hole is collared outside the anomaly.

Pre-collaring of all the holes through the alluvium preferably by means of a casing advancer (see Figs. 36-40) is required for efficient use of the limited drilling time available. Sludge recovery of the precollar sample is recommended for holes collared in the Webbs Creek Valley (holes WR 2, 3, 6) to test for alluvial cassiterite particularly near the alluvium/weathered limestone boundary.

All the drilling, cutting, mapping and sampling is expected to be completed within a six week period over the summer season 1983/84 using helicopter support and is expected to cost approximately $113,700 (Appendix 1).

REFERENCES

Martin, L.A., 1981: E.L. 17/77 Wilson River Area, Annual Report 1980-81, Unpublished Report, Renison Ltd.

Roberts, P.A., and Martin, L.A., 1982: E.L. 17/77 Wilson River Area, Annual Report 1981-82. Unpublished G.F.E.L. Report.

Ross, A.F., 1980: E.L. 17/77 Wilson River Area, Annual Report 1979-80. Unpublished Report, Renison Ltd.

Schellekens, R., 1978: E.L. 17/77 Wilson River Area, Progress Report 1978. Unpublished Report, Renison Ltd.

Wells, K., 1979: E.L. 17/77 Wilson River Area, Annual Report 1979-80. Unpublished Report, Renison Ltd.

APPENDIX 1

Expenditure during the 1982/83 Programme
Proposed Budget from the 1983-84 Programme

036

GOLD FIELDS EXPLORATION PTY. LIMITED

537037

EXPENDITURE

(1982/83 Programme to April 1983)

Geology	$
- Salaries	12,021
- Salary on-costs	1,129
- Transport	15,355
- Assays	1,475
- Outside Contractors	1,791
- Travel	1,117
- Stores	468
	33,356
Geophysics	
- Miscellaneous	20
- Outside Contractors	13,263
- Stores	72
	13,355
Geochemistry	
- Assays	126
- Outside Contractors	9,240
- Stores	439
	9,805
Land Acquisition	
- Miscellaneous	1,545
Indirect Motor Vehicle Expenses	485
	58,519

037

GOLD FIELDS EXPLORATION PTY. LIMITED

537038

PROPOSED BUDGET 1983-84

Geology	$
- Salaries	15,000
- Salary on-costs	3,800
- Travel and Accomodation	1,200
- Outside Contractors	2,500
- Stores	700
	23,200

Geophysics	
- Outside Contractors	2,500
- Stores	200
	2,700

Geochemistry	
- Transport	5,500
- Outside Contractors	5,300
- Stores	300
	11,100

Drilling	
- Transport	27,500
- Analysis	3,000
- Outside Contractors	29,000
- Stores	1,500
	61,000

Land Acquisition	
- Miscellaneous	2,000

GOLD FIELDS EXPLORATION PTY. LIMITED

	$
Site Preparation	
- Outside Contractors	10,000
Surveying	
- Outside Contractors	2,400
Indirect Motor Vehicle Expenses	1,300
	113,700

APPENDIX 2

Rock Chip and Power Auger Samples :-

Numbers, locations, descriptions and assays.

040

ROCK CHIP SAMPLE RECORD AND ANALYTICAL DATA SHEET

537041

SAMPLE NUMBER	GRID LOCATION	DESCRIPTION	Ag	Bi	ANALYSES Sn	WO_3	Cu	Pb	Zn	As
1790	HRG 22N 1800W	Qtz-tourm. veins + nodules from Tadpole Hill	<1	<5	70	10	<10	30	<10	10
1791	HRG 22N 1800W	Qtz-tourm. veins + nodules from Tadpole Hill	1	25	390	30	40	160	20	1700
1719	LCW 400N/Wilson River	Float. Quartzite-sst? or limestone? *			10	20	40	170	40	20
1720	LCW 400N/Wilson River	Float. Quartzite-sst? or limestone?			<10	30	30	60	50	30
1721	LCW 400N/Wilson River	Float. Chert (red)			<10	<10	20	90	20	<10
1722	LCW 400N/Wilson River	Float. Magnetite skarn			760	30	120	240	500	10
1712	LCE B.L. 1375N	Mag. skarn float.			560	10	30	50	390	60
1714	LCW 1600N/Webbs Ck.	Clay, orange white, outcrop			10	20	50	180	340	10
1715	LCW 1600N/Webbs Ck.	Float; breccia of granite? quartzite? frags. in clay *			10	70	870	1950	800	30
1716	LCW 1100N/Webbs Ck.	Hornfels. Float. Quartzite?			<10	10	20	40	70	<10
1717	LCW 800N/Webbs Ck.	Weathered quartzite? Lst? Float			10	20	10	40	50	20
1718	LCW 800N/Webbs Ck.	Clay outcrop. Weathered qtzite? Bedded *			30	60	130	50	890	150
1711	LCE 1400N/Laurel Ck.	Blue clay/white clay-thin banded lenses *			<10	10	10	10	80	<10
171	LCE 200N/ 1100E	Hornfelsed sst with py. Crystal Ck. Group			10	10	50	60	90	20
1710	LCE 1400N/Laurel Ck.	Brown gossan			10	40	110	180	110	230
1705	LCE 1400N/Laurel Ck.	Med. grained porph. granite with tourm. veins			10	10	<10	20	30	20
1706	LCE 1400N/Laurel Ck.	Blue clay. weathered limestone?			70	120	60	20	70	100
1707	LCE 1400N/Laurel Ck.	Brecciated brown clay			20	20	50	80	310	50
1708	LCE 1400N/Laurel Ck.	Mag. skarn float.			490	30	20	60	280	80
1709	LCE 1400N/Laurel Ck.	Quartzite *			10	10	<10	70	<10	<10
1792	LCW 1762.5N 400E	Rock Chip Magnetite skarn			530	<10	70	40	500	<10
1794	LCE 1600N/Webbs Ck.	Hornfelsed sst.			30	<10	10	170	80	10

* CMS Petrographic Analyses (See Appendix 3)

041

POWER AUGER SAMPLE RECORD AND ANALYTICAL DATA SHEET

537042

SAMPLE NUMBER	GRID LOCATION		DEPTH (metres)	DESCRIPTION	ANALYSES (ppm)					
					Sn	WO_3	Cu	Pb	Zn	As
				LAUREL CREEK EAST						
1521	2N	982.5E	3.5	Light brown micaceous clay + qtz & weathered feldspar	10	20	30	20	50	<10
1522	2N	975E	2.5	Light brown micaceous clay + qtz & weathered feldspar	10	10	30	30	40	10
1523	2N	975E	3.5	Light brown micaceous clay + qtz & weathered feldspar	30	40	30	20	60	30
1524	1400N	87.5E	4.5	Black micaceous, Fe st. clay	260	500	50	50	410	150
1525	1412.5N	87.5E	5.3	White micaceous, Fe st. clay	<10	40	130	300	200	810
1526	1425N	87.5E	1.3	Brown soil, much qtz & Fe st. minor	20	<30	10	30	20	20
1527	1437.5N	87.5E	2.0	Brown soil, much qtz & Fe st. minor	30	20	10	80	30	30
1528	1450N	87.5E	4.5	Light brown qtz rich soil	50	20	30	150	70	30
1529	1462.5N	87.5E	3.0	Light brown qtz rich soil	40	110	20	1040	90	40
1530	1475N	87.5E	2.2	Brown clay	20	80	50	200	120	90
1531	1387.5N	87.5E	Rock Chip	Rock Chip. Gossan-non magnetic	2870	1080	1100	90	390	5820
1532	1375N	87.5E	4.0	Pale clay -stained with Fe-ox. Micaceous	30	60	70	90	220	170
1533	1362.5N	87.5E	1.4	Brown clay soil. Quartz rich	140	30	10	30	50	25
1534	1350N	87.5E	4.2	Pale coloured clay. Not stained	80	30	260	90	50	10
1535	1400N	75E	1.5	Brown gravels-rock chips. Act? + Fe stained-strong	270	120	50	40	60	120
1536	1400N	62.5E	4.2	Red brown magnetic gossanised clay	1130	630	770	280	260	1830
15[illegible]	1412.5N	75E	1.5	Pale brown-grey qtz, bio. soil	130	50	70	30	30	210
1538	1425N	75E	1.0	Brown-grey clayey soil	30	70	<10	20	20	30
1539	1387.5N	75E	2.8	Brown clay	6210	590	1330	140	800	2480
1540	1600N	1025W	5.0	Dark grey soil with weathered/alt? feldspars	20	20	<10	20	90	<10
1541	1612.5N	1025W	4.2	Dark grey soil with weathered/alt? feldspars	10	20	<10	20	40	<10
1542	1625N	1025W	1.3	Weathered quartzite	10	10	<10	<10	<10	<10
1543	1637.5N	1025W	3.0	Light brown sandy soil - weathered quartzite?	20	20	<10	20	30	<10
1544	1650N	1025W	2.4	Light brown sandy soil - weathered quartzite?	10	10	<10	30	30	<10
1569	1400N	675W	1.0	Brown soil and weathered quartzite	10	10	<10	<10	10	10
1570	1412N	675W	5.3	Grey clay	40	40	380	90	370	10
1571	1400N	675W	4.4	Grey clay with minor quartz	10	40	40	20	80	<10
1572	1412.5N	675W	1.8	Light grey soil	10	70	<10	20	20	10
1573	1425N	675W	1.0	Brown soil, micaceous granitic?	10	60	<10	30	60	10
1574	1437.5N	675W	Rock Chip	Chip surface. Coarse grained weakly porphyritic granite	10	20	70	20	10	10
1575	1450N	675W	0.8	Brown soil, weathered granite	10	70	<10	20	30	<10
1576	1462.5N	675W	Rock Chip	Chip surface.Coarse grained porphyritic granite	10	20	<10	<10	20	10
15[illegible]	1487.5N	675W	Rock Chip	Chip surface. Brown clay with qtz fragments	<10	10	<10	10	<10	<10
1578	1500N	675W	1.3	Brown soil, weathered	10	40	60	10	10	10
1579	1525N	675W	Rock Chip	Surface chip. Coarse grained porphyritic granite	10	10	<10	<10	10	10
1580	1550N	675W	Rock Chip	Surface chip. Coarse grained porphyritic granite	10	10	<10	<10	<10	10
1581	1575N	675W	1.5	Brown soil, qtz, biotite-weathered granite	10	20	<10	20	<10	10
1582	1600N	725W	1.2	Pale brown clay - weathered granite?	10	20	<10	<10	10	<10
1583	1205N	675W	Rock Chip	Surface chip. Quartzite	10	10	<10	<10	<10	<10
1584	1225N	675W	1.4	Brown soil and weathered quartzite	10	10	<10	<10	<10	<10
1585	1250N	675W	1.0	Brown soil and weathered quartzite	10	<10	<10	<10	<10	<10
1586	1276N	675W	0.8	Brown soil and weathered quartzite	<10	10	<10	<10	<10	<10
1587	1300N	675W	Rock Chip	Surface chip. Quartzite	10	10	<10	50	<10	10
1588	1325N	675W	Rock Chip	Surface chip. Quartzite	<10	<10	<10	<10	<10	<10
1589	1345N	675W	Rock Chip	Surface Chip. Quartzite	<10	10	130	10	10	<10
1590	1360N	675W	4.5	Dark brown clay-no mins. weathered rock chips	10	10	<10	20	110	10
1591	1375N	675W	3.0	Pale brown clay-weathered quartzite?	30	10	70	20	100	20
1592	1387.5N	675W	4.2	Dark brown clay	10	20	30	30	70	<10

042

POWER AUGER SAMPLE RECORD AND ANALYTICAL DATA SHEET

537043

SAMPLE NUMBER	GRID LOCATION		DEPTH (metres)	DESCRIPTION	ANALYSES (ppm)					
					Sn	WO^3	Cu	Pb	Zn	As
				LAUREL CREEK EAST						
1067	12N	437.5E	0.5	Brown rock chip - magnetite skarn	240	30	500	230	400	140
1068	12N	425E	3.2	Pale brown soil and rock fragments	10	20	20	50	80	<10
1069	12N	412.5E	3.0	Pale brown soil and rock fragments	10	30	100	130	90	20
1070	12N	400E	3.4	Pale brown soil and rock fragments	10	50	40	70	50	30
1071	12N	387.5E	4.1	Dark brown clay with rock fragments? Lst??	30	30	300	90	170	30
1072	12N	375R	1.0	Quartzite rock fragments	20	10	80	20	<10	10
1073	12N	362.5E	0.8	Light grey sand-weathered quartzite	10	20	<10	<10	<10	<10
1074	12N	350E	3.0	Light grey sand-weathered quartzite	10	10	10	<10	10	10
1075	12N	337.5E	1.0	Light grey sand-weathered quartzite	<10	10	10	<10	20	<10
1076	12N	400E	Rock Chip	Surface rock chip. Gossaned magnetite skarn?	<10	20	1190	250	280	40
1077	8N	475E	1.2	Light grey chips - weathered quartzite	<10	<10	10	<10	<10	<10
1078	8N	500E	1.5	Dark grey chips - weathered/alt? quartzite.	10	30	<10	10	20	<10
1079	8N	515E	1.0	Light grey sand & frags. - quartzite (weathered)	<10	10	<10	10	<10	<10
1080	8N	525E	1.0	Quartzite fragments	<10	<10	<10	30	<10	10
1081	8N	537E	1.5	Light grey sands & chips - weathered quartzite	10	10	<10	<10	40	<10
1082	8N	537E	3.2	Dark brown Fe-st. clay - weathered quartzite	10	10	<10	<10	<10	<10
1083	8N	550E	4.5	Dark brown Fe-st.clay Lst??	20	30	100	70	1170	100
1084	8N	562E	1.5	Dark brown soil and weathered quartzite	20	10	10	10	70	10
1085	8N	562E	2.8	Dark brown soil and weathered quartzite	10	10	20	10	100	10
1086	8N	575E	1.5	Dark brown soil and quartz-biotite frags. Granite?	180	10	<10	<10	30	<10
1087	8N	575E	3.5	Brown soil - weathered quartzite?/granite?	150	10	<10	10	90	<10
1088	8N	600E	1.6	Dark brown soil & qtzite frags. Weathered qtzite?	150	10	<10	10	10	<10
1089	8N	612.5E	1.3	Light brown soil & qtz-biotite. Weathered qtzite-granite?	10	30	<10	10	10	<10
1090	8N	625E	1.0	Light brown soil & qtz-biotite. Weathered granite.	10	50	<10	10	10	<10
1091	8N	690E	3.8	Light brown soil & qtz-biotite. Weathered granite.	<10	20	<10	10	20	<10
1092	6N	550E	2.8	Dark brown weathered quartzite and soil.	10	20	<10	<10	10	<10
1093	6.4N	575E	Rock Chip	Surface sample. Quartzite rock chip.	10	20	30	140	240	<10
1094	6N	650E	1.0	White clay & brown soil	10	<10	<10	<10	<10	<10
1095	6N	137.5E	1.5	Dark brown soil	20	20	<10	10	<10	<10
1096	6N	750E	1.2	Dark brown soil and weathered quartzite	10	10	<10	<10	<10	<10
1097	6N	762.5E	1.0	Dark brown soil	10	<10	<10	<10	<10	<10
1098	6N	762.5E	3.0	White clay	10	10	40	30	30	<10
1099	6N	762.5	3.8	White clay with bio. & iron st. Weathered qtzite	10	10	20	30	30	<10
1100	6N	775E	1.0	Dark brown soil	10	<10	<10	<10	<10	<10
1501	6N	775E	2.0	Dark brown soil and weathered quartzite?	20	10	<10	10	20	<10
1502	6N	787.5E	1.4	Grey soil and weathered quartzite?	20	20	10	<10	<10	<10
1503	6N	800E	1.4	Grey soil and weathered quartzite?	10	10	20	<10	<10	<10
1504	6N	812.5E	0.8	Grey soil and weathered quartzite?	10	10	50	10	10	<10
1505	6N	825E	1.4	Brown soil and quartz. Granitic?	10	50	60	10	10	<10
1506	6N	837.5E	3.2	Brown soil and quartz.	10	50	60	20	20	<10
1507	450N	700E	Rock Chip	Surface sample. Fine grained quartizite qtz vein? + sulph.	20	10	100	50	30	20
1508	4N	925E	4.1	Pale orange-grey clay with granitic minerals	10	10	<10	20	20	<10
1509	4N	937.5E	3.5	Pale orange-grey clay with granitic minerals	10	30	30	30	50	<10
1510	4N	950E	4.2	Dark brown soil-clay	10	20	0	20	40	<10
1511	4N	962.5E	3.3	Brown clay with quartz weathered feldspar + mica	10	20	30	20	30	<10
1512	4N	975E	2.8	Brown clay with quartz weathered feldspar + mica	10	20	10	20	20	<10
1513	4N	987.5E	3.5	Brown clay with quartz weathered feldspar + mica	10	10	30	30	30	<10
1514	4N	1000E	2.2	Brown clay with quartz weathered feldspar + mica	<10	20	20	20	30	10
1515	0N	850E	1.2	Dark brown clay with quartz weathered feldspar+mica	20	10	10	20	20	<10
1516	2N	1050E	Rock Chip	Rock Chip. Weathered quartzite?	20	20	20	20	190	10
1517	2N	1037.5E	Rock Chip	Rock Chip. Weathered quartzite?	10	10	40	20	260	<10
1518	2N	1025E	Rock Chip	Rock Chip. Weathered quartzite?	10	20	40	30	90	20
1519	2N	1012.5E	Rock Chip	Rock Chip. Weathered quartzite? sl. gossanised.	<10	20	60	40	170	10
1520	2N	1000E	3.0	Light brown micaceous clay	10	10	20	20	40	<10

043

POWER AUGER SAMPLE RECORD AND ANALYTICAL DATA SHEET

537044

SAMPLE NUMBER	GRID LOCATION		DEPTH (metres)	DESCRIPTION	ANALYSES (ppm)					
					Sn	WO^3	Cu	Pb	Zn	As
				LAUREL CREEK EAST						
2478	1000E	500E	3.0	Grey fine grained sediment. Too small						
2479	1000E	500E	2.5	Black-brown micaceous soil with large qtz grains	50	<10	30	20	130	<10
2480	1000E	512.5E	4.0	Green-pale grey/brown micaceous silt qtz grains	10	40	40	620	5100	<10
2481	1000E	525E	Rock Chip	Rock chip. Magnetite skarn	<10	<10	210	230	660	<10
2482	1000E	537.5E	1.0	Pale brown silty clay and rock fragments	70	10	10	20	30	<10
2483	1000E	537.5E	2.0	White clay + qtz. weathered qtzite?	70	20	20	20	40	<10
2484	1000E	537.5E	3.0	White clay + qtz. weathered qtzite?	<10	10	20	20	50	<10
2485	1000E	537.5E	4.2	White clay + qtz. weathered qtzite?	<10	10	20	20	40	<10
2486	1000E	550E	1.0	Weathered granite. Coarse grained + dark brown soil	30	10	<10	10	<10	<10
2487	1000E	562.5E	1.5	Dark brown soil + qtz fragments	250	30	<10	10	20	<10
2488	1000E	575E	1.3	Dark brown soil + qtz frags. Weathered granite?	610	20	20	30	60	<10
2489	1000E	587.5E	1.0	Brown soil and weathered feldspars,qtz + gr. frags	10	<10	<10	10	50	<10
2490	1000E	600E	1.2	Brown sandy soil. Weathered granite	280	<10	<10	<10	20	<10

