000

356001

D. of M. | A.C. - | C.G. 84-2204 | S.O. | Registrar
D. DIR. | 20 AUG 1984 | E & IL
DEPT. OF MINES
REF. No. 8576/84

RENISON LIMITED

EL 42/71 WEST

ARGENT AREA

OPEN FILE

ANNUAL REPORT

1983 - 84

MICROFILMED

AMG REFERENCE POINTS ADDED

D. J. Kilpatrick,
August 1984

c.c. Mines Department 1
GFEL, Tasmania 1
Renison Limited 2

001

356002

CONTENTS

PAGE

1. SUMMARY 1
2. INTRODUCTION 2
3. PREVIOUS WORK 3
4. GEOLOGY 4
5. DISCUSSION OF WORK COMPLETED 5
   - 5.1 DUNKLEY FAULT GRID SECTOR 5
     - 5.1.1 Access 5
     - 5.1.2 Geology 5
     - 5.1.3 Geophysics 6
       - 5.1.3.1 Magnetics 6
       - 5.1.3.2 V.L.F. - E.M 6
     - 5.1.4 Geochemistry 7
     - 5.1.5 Discussion 8
   - 5.2 WESTERN HILLS SECTOR 9
     - 5.2.1 Access 9
     - 5.2.2 Geology 9
   - 5.3 ARGENT AREA GENERAL 10
     - 5.3.1 Geological Survey Mapping 10
     - 5.3.2 Landsat Lineament Study 10
6. RECOMMENDATIONS TO JUNE 1985 11
   - 6.1 FEDERAL FAULT SECTOR 11
   - 6.2 TUNNEL RIDGE SECTOR 11
   - 6.3 DUNKLEY FAULT GRID SECTOR 11
   - 6.4 KELLEHER RIDGE SECTOR 11
   - 6.5 WESTERN HILLS SECTOR 11

REFERENCES 12

APPENDICES 13

1. EXPENDITURE 1983 - 84 13
2. BUDGET 1984 - 85 15
3. PETROLOGICAL REPORT 17

002

FIGURES IN TEXT

(i) / 1:250,000 LOCALITY PLAN 1:50,000 LOCALITY & GEOLOGY PLAN

(ii) / 1:20,000 GRID LOCALITY

(iii) / GEOPHYSICAL MODEL OF MAGNETICS DATA - LINE 400S
DUNKLEY FAULT GRID

(iv) / GEOPHYSICAL MODEL OF MAGNETICS DATA - LINE 600S
DUNKLEY FAULT GRID

(v) / VLF-EM DATA FOR NWC - STACKED PROFILE

(vi) / VLF-EM DATA FOR JPN - STACKED PROFILE

PLANS

1. / GEOLOGICAL AND DRILLHOLE LOCALITY 1:10,000
2. / DUNKLEY FAULT GRID, INTERPRETIVE GEOLOGY 1:5,000
3. / DUNKLEY FAULT GRID, TOTAL FIELD GROUND MAGNETICS 1:5,000
4. / A - T DUNKLEY FAULT GRID, COMPOSITE LINE PROFILES 1:2,000 - No 4 "O" = 14 plans
5. / A - F DUNKLEY FAULT GRID, BEDROCK GEOCHEMISTRY CONTOUR 1:5,000 = 6 plans
6. / LINEAMENT 1:10,000

1. SUMMARY

This report covers work completed between December 1983 and June 1984. Effort was concentrated on the newly established Dunkley Fault Grid. Work involved infill line cutting, magnetics geochemistry and VLF-EM. Results confirmed and detailed earlier work and minimal reinterpretation was required. The prospect remains the most promising on the licence with the possible exception of the northern extension of the Federal system. No work was carried out on the Federal Fault Sector.

Recommendations include one diamond drillhole on the Dunkley Fault Grid followed by a ground EM survey.

One diamond drillhole is proposed in the S.E. corner of the Tunnel Ridge Sector testing the magnetic anomaly adjacent an inferred fault in an area known to contain Renison Mine Sequence rocks.

2. INTRODUCTION

EL 42/71 covers an area of 53km^2 south and west of the Renison Mining Lease (figure (i)). The southern portion includes the Grand Prize Mining Leases and is reported separately (Komyshan and Roberts 1984). The western portion reported herein is referred to as the Argent Area.