044

POWER AUGER SAMPLE RECORD AND ANALYTICAL DATA SHEET

537045

SAMPLE NUMBER	GRID LOCATION		DEPTH (metres)	DESCRIPTION	ANALYSES (ppm)					
					Sn	WO_3	Cu	Pb	Zn	As
				LAUREL CREEK WEST						
1545	1150N	1550E	3.6	Weathered quartzite	20	10	<10	20	20	<10
1546	1162.5N	1550E	3.5	White clay with minor quartz + mica	10	20	<10	10	10	<10
1547	1175N	1550E	4.0	White clay with minor quartz + mica	10	20	<10	10	10	<10
1548	1187.5N	1550E	2.8	Orange-white clay-minor quartz	10	20	<10	20	20	<10
1549	1200N	1550E	3.0	Dark grey plastic clay. Bluish	50	90	40	150	30	10
1550	1212.5N	1550E	2.5	Dark grey plastic clay. Bluish	<10	20	130	40	70	<10
1551	1225N	1550E	2.5	Dark grey plastic clay. Bluish	10	50	20	50	40	<10
1552	1237.5N	1550E	4.2	Dark brown clay. No minerals	10	40	120	40	70	40
1553	1250N	1550E	4.6	Dark grey plastic clay. No minerals	10	50	50	160	280	20
1554	1262.5N	1550E	4.5	Dark grey plastic clay. No minerals	30	20	140	30	200	<10
1555	1275N	1550E	2.8	Brown clay. No minerals	20	240	30	50	130	10
1556	1287.5N	1550E	2.6	Dark grey quartz-mica rich soil	10	30	<10	10	70	10
1557	1300N	1550E	3.0	Light grey quartz-mica (minor) soil	<10	60	60	20	60	<10
1558	1312.5N	1550E	2.6	Light grey quartz-mica (minor) soil	10	40	<10	10	20	<10
1559	1325N	1550E	2.5	Brown quartz rich clay	<10	30	<10	30	30	40
1560	1337.5N	1550E	3.0	Dark brown clay	10	60	<10	10	50	20
15[illegible]	1337.5N	1550E	4.2	Brown quartz rich soil	10	30	<10	10	50	10
156[illegible]	1350N	1550E	1.5	Dark brown quartz mica rich soil	20	20	<10	10	10	<10
1563	1350N	1550E	2.5	Pale brown quartzose clay. Granite?	20	30	<10	20	20	10
1564	1350N	1550E	3.4	Pale brown quartzose clay. Granite?	10	30	<10	10	20	10
1565	1362.5N	1550E	1.2	Pale brown quartzose clay. Granite?	10	50	<10	20	30	10
1566	1375N	1550E	3.2	Light brown soil. Granitic?	10	30	<10	10	30	20
1567	1387.5N	1550E	2.8	Light brown soil, weathered granite	10	20	<10	10	20	10
1568	1400N	1550E	3.4	Light brown soil, weathered granite	10	20	<10	10	20	10
1593	1800N	400E	3.2	Very pale brown soil - rock fragments	80	10	10	30	10	<10
1594	1812.5N	400E	2.4	Dark brown clay + rock fragments + quartz	10	10	10	20	20	<10
1595	1825N	400E	Rock Chip	Surface. Brown micaceous sandy soil, weathered/ altered feldspar+quartz	30	10	10	10	10	<10
1596	1837.5N	400E	Rock Chip	Surface. Light brown micaceous clayey soil, weathered/altered feldspar + quartz	10	<10	<10	10	10	<10
1597	1850N	400E	Rock Chip	Surface. Brown clay with qtz + alt. feldspar + micas	20	<10	<10	20	20	<10
1598	1787.5N	400E	Rock Chip	Rock Chip. Mag. skarn-unweathered	1120	<10	250	90	590	<10
1599	1775N	400E	2.1	Brown limonitic clay with qtz grains	1840	70	550	80	550	170
16[illegible]	1762.5N	400E	Rock Chip	Rock Chip. Weathered qtzite-clays. Limonite in joints	30	40	140	160	120	80
2501	1750N	400E	1.8	White clay.	280	20	200	70	810	110
2502	1737.5N	400E	2.0	White clay with Fe-ox stain	230	<10	120	60	690	270
2503	1725N	400E	1.5	Weathered clay with Fe-ox stain	510	20	310	30	590	340
2504	1712.5N	400E	1.5	Limonitic clay, weathered feldspars	760	30	190	100	480	100
2505	1700N	400E	1.8	Limonitic clay, weathered feldspars	40	<10	30	90	100	20
2506	1800N	250E	3.5	Pale clay with qtz + feldspar granite?	10	10	20	20	20	<10
2507	1787.5N	250E	4.0	Pale brown clay with qtz + feldspar granite?	<10	10	<10	20	10	<10
2508	1775N	250E	3.4	Pale brown clay with qtz + feldspar granite?	<10	20	<10	20	20	<10
2509	1762.5N	250E	3.8	Pale brown clay with qtz + feldspar granite?	<10	50	<10	10	30	<10
2510	1750N	250E	Rock Chip	Rock chip. Clay-stained-altered? Fe-ox stain	40	20	120	100	100	<10
2511	1737.5N	250E	Rock Chip	Rock chip. Soft white clay	840	40	30	40	100	60
2512	1725N	250E	Rock Chip	Rock chip. Weathered pale sst. -Fine gr.-quartzite?	10	<10	10	10	10	<10
2513	1712.5N	250E	2.1	Weathered pale clay with minor qtz-feld.-mica	20	<10	10	20	40	<10
2514	1700N	250E	1.0	Weathered pale brown clay with minor qtz-feld-mica	<10	10	<10	20	10	<10
2515	1812.5N	250E	4.3	White clay with fine qtz-feld-mica-granite?	<10	10	<10	20	10	<10
2516	1825N	250E	4.0	Pale brown clay with fine qtz-feld-mica-granite?	<10	<10	<10	20	10	<10
2517	1837.5N	250E	4.0	pale brown clay with fine qtz-feld-mica-granite?	<10	20	<10	20	20	<10
2518	1850N	250E	Rock Chip	Rock Chip. Sl. weathered granite	<10	10	<10	50	10	<10

045

POWER AUGER SAMPLE RECORD AND ANALYTICAL DATA SHEET

537046

SAMPLE NUMBER	GRID LOCATION		DEPTH (metres)	DESCRIPTION	ANALYSES (ppm)					
					Sn	WO_3	Cu	Pb	Zn	As
				LAUREL CREEK WEST						
2519	14N	300W	3.5	Pale brown clay soil with qtz-weathered feld	10	10	30	180	100	<10
2520	14N	312.5W	1.8	White clay.	<10	30	40	410	60	10
2521	14N	325W	4.5	White clay with very minor Fe-ox stain	60	50	20	810	100	10
2522	14N	350W	1.4	Brown clayey soil, minor qtz	<10	30	<10	200	50	<10
2523	14N	337.5W	1.8	White fine gr. rock - sl.weathered-quartzite?	10	10	<10	40	25	<10
2524	12N	350W	Rock Chip	Rock Chip. Fine gr. granite-weathered	<10	10	<10	50	30	<10
2525	12N	337.5W	Rock Chip	Rock chip. Dark brown gossan and white clay	1060	130	200	160	490	740
2526	12N	325W	1.8	Brown fine grained soil	400	90	90	70	70	370
2527	12N	312.5W	2.0	Brown clayey soil with qtz + limonite frags	150	410	470	140	3720	510
2528	12N	312.5W	3.8	Pale clay-banded, wk dev. limonite	50	100	430	140	3740	140
2529	12N	300W	1.8	White clay with brown soil	20	180	190	60	630	290
2530	12N	287.5W	1.5	Pale brown-grey clay	<10	10	30	20	120	30
2531	12N	2 5W	2.0	Pale brown-grey clay	<10	10	34	20	90	<10
2532	10N	325W	0.8	White clay with orange lim. staining	10	10	20	80	790	<10
2533	10N	337.5W	1.2	White clay with orang lim. staining	<10	20	10	40	70	10
2534	10N	350W	4.2	White clay with orange lim. staining	10	20	40	250	2360	<10
25[illegible]	10N	362.5W	4.0	White clay with orange lim. staining	10	10	30	50	500	10
2536	10N	375W	2.1	Dark brown clayey soil	<10	20	<10	60	200	<10
2537	10N	387.5W	2.4	Dark brown clayey soil. Sandy granite? soil	<10	10	<10	20	30	<10
2538	10N	400W	4.5	Brown clay with qtz-feldspar fragments	<10	10	20	50	90	<10
2539	8N	400W	2.2	Brown clayey soil	<10	10	40	20	140	<10
2540	8N	412.5W	2.5	Dark brown clayey soil and white clay	10	50	40	1200	430	20
2541	8N	425W	1.8	Light brown gritty soil. Weathered quartzite?	<10	30	<10	20	30	<10
2542	8N	450W	2.6	Light brown gritty soil. Weathered quartzite?	<10	10	<10	50	30	<10

046

POWER AUGER SAMPLE RECORD AND ANALYTICAL DATA SHEET

537047

SAMPLE NUMBER	GRID LOCATION		DEPTH (metres)	DESCRIPTION	ANALYSES (ppm)					
					Sn	WO^3	Cu	Pb	Zn	As
				LITTLE WILSON RIVER						
2543	15.5N	1950E	3.8	Plastic brown clay	10	30	50	50	250	<10
2544	15.5N	1925E	4.5	Plastic white banded clay	10	10	30	100	50	<10
2545	15.5N	1900E	4.2	Plastic white banded clay	<10	10	30	90	90	<10
2546	15.5N	1875E	4.0	Plastic grey clay	10	10	40	60	370	10
2547	15.5N	1850E	1.8	Dark brown clayey soil with qtz + mica fragments	60	10	<10	<10	20	<10
2548	15.5N	1825E	0.8	Dark brown soil with large qtz fragments	160	<10	<10	<10	<10	<10
2549	15.5N	1800E	3.8	White banded clay with orange stain	10	20	40	40	430	20
2550	15.5N	1775E	3.4	White limonitic clay	10	40	220	50	280	130
2451	15.5N	1750E	3.5	Yellow brown limonitic clay	230	20	2520	40	270	240
2452	15.5N	1725E	1.5	Black qtz rich soil	50	10	20	10	40	<10
2453	16N	1875E	1.3	Qtzite? White fine gr. rock + light brown soil	20	<10	230	20	40	30
2454	16N	1900E	3.5	Dark brown-black clay. Limonite	<10	<10	130	20	70	<10
2455	16N	1925E	4.3	Orange brown clay-limonitised	<10	20	50	20	160	110
2456	16N	1950E	4.5	Pale brown fine grained silty clay	10	20	60	30	480	20
2457	16N	1975E	4.2	Pale brown clay	50	10	20	50	360	<10
2458	16N	2000E	4.8	Brown clay with weathered/altered rock fragments	<10	<10	40	70	290	10
245[redacted]	16.5N	2025E	2.6	Brown soil, clay + fine grained	10	20	<10	10	40	<10
2460	16.5N	2050E	1.9	Brown clayey soil-white clay fragments	10	50	20	10	20	<10
2461	16.5N	2075E	1.0	Weathered granite? Micas+clays-brown	<10	<10	10	20	30	<10
2462	16.5N	2100E	1.0	Brown soil, rock fragments	10	30	10	40	50	<10
2463	16.5N	2125E	2.8	Brown clayey soil, weathered rock + qtz	<10	50	20	10	30	10
2464	14N	1400E	4.8	Pale brown silty clay	<10	10	120	50	150	10
2465	14N	1375E	1.4	Pale brown silty clay	<10	<10	70	20	40	30
2466	14N	1350E	4.8	White clay with strong brown-red stain	10	<10	190	60	150	40
2467	14N	1325E	0.8	Brown fine grained silty soil	20	40	470	10	60	360
2468	14N	1300E	1.6	Brown clay + silty sediments	<10	10	170	20	60	<10
2469	14N	1275E	1.4	Dark brown limonitic clayey soil	<10	<10	360	20	60	30
2470	14N	1250E	Rock Chip	Rock chip. Limonitic/weathered claystone/sst/qtzite?	<10	<10	190	20	20	<10
2471	14N	1225E	1.0	Brown silty clay	30	<10	1 0	20	40	190
2472	14N	1200E	1.2	Brown silty clay qtzite?	<10	<10	150	20	30	<10
2473	13N	1325E	1.8	Dark brown clayey soil. Limonitic	470	30	810	30	180	4440
2474	13N	1350E	3.5	White and brown clays	<10	<10	100	60	140	190
2475	13N	1375E	3.0	Pale brown clay	<10	10	40	50	140	70
247[redacted]	13N	1400E	4.2	Pale brown clay	30	10	80	80	220	70
247[redacted]	13N	1425E	3.3	Pale brown clay layered	<10	10	60	60	130	20

APPENDIX 3

C.M.S. Petrographic Report on rock chip samples.

043

537049

REPORT CMS 83/3/15

Wilson River Samples

5 rock samples were received for petrological examination; thin-sections were prepared, and an XRD identification of the clay phase in 1711 was carried out as requested; supplementary optical tests were also made. The results are presented in the attached table.

Summary

At least four of the rocks are metasediments with evidence of medium-grade contact-metamorphism; they represent a variety of lithologies ranging from quartz sandstones through argillites to banded argillaceous limestones (or dolostones). 1711 is almost totally argillised; the nature of the clay (metahalloysite) indicates that this was a hydrothermal event.

1715 is a quartz-goethite rock which may have been a sediment, depending on its field occurrence; much of the goethite is derived from, or represents, oxidised sulphides, and base metal geochemistry is needed.

H.W. Fander, M. Sc.

CENTRAL MINERALOGICAL SERVICES

ample o.	Rock Type - Composition	Fabric	Minor Minerals	Comments
709 T.S. 15514)	Metaquartzite. Virtually entirely composed of small polygonal and interlocking quartz grains; many small cavities - leached ?carbonate.	Very uniform, medium-grained; vague relict clastic textures. Faintly bedded.	Minute carbonate inclusions in quartz. Detrital zircon, leucoxene.	Believed to have been an ortho-quartzite with carbonate cement, now thoroughly recrystallized; coarser carbonate subsequently leached.
711	Argillised ?Calc-Silicate Rock. Dominantly massive featureless meta-halloysite (XRD), with folded leucoxenic bands, dispersed ultrafine hydrogarnet.	Structureless, no relict textures; relict banding may be spurious.	Ultrafine pyrite crystals throughout, and minute ?carbon-aceous grains.	Original composition not known, because of intense hydrothermal alteration, but presumed banded calc-silicate.
1719	Banded Calc-Silicate Hornfels. Alternating bands of fine diopside, diopside-actinolite, diopside-quartz, phlogopite-quartz; scattered fine pyrrhotite throughout.	Fine compositional banding reflects variations in original rock. Fine-grained.	Scattered sphene. Coarserpatches of random actinolite.	Despite banded appearance, rock is believed to be a product of contac metamorphism of a semi-calcareous fine sediment.
1715	Quartz-Goethite Rock. Mosaic of polygonal quartz grains with intergranular goethite and massive goethite veins with cellular textures.	Featureless rock fabric, no relict textures; possibly vein-type fabric.	None detected.	Goethite represents oxidised sulphides, mainly pyrite, but possibly others; geochemistry needed.
1718	Spotted Hornfels. Small ovoid spots of sericitised cordierite set in fine biotite-quartz mass; Mn/Fe oxide impregnations, goethite veinlets.	Very uniform and devoid of relict features. Very fine-grained.	Adularia veins; hydrothermal clay veinlets.	Medium-grade contact-metamorphism a fine-grained argillic sediment (siltstone-mudstone).

53050

537051

APPENDIX 4

Ground Magnetometer Survey Sheets for the Laurel Creek Grids, 1982/83.

051

GOLD FIELDS EXPLORATION PTY. LIMITED

537052

GROUND MAGNETOMETER SURVEY

PAGE NO: 1

LOCATION: L.C.W. LINE 1550E

DATE: 9-2-83

MAGNETOMETER:

OPERATOR: S.S./W.H/A.G

BASE STATION LOCATION: 1200N, 1550E LCN.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1150N	12·55	62 289	+48	62337	
1162·5N		339	+48	387	
1175N		324	+51	375	
1187·5N		300	+51	351	
1200N		294	+50	344	
1212·5N	1·00	328	+50	378	
1225N		396	+50	446	
1237·5N		445	+50	495	
1250N		499	+51	450	
1262·5N		585	+51	636	
1275N		555	+52	607	
1287·5N		385	+52	437	
1300N	1·05	275	+52	327	
1312·5N		244	+52	296	
1325N		314	+52	366	
1337·5N		246	+51	297	
1350N		269	+51	320	
1362·5N	1·10	249	+51	300	
1375N		253	+51	304	
1387·5N		251	+52	303	
1400N		259	+52	311	

052

GOLD FIELDS EXPLORATION PTY. LIMITED

537053

GROUND MAGNETOMETER SURVEY

LOCATION: L.C.W. LINE 400E

DATE: 8-2-83

MAGNETOMETER:

OPERATOR: N.P

BASE STATION LOCATION: 1800N, 400E L.C.W.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1850N		62332	+215	62547	
1837·5N	4·50	340	+216	556	
1825N		357	+217	573	
1812·5N		560	+218	776	
1800N	4·30	334	+219	553	
1787·5N		282	+219	501	
1775N		720	+218	938	
1762·5N		63052	+217	63269	
1750N	4·35	62271	+216	62487	
1737·5N		075	+216	291	
1725N		119	+216	335	
1712·5N		195	+215	411	
1700N	4·40	194	+215	409	

J53

GOLD FIELDS EXPLORATION PTY. LIMITED

537054

GROUND MAGNETOMETER SURVEY

LOCATION: L.C.W. LINE 250E

DATE: 8-2-83

MAGNETOMETER:

OPERATOR: N.P.

BASE STATION LOCATION: 1800N, 250E, L.C.W.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1850N		62423	-54	62369	
1837.5N	5.20	455	-54	401	
1825N		514	-55	459	
1812.5N		549	-54	495	
1800N	5.05	674	-53	621	
1787.5N		760	-53	707	
1775N		800	-53	747	
1762.5N		744	-54	691	
1750N		185	-54	132	
1737.5N	5.10	61875	-54	821	
1725N		817	-54	763	
1712.5N		814	-53	760	
1700N	5.14	924	-53	869	

054

GOLD FIELDS EXPLORATION PTY. LIMITED

537055

GROUND MAGNETOMETER SURVEY

LOCATION: L.C.W. LINE 1200N

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: S.S. /A.S.C.

BASE STATION LOCATION: 1200N, BASE LINE, L.C.W.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
BASE LINE	8·00	62315	-32	62347	
12·5W		308	"	340	
25W		306	"	338	
37·5W		316	-31	347	
50W	8·05	311	"	342	
62·5W		310	"	341	
75W		319	"	350	
87·5W		310	-30	340	
100W	8·10	308	"	338	
112·5W		306	"	336	
125W		326	"	356	
137·5W		321	"	351	
150W		324	-29	353	
162·5W	8·15	312	"	341	
175W		294	-28	322	
187·5W		297	"	325	
200W	8·20	273	-27	300	
212·5W		308	"	335	
225W		306	"	333	
237·5W		309	"	336	
250W	8·25	321	-26	347	
262·5W		354	"	380	
275W		410	"	436	
287·5W		499	"	525	
300W		784	"	810	
312·5W	8·30	061	"	63087	
325W		204	"	230	
337·5W		160	"	186	
350W		335	"	62361	
362·5W	8·35	356	-27	383	
375W		322	"	349	
387·5W		283	"	310	
400W	8·40	257	"	284	

055

GOLD FIELDS EXPLORATION PTY. LIMITED

537056

GROUND MAGNETOMETER SURVEY

PAGE NO: 5

LOCATION: L.C.W. LINE 1200N

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: S.S. /A.J.C.

BASE STATION LOCATION: 1200N, BASE LINE. LCW.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
412·5W		62289	-27	62316	
425W	8·45	270	-26	296	
437·5W		273	"	299	
450W	8·50	273	-25	298	
12·5E	9·30	62301	-22	62323	
25E		299	-21	320	
37·5E	9·35	297	"	318	
50E		295	"	316	
62·5E		294	"	315	
75E		292	-20	312	
87·5E		293	"	313	
100E	9·40	291	"	311	
112·5E		292	"	312	
125E		284	"	304	
137·5E		276	"	296	
150E		272	"	292	
162·5E	9·45	273	"	293	
175E		272	"	292	
187·5E		277	"	297	
200E		277	"	297	
212·5E	9·50	276	"	296	
225E		269	"	289	
237·5E		262	"	282	
250E		269	"	289	
262·5E		266	"	286	
275E		256	"	276	
287·5E		256	"	276	
300E	9·55	252	"	272	
312·5E		252	-19	271	
325E		253	"	272	
337·5E		249	"	268	
350E		253	"	272	
362·5E		255	"	274	

056

GOLD FIELDS EXPLORATION PTY. LIMITED

537057

GROUND MAGNETOMETER SURVEY

PAGE NO: 6

LOCATION: L.C.G. 1200N

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: G.S. / A.S.C

BASE STATION LOCATION: 1200N, BASE LINE LCG

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
375E	10·00	62255	-19	62274	
387·5E		255	"	274	
400E		254	"	273	
412·5E		251	-20	271	
425E		247	"	267	
437·5E		240	"	260	
450E	10 05	228	"	248	
462·5E		232	-21	253	
475E		235	"	256	
487·5E		235	"	256	
500E		242	"	263	
512·5E		248	"	269	
525E		270	-22	292	
537·5E		284	"	306	
550E		297	"	319	
562·5E	10·10	298	"	320	
575E		293	"	315	
587·5E		308	"	330	
600E		304	"	326	
612·5E		304	-23	327	
625E		302	"	325	
637·5E		304	"	327	
650E	10·15	302	"	325	
662·5E		295	"	318	
675E		291	"	314	
687·5E		285	"	308	
700E		276	-24	300	
712·5E		268	"	292	
725E		261	"	285	
737·5E	10·20	252	"	276	
750E		248	"	272	
762·5E		244	"	268	
775E		240	"	264	
787·5E		239	"	263	

057

GOLD FIELDS EXPLORATION PTY. LIMITED

537058

GROUND MAGNETOMETER SURVEY

PAGE NO: 7

LOCATION: L.C.W. 1200N

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: S.S. / A.J.C.

BASE STATION LOCATION: 1200N, BASE LINE LCW.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
800E	10·25	62232	-24	62256	
812·5E		232	"	256	
825E		227	"	251	
837·5E		225	"	249	
850E		223	"	247	
862·5E		216	"	240	
875E		209	"	233	
887·5E	10·30	147	"	171	
900E		192	"	216	
912·5E		183	"	207	
925E		212	-25	237	
937·5E		324	"	349	
950E	10·30	265	"	290	
962·5E		238	"	263	
975E		243	"	268	
987·5E		247	-26	273	
1000E		248	"	274	
1012·5E		256	"	282	
1025E	10·40	276	"	302	
1037·5E		317	"	343	
1050E		418	-27	345	
1062·5E		587	"	614	
1075E		683	-28	710	
1087·5E	10·45	661	"	689	
1100E		509	"	537	
1112·5E		333	"	361	
1125E		258	"	286	
1137·5E		241	-29	270	
1150E		249	"	278	
1162·5E		261	"	290	
1175E	10·50	269	"	298	
1187·5E		270	"	299	
1200E		284	"	313	
1212·5E		283	-30	313	

058

GOLD FIELDS EXPLORATION PTY. LIMITED

537059

GROUND MAGNETOMETER SURVEY

LOCATION: L.C.W. 1200N

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: S.S. /A.S.C.

BASE STATION LOCATION: 1200N, BASE LINE LCW.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1225E		62294	-30	62324	
1237.5E		292	"	322	
1250E	10.55	286	"	316	
1262.5E		286	"	316	
1275E		305	"	335	
1287.5E		321	"	351	
1300E		315	-31	346	
1312.5E		313	"	344	
1325E		302	"	333	
1337.5E	11.00	285	"	315	
1350E		282	"	313	
1362.5E		285	"	316	
1375E		292	-32	324	
1387.5E		296	"	328	
1400E		292	"	324	
1412.5E	11.05	281	-33	314	
1425E		282	"	315	
1437.5E		286	"	319	
1450E		287	-34	321	
1462.5E		276	"	310	
1475E	11.10	276	"	310	
1487.5E		271	"	305	
1500E		275	"	309	
1512.5E		255	-35	290	
1525E		233	"	268	
1537.5E	11.15	196	"	231	
1550E		165	"	200	
1562.5E		174	"	209	
1575E		N/R	-36		
1587.5E		N/R	"		
1600E		142	"	178	
1612.5E	11.20	176	"	212	
1625E		277	"	313	
1637.5E		290	"	326	
1650E		206	"	242	

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GOLD FIELDS EXPLORATION PTY. LIMITED

537060

GROUND MAGNETOMETER SURVEY

PAGE NO: 9

LOCATION: L.C.W.

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: S.S. /A.J.C.

BASE STATION LOCATION: Uncorrected readings. LINE 1400N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
287.5W		62286			
300W		312			
312.5W		281			
325W		272			
330W		554			
337.5W		385			
350W		285			

060

GOLD FIELDS EXPLORATION PTY. LIMITED

537061

GROUND MAGNETOMETER SURVEY

PAGE NO: 10

LOCATION: L.C.W.

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: S.S./A.J.C.

BASE STATION LOCATION: Uncorrected readings. LINE 1200N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
262·5W		62310			
275W		453			
287·5W		439			
300W		807			
312·5W		63069			
325W		218			
337·5W		363			
350W		62360			
362·5W		355			

061

GOLD FIELDS EXPLORATION PTY. LIMITED

537062

GROUND MAGNETOMETER SURVEY

PAGE NO: 11

LOCATION: L.C.W.

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: S.S. / A.S.C.

BASE STATION LOCATION: Uncorrected readings. LINE 1000N.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
300W		62216			
312·5W		053			
325W		61946			
337·5W		62696			
350W		63283			
362·5W		64621			
375W		63043			
387·5W		62653			
400W		445			

062

GOLD FIELDS EXPLORATION PTY. LIMITED

537063

GROUND MAGNETOMETER SURVEY

PAGE NO: 12

LOCATION: L.C.W.

DATE: 17-1-83

MAGNETOMETER:

OPERATOR: S.S. /A.J.C.

BASE STATION LOCATION: Uncorrected readings. LINE 800N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
375W		62206			
387.5W		169			
400W		693			
412.5W		63100			
425W		539			
437.5W		62571			
450W		N/R.			

063

GOLD FIELDS EXPLORATION PTY. LIMITED

537064

GROUND MAGNETOMETER SURVEY

PAGE NO: 13.

LOCATION: L.C.E. LINE 1025W

DATE: 9-2-83

MAGNETOMETER:

OPERATOR: S.S. / W.H. / A.B.

BASE STATION LOCATION: 1200N, 1550E LCW.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1600N	12·45	63231	+48	63279	
1612·5N		62819	"	62876	
1625N		285	"	333	
1637·5N		226	"	274	
1650N	12·50	216	"	264	

064

GOLD FIELDS EXPLORATION PTY. LIMITED

537065

GROUND MAGNETOMETER SURVEY

PAGE NO: 14

LOCATION: L.C.E. LINE 675W

DATE: 9-2-83

MAGNETOMETER:

OPERATOR: SS /W.H. /A.B.

BASE STATION LOCATION: 1400N, 675W L.C.E.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1600N	11·44	62331	-100	62 231	
1587·5N		306	-99	207	
1575N		348	"	249	
1562·5N	11·40	352	-98	254	
1550N		296	"	171	
1537·5N		234	"	136	
15[illegible]N		238	"	140	
1512·5N	11·35	221	"	123	
1500N		208	"	110	
1487·5N		283	-97	186	
1475N		199	-96	103	
1462·5N	11·30	259	"	163	
1450N		679	+81	760	
1437·5N	10·40	297	"	378	
1425N		460	"	541	
1412·5N		671	"	752	
1400N	10·00	63274	"	63355	
1387·5N		62700	"	62781	
1[illegible]5N		038	"	119	
1362·5N		61968	+80	048	
1350N	10·05	978	"	058	
1337·5N		62047	"	127	
1325N		172	"	252	
1312·5N		182	+81	263	
1300N		218	"	299	
1287·5N	10·10	228	"	309	
1275N		252	"	333	
1262·5N		244	"	325	
1250N		233	+82	315	
1237·5N		270	"	352	
1225N		239	"	321	
1212·5N	10·15	197	"	299	
1200N		266	"	348	

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GOLD FIELDS EXPLORATION PTY. LIMITED

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GROUND MAGNETOMETER SURVEY

PAGE NO: 15

LOCATION: L.C.E. LINE 75E

DATE: 9-2-83

MAGNETOMETER:

OPERATOR: S.S./W.H./A.B.

BASE STATION LOCATION: 1400N, 87.5E, L.C.E.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1387.5N	9.05	64355	+450	64805	
1400N		59714	+430	60144	
1412.5N		779	+675	454	
1425N	9.08	697	+900	597	

086

GOLD FIELDS EXPLORATION PTY. LIMITED

537067

GROUND MAGNETOMETER SURVEY

PAGE NO: 16

LOCATION: L.C.E. LINE 87.5E

DATE: 9-2-83

MAGNETOMETER:

OPERATOR: S.S./W.H./A.B.

BASE STATION LOCATION: 1400N, 87.5E, LCE.

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1350N		61042	+750	61792	
1362.5N	8.45	60721	+500	221	
1375N		62859	+541	63400	
1387.5N		59872	+581	60453	
1400N	8.40	372	+622	59994	
1412.5N	8.52	722	+688	60410	
1425N		60476	+532	61008	
1437.5N		66804	+376	67180	
1450N	8.55	64795	+220	65015	
1462.5N		63913	+266	64179	
1475N	8.58	255	+312	63567	

067

GOLD FIELDS EXPLORATION PTY. LIMITED

537068

GROUND MAGNETOMETER SURVEY

PAGE NO: 17

LOCATION: L.C.E.

DATE: 13-1-83

MAGNETOMETER:

OPERATOR: P.A.R./A.J.C

BASE STATION LOCATION: Uncorrected readings. LINE 1400N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
BASE LINE		62355			
12·5E		64980			
25E		724			
37·5E		58400			
50E		62540			
62·5E		60900			
7[redacted]		61100			
87·5E		000			
100E		60700			
112·5E		68804			
125E		65071			
137·5E		63579			
150E		62936			

063

GOLD FIELDS EXPLORATION PTY. LIMITED

537069

GROUND MAGNETOMETER SURVEY

PAGE NO: 18

LOCATION: L.C.E.

DATE: 14-1-83.

MAGNETOMETER:

OPERATOR: S.S./A.S.C.

BASE STATION LOCATION: Uncorrected readings LINE 1200N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
450E		62750			
462.5E		883			
475E		63113			
487.5E		388			
500E		64281			
512.5E		65584			
5[illegible]E		67717			
537.5E		61000			
550E		62626			
562.5E		940			
575E		67030			
587.5E		64704			
600E		63825			
612.5E		351			
625E		687			
637.5E		62907			
650E		830			

063

GOLD FIELDS EXPLORATION PTY. LIMITED

537070

GROUND MAGNETOMETER SURVEY

PAGE NO: 19

LOCATION: L.C.E.

DATE: 13-1-83

MAGNETOMETER:

OPERATOR: R.A.R. /A.S.C.

BASE STATION LOCATION: Uncorrected readings LINE 1000N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
500E		62241			
512.5E		968			
525E		61250			
537.5E		63500			
550E		66215			
562.5E		64175			
575E		63313			
587.5E		62858			
600E		597			
612.5E		504			
625E		454			

070

537071

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GROUND MAGNETOMETER SURVEY

PAGE NO: 20

LOCATION: L.C.E.

DATE: 14-1-83.

MAGNETOMETER:

OPERATOR: S.S./A-J.C

BASE STATION LOCATION: Uncorrected readings LINE 800N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
450E		62750			
462·5E		883			
475E		63113			
487·5E		338			
500E		64281			
512·5E		65584			
525E		67717			
537·5E		61000			
550E		62 626			
562·5E		940			
575E		67030			
587·5E		64704			
600E		63821			
612·5E		351			
625E		087			
637·5E		62907			
650E		830			

071

GOLD FIELDS EXPLORATION PTY. LIMITED

537072

GROUND MAGNETOMETER SURVEY

PAGE NO: 21

LOCATION: L.C.E.

DATE: 14-1-83.

MAGNETOMETER:

OPERATOR: S.S./A.J.C.

BASE STATION LOCATION: Uncorrected readings LINE 600N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
700E		62322			
712·5E		392			
725E		553			
737·5E		555			
750E		63 245			
762·5E		068			
775E		444			
787·5E		64424			
800E		63529			
812·5E		184			
825E		000			
837·5E		62852			
850E		708			

072

GOLD FIELDS EXPLORATION PTY. LIMITED

537073

GROUND MAGNETOMETER SURVEY

PAGE NO: 22

LOCATION: L.C.E.

DATE: 14-1-83

MAGNETOMETER:

OPERATOR: S.S./A.J.C.

BASE STATION LOCATION: Unrecorded readings LINE 400N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
925E		62482			
937.5E		633			
950E		722			
962.5E		767			
975E		718			
987.5E		646			
1000E		579			
1012.5E		570			
1025E		526			

075

GOLD FIELDS EXPLORATION PTY. LIMITED

537074

GROUND MAGNETOMETER SURVEY

PAGE NO: 23

LOCATION: L.C.E.

DATE: 14-1-83

MAGNETOMETER:

OPERATOR: S.S./A.J.C.

BASE STATION LOCATION: Unrecorded readings LINE 200N

Station	Time	Magnetic Reading	Base Reading	Corrected Reading	Cultural Features
1050E		62571			
1037.5E		631			
1025E		699			
1012.5E		750			
1000E		938			
987.5E		778			
[redacted]E		451			
962.5E		281			
950E		253			

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APPENDIX 5

1983 Geophysical Surveys at Laurel Creek
Mitre Geophysics Report RN/MG82/14 by Dr. J.R. Bishop

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537076

1983 GEOPHYSICAL SURVEYS AT LAUREL CREEK

(Addendum to Mitre Geophysics report RN/MG82/14)

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List of Figures	1
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1983 Magnetic Surveys	3
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Conclusions and Recommendations	5

FIGURES

1. Anomaly Compilation Plan (1:10,000 scale)

Figures referred to or referenced but not included in this report.

a. Total magnetic field contours, Corinna B4-3 sheet (1:5000).

b. Chargeability contours, Corinna B4-3 sheet (1:5000).

c. Resistivity contours, Corinna B4-3 sheet (1:5000).

d. Composite profiles LCE 75E, 87.5E, 1400N. (1:1000).

e. Composite profiles LCE 675W and 1025W; LCW 1550E. (1:1000).

f. Composite profiles LCE 200, 400, 600, 800, 1000, 1200N. (1:1000).

g. Composite profiles LCW 800, 1000, 1200, 1400N. (1:1000).

h. Composite profile LCW 250E, 400E. (1:1000).

i. Composite profiles LCE grid (lines 00 to 1600N) and LCW grid (lines 00 to 1800N). (1:5000).

SUMMARY

This report is intended to be read as an addendum to the report on the 1982 geophysical surveys over the Laurel Creek grids.

Coverage of the magnetic and IP surveys over the Laurel Creek East and West grids was completed during the 1983 field season. As well, several magnetic anomalies were detailed with short surveys along lines perpendicular to the main grid lines. There were no major changes to the conclusions made from the 1982 surveys: the most prospective skarn zones, defined by magnetic anomalies 2 and 9 (renamed the 'A' and 'F' anomalies respectively), have been better defined by the detailed magnetics.

To complete the IP coverage, most of the Laurel Creek East grid was surveyed: there were several 'anomalies' recorded, but only those coincident with anomaly F are considered to be significant. (No IP responses were recorded over the two other magnetic anomalies on the grid.) The maximum chargeabilities over anomaly F were less than 30mv/v, indicating little sulphide in this shallowly buried zone. The IP suggests that the maximum amount of sulphide occurs at the northern end of the zone, near line 14N; however this higher response may be due to the zone's near outcropping at this location.

Surveying of only one line, 1200N on the Laurel Creek West grid, was required to complete the magnetic coverage. This data showed that two anomalies (nos 5 and 6), previously thought to be separate, were probably one continous zone (now labelled 'C'). And it considerably reduced the expected size of another (no. 7, renamed 'D'). At its western end, line 1200N passed over anomaly A, where a significant broadening of the zone was recorded.

The several short, detailed magnetic surveys were used to locate the skarn zones for geochemical sampling, as well as to help determine the extent of some of the zones. The geochemical sampling was carried out with a power auger and quite superior anomalies were obtained, compared with the original near-surface samples. Integration of the magnetics and geochemistry suggests that anomaly F be investigated near line 1400N (drilling to the north close to detail line 87.5E is suggested) and on 800N before 1000N (the geochemistry over 1000N is better than on 800N, but the magnetics indicates a much wider zone at 800N). Drilling of anomaly A is recommended on 1200N where the best geochemical results are, rather than on 1000N which has the stronger magnetic response.