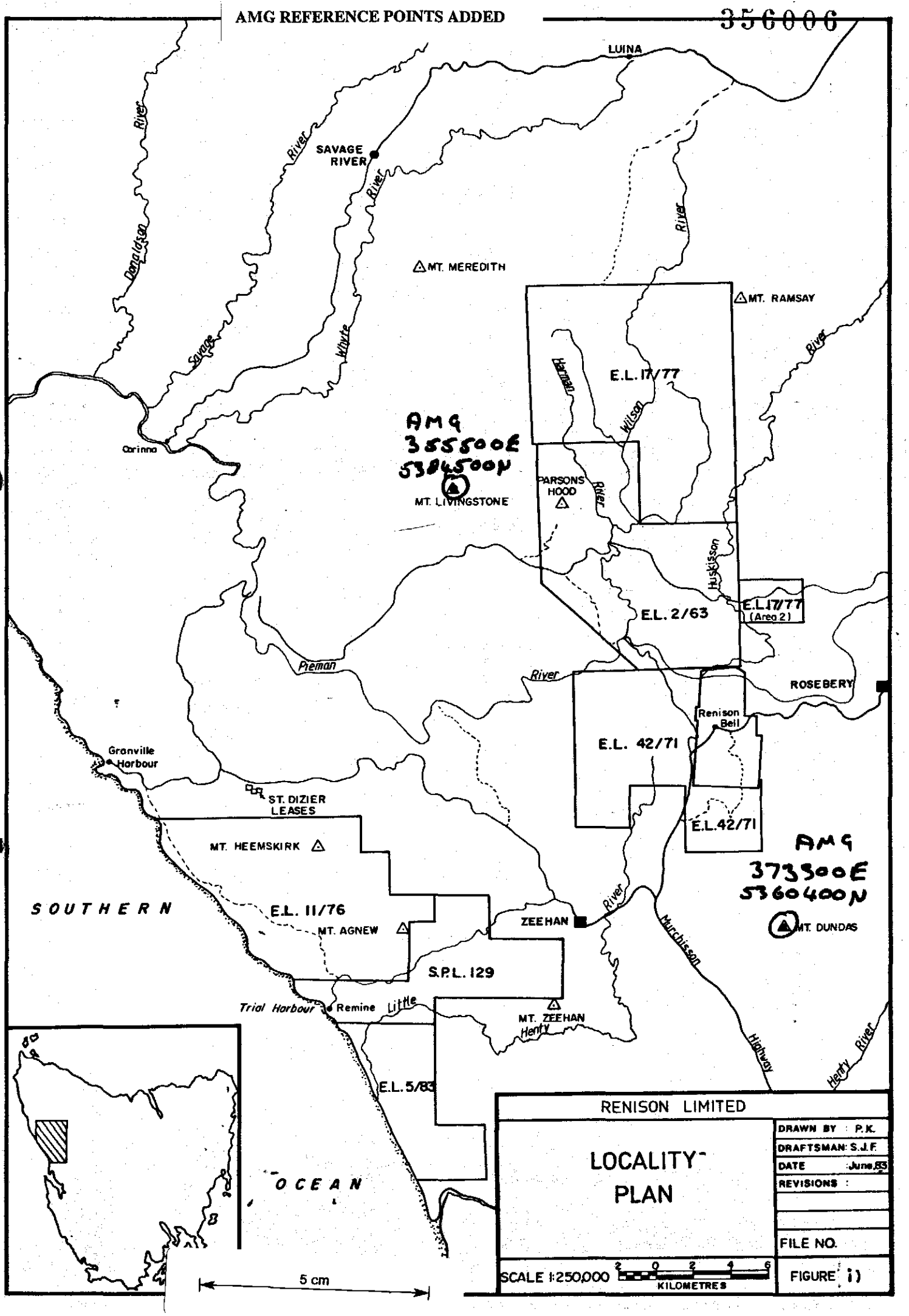
Because of the presence of Crimson Creek and Success Creek formation sediments, the abundance of faulting, and the proximity of the Renison and Razorback tin mines, the license is considered to hold good potential for economic stanniferous mineralisation, as carbonate replacement, fault infil and skarn derived deposits.

The relinquishment date for the license is August 1987. There will be a further three annual reports before then. This report covers work completed between December 1983 and June 1984. This shortened interval will allow the following reports to be better co-ordinated with the renewal and relinquishment dates (August 23rd).