If drilling elsewhere on the grid is desired, then anomaly B (anomalies 3 and 4 from the 1982 surveys) is suggested since this also has promising associated geochemistry. However it is recommended that this be better defined (by magnetics and geochemistry) before siting a drill target.

INTRODUCTION

At the conclusion of the 1982 field season, the magnetic and IP surveys of the Laurel Creek East and West grids had not been completed. As well as finishing these surveys, the 1983 field work included detailing of some of the magnetic anomalies defined in 1982.

This report evaluates the 1983 work and comments on the results of the completed surveys. It has been structured to be included as an addendum to the report on the 1982 geophysical surveys (Mitre Geophysics report RN/MG82/14).

1983 IP Surveys

The coverage of the Laurel Creek East grid was completed by surveying all of lines 00N to 800N and the eastern and western ends of lines 1000N to 1600N. The same parameters were used as for the 1982 survey and the results have been plotted onto the 1:5000 composite profiles and onto the 1:5000 contour plans of the 1982 survey. 20mv/v and 15mv/v anomalies have been added to the revised Laurel Creek anomaly compilation map (see Figure 1).

Although the highest chargeabilities (on both grids) were recorded by this survey, there was only one anomaly, on line 200N, where absolute high values were recorded (a maximum of 74mv/v). However, this has no associated magnetic anomaly and is attributed to disseminated sulphides within the Crimson Creek Formation. Elsewhere 'high' values are 20 to 25 mv/v and broad areas of such values at the southern end of the Laurel Creek East grid are probably due to minor sulphides within the Crotty Quartzite.

A 15 to 29 mv/v response was defined on lines 1000N to 1400N which coincided with magnetic anomaly no. 9. A very shallow source is indicated and the response may be largely due to magnetite, although good base metal geochemistry at the northern end (where the chargeabilities are highest) suggests the presence of some sulphide.

Resistivities were comparable to those recorded by the earlier survey, ie mostly between 1000 and 2000 ohm-m. Areas below 500 ohm-m are shown in Figure 1. One such low, between 1200N and 1400N, is coincident with magnetic anomaly no. 9 and a chargeability response; however, it seems likely that this low, like the others, is due to weathering and/or conductive cover rather than mineralisation.

1983 MAGNETIC SURVEYS

1200N of the Laurel Creek West grid was the only line not surveyed by magnetometer during the 1982 field season. Completion of the survey in 1983, reduced the (inferred) size of anomaly no.

7, and showed that anomalies 5 and 6 were actually one response. The survey also recorded a much wider (though not stronger) response for anomaly no. 2 on 1200N (see Figure 1).

Several anomalies were detailed. These surveys served to locate the geochemical sample points over the skarn zones and/or to better define the extent of the responses. In the former category, were surveys on LCE lines 200, 400, 600, 800, 1000, 1200 and 1400N, and on LCW lines 800, 1000, 1200, and 1400N. In the latter category, surveys over anomalies 3, 4, 7 and 8 failed to extend the size of these anomalies from their original definition by the 1982 surveys.

DISCUSSION

Following the 1983 surveys, the potential of the area is still focussed on two anomalies; viz, nos 2 and 9. Because these surveys have amalgamated some anomalies and a (false) anomaly has been removed, there are no longer nine anomalies and thus renaming is appropriate: the new, alphabetical labelling is shown in Figure 1 and is used below. Further comments on each of the anomalies, arising from the 1983 surveys, are given below.

(1). This false anomaly has been removed from the contour plan (however the profile for line 400N (LCW) has not been corrected).

(A). (previously no. 2). The 1983 detailing has slightly enhanced this anomaly by defining a broadening of the zone on line 1200N. The northern end of the response has not been closed off, but this is not significant if the granite boundary is cluse to its indicated position (see Figure 1). Line 1000N, with an anomalous amplitude of over 3000 gammas, has the best response, but line 1200N, with an amplitude of about 1000 gammmas, has much better geochemistry.

(B). (previously nos 3 and 4). Surveying of two short lines which extended past the granite contact, has confirmed the limited northern extent of these anomalies. However the geochemical sampling gave interesting tin responses and the potential tonnage is sufficient to warrant further investigation.

(C).(previously nos 5 and 6). The magnetic results from line 1200N (LCW) suggest that nos 5 and 6 are one continuous zone. Since most of the other magnetic anomalies lie on the granite contact, it has been suggested that this zone may also define the boundary (see Figure 1). The (relatively) low magnetic response and the lack of any associated geochemistry, result in anomaly C having a poor potential.

(D) and (E). (previously nos 7 and 8). The detailing of both of these anomalies has reduced their size: substantially for D which had been thought to extend across line 1200N (LCW). The traverse across E (line 675W) gave some base metal geochemical responses, but no tin. Thus the prospectiveness of these two anomalies has

not been increased.

(F).(previously no. 9). Detailing of the northern end of this anomaly on 1400N has recorded promising base metal and tin geochemical responses. These surveys have produced a more complex contour pattern, and it is likely that further surveying would produce further complexities. That is, the northern end of this skarn is close to outcropping and this may be why the better geochemical values were obtained here. Interesting tin values (over 500ppm) were obtained on line 1000N as well and this area, near the centre of the zone, is also a potential drill target.

The shapes of some of the magnetic anomalies suggest that magnetic remanence is significant and in places, dominant. This means that no reliable interpretation of the anomalies can be made (ie, determination of the bodies' depths, attitudes, etc.) without knowledge of the remanence properties. However, given the apparent shallow depth of the magnetic sources, it is unlikely that the drilling of uninterpreted anomalies would miss the target. Nevertheless a thorough understanding of the magnetic parameters may become necessary; for example, it may happen that economic tin grades are associated with a particular mineralising event which may have distinct magnetic features (eg, reversed magnetisation). Thus it is recommended that the magnetic properties of the skarn be determined wherever possible. This will require oriented samples from any drill core. (Any interpretation would include a determination of dip and although this cannot at present be done with any certainty, steeper dips than are indicated on the geological sections are likely.)

CONCLUSIONS AND RECOMMENDATIONS

As expected, the completion of the magnetic and I.P. surveys at Laurel Creek has not defined any new areas of interest but has largely confirmed the conclusions made in the earlier report.

A comparison between the original composite profiles and those showing the 1983 detail work, indicates that the power-auger geochemical sampling program was most successful: drill targets within the better magnetic anomalies may be graded according to their geochemical responses. Thus the following are likely targets (centre of the zone of interest given; depth unspecified):

(1). Anomaly F
line 37.5E: 1387.5mN. (drilled to the north). Further magnetic coverage is recommended to the south before collaring the drill hole. Also, see comment below.

(2). Anomaly F
line 800N: 562.5mE. (drilled to the east).

(3). Anomaly A
line 1200N: 375mW. (drilled to the west).

(4). Anomaly B
Further magnetics and geochemistry are recommended before choosing a site, however line 400E: 1750mN (drilled to the north) is a definite target.

It is noted that most of anomaly F is at a shallow angle to the grid lines: the bearing of the first drilling recommendation would presumably not be at right angles to geologic strike. Since this would not be desirable , it is recommended that a magnetic survey be made over the projected path of any planned hole not directly beneath and parallel to a grid line. This safety precaution should confirm that the target occurs where and how it is expected.

J.R. Bishop
May, 1983.

364000E

5 388 000 N

5387000N

5 386 000 N

LINE 18 N.

LINE 17 N.

LINE 16·5 N.

LINE 16 N.

LINE 15·5 N.

LINE 15 N.

LINE 14·5N

LINE 14N.

LINE 13 N.

LINE 12·5 N.

LINE 12·25 N.

LINE 12 N.

LINE 15

LINE 14·5

Wilson River

LITTLE WILSON RIVER
INFILL LINES

537082

CORINNA DI/1	CORINNA DI/3
CORINNA DI/2	CORINNA DI/4

5 cm

GOLD FIELDS EXPLORATION PTY. LIMITED

LITTLE WILSON RIVER
GRID

Sn BEDROCK (p.p.m.)

GEOCHEMISTRY 1987

DRAWN BY : A.J.C.
DRAFTSMAN : S.J.F.
DATE : June, 83
REVISIONS :
FILE NO.

SCALE 1:5000 100 0 100 200 METRES

FIG. 7

83-2014 1/2.

364 000E

5388 000N

5387 000N

5386 000N

LINE 18 N.

LINE 17 N.

LINE 16·5 N.

LINE 16 N.

LINE 15·5 N.

LINE 15 N.

LINE 14·5 N.

LINE 14 N.

LINE 13 N.

LINE 12·5 N.

LINE 12·25 N.

LINE 12 N.

LINE 15

LINE 14·5

LITTLE WILSON RIVER
INFILL LINES

Wilson River

537083

CORINNA DI/1 | CORINNA DI/3
CORINNA DI/2 | CORINNA DI/4

5 cm

GOLD FIELDS EXPLORATION PTY. LIMITED

LITTLE WILSON RIVER
GRID

WO_3 BEDROCK (p.p.m.)

GEOCHEMISTRY 1983

DRAWN BY : A.J.C.
DRAFTSMAN : S.J.F.
DATE : June, 83
REVISIONS :
FILE NO.

SCALE 1:5000 — 100 0 100 200 METRES

FIG. 8

83-2014 1/2.

364000E

5388000N

5387000N

5386000N

LINE 18 N.

LINE 17 N.

LINE 16.5 N.

LINE 16N.

LINE 15.5 N.

LINE 15 N.

LINE 14.5 N.

LINE 14N.

LINE 13 N.

LINE 12.5 N

LINE 12.25 N.

LINE 12N.

LINE 15

LINE 14.5

LITTLE WILSON RIVER
INFILL LINES

Wilson River

537084

CORINNA DI/1	CORINNA DI/3
CORINNA DI/2	CORINNA DI/4

5 cm

GOLD FIELDS EXPLORATION PTY. LIMITED

LITTLE WILSON RIVER
GRID

Cu BEDROCK (p.p.m.)

GEOCHEMISTRY 1989

DRAWN BY : A.J.C.
DRAFTSMAN : S.J.F.
DATE : June, 83
REVISIONS :
FILE NO.

SCALE 1:5000 100 0 100 200 METRES

FIG. 9

83-2014 1/2

364 000 E

5 388 000N

5 387 000N

5 386 000N

364 000E

LINE 18 N.

LINE 17 N.

LINE 16·5 N.

LINE 16N.

LINE 15·5 N.

LINE 15 N

LINE 14·5 N.

LINE 14 N

LINE 13 N.

LINE 12·5 N

LINE 12·25 N.

LINE 12 N

LINE 15

LINE 14·5

LITTLE WILSON RIVER
INFILL LINES

Wilson River

537085

CORINNA DI/1	CORINNA DI/3
CORINNA DI/2	CORINNA DI/4

5 cm

GOLD FIELDS EXPLORATION PTY. LIMITED

LITTLE WILSON RIVER
GRID

Pb BEDROCK (p.p.m.)

GEOCHEMISTRY 1990

DRAWN BY : A.J.C.
DRAFTSMAN : S.J.F.
DATE : June, 83
REVISIONS :
FILE NO.

SCALE 1:5000 — 100 0 100 200 METRES

FIG. 10

83-2014 1/2

364000E

LINE 18 N.

LINE 17 N.

LINE 16·5 N.

LINE 16N.

LINE 15·5 N.

LINE 15 N.

LINE 14·5 N.

LINE 14N

LINE 13 N.

LINE 12·5 N.

LINE 12·25 N.

LINE 12N.

5388000N

5387000N

5386000N

LINE 15

LINE 14·5

LITTLE WILSON RIVER
INFILL LINES

Wilson River

537086

CORINNA DI/1	CORINNA DI/3
CORINNA DI/2	CORINNA DI/4

5 cm

83-2014 1/2

GOLD FIELDS EXPLORATION PTY. LIMITED

LITTLE WILSON RIVER
GRID

Zn BEDROCK (p.p.m.)

GEOCHEMISTRY 1991

DRAWN BY : A.J.C.
DRAFTSMAN: S.J.F.
DATE : JUNE.83
REVISIONS :
FILE NO.

SCALE 1:5000

100 0 100 200
METRES

FIG. 11

364000E

5388000N

5387000N

5386000N

LINE 18N.

LINE 17N.

LINE 16·5N.

LINE 16N.

LINE 15·5N.

LINE 15N.

LINE 14·5N.

LINE 14N.

LINE 13N.

LINE 12·5N

LINE 12·25N.

LINE 12N.

LINE 15

LINE 14·5

LITTLE WILSON RIVER
INFILL LINES

Wilson River

537087

CORINNA DI/1	CORINNA DI/3
CORINNA DI/2	CORINNA DI/4

5 cm

83-2014 1/2

GOLD FIELDS EXPLORATION PTY. LIMITED

LITTLE WILSON RIVER
GRID

As BEDROCK (p.p.m.)

GEOCHEMISTRY 1992

DRAWN BY : A.J.C.
DRAFTSMAN : S.J.F.
DATE : June, 83
REVISIONS :
FILE NO.

SCALE 1:5000 100 0 100 200 METRES

FIG. 12

Geochemistry P.P.M.

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

RESISTIVITY IN Ohm - METRES (- - - -)

N.A.

1500mE

2000mE

65 000 Ω

Total Magnetic Field (γ)

FINE SCALE (——) COARSE SCALE (- - - -)

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

Bedrock Geochemistry P.P.M.

Note : Reduced Scale

B.C. RIDGE

LITTLE WILSON RIVER

OLD WORKINGS

FERN CK

WILSON RIVER

Cs

Cg

Sc

Dg-1

Dg-2

1500mE

2000mE

537088

5 cm

RENISON LIMITED

E.L. 17/77 - WILSON RIVER AREA

LITTLE WILSON RIVER INFILL LINES

LINE L.W.R. 155N. 1993

SECTION LOOKING NORTH

SCALE. 1:5000 METRES

0 100 200 300

DRAWN	L.M./A.C.
TRACED	T.G.D.S./S.F.
DATE	June 1982
SCALE	1:5000
DRAWING No.	FIG. 13

I.P.

CHARGEABILITY

RESISTIVITY

MAGNETICS

5000 γ SCALE

1000 γ SCALE

GEOCHEMISTRY

Sn

Cu

Pb

Zn

As

WO_3

SEDIMENTARY ROCKS

Quaternary

Qra Recent Alluvium

Tg Tertiary Gravels

Devonian

Db Bell Shale

Df Florence Quartzite

Silurian

Undiff. Amber Shale — Sas Siliceous Sandstone member; Sas Sah Limestone member

Sc Crotty Quartzite

Ordovician

Og Gordon Limestone

Om? Molna ? Sandstone

Cambrian

Cdh Upper Dundas Group ≡ Huskisson Formation Upper Cambrian

Cc Crimson Creek Formation Middle Cambrian

Pre-Cambrian

pCo Oonah Quartzite and Schist

IGNEOUS ROCKS

Tb Tertiary Basalt

Dg-1 / Dg-2 / Dgm — Devonian Granites — Coarse to very coarse Adamellite; Quartz Porphyry and fine grained Adamellite; Fine to medium grained Quartz Tourmaline Alteration; Microgranite; Microgranite Dykes

Tourmalinized Granite

DPa Devonian ? Acid Intrusives

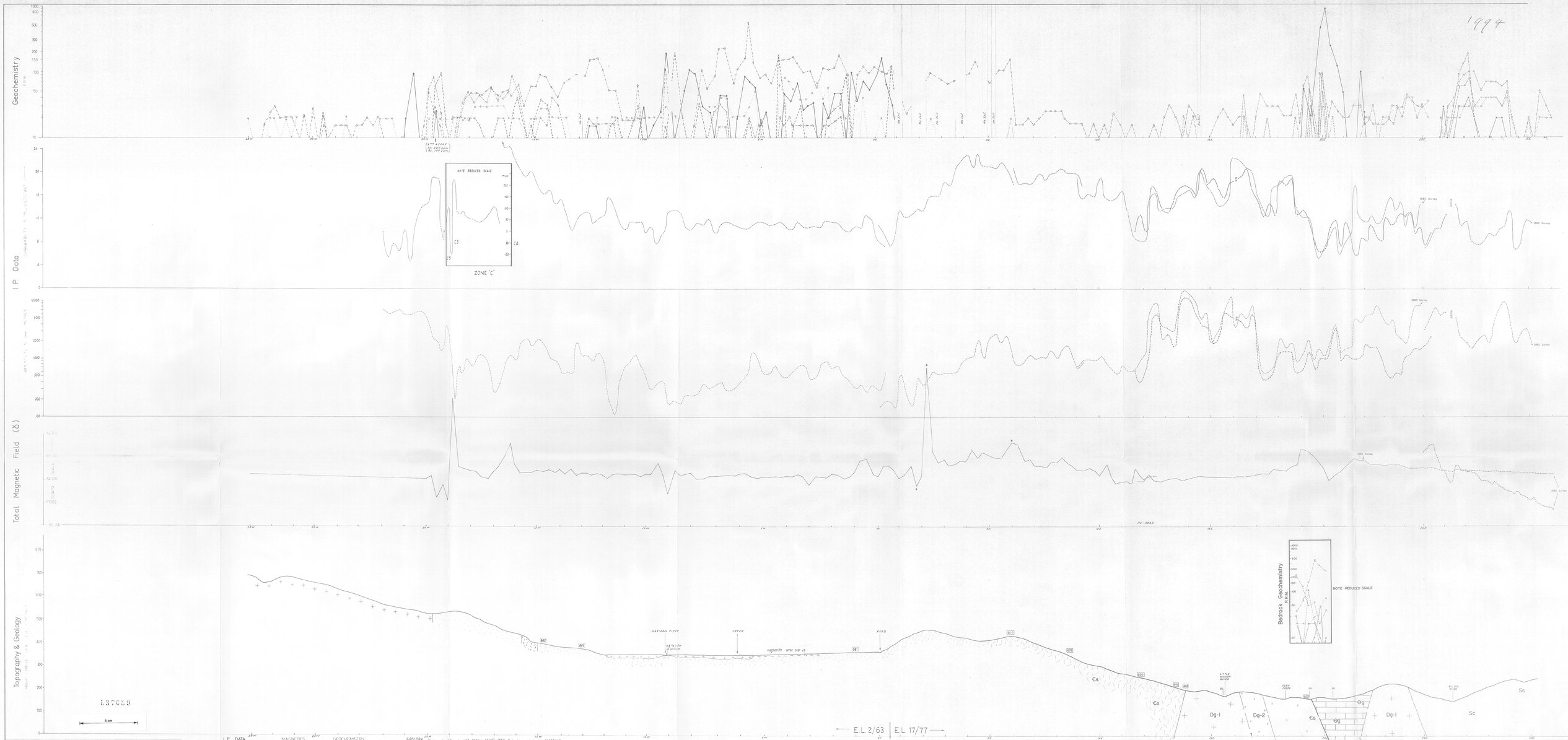
Cs Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes

Cg Cambrian Basic or Gabbroic Rocks

SYMBOLS

- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in ultra-mafic
- Cleavage, parting shear
- Dyke

63 - 2014 1/2



RENISON LIMITED

HARMAN RIVER GRID
LINE 16
E.L. 2/63 E.L. 17/77 1994
SCALE 1: 5000 METRES

DRAWN	ARJ/MJC
TRACED	YC & TBDS
DATE	June 1982
SCALE	1: 5000
DRAWING No.	FIG. 14

I.P. DATA
Dipole Array 3 & 4
Current Electrode spacing
(N. 3200W, 3200E, 4 array)
(N. 3200W, 3200E, 3 array)
Chargeability
Resistivity

MAGNETICS
Kinetic magnetometer reading

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
WO_3

GEOLOGY (Mapping by A. Ross Jan. 1980, 275W to 25 SE) 664 Rock chip sample location (A.BROWN)

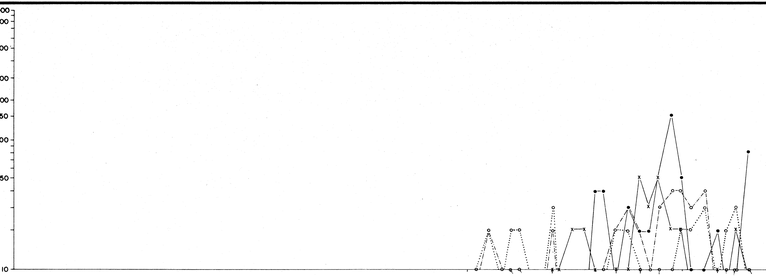
INTRUSIVES
MERRITH GRANITE
Coarse to medium grained biotite granite (Dg) (Loston Hunting reference).
Fine grained muscovite - biotite granite (Dg2) occasionally porphyritic.
Microgranite (Dgm).
Alteration + Tourmaline, chlorite.

CANADIAN
WEBSTERITE HILL COMPLEX
Ultrabasic rocks (Ub).
Silicification (alteration).

SEDIMENTS
CANADIAN
CROMBIE CREEK FORMATION (Cs)
Reworked, stromatolitic carbonate, minor gabbro.
GORDON LIMESTONE (Cg)
Grey, massive limestone.
CARBONIFEROUS
GRITTY QUARTZITE (Cs)
Argillite and Limestone
SILURIAN
Limestone, laterally across developed on ultrabasics (Ts)
TERTIARY
QUATERNARY
Recent alluvium (Qa)

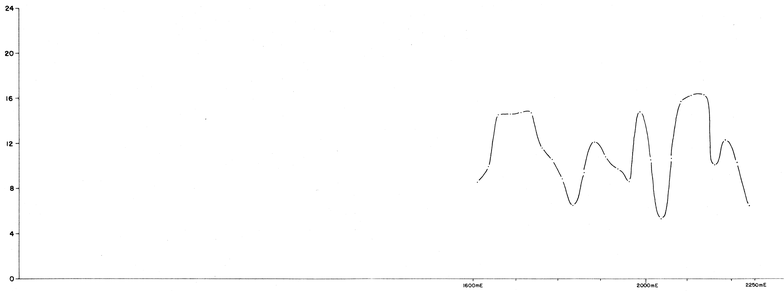
83-2014 1/2

Geochemistry P.P.M.

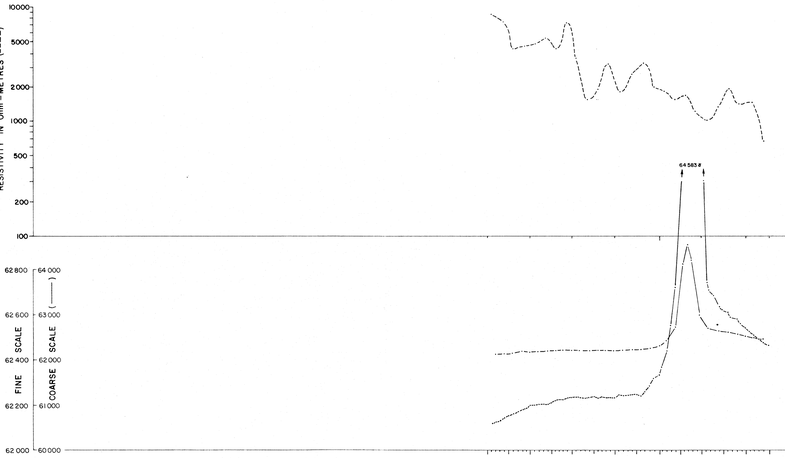


I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)



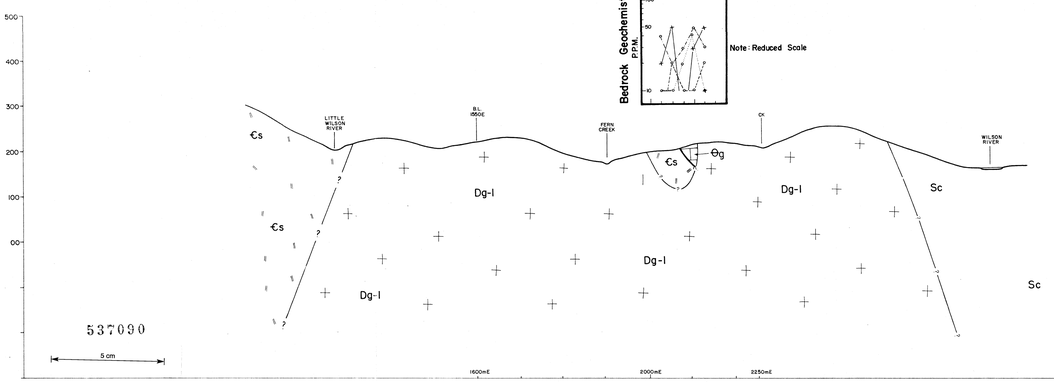
RESISTIVITY IN Ohm-METRES (- - - -)



Total Magnetic Field (γ)

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)



Bedrock Geochemistry P.P.M.

Note: Reduced Scale

RENISON LIMITED	DRAWN: L.M. / A.C.
E.L. 17/77 - WILSON RIVER AREA	TRACED: T.G.D.S./S.F.
LITTLE WILSON RIVER INFILL LINES	DATE: June 1982
LINE L.W.R. 16·5N. 1995	SCALE: 1:5000
SECTION LOOKING NORTH	DRAWING No. FIG. 15
SCALE 1:5000 METRES 100 0 100 200 300	

LP
- CHARGEABILITY
- RESISTIVITY

MAGNETICS
- 5000 γ SCALE
- 1000 γ SCALE

GEOCHEMISTRY
- Sn
- Cu
- Pb
- Zn
- As
- WO_3

SEDIMENTARY ROCKS

Quaternary
- Qre — Recent Alluvium
- Tg — Tertiary Gravels

Devonian
- Db — Bell Shale
- Df — Florence Quartzite

Silurian
- Undiff Amber Shale — Sas — Siliceous Sandstone member
- Sa — Sah — Limestone member
- Sc — Crotty Quartzite

Ordovician
- Og — Gordon Limestone
- Om? — Moina ? Sandstone

Cambrian
- €dh — Upper Dundas Group ≡ Huskisson Formation Upper Cambrian
- €c — Crimson Creek Formation Middle Cambrian

Pre-Cambrian
- pCo — Conoh Quartzite and Schist

IGNEOUS ROCKS
- Tb — Tertiary Basalt
- Dm — Dg-1 — Coarse to very coarse Adamellite
- Dg-2 — Quartz Porphyry and fine grained Porphyritic Granite with wide spread Quartz Tourmaline Alteration
- Dgm — Microgranite ; Microgranite Dykes
- Tourmalinized Granite
- D?c — Devonian ? Acid Intrusives
- €s — Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
- €g — Cambrian Basic or Gabbroic Rocks

SYMBOLS
- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in ultra-mafic
- Cleavage, parting, shear
- Dyke

83-2914 1/2

1996

Geochemistry P.P.M.

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

RESISTIVITY IN Ohm-METRES (- - - -)

Total Magnetic Field (γ)

COARSE SCALE

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

NOTE REDUCED SCALE

ZONE 'C'

C6 C7 C8 C9

1982 Survey

1980 Survey

7/2/80 23/2/80 26/2/80 6/3/80

Bedrock Geochemistry P.P.M.

NOTE: REDUCED SCALE

537091

5 cm

LITTLE WILSON RIVER

WILSON RIVER

RENISON LIMITED

HARMAN RIVER GRID
LINE 14
E.L. 2/63, E.L. 17/77 1996

SCALE 1:5000 METRES

DRAWN	L.M./A.C.
TRACED	T.G.D.S./S.F.
DATE	May, 1982.
SCALE	1:5000
DRAWING No.	

FIG. 16

LP
CHARGEABILITY
RESISTIVITY

MAGNETICS
5000 γ SCALE
1000 γ SCALE
* Erratic magnetometer reading

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
WO_3

GEOLOGY

INTRUSIVES

DEVONIAN
Coarse to medium grained biotite granite (Dg) (often flooting reference)
Fine grained muscovite - biotite granite (Dg f) occasionally porphyritic
Microgranite (Dgm)
Alteration - tourmaline, chlorite

MERCENTH GRANITE

WESTERITE BELT COMPLEX

CAMBRIAN
Ultrabasic rocks (€u)
Silicification (alteration)

SEDIMENTS

CAMBRIAN
CRIMSON CREEK FORMATION (€c)
Dolomitic sediments, calcareous sediments, minor gabbro

ORDOVICIAN
GORDON LIMESTONE (Og)
Grey, massive limestone

SILURIAN
CROTTY QUARTZITE (Sc)
Quartzite and interbedded sediments

TERTIARY
Ironstone, laterite scree developed on ultrabasics (Ts)

QUATERNARY
Recent alluvium (Qra)

83-2014 1/2

Geochemistry P.P.M.

Cu 1600 Zn 9950 As 9950

NO SAMPLE NO SAMPLE

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

1000mE. 1500mE. 2000mE.

RESISTIVITY IN Ohm-METRES (- - - -)

Total Magnetic Field (γ)

FINE SCALE COARSE SCALE

Bedrock Geochemistry P.P.M.

Note: Reduced Scale

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

537092

5 cm

Cs Cs Cs Cg Cg Sc Sc Sc Sa Sa Sa

LITTLE WILSON RIVER Qra B.L. 1900E WILSON RIVER

1000mE 1500mE 2000mE

RENISON LIMITED

E.L. 17/77 - WILSON RIVER AREA
LITTLE WILSON RIVER INFILL LINES
LINE LWR. 13N. 1997
SECTION LOOKING NORTH
SCALE 1:5000 METRES
100 0 100 200 300

DRAWN	L.M./A.C.
TRACED	T.G.D.S./S.H.
DATE	June 1982
SCALE	1:5000
DRAWING No.	

FIG. 17

I.P.
CHARGEABILITY
RESISTIVITY

MAGNETICS
5000 γ SCALE
1000 γ SCALE

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
WO_3

SEDIMENTARY ROCKS

Quaternary
Qra Recent Alluvium
Tg Tertiary Gravels

Devonian
Db Bell Shale
Df Florence Quartzite

Silurian
Undiff. Amber Shale
Sas Siliceous Sandstone member
Sal Limestone member
Sc Crotty Quartzite

Ordovician
Gordon Limestone
Om? Maina ? Sandstone

Cambrian
Cdh Upper Dundas Group ≡ Huskisson Formation Upper Cambrian
Cc Crimson Creek Formation Middle Cambrian

Pre-Cambrian
pCo Oonah Quartzite and Schist

IGNEOUS ROCKS
Tb Tertiary Basalt
Dg-1 Coarse to very coarse Adamellite
Dg-2 Quartz Porphyry and fine grained Porphyritic Granite with wide spread Quartz Tourmaline Alteration
Dm Microgranite; Microgranite Dykes
Dgm Tourmalinized Granite
DPg Devonian P Acid Intrusives
Cs Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
Cg Cambrian Basic or Gabbroic Rocks

SYMBOLS
Dip and Strike of Bedding (Facing known)
Dip and Strike of Bedding (Facing unknown)
Dip and Strike of Composition Banding
Dip and Strike of Cleavage, undifferentiated
Axial Plane of small anticline
Anticlinal, Synclinal Axis
Dip and Strike of Jointing
Dip and Strike of Foliation
Observed outcrop
Fossil locality
Interpreted Boundary
Fault, approximate position
Compositional layering in Ultra-mafic
Cleavage, parting, shear
Dyke

83 - 2914 1/2

366 000 E.
367 000 E.
368 000 E.
369 000 E.
370 000 E.
5 394 000 N.
5 393 000 N.
5 392 000 N.
5 391 000 N.
1800N
1600N
1400N
1200N
1000N
800N
600N
400N
200N
00 N
E.L. 17/77

537093

5 cm

CORINNA B4-3	CORINNA B4-4
CORINNA D2-1	CORINNA D2-2

RENISON LIMITED

LAUREL CREEK GRIDS

BEDROCK SAMPLING (p.p.m.)

Sn GEOCHEMISTRY 1993

SCALE 1:5,000 METRES

100 0 100 200 300

DRAWN	A. J. C.
TRACED	S. J. F.
DATE	June, 83
SCALE	1:5,000
DRAWING NO.	FIG. 18

83-2014 (1/2)

366 000 E.
367 000 E.
368 000 E.
369 000 E.
370 000 E.
5 394 000 N.
5 393 000 N.
5 392 000 N.
5 391 000 N.
E.L. 17/77
E.L. 17/77
1800N
1600N
1400N
1200N
1000N
800N
600N
400N
200N
00N
1500N
900N
700N
500N
300N
100N
600N
400N
200N
00N
537094
5 cm
CORINNA B4-3
CORINNA B4-4
CORINNA D2-1
CORINNA D2-2
RENISON LIMITED
LAUREL CREEK GRIDS 1999
BEDROCK SAMPLING (p.p.m.)
WO_3 GEOCHEMISTRY
SCALE. 1:5,000 METRES
100 0 100 200 300
DRAWN A.J.C.
TRACED S.J.F.
DATE June, 83
SCALE 1:5000
DRAWING NO.
FIG. 19
83-204 12

366 000 E.
367 000 E.
368 000 E.
369 000 E.
370 000 E.
5 394 000 N.
5 393 000 N.
5 392 000 N.
5 391 000 N.
1800N
1600N
1400N
1200N
1000N
800N
600N
400N
200N
00 N
E.L. 17/77
E.L. 17/77
537095
5 cm

CORINNA B4-3	CORINNA B4-4
CORINNA D2-1	CORINNA D2-2

RENISON LIMITED 2000

LAUREL CREEK GRIDS

BEDROCK SAMPLING (p.p.m.)

Cu GEOCHEMISTRY

SCALE 1:5,000 METRES

100 0 100 200 300

DRAWN	A.J.C.
TRACED	S.J.F.
DATE	June, 83
SCALE	1:5,000
DRAWING NO.	FIG. 20

53-2914 1/2.

366 000 E.
367 000 E.
368 000 E.
369 000 E.
370000 E.
5 394 000 N.
5 393 000 N.
5 392 000 N.
5 391 000 N.
1800N
1600N
1400N
1200N
1000N
800N
600N
400N
200N
00 N
E.L. 17/77
E.L. 17/77
537096
5 cm
CORINNA B4-1
CORINNA B4-4
CORINNA D2-1
CORINNA D2-2
RENISON LIMITED 2001
LAUREL CREEK GRIDS
BEDROCK SAMPLING (p.p.m.)
Pb GEOCHEMISTRY
SCALE 1:5000 METRES
DRAWN A.J.C.
TRACED S.J.F.
DATE June, 83
SCALE 1:5000
DRAWING NO.
FIG. 21
83 - 2014 12.

366 000 E.
367 000 E.
368 000 E.
369 000 E.
370 000 E.
5 394 000 N.
5 393 000 N.
5 392 000 N.
5 391 000 N.
1800N
1600N
1400N
1200N
1000N
800N
600N
400N
200N
00 N
E.L. 17/77
E.L. 17/77
5 cm
537098

CORINNA B4-3	CORINNA B4-4
CORINNA D2-1	CORINNA D2-2

RENISON LIMITED 2003

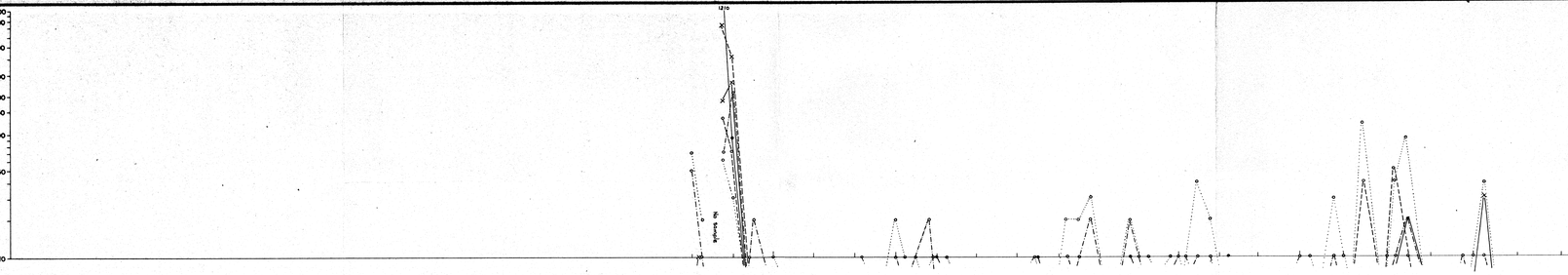
LAUREL CREEK GRIDS
BEDROCK SAMPLING (p.p.m.)
As GEOCHEMISTRY

SCALE 1:5,000 METRES
100 0 100 200 300

DRAWN	A.J.C.
TRACED	S.J.F.
DATE	June, 83
SCALE	1:5000
DRAWING NO.	FIG. 23

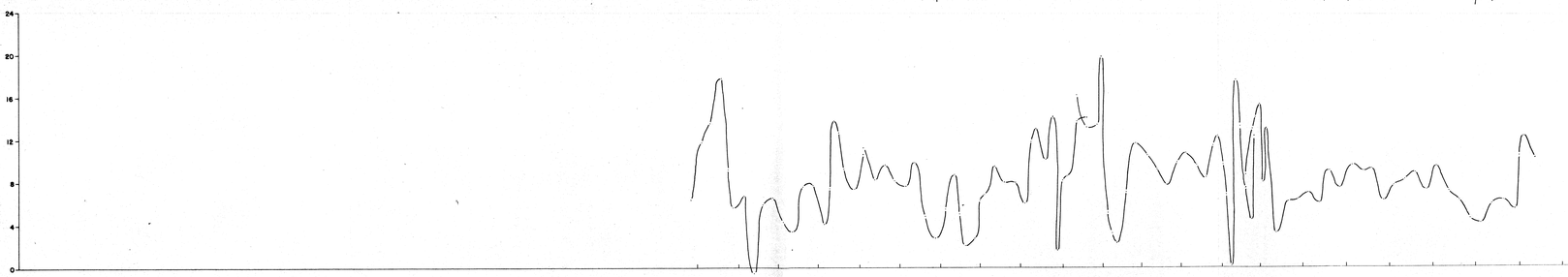
83-2014 1/2

Geochemistry P.P.M.