005

AMG REFERENCE POINTS ADDED

356006



RENISON LIMITED

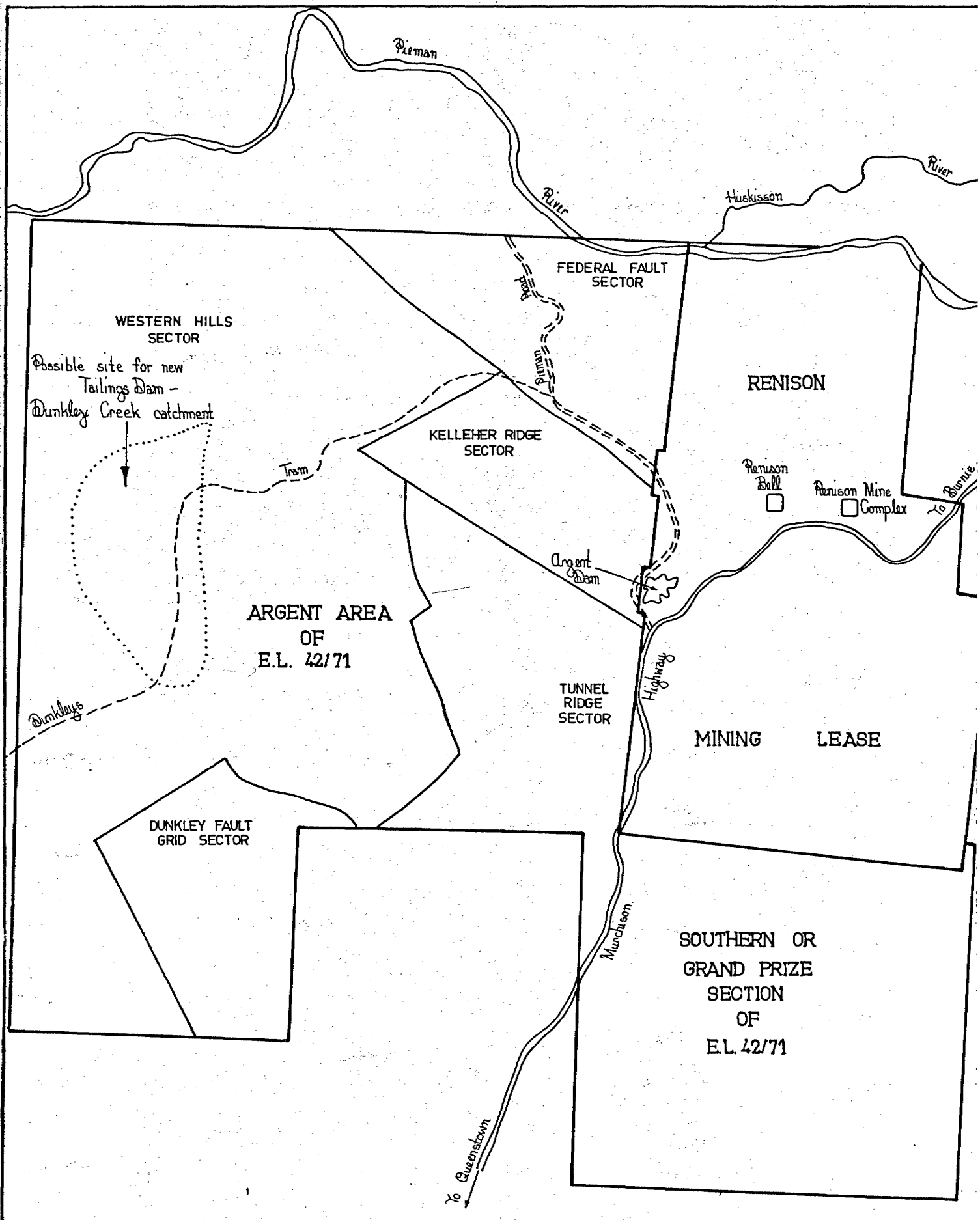
LOCALITY PLAN

DRAWN BY : P.K.
DRAFTSMAN: S.J.F.
DATE : June, 85
REVISIONS :

FILE NO.

SCALE 1:250,000 2 0 2 4 6 KILOMETRES

FIGURE 1)



1 : 50,000

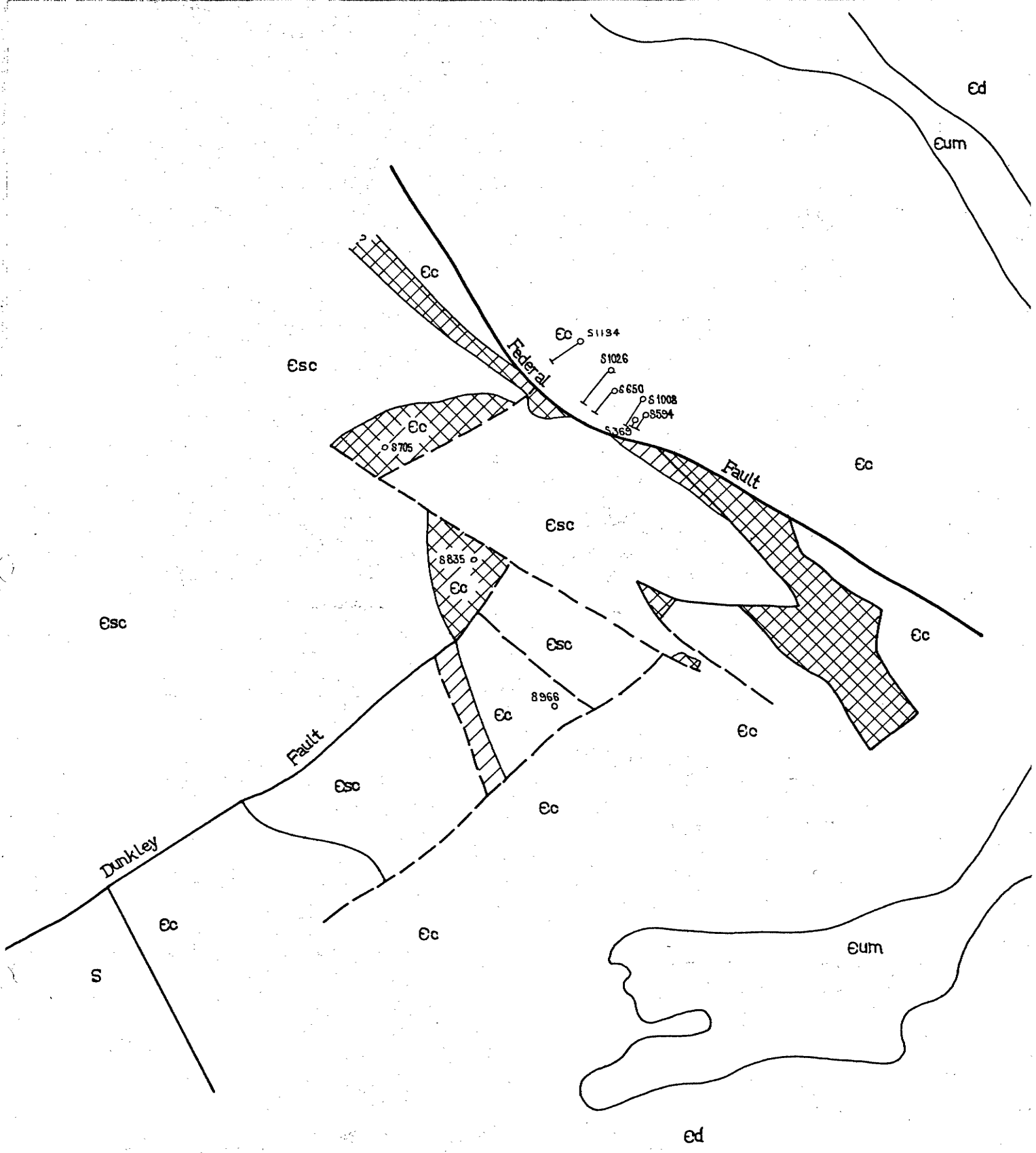
E.L. 42/71 AND R.M.L.