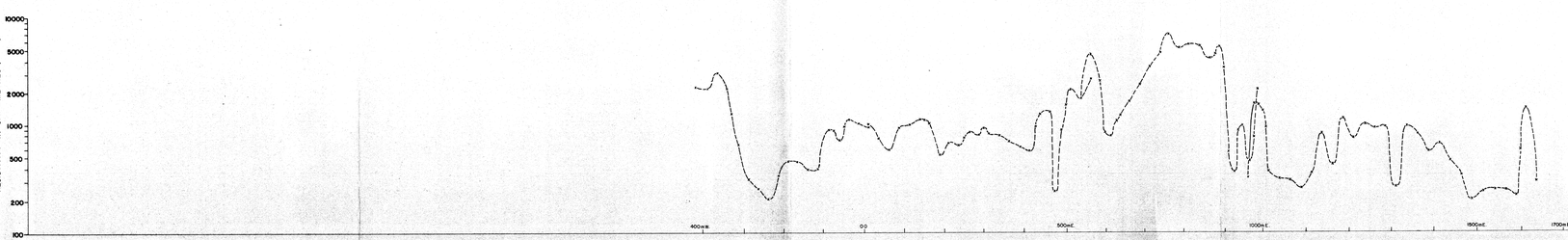


I.P. Data

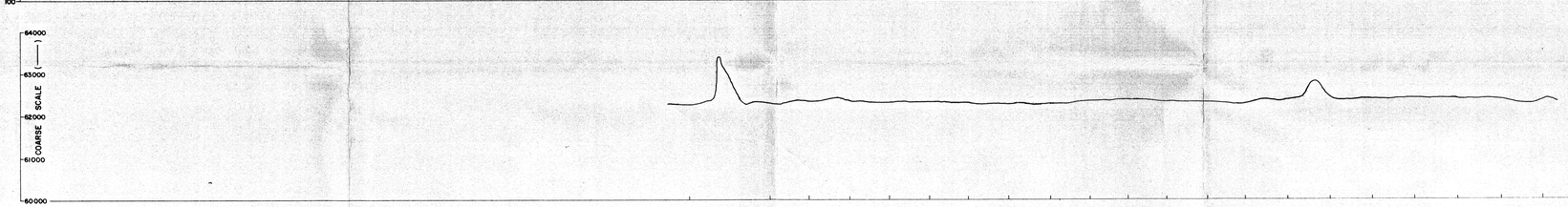
CHARGEABILITY IN MILLIVOLTS / VOLT (——)



RESISTIVITY IN Ohm-METRES (– – –)

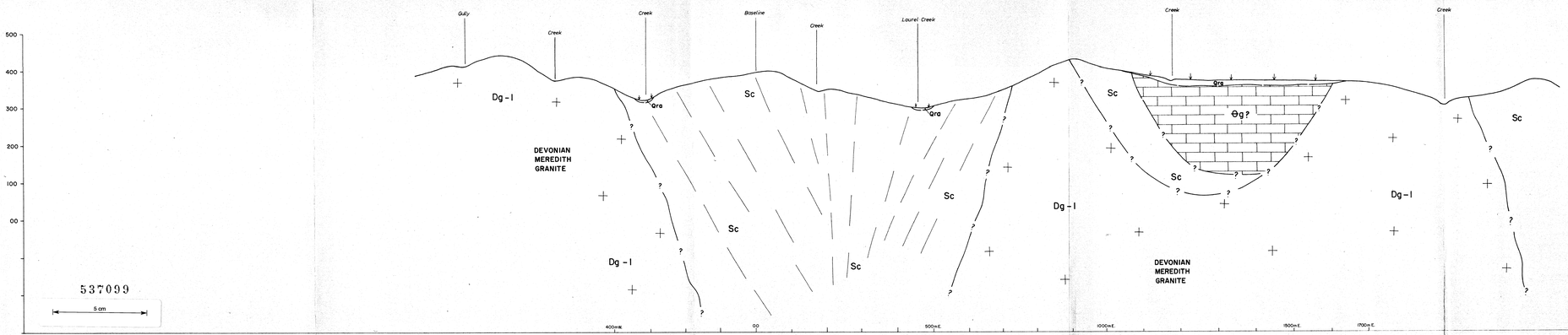


Total Magnetic Field (γ)



Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)



537099

5 cm

RENISON LIMITED 2004	
E.L. 17/77 - WILSON RIVER AREA	
LAUREL CREEK WEST GRID	
LINE L.C.W. 1200 N	
SECTION LOOKING NORTH	
SCALE 1:5000 METRES	
100 0 100 200 300	

DRAWN	L.M./A.C.
TRACED	T.G.D.S.
DATE	July 1982
SCALE	1:5000
DRAWING No.	

FIG. 24

83-204 1/2.

I.P.
- CHARGEABILITY
- RESISTIVITY

MAGNETICS
- 5000 γ SCALE
- 1000 γ SCALE

GEOCHEMISTRY
- Sn
- Cu
- Pb
- Zn
- As
- WO_3

SEDIMENTARY ROCKS

Quaternary
- Qra — Recent Alluvium
- Tg — Tertiary Gravels

Devonian
- Db — Bell Shale
- Df — Florence Quartzite

Silurian
- Undiff. Amber Shale — Sas — Siliceous Sandstone member; Salt — Limestone member
- Sc — Crotty Quartzite

Ordovician
- Θg? — Gordon Limestone
- Θm? — Moina ? Sandstone

Cambrian
- Cdh — Upper Dundas Group ☰ Huskisson Formation Upper Cambrian
- Cc — Crimson Creek Formation Middle Cambrian

Pre-Cambrian
- pCo — Oonah Quartzite and Schist

IGNEOUS ROCKS
- Tb — Tertiary Basalt
- Dg-1, Dg-2, Dgm — Coarse to very coarse Adamellite; Quartz Porphyry and fine grained Porphyritic Granite with wide spread Micrographic; Micrographic Dykes
- Tourmalinized Granite
- DPa — Devonian ? Acid Intrusives
- Cs — Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
- Cg — Cambrian Basic or Gabbroic Rocks

SYMBOLS
- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage parting shear
- Dyke

Geochemistry P.P.M.

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

RESISTIVITY IN Ohm-METRES (- - - -)

Total Magnetic Field (γ)

COARSE SCALE (——)

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

Creek

Baseline

Webbs Creek

Sc

Sa ?

Dg - I

Φg?

Magnetite - Hematite - Garnet Skarn Replacing Ordovician Gordon Limestone

DEVONIAN MEREDITH GRANITE

1250mW 1000mW 500mW 00 550mE

537100

5 cm

RENISON LIMITED 2005	DRAWN: L.Martin
E.L. 17/77 - WILSON RIVER AREA	TRACED: T.G.D.S.
LAUREL CREEK EAST GRID	DATE: July 1981
LINE L.C.E. 1400N	SCALE: 1:5000
SECTION LOOKING	DRAWING No.
SCALE. 1:5000 METRES 100 0 100 200 300	FIG. 25

93 - 2014 1/2

I.P.
- CHARGEABILITY
- RESISTIVITY

MAGNETICS
- 5000 γ SCALE
- 1000 γ SCALE

GEOCHEMISTRY
- Sn
- Cu
- Pb
- Zn
- As
- WO_3

SEDIMENTARY ROCKS

Quaternary
- Qra — Recent Alluvium
- Tg — Tertiary Gravels

Devonian
- Db — Bell Shale
- Df — Florence Quartzite

Silurian
- Undiff. Amber Shale
- Sas — Siliceous Sandstone member
- Sal — Limestone member
- Sc — Crotty Quartzite

Ordovician
- Φg — Gordon Limestone
- Φm? — Moina ? Sandstone

Cambrian
- €dh — Upper Dundas Group (i) Huskisson Formation Upper Cambrian
- €c — Crimson Creek Formation Middle Cambrian

Pre-Cambrian
- pCo — Oonah Quartzite and Schist

IGNEOUS ROCKS
- Tb — Tertiary Basalt
- Dg-1, Dg-2, Dgm — Course to very coarse Adamellite Quartz Porphyry and fine grained Adamellite Granite Pegmatite Aplite and Quartz Tourmaline Breccias Micrograonite ; Microgranite Dykes Tourmalinized Granite
- Dg — Devonian ? Acid Intrusives
- €s — Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
- €g — Cambrian Basic or Gabbroic Rocks

SYMBOLS
- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage, parting, shear
- Dyke

Geochemistry

P.P.M.

1000 800 500 300 200 150 100 50 10

1300

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

24 20 16 12 8 4 0

RESISTIVITY IN Ohm - METRES (- - - -)

10000 5000 2000 1000 500 200 100

1200mW 1000mW 500mW 100 500mE 575mE

Total Magnetic Field (γ)

COARSE SCALE

64000 63000 62000 61000 60000

N.R.

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

500 400 300 200 100 00

Gully Creek Creek Creek Webb's Creek Creek

Sc Sc Sc Sc Dg-1 Dg ? Dg ? DEVONIAN MEREDITH GRANITE

537101

5 cm

1200mW 1000mW 500mW 00 500mE 575mE

RENISON LIMITED 2006	DRAWN L.Martin
E.L. 17/77 - WILSON RIVER AREA	TRACED T.G.D.S.
LAUREL CREEK EAST GRID	DATE July, 1982
LINE L.C.E. 1200 N	SCALE 1:5000
SECTION LOOKING	DRAWING No.
SCALE 1:5000 METRES 100 0 100 200 300	FIG. 26

83-2014 1/2

I.P. CHARGEABILITY; RESISTIVITY

MAGNETICS 5000 γ SCALE; 1000 γ SCALE

GEOCHEMISTRY Sn, Cu, Pb, Zn, As, WO_3

SEDIMENTARY ROCKS

Quaternary
- Qra Recent Alluvium
- Tg Tertiary Gravels

Devonian
- Db Bell Shale
- Df Florence Quartzite

Silurian
- Undiff. Amber Shale
- Sas Siliceous Sandstone member
- Sal Limestone member
- Sc Crotty Quartzite

Ordovician
- Ogj Gordon Limestone
- Om? Molina ? Sandstone

Cambrian
- €dh Upper Dundas Group ≡ Huskisson Formation Upper Cambrian
- €c Crimson Creek Formation Middle Cambrian

Pre-Cambrian
- p€o Oonah Quartzite and Schist

IGNEOUS ROCKS
- Tb Tertiary Basalt
- Dg-1, Dg-2, Dgm, Dm Coarse to very coarse Adamellite Quartz Porphyry and fine grained Adamellite Dg-1 Weakly Sheared Dg-2 Quartz Tourmaline Alteration Micrograntite, Microgranite Dykes Tourmalinized Granite
- D?a Devonian ? Acid Intrusives
- €s Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
- €g Cambrian Basic or Gabbroic Rocks

SYMBOLS
- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage, parting, shear
- Dyke

Geochemistry P.P.M.

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

RESISTIVITY IN Ohm-METRES (- - - -)

Total Magnetic Field (γ)

COARSE SCALE

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

Laurel Creek

Creek

Baseline

Webb's Creek

Creek

Sc

Qra

Θg ?

Dg-I

DEVONIAN MEREDITH GRANITE

537102

5 cm

RENISON LIMITED 2007

E.L. 17/77 - WILSON RIVER AREA

LAUREL CREEK EAST GRID

LINE L.C.E. 1000N

SECTION LOOKING

SCALE 1:5000 METRES

DRAWN	L.Martin
TRACED	T.G.D.S.
DATE	July,1982.
SCALE	1:5000
DRAWING No.	FIG. 27

IP

CHARGEABILITY

RESISTIVITY

MAGNETICS

5000 γ SCALE

1000 γ SCALE

GEOCHEMISTRY

Sn

Cu

Pb

Zn

As

WO_3

SEDIMENTARY ROCKS

Quaternary

Qra Recent Alluvium

Tg Tertiary Gravels

Devonian

Db Bell Shale

Df Florence Quartzite

Silurian

Undiff. Amber Shale

Sas Siliceous Sandstone member

Sal Limestone member

Sc Crotty Quartzite

Ordovician

Θg Gordon Limestone

Θm? Moina ? Sandstone

Cambrian

Cdh Upper Dundas Group ≡ Huskisson Formation Upper Cambrian

Cc Crimson Creek Formation Middle Cambrian

Pre-Cambrian

p€a Oonah Quartzite and Schist

IGNEOUS ROCKS

Tb Tertiary Basalt

Dg Devonian Granite

Dg-1 Coarse to very coarse Adamellite

Dg-2 Quartz Porphyry and fine grained Porphyritic Granite with wide spread Quartz Tourmaline Alteration

Dgm Microgranite ; Microgranite Dykes

Dtg Tourmalinized Granite

Dζa Devonian ? Acid Intrusives

Cs Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes

Cg Cambrian Basic or Gabbroic Rocks

SYMBOLS

Dip and Strike of Bedding (Facing known)

Dip and Strike of Bedding (Facing unknown)

Dip and Strike of Composition Banding

Dip and Strike of Cleavage, undifferentiated

Axial Plane of small anticline

Anticlinal, Synclinal Axis

Dip and Strike of Jointing

Dip and Strike of Foliation

Observed outcrop

Fossil locality

Interpreted Boundary

Fault, approximate position

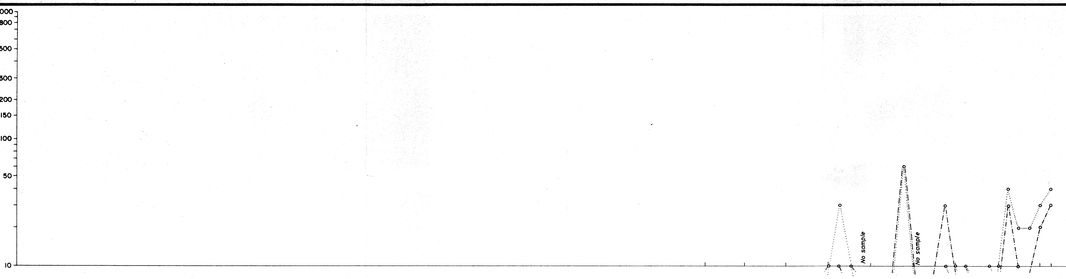
Compositional layering in Ultra-mafic

Cleavage parting shear

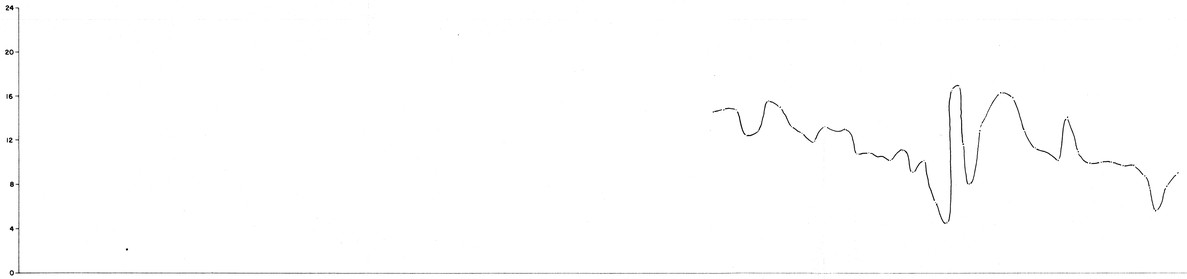
Dyke

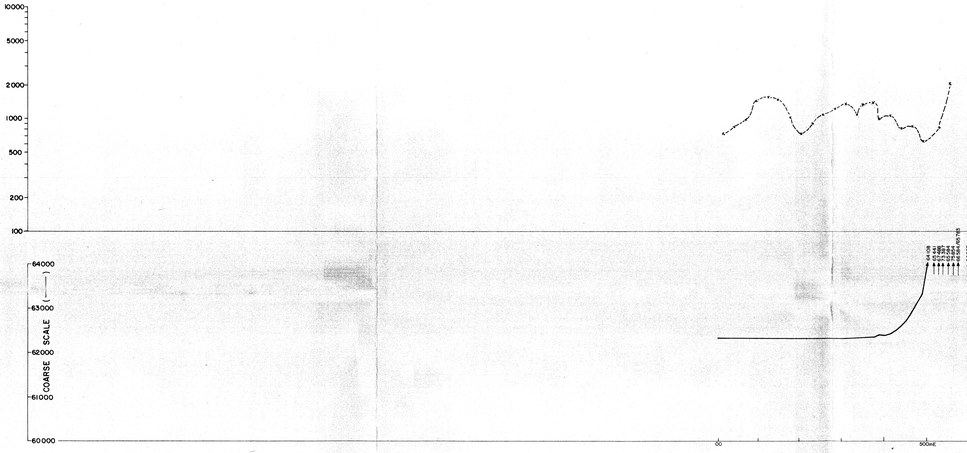
83-2014 .2/2.

Geochemistry P.P.M.



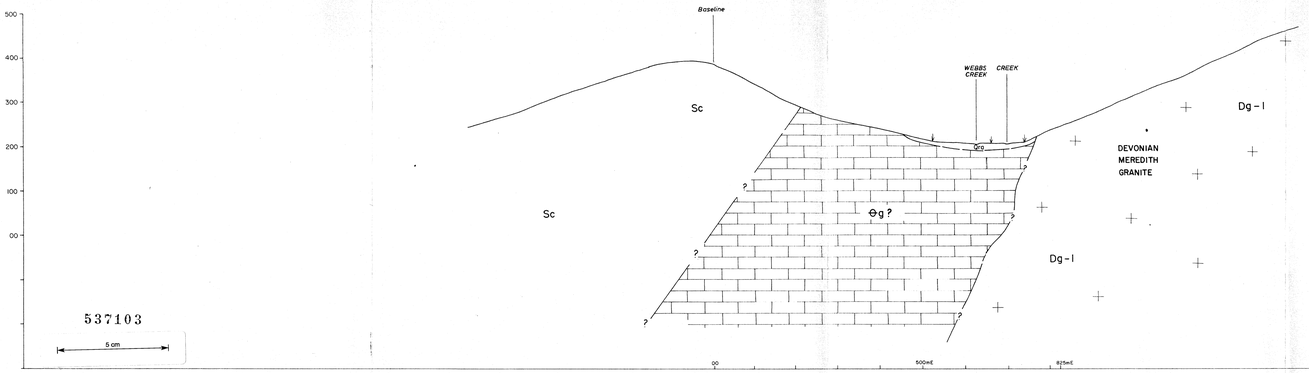
I.P. Data





Total Magnetic Field (γ)

Topography & Geology HEIGHT ABOVE SEA LEVEL - (METRES)



537103

5 cm

RENISON LIMITED 2005	
E.L. 17/77 - WILSON RIVER AREA	
LAUREL CREEK EAST GRID	
LINE L.C.E. 800 N	
SECTION LOOKING	
SCALE 1:5000 METRES	
100 0 100 200 300	

DRAWN	L.Martin
TRACED	T.G.D.S.
DATE	July, 1982
SCALE	1:5000
DRAWING No.	FIG. 28

I.P.
- CHARGEABILITY
- RESISTIVITY

MAGNETICS
- 5000 γ SCALE
- 1000 γ SCALE

GEOCHEMISTRY
- Sn
- Cu
- Pb
- Zn
- As
- WO_3

SEDIMENTARY ROCKS

Quaternary
- Qra — Recent Alluvium
- Tg — Tertiary Gravels

Devonian
- Db — Bell Shale
- Df — Florence Quartzite

Silurian
- Undiff. Amber Shale
- Sas — Siliceous Sandstone member
- Sal — Limestone member
- Sc — Crotty Quartzite

Ordovician
- Ogs — Gordon Limestone
- Om? — Moina ? Sandstone

Cambrian
- €dh — Upper Dundas Group ≡ Hunkisson Formation Upper Cambrian
- €c — Crimson Creek Formation Middle Cambrian

Pre-Cambrian
- p€o — Oonah Quartzite and Schist

IGNEOUS ROCKS
- Tb — Tertiary Basalt
- Dg-1, Dg-2, Dgm — Coarse to very coarse Adamellite; Quartz Porphyry and Fine grained Quartz-rich Granite with Sub-Horizontal Quartz Tourmaline Alteration; Microgranite, Microgranite Dykes; Tourmalinized Granite
- D?g — Devonian ? Acid Intrusives
- Cs — Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
- €g — Cambrian Basic or Gabbroic Rocks

SYMBOLS
- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage, parting shear
- Dyke

83-2014 2/2.

Geochemistry P.P.M.

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

RESISTIVITY IN Ohm - METRES (- - - -)

Total Magnetic Field (γ)

COARSE SCALE

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

Baseline

LAUREL CREEK

WEBBS CREEK

Sa

Sc

Qra

Θg

Cc

Dg-l

DEVONIAN MEREDITE GRANITE

537104

5 cm

RENISON LIMITED 2009	DRAWN L.Martin
E.L. 17/77 - WILSON RIVER AREA	TRACED T.G.S.
LAUREL CREEK EAST GRID	DATE July, 1982
LINE L.C.E. 600N	SCALE 1:5000
SECTION LOOKING	DRAWING No.
SCALE. 1:5000 METRES 100 0 100 200 300	FIG. 29

83-2014 2/2

IP

CHARGEABILITY

RESISTIVITY

MAGNETICS

5000 γ SCALE

1000 γ SCALE

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, WO_3

SEDIMENTARY ROCKS

Quaternary

Qra Recent Alluvium

Tg Tertiary Gravels

Devonian

Db Bell Shale

Df Florence Quartzite

Silurian

Undiff. Amber Shale: Sas Siliceous Sandstone member; Sal Limestone member

Sc Crotty Quartzite

Ordovician

Θg Gordon Limestone

Θm? Moina ? Sandstone

Cambrian

Cdh Upper Dundas Group, El Hudgeson Formation, Upper Cambrian

Cc Crimson Creek Formation Middle Cambrian

Pre-Cambrian

pCo Oonah Quartzite and Schist

IGNEOUS ROCKS

Tb Tertiary Basalt

Dg-l, Dg-p, Dgm Devonian Meredith Granite: Coarse to very coarse Adamellite; Quartz Porphyry and fine grained Granite; Pegmatite, Aplite and Altered Quartz Tourmaline Alteration; Microgranite; Microgranite Dykes; Tourmalinized Granite

Dfp Devonian ? Acid Intrusives

Cs Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes

Cg Cambrian Basic or Gabbroic Rocks

SYMBOLS

- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticline, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage, parting, shear
- Dyke

Geochemistry P.P.M.

1000 800 500 300 200 150 100 50 10

no sample

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

24 20 16 12 8 4 0

RESISTIVITY IN Ohm - METRES (- - - -)

10000 5000 2000 1000 500 200 100

Total Magnetic Field (γ)

64000 63000 62000 61000 60000

COARSE SCALE

00 500mE 1000mE 1175mE

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

500 400 300 200 100 00

Baseline

LAUREL CREEK

WEBBS CREEK

GULLY

CREEK

Qra

Sa

Sc

Sa

Sc

Sc

Eg ?

Cc

Cc

DEVONIAN MEREDITH GRANITE

Dg-l

Dg-l

537105

5 cm

00 500mE 1000mE 1175mE

RENISON LIMITED 2010

E.L. 17/77 - WILSON RIVER AREA

LAUREL CREEK EAST GRID

LINE L.C.E. 400 N

SECTION LOOKING

SCALE. 1:5000 METRES

0 100 200 300

DRAWN	L.Martin
TRACED	T.G.D.S.
DATE	July, 1982
SCALE	1:5000
DRAWING No.	FIG. 30

83-2014 2/2

I.P.

CHARGEABILITY

RESISTIVITY

MAGNETICS

5000 γ SCALE

1000 γ SCALE

GEOCHEMISTRY

Sn

Cu

Pb

Zn

As

WO_3

SEDIMENTARY ROCKS

Quaternary

Qra Recent Alluvium

Tg Tertiary Gravels

Devonian

Db Bell Shale

Df Florence Quartzite

Silurian

Undiff. Amber Shale — Sas Siliceous Sandstone member; Sal Limestone member; Sc Crotty Quartzite

Ordovician

Gordon Limestone

Om? Maina ? Sandstone

Cambrian

Ccb Upper Dundas Group ≡ Huskisson Formation Upper Cambrian

Cc Crimson Creek Formation Middle Cambrian

Pre-Cambrian

pCo Oonah Quartzite and Schist

IGNEOUS ROCKS

Tb Tertiary Basalt

Dg-1 / Dg-2 / Dgm — Coarse to very coarse Adamellite; Quartz Porphyry and fine grained Porphyritic Granite with wide spread Quartz Tourmaline Alteration; Microgranite ; Microgranite Dykes; Tourmalinized Granite

DPa Devonian ? Acid Intrusives

Cs Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes

Cg Cambrian Basic or Gabbroic Rocks

SYMBOLS

Dip and Strike of Bedding (Facing known)

Dip and Strike of Bedding (Facing unknown)

Dip and Strike of Composition Banding

Dip and Strike of Cleavage, undifferentiated

Axial Plane of small anticline

Anticlinal, Synclinal Axis

Dip and Strike of Jointing

Dip and Strike of Foliation

Observed outcrop

Fossil locality

Interpreted Boundary

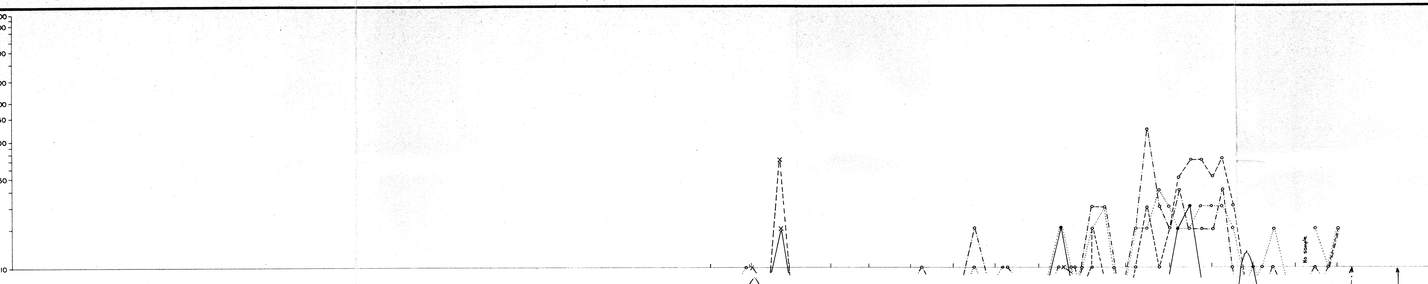
Fault, approximate position

Compositional layering in Ultra-mafic

Cleavage: parting, shear

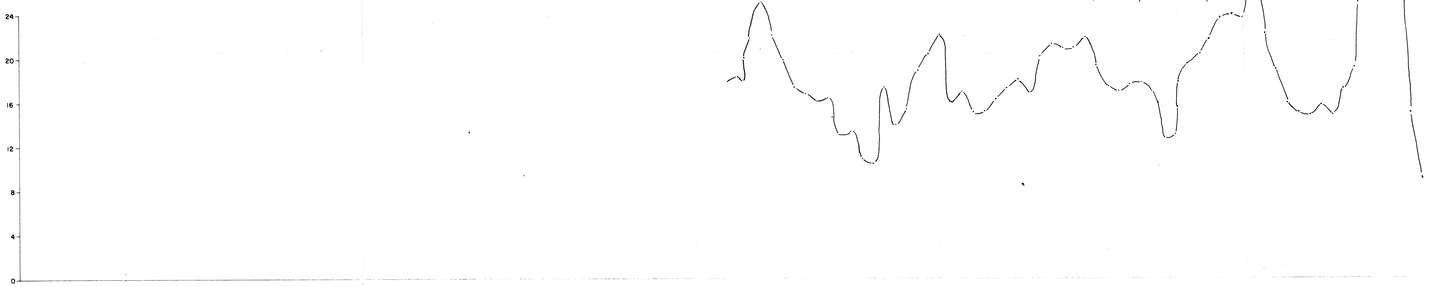
Dyke

Geochemistry P.P.M.

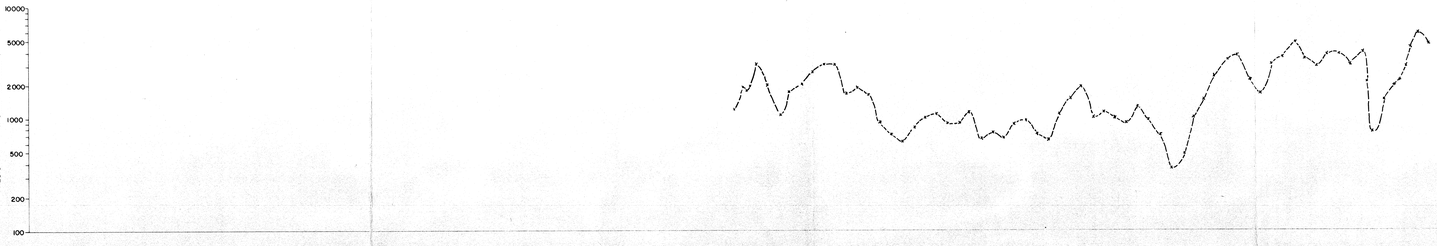


I.P. Data

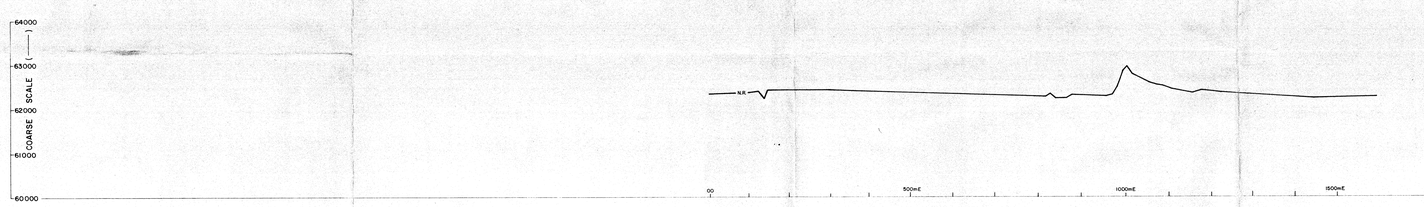
CHARGEABILITY IN MILLIVOLTS / VOLT (——)



RESISTIVITY IN Ohm - METRES (- - - -)

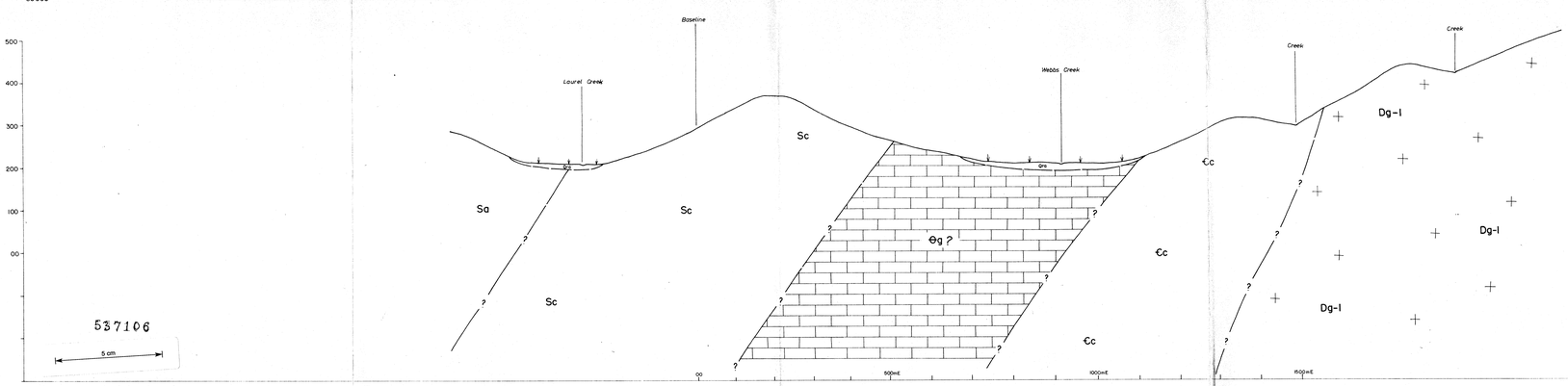


Total Magnetic Field (γ)



Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)



RENISON LIMITED 2011	DRAWN: L.Martin
E.L. 17/77 - WILSON RIVER AREA	TRACED: T.G.D.S
LAUREL CREEK EAST GRID	DATE: July, 1982
LINE L.C.E. 200 N	SCALE: 1:5000
SECTION LOOKING	DRAWING No.
SCALE 1:5000 METRES 100 0 100 200 300	FIG. 31

I.P.
- CHARGEABILITY
- RESISTIVITY

MAGNETICS
- 5000 γ SCALE
- 1000 γ SCALE

GEOCHEMISTRY
- Sn
- Cu
- Pb
- Zn
- As
- WO_3

SEDIMENTARY ROCKS

Quaternary
- Qre — Recent Alluvium
- Tg — Tertiary Gravels

Devonian
- Db — Bell Shale
- Df — Florence Quartzite

Silurian
- Undiff. Amber Shale — Sas — Siliceous Sandstone member
- Sal — Limestone member
- Sc — Crotty Quartzite

Ordovician
- Θg? — Gordon Limestone
- Θm? — Moina ? Sandstone

Cambrian
- €dh — Upper Dundas Group / Huskisson Formation / Upper Cambrian
- €c — Crimson Creek Formation / Middle Cambrian

Pre-Cambrian
- pCo — Oonah Quartzite and Schist

IGNEOUS ROCKS
- Tb — Tertiary Basalt
- Dg-1, Dg-2, Dgm — Coarse to very coarse Adamellite; Quartz Porphyry and fine grained Porphyritic Granite with acidic to mod. basic Xenoliths; Microgranite; Microgranite Dykes; Tourmalinized Granite
- Dg — Devonian ? Acid Intrusives
- €s — Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
- €g — Cambrian Basic or Gabbroic Rocks

SYMBOLS
- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage parting shear
- Dyke

83 - 2014 2/2

Geochemistry

P.P.M.

1000 800 500 300 200 150 100 50 10

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

24 20 16 12 8 4 0

RESISTIVITY IN Ohm-METRES (- - - -)

10000 5000 2000 1000 500 200 100

Total Magnetic Field (γ)

64000 63000 62000 61000 60000

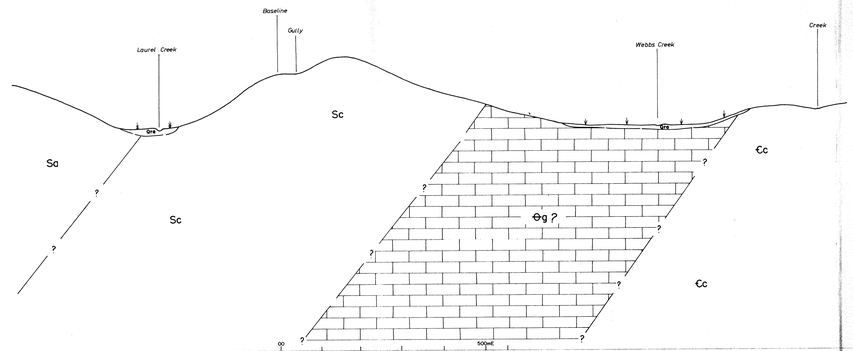
COARSE SCALE

00 500mE

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

500 400 300 200 100 00



537107

5 cm

RENISON LIMITED 2012

E.L. 17/77 - WILSON RIVER AREA

LAUREL CREEK EAST GRID

LINE L.C.E. 00N

SECTION LOOKING

SCALE 1:5000 METRES

100 0 100 200 300

DRAWN	L. Martin
TRACED	T.G.D.S.
DATE	July, 1982
SCALE	1:5000
DRAWING No.	FIG. 32

83 - 2014 2/2.

I.P.
- CHARGEABILITY
- RESISTIVITY

MAGNETICS
- 5000 γ SCALE
- 1000 γ SCALE

GEOCHEMISTRY
- Sn
- Cu
- Pb
- Zn
- As
- WO_3

SEDIMENTARY ROCKS

Quaternary
- Qra — Recent Alluvium
- Tg — Tertiary Gravels

Devonian
- Db — Bell Shale
- Df — Florence Quartzite

Silurian
- Undiff. Amber Shale: Sas — Siliceous Sandstone member
- Sal — Limestone member
- Sc — Crotty Quartzite

Ordovician
- Θg? — Gordon Limestone
- Θm? — Moina ? Sandstone

Cambrian
- €dh — Upper Dundas Group or Hustlesson Formation, Upper Cambrian
- €c — Crimson Creek Formation, Middle Cambrian

Pre-Cambrian
- pCo — Oonah Quartzite and Schist

IGNEOUS ROCKS
- Tb — Tertiary Basalt
- Dg-1, Dg-2, Dgm — Coarse to very coarse Adamellite, Quartz Porphyry and fine grained Adamellite, Granodiorite, Microgranite, Microgranite, Dykes, Tourmalinized Granite
- Dβ — Devonian ? Acid Intrusives
- €s — Upper Cambrian Serpentinites, and Mafic-Ultra-mafic complexes
- €g — Cambrian Basic or Gabbroic Rocks

SYMBOLS
- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage parting, shear
- Dyke

366 000 E.
367 000 E.
368 000 E.
369 000 E.
370000 E.
5 394 000 N.
5 393 000 N.
5 392 000 N.
5 391 000 N.
E.L. 17/77
1800N
1600N
1400N
1200N
1000N
800N
600N
400N
200N
00 N
1600W
1400W
1200W
1000W
800W
600W
400W
200W
100W
200 N
NOTE
No data on line 12 N
5 cm
LAUREL CREEK
TOTAL MAGNETIC FIELD CONTOURS
COMPILED BY SCINTREX
Job No TAS-09F-E
PLATE 3
SHT. 1 of 2
83-2108
CORINNA B4-3
CORINNA B4-4
CORINNA D2-1
CORINNA D2-2
RENISON LIMITED 2013
LAUREL CREEK GRIDS
TOTAL MAGNETIC FIELD CONTOURS
SCALE, 1:5,000 METRES
100 0 100 200 300
DRAWN Scintrex/A.C.
TRACED Scintrex/S.E.
DATE April, 1983
SCALE 1:5,000
DRAWING NO.
FIG. 33
83 - 2014 2/2

E.L. 17/77

E.L. 17/77

18N
16N
14N
12N
10N
8N
6N
4N
2N
00

16N
14N
12N
10N
8N
6N

370000 E.

5393000 N.

5392000 N.

5391000 N.

366 000 E

367 000 E

368 000 E

369 000 E

370 000 E

5 cm

LAUREL CREEK

CHARGEABILITY CONTOURS

SURVEYED BY SCINTREX
COMPILED BY A.C.