LOCALITY

PLAN

5 cm

356007



S Siluro - Devonian sediments (Eldon Group)
Ed Dundas Group
Ec Crimson Creek Formation
Esc Success Creek Formation
Eum Serpentine Hill Ultramafics
Mine Sequence Rocks
Possible Mine Sequence Rocks
S369 Diamond Drill Hole Locality
Fault Inferred
Fault Definite
Geological Boundary

5 cm

AND GEOLOGY

356008 006

Pieman
River
Huskisson
River
Ed
Eum
Ec
FEDERAL FAULT SECTOR
Road
Federal
Tramway
S1194
S1026
S650
S1008
S594
S365
WESTERN HILLS SECTOR
Esc
Possible site for new Tailings Dam – Dunkley Creek catchment
Tram
S706
KELLEHER RIDGE SECTOR
RENISON
Fault
Renison Bell
Renison Mine Complex
To Burnie
S835
Argent Dam
ARGENT AREA OF E.L. 42/71
S966
TUNNEL RIDGE SECTOR
Highway
MINING LEASE
Dunkleys
Fault
Dunkley
DUNKLEY FAULT GRID SECTOR
S
Murchison
SOUTHERN OR GRAND PRIZE SECTION OF E.L. 42/71
To Queenstown
S Siluro-Devonian sediments (Eldon Group)
Ed Dundas Group
Ec Crimson Creek Formation
Esc Success Creek Formation
Eum Serpentine Hill Ultramafics
Mine Sequence Rocks
Possible Mine Sequence Rocks
S369 Diamond Drill Hole Locality
Fault Inferred
Fault Definite
Geological Boundary
5 cm
356007
1:50,000
E.L. 42/71 AND R.M.L.
LOCALITY AND GEOLOGY PLAN
356008 006

3. PREVIOUS WORK

Several companies have completed a variety of exploration programmes in this area over the years. A compilation of all geophysical data from within the license, the Renison Mining Lease and the Cuni area (Bishop 1983), has revealed the following exploration history of the Argent Section. For location see figure (ii).

a) Mine Department Grid (1954) - Covered Owen Meredith Bon Accord line of workings. Work included S.P. and Turam.

b) RTAE (1960) - Rio Tinto Australia Exploration cut a small grid to test the magnetic anomaly in the Dunkley Fault area. Magnetics and S.P. were conducted.

c) E.Z. Melba Flat Grid (1962) A large, but poorly located grid covering nearly half of the Argent Section. Magnetics and IP and geochemistry and two drillholes were completed, MFP 124, MFP 125.

d) Renison Bell West Grid (? 1964) - Comstaff designed this grid to test the northern extension of the Federal Fault. IP, ground magnetics, SP. Diamond drillholes RB1, RB2, RB3.

e) Wilson River Grid (1971) - Paringa cut this grid north of the lease boundary, testing the contact between the "Oonah/Crimson Creek Series" - i.e. the northern extension of the Federal-Owen Meredith Fault. They conducted geochemistry, magnetics and SP.

f) Dunkley Grid (1972) - Renison cut a total of 5 lines (15km) across the Dunkley Fault and testing the magnetic anomaly. Magnetics and mapping were completed on 3 lines.