Job № TAS-037-E

PLATE 1.

CONTOUR Int. 5	B4-1
D2-1	D2-2

537109

RENISON LIMITED 2014

LAUREL CREEK GRIDS

CHARGEABILITY CONTOURS

SCALE 1:5000 m

DRAWN	Scintrex/A.C.
DRAFTED	Scintrex/S.F.
DATE	April, 1983

FIG. 34

83 - 2014 2/2

E.L. 17/77

E.L. 17/77

18N
16N
14N
12N
10N
8N
6N
4N
2N
00

16N
14N
12N
10N
8N
6N
4N
2N
00

366 000 E.
367 000 E.
368 000 E.
369 000 E.
370 000 E.

5394000 N.
5393000 N.
5392000 N.
5391000 N.

5 cm

LAUREL CREEK
RESISTIVITY CONTOURS
SURVEYED BY SCINTREX
COMPILED BY A.J.C.
Job N° TAS-097-E
PLATE 2.

537110

CONDUCTIVE BELT	B4-4
D2-1	D2-2

RENISON LIMITED 2015

LAUREL CREEK GRIDS

RESISTIVITY CONTOURS

SCALE 1:5000m

DRAWN	Scintrex/A.C.
DRAFTED	Scintrex/S.E.
DATE	April, 1983

FIG. 35

83-2014 2/2.

Geochemistry
P.P.M.

I.P. Data
CHARGEABILITY IN MILLIVOLTS / VOLT (——)
RESISTIVITY IN Ohm - METRES (- - - -)

Total Magnetic Field (γ)
COARSE SCALE (——)

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)

8N
10N
12N
14N

Dg-I
Sc
Qra
CREEK
5 cm

537111

RENISON LIMITED 2016	
E.L. 17/77 - WILSON RIVER AREA	
LAUREL CREEK WEST GRID	
LINE L.C.W. 8, 10, 12, 14N.	
SECTION LOOKING NORTH	
SCALE 1:1000 METRES	
DRAWN	T.C.
TRACED	T.G.D.S.
DATE	April, 1983
SCALE	1:1000
DRAWING No.	FIG. 36

IP
CHARGEABILITY
RESISTIVITY

MAGNETICS
5000 γ SCALE
1000 γ SCALE

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
WO_3

Auger Sample —— Limit of auger penetration

BEDROCK GEOCHEMISTRY

SEDIMENTARY ROCKS

Quaternary
Qra Recent Alluvium
Tg Tertiary Gravels

Devonian
Db Bell Shale
Df Florence Quartzite

Silurian
Lindsay Amber Shale — Sas Siliceous Sandstone member; Sah Limestone member
Sc Crotty Quartzite
Hornfelsed and altered calc-silicate lenses. Some magnetite bearing skarns developed.

Ordovician
Gordon Limestone Invariably weathered and/or altered.
Ms? Maina ? Sandstone

Cambrian
Ccdn Upper Dundas Group; Huskisson Formation; Upper Cambrian
Cc Crimson Creek Formation Middle Cambrian

Pre-Cambrian
pCo Oonah Quartzite and Schist

IGNEOUS ROCKS
Tb Tertiary Basalt
Dg-I Dg-C Dgm Coarse to very coarse Adamellite; Quartz Porphyry and fine grained Quartz Porphyry; Fine to Medium Grained Quartz Tourmaline Aplite; Microgranite, Microgranite Dykes; Tourmalinized Granite
Dfa Devonian ? Acid Intrusives
Ca Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
Cg Cambrian Basic or Gabbroic Rocks

SYMBOLS
Dip and Strike of Bedding (Facing known)
Dip and Strike of Bedding (Facing unknown)
Dip and Strike of Composition Banding
Dip and Strike of Cleavage, undifferentiated
Axial Plane of small anticline
Anticlinal, Synclinal Axis
Dip and Strike of Jointing
Dip and Strike of Foliation
Observed outcrop
Fossil locality
Interpreted Boundary
Fault, approximate position
Compositional layering in Ultra-mafic
Cleavage parting shear
Dyke

83-2014 2/2

Bedrock Geochemistry P.P.M.

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

RESISTIVITY IN Ohm – METRES (- - - -)

Total Magnetic Field (γ)

COARSE SCALE

Topography & Geology

HEIGHT ABOVE SEA LEVEL – (METRES)

CREEK

Sc

Dg-I

Dg-E

Dgm

Dq

537112

5 cm

(L.C.W.)250 E

(L.C.W.)400 E.

1700mN 1750mN 1800mN 1850mN

RENISON LIMITED 2017

E.L. 17/77 - WILSON RIVER AREA

LAUREL CREEK WEST GRID

LINES L.C.W. 250,400E.

SECTION LOOKING WEST

SCALE 1:1000 METRES

DRAWN	T.C.
TRACED	T.G.D.S.
DATE	April, 1983
SCALE	1:1000
DRAWING No.	FIG. 37

I.P.

CHARGEABILITY

RESISTIVITY

MAGNETICS

5000 γ SCALE

1000 γ SCALE

BEDROCK GEOCHEMISTRY

Auger Sample ——— Limit of auger penetration.

BEDROCK GEOCHEMISTRY

Sn Cu Pb Zn As WO_3

SEDIMENTARY ROCKS

Quaternary

Qra Recent Alluvium

Tg Tertiary Gravels

Devonian

Db Beli Shale

Df Florance Quartzite

Silurian

Undiff. Amber Shale: Sas Siliceous Sandstone member; Sal Limestone member

Sc Crotty Quartzite

Ordovician

Gordon Limestone Invariably weathered and/or altered.

Oms? Moina ? Sandstone

Cambrian

Cdh Upper Dundas Group, Hutchinson Formation Upper Cambrian

Cc Crimson Creek Formation Middle Cambrian

Pre-Cambrian

pCo Oonah Quartzite and Schist

IGNEOUS ROCKS

Tb Tertiary Basalt

Dg-I Dg-E Dgm Devonian Granites: Coarse to very coarse Adamellite; Quartz Porphyry and fine grained Porphyritic Granite with well defined Porphyritic texture; Granophyric Micrographic; Micrographic Dykes; Tourmalinized Granite

Dq Devonian ? Acid Intrusives

Cs Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes

Cg Cambrian Basic or Gabbroic Rocks

METASOMATIC ROCKS

Magnetite-Sulphide? Bearing Calc-Silicate Skarn

SYMBOLS

- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage parting shear
- Dyke

83 - 2014 2/2

Bedrock Geochemistry P.P.M.

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

RESISTIVITY IN Ohm - METRES (- - -)

Total Magnetic Field (γ)

COARSE SCALE

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

E37113

5 cm

(L.C.E.) 675 W.

(L.C.E.) 1025 W.

(L.C.W) 1550 E.

POSSIBLY ARGILLISED?

Creek

Sc

Dg-l

RENISON LIMITED 2018

E.L. 17/77 - WILSON RIVER AREA

LAUREL CREEK EAST & WEST GRIDS

LINES L.C.W. 675W, 1025W, 1550E.

SECTION LOOKING WEST

SCALE 1:1000 METRES

DRAWN	T.C.
TRACED	T.G.D.S.
DATE	April, 1983
SCALE	1:1000
DRAWING No.	FIG. 38

83-2014 2/2

I.P.

CHARGEABILITY

RESISTIVITY

MAGNETICS

5000 γ SCALE

1000 γ SCALE

BEDROCK GEOCHEMISTRY

Auger Sample

Limit of auger penetration

BEDROCK GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, WO_3

SEDIMENTARY ROCKS

Quaternary

Qra Recent Alluvium

Tg Tertiary Gravels

Devonian

Db Bell Shale

Df Florence Quartzite

Silurian

Undiff. Amber Shale

Sas Siliceous Sandstone member

Sal Limestone member

Sc Clotty Quartzite

Hornfelsed & altered calc-silicate lenses. Some magnetite bearing skarns developed

Ordovician

Gordon Limestone Invariably weathered and/or altered

Om? Mevna ? Sandstone

Cambrian

Cdh Upper Dundas Group ≡ Hunkeson Formation Upper Cambrian

Cc Crimson Creek Formation Middle Cambrian

Pre-Cambrian

pCo Oonah Quartzite and Schist

IGNEOUS ROCKS

Tb Tertiary Basalt

Dg-l Dg-d Dgm Devonian Granites

Coarse to very coarse Adamellite

Quartz Porphyry and Fine grained Porphyritic Granite with wide spread Quartz Tourmaline Alteration

Metagranite, Microgranite Dykes

Tourmalinized Granite

Dfa Devonian ? Acid Intrusives

Ca Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes

Cg Cambrian Basic or Gabbroic Rocks

SYMBOLS

Dip and Strike of Bedding (Facing known)

Dip and Strike of Bedding (Facing unknown)

Dip and Strike of Composition Banding

Dip and Strike of Cleavage, undifferentiated

Axial Plane of small anticline

Anticlinal, Synclinal Axis

Dip and Strike of Jointing

Dip and Strike of Foliation

Observed outcrop

Fossil locality

Interpreted Boundary

Fault, approximate position

Compositional layering in Ultra-mafic

Cleavage parting shear

Dyke

Bedrock Geochemistry P.P.M.

I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)

RESISTIVITY IN Ohm - METRES (- - - -)

Total Magnetic Field (γ)

COARSE SCALE

Topography & Geology

HEIGHT ABOVE SEA LEVEL - (METRES)

537114

5 cm

(L.C.E.)87·5E

(L.C.E.)75E

(L.C.E.) 1400N

RENISON LIMITED 2019

E.L. 17/77 - WILSON RIVER AREA

LAUREL CREEK EAST GRID

LINES L.C.W. 87·5,75E, 1400N.

SECTION LOOKING NORTH & WEST

SCALE 1:1000 METRES

DRAWN	T.C.
TRACED	T.G.D.S.
DATE	April, 1983
SCALE	1:1000
DRAWING No.	FIG. 39

IP
- CHARGEABILITY
- RESISTIVITY

MAGNETICS
- 5000 γ SCALE
- 1000 γ SCALE

BEDROCK GEOCHEMISTRY
- Auger Sample ——— Limit of auger penetration.

BEDROCK GEOCHEMISTRY
- Sn
- Cu
- Pb
- Zn
- As
- WO_3

SEDIMENTARY ROCKS

Quaternary
- Qra — Recent Alluvium
- Tg — Tertiary Gravels

Devonian
- Db — Bell Shale
- Df — Florence Quartzite

Silurian
- Undiff. Amber Shale
- Sas — Siliceous Sandstone member
- Sal — Limestone member
- Sc — Crotty Quartzite

Ordovician
- Ogm — Gordon Limestone invariably weathered and/or altered.
- Omp — Maine ? Sandstone

Cambrian
- Cdh — Upper Dundas Group (i) Huskisson Formation Upper Cambrian
- Cc — Crimson Creek Formation Middle Cambrian

Pre-Cambrian
- pCo — Oonah Quartzite and Schist

IGNEOUS ROCKS
- Tb — Tertiary Basalt
- Dm — Dg-1, Dg-2, Dgm: Devonian Granites. Coarse to very coarse Adamellite. Quartz Porphyry and fine grained Quartz Tourmaline Granite. Dg-1 has Quartz Tourmaline intrusives. Monzogranite, Microgranite, Dykes
- Tourmalized Granite
- Dfg — Devonian ? Acid Intrusives
- Cs — Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
- Cg — Cambrian Basic or Gabbroic Rocks

METASOMATIC ROCKS
- Nisgnetite - Sulphide? Bearing Calc.-Silicate Skarn.

SYMBOLS
- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage, unclifferentiated
- Axial Plane of small anticline
- Anticline, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage parting shear
- Dyke

83-2014 2/2.

Geochemistry
P.P.M.

I.P. Data
CHARGEABILITY IN MILLIVOLTS / VOLT (——)
RESISTIVITY IN Ohm - METRES (- - - -)

Total Magnetic Field (δ)
COARSE SCALE

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)

2N.
4N.
6N.
8N.
10N.
12N.

WEBBS CREEK
Projected 35m North
Projected 35m South

537115
5 cm

RENISON LIMITED 2020	
E.L. 17/77 - WILSON RIVER AREA	
LAUREL CREEK EAST GRID	
LINE L.C.E. 2,4,6,8,10,12N.	
SECTION LOOKING NORTH	
SCALE 1:1000 METRES	
DRAWN	T.C.
TRACED	T.G.D.S.
DATE	April, 1983
SCALE	1:1000
DRAWING No.	FIG. 40

I.P.
CHARGEABILITY
RESISTIVITY

MAGNETICS
5000 δ SCALE
1000 δ SCALE

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
WO_3

BEDROCK GEOCHEMISTRY
● Auger Sample —— Limit of auger penetration

SEDIMENTARY ROCKS
Quaternary
Qra Recent Alluvium
Tg Tertiary Gravels
Devonian
Db Bell Shale
Df Florence Quartzite
Silurian
Undiff. Amber Shale: Sas Siliceous Sandstone member; Sal Limestone member
Sc Crotty Quartzite
Ordovician
Gordon Limestone invariably weathered and/or altered
Øm? Moina ? Sandstone
Cambrian
Cdh Upper Dundas Group ≡ Hunkeson Formation Upper Cambrian
Cc Crimson Creek Formation Middle Cambrian
Pre-Cambrian
pCo Donah Quartzite and Schist

IGNEOUS ROCKS
Tb Tertiary Basalt
Dg-1, Dg-2, Dgm: Coarse to very coarse Adamellite Quartz Porphyry and fine grained Granite, Dg-1 Pink to Buff coloured Quartz Tourmaline Alteration. Microgranite, Microgranite Dykes
Tourmalinized Granite
DPa Devonian ? Acid Intrusives
Cs Upper Cambrian Serpentinites, and Mafic-ultra-mafic complexes
Cg Cambrian Basic or Gabbroic Rocks

METASOMATIC ROCKS
Magnetite – sulphide? bearing calc-silicate skarn.

SYMBOLS
Dip and Strike of Bedding (Facing known)
Dip and Strike of Bedding (Facing unknown)
Dip and Strike of Composition Banding
Dip and Strike of Cleavage, undifferentiated
Axial Plane of small anticline
Anticlinal, Synclinal Axis
Dip and Strike of Jointing
Dip and Strike of Foliation
Observed outcrop
Fossil locality
Interpreted Boundary
Fault, approximate position
Compositional layering in Ultra-mafic
Cleavage/ parting shear
Dyke

83 - 2014 2/2

DEVONIAN
MEREDITH
GRANITE

E.L. 17/77

E.L. 17/77

GRANITE POSSIBLY ARGILLISED IN THIS ZONE

F

F

F

Dg-I

Sc

Sa

Df

Qg

Qra/Sc

Qra/Sa

Cc

Dg-2

Sc.

366 000 E.

367 000 E.

368 000 E.

369 000 E.

370 000 E.

5 394 000 N

5 393 000 N

5 392 000 N.

5 391 000 N

1800N

1600N

1400N

1200N

1000N

800N

600N

400N

200N

00 N

100 N

200 N

SEDIMENTARY ROCKS

Quaternary

- Qra — Recent Alluvium
- Tg — Tertiary Gravels

Devonian

- Db — Bell Shale
- Df — Florence Quartzite

Silurian

- Undiff / Amber Shale — Sas — Siliceous Sandstone member
- Sc — Limestone member
- Sc — Crotty Quartzite
- Hornfelsed & altered calc-silicate lenses. Some magnetite bearing Skarns developed.

Ordovician

- Dgl — Gordon Limestone
- Dm? — Maine ? Sandstone

Cambrian

- Cdh — Upper Cambrian (Duncos Group (undiff.)
- Middle Cambrian
  - Cm — Tuffaceous Sandstones
  - Cch — Chert
  - Cst — Tuffaceous Siltstones/Shales
  - Ck — Skarn
  - Ch — Hornfels
  - Ct — Tuff
- Zeolite Cu Porphyries: Cc

Pre-Cambrian

- pCo — Oonah Quartzite and schist

IGNEOUS ROCKS

- Tb — Tertiary Basalt
- Dg-I, Dm, Dg-2, Dgm — Coarse to very coarse Adamellite Quartz Porphyry and fine grained Porphyritic Granite with widespread Quartz Tourmaline Alterations Microgranite; Microgranite Dykes
- Dfq — Devonian ? Acid Intrusives
- Cs — Upper Cambrian Serpentinites and Mafic-ultra-mafic complexes
- Cg — Cambrian Basic or Gabbroic Rocks

METASOMATIC ROCKS

- Magnetite- subside? bearing calc-silicate, Skarn

SYMBOLS

- Dip and Strike of Bedding (Facing known)
- Dip and Strike of Bedding, (Facing unknown)
- Dip and Strike of Composition Banding
- Dip and Strike of Cleavage undifferentiated
- Axial Plane of small anticline
- Anticlinal, Synclinal Axis
- Dip and Strike of Jointing
- Dip and Strike of Foliation
- Observed outcrop
- Fossil locality
- Interpreted Boundary
- Fault, approximate position
- Compositional layering in Ultra-mafic
- Cleavage, parting, shear
- Dyke

DATA SOURCE

Data presented is a compilation of :

- Renison Mapping
- A.V. Brown (1980's) - Mines Dept.
- Photogeological interpretation by P.R. Bolthar
- L. Martin (1982)
- A. Cartwright (1983)

CORINNA B4-3 | CORINNA B4-4
CORINNA 02-1 | CORINNA 02-2

5 cm

RENISON LIMITED 2021

LAUREL CREEK GRIDS INTERPRETATIVE AND FACTUAL GEOLOGY PLAN

SCALE - 1:5000 METRES

100 0 100 200 300

DRAWN	L.M./A.C.
TRACED	T.G.D.S./S.F.
DATE	July, 82 / July, 83
SCALE	1: 5000
DRAWING NO.	FIG. 41

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