g) Crimson Creek Grid (1973) - Renison repegged and extended the Comstaff Renison Bell West grid and completed mapping, proton magentics, IP and some MIP. Some diamond drillholes were completed testing the Federal/Owen Meredith shear and the Owen Meredith workings, S369, S370, S386, S388. Since then a number of deep drillholes have been completed in the area testing the Federal Fault, S594, S560, S697, S1008, S1026, S1134.

h) Argent Grid (1975) - Covered mostly the same area as the EZ Melba Flat Grid. Magnetics IP, geochem and mapping were completed. Three holes have been drilled in the area since the completion of the grid, S495, S835, S966.

i) Dunkley Tram Grid (1979) - Three broadly spaced lines in the west of the area covered outcropping Mine Sequence rocks. Proton magnetics, IP, geochemistry and mapping was completed before a drillhole S705 was spudded.

j) Dunkley Fault Grid (1983) - Detailed grid area over the magnetic anomaly and faulted CCF block; 40km of lines cut initially. Magnetics, bedrock geochemistry and mapping completed.

033

356010

REF: RN/MG83/05

RENISON LIMITED

E.L.42/71 & R.M.L.

GRID & SHEET REFERENCE

GEOLOGIST	
DRAFTSMAN	T.G.D.S.
DATE	Dec., '83
REVISIONS	

SCALE 1:20000

DRAWING No. FIG. ii)

003

4. GEOLOGY

The Argent Area of EL 42/71 contains rocks of the basal Precambrian Oonah quartzites and slates, Lower Cambrian Success Creek Group (S.C.G.) and the conformably overlain Crimson Creek formation (C.C.F.). The Renison Mine Sequence (M.S.) is located stratigraphically with the base of the C.C.F. and the top of the S.C.G. Four separate blocks in the Argent Area contain outcropping M.S. dolomites, and a further two areas are known to contain possible M.S. rocks.

The C.C.F. and upper S.C.G. are known to host carbonate horizons besides the M.S. carbonates. The area exhibits moderate regional and local folding and is dissected by several major faults. Three of these are known to be mineralised to at least a minor extent including the northern extension of the Federal Fault.

Depth to granite is unkown, however, there is geophysical and geological evidence in both the Federal Fault Sector and the Dunkley Fault Sector that a figure of 1,000-1,200m is not unreasonable. This is similar to the depth below mineralisation in the Renison Mine area.

From the combination of these factors, the Argent Area of EL 42/71 is seen to be the most prospective ground outside the Renison Mining Lease for a Renison style stratabound, stratabound/fault, or fault bound stanniferous orebody.

The geology of the Argent Area is shown on plan 1 at 1:10,000 and is described in more detail in previous annual reports and papers to which the reader is referred. The geological setting of the various 'sectors' referred to within the report is described in section 6 of the 1981-82 annual report and is summarised in figure (i).

5. DISCUSSION OF WORK COMPLETED

5.1 DUNKLEY FAULT GRID SECTOR

5.1.1 Access

Infill line cutting was designed to allow more detailed coverage of both magnetic and geochemical anomalies detected by work on the main lines. A total of 15,100m of line was cut and pegged. Most of the new lines were cut parallel to the initial grid, however, 3,200m of lines were designed to allow testing of the Dunkley Fault and hence were cut at 90° to the main lines.

Bushfires in 1980 burnt out one third of the grid area in the northern part. Dead trees are regularly falling across lines and line clearing may be necessary to maintan the grid in a useable condition.

A 4-WD track was established to connect the NE corner of the grid with the Dunkely Tram (Plan 1, also section 5.2.1). The grid can now be accessed from four separate starting points. Two tracks however, are driveable only in summer.

All tracks have been surveyed (except the one which crosses line 1400S at 2275E). Lines have been located where they cross these tracks. Line positions away from the roads have been checked on crosslines and on aerial photographs. (A three run series at 1:16,000 conducted for Renison was flown on 15.1.84). This new data is yet to be compiled to produce a final grid locality plan. However, it appears that changes will be minor and not significantly affect anomaly positions. For the purpose of this report, the grid position is the same as that used in the previous report. Infill lines are shown as proposed rather than actual. The finalised grid position will be completed for the 1984 - 85 Annual Report.

5.1.2 Geology

Petrographic descriptions of 18 samples collected from the grid area were received from C.M.S., Adelaide. The report is appended (Appendix 3). The descriptions confirmed field mapping. Sample locations are shown on Plan 2.

Perhaps the most significant comment refers to C1002 (100S, 1600E); "a ferruginous chert breccia which on petrological grounds could be correlated with ferriginous chert facies of Red Rock Member". This locality is adjacent the Dunkley Fault in the NE corner of the grid, 400m west of the contact with the Success Creek sediments. A less encouraging result was the absence of detectable hornfelsing and metasomatic effects. This may suggest a more distal relationship to underlying granite than first proposed. This is not necessarily a negative point however, since in the Renison area, the presence of hornfelsing and metasomatic effects on the surface often mean that Sn is associated with complex skarn mineralisation, e.g. in the Dalcoath-Gormanston Creek area.

Results and effects of geochemistry and geophysics carried out since the last report on the interpretted geology are discussed in section 5.1.5).

5.1.3 Geophysics

5.1.3.1 Magnetics

All of the infill lines, except the crossline XL200E, were covered with proton magnetics. Results confirmed and detailed the anomalous areas defined in the earlier survey (Plan 3). Results are also plotted on line profiles (Plans 4A - M) A summary of the infill work follows:-

- The shape of the main magnetic anaomaly is now more oblong with a NE trend. The size is marginally increased.

- No magnetic response over the geochemical anomaly in the NW corner of the grid. A localised probably shallow source appears to be causing the response at the eastern end of the 300 south line.

- The eastern tip of the grid shows a number of localised highs probably due to shallow sources, possibly associated with the contact zone of the SCG and CCF rocks.

- The anomalous zone on L2200S now shown to be continuous as a NE trending zone extending to the 1200S line.

- A linear NE trend magnetic low parallels the above linear high and separates it from the main anomalous area (from 600E on 2200S to 2800E on 700S).

Preliminary modelling by J. Bishop of the data obtained on lines 400 and 600S over the main anomaly has proved encouraging (figures (iii) and (iv)). Using susceptibility equivalent to that of massive pyrrhotite, the shape of the magnetic profile can be matched approximately using two vertically dipping tabular bodies approximately 150m below surface. Some geological input can refine the shape and orientation of the body, however, the work does indicate that the depth to the source of the anomaly is probably less than 200m if the body is massive po. Other possibilities remain to be modelled, e.g. large disseminated po. body, a magnetite skarn zone, an ultrabasic intrusive. Detailed modelling will be carried out using more sophisticated equipment than that used for the preliminary work and will be completed before November 1984.

5.1.3.2 VLF-EM

Most of the northern half of the grid, including infill lines, down to the 1400S line has been covered with VLF-EM. Profiles of dip angle and a filtered derivative have been plotted on the composite line profiles (Plans 4A - M). This work shows some strong dip angle responses, however, trends between lines are not often continuous.

Stacked profiles of the Frazer filtered derivative are included in the text (figures (v) and (vi)). The Boodecker Fault is apparent on most of the lines at around 400-600E, however, defining unknown structures on the basis of the filtered data would be purely speculative. The noisy nature of the data may be due to:-

(i) errors in dip angle measurement (up to $\pm 3^{o}$ where field strength is weak)

(ii) conductive material on the surface

FIGURE iii)

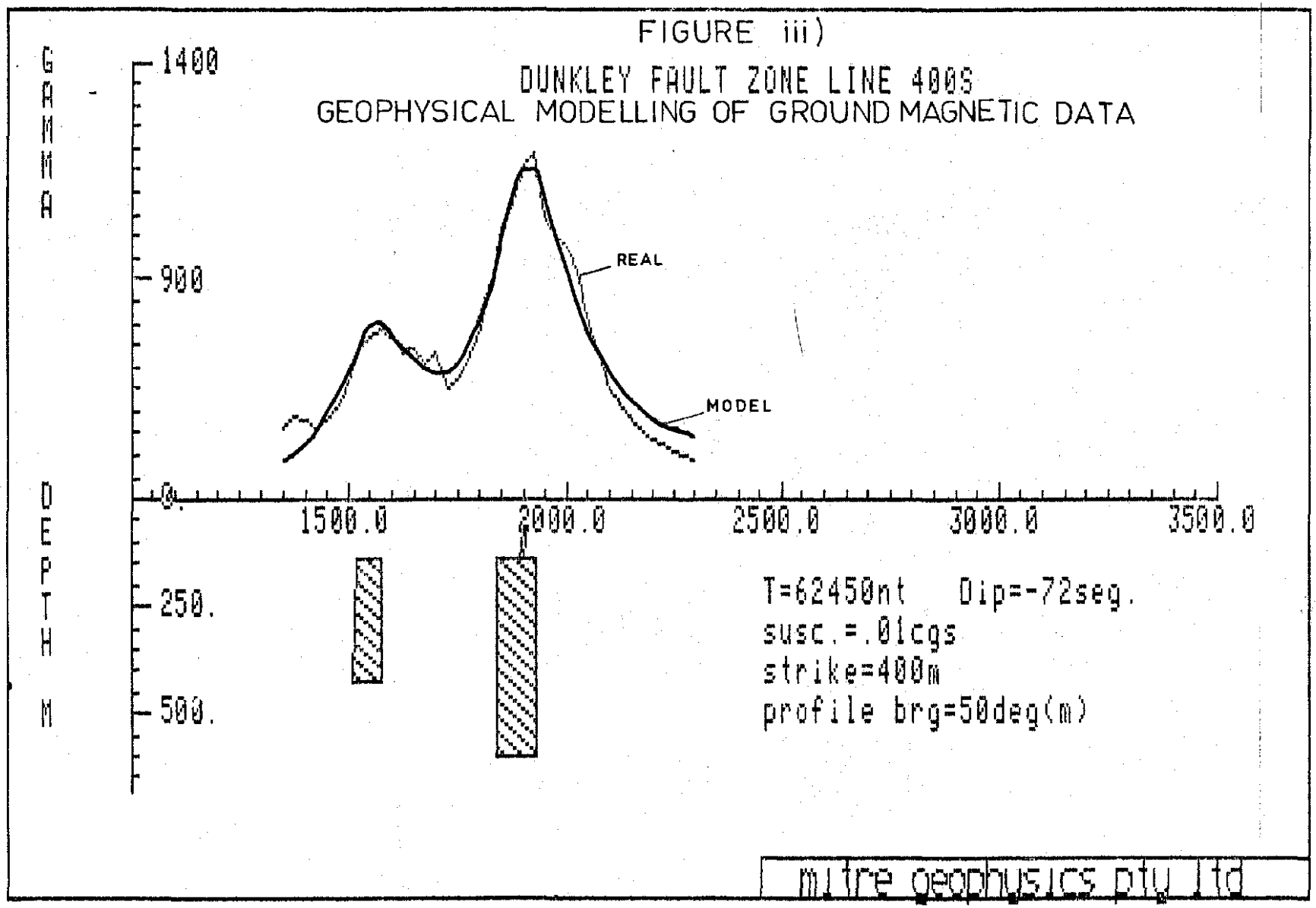
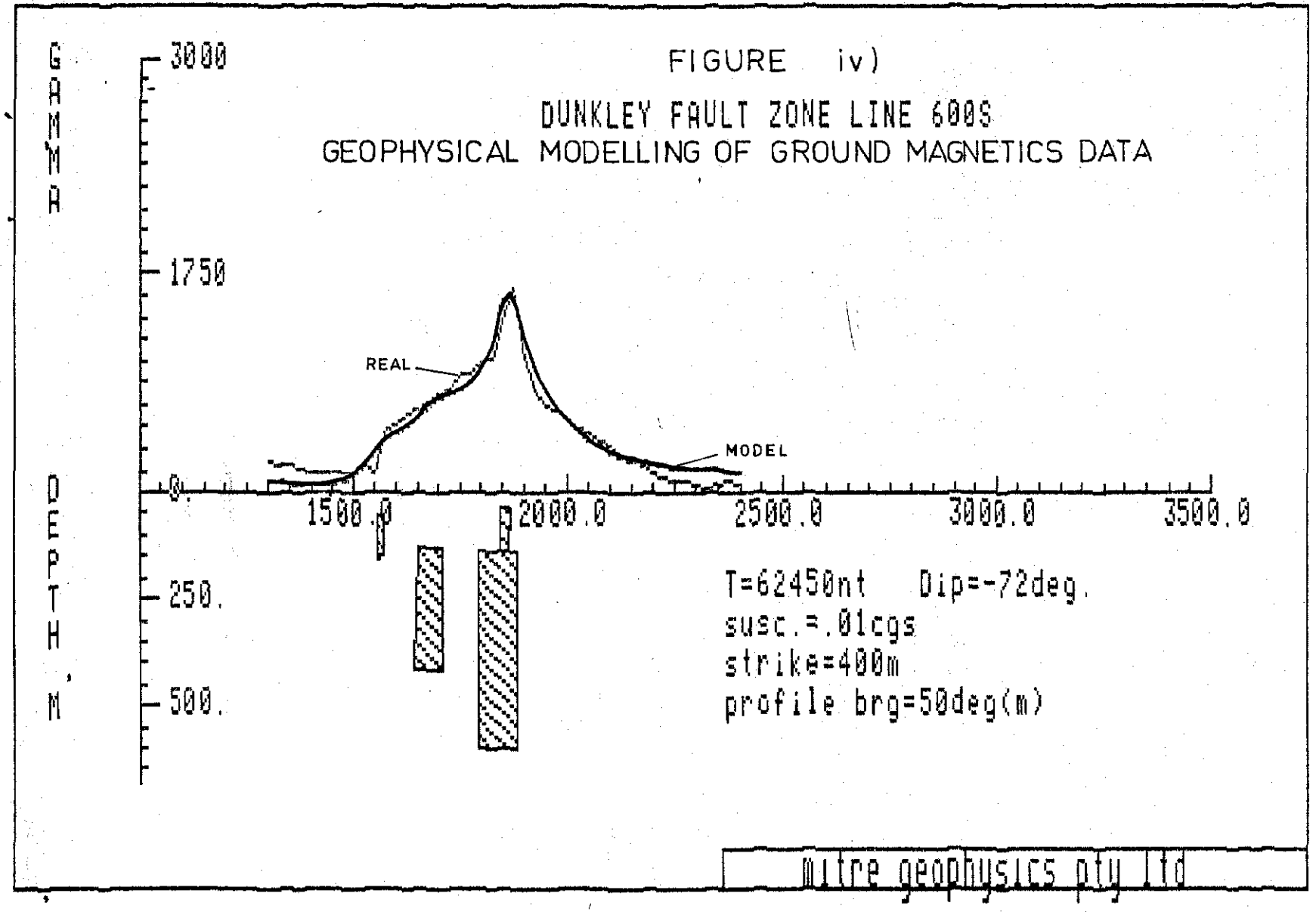

DUNKLEY FAULT ZONE LINE 400S
GEOPHYSICAL MODELLING OF GROUND MAGNETIC DATA
GAMMA
1400
900
REAL
MODEL
0.
1500.0
2000.0
2500.0
3000.0
3500.0
DEPTH M
250.
500.
T=62450nt Dip=-72seg.
susc.=.01cgs
strike=400m
profile brg=50deg(m)
mitre geophysics pty ltd

FIGURE iv)

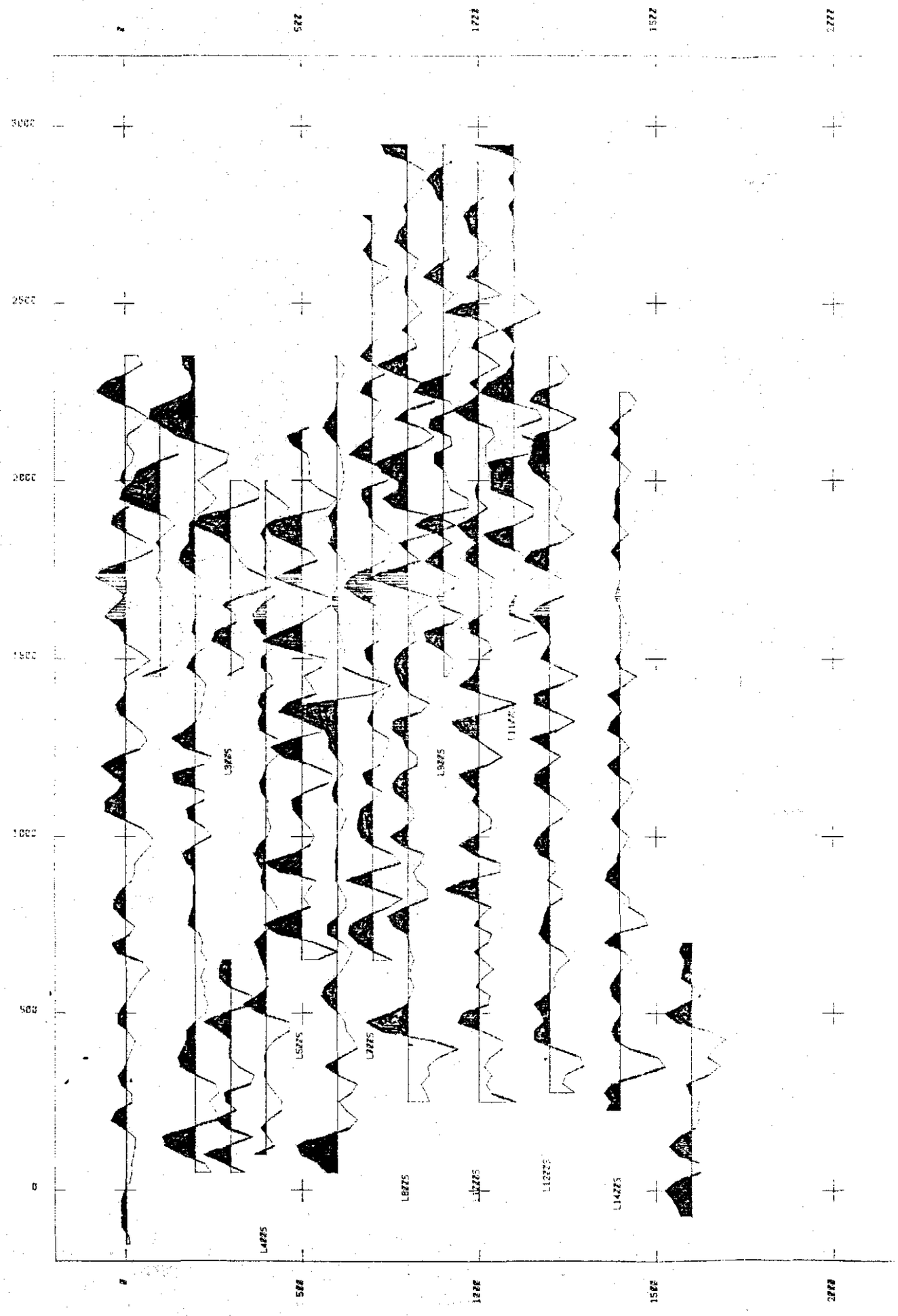
DUNKLEY FAULT ZONE LINE 600S
GEOPHYSICAL MODELLING OF GROUND MAGNETICS DATA



Mitre geophysics pty ltd

013

356016



5 cm

FILTER USED:

$\theta_n = (^2/_3\theta_{n-2} + ^4/_3\theta_{n-1}) - (^4/_3\theta_{n+1} + ^2/_3\theta_{n+2})$

LEGEND

VERTICAL SCALE = 20 DEGREES

SCALE

1:10000

FIGURE v)

MITRE GEOPHYSICS PTY LTD.

DUNKLEY FAULT GRID

FILTERED VLF DATA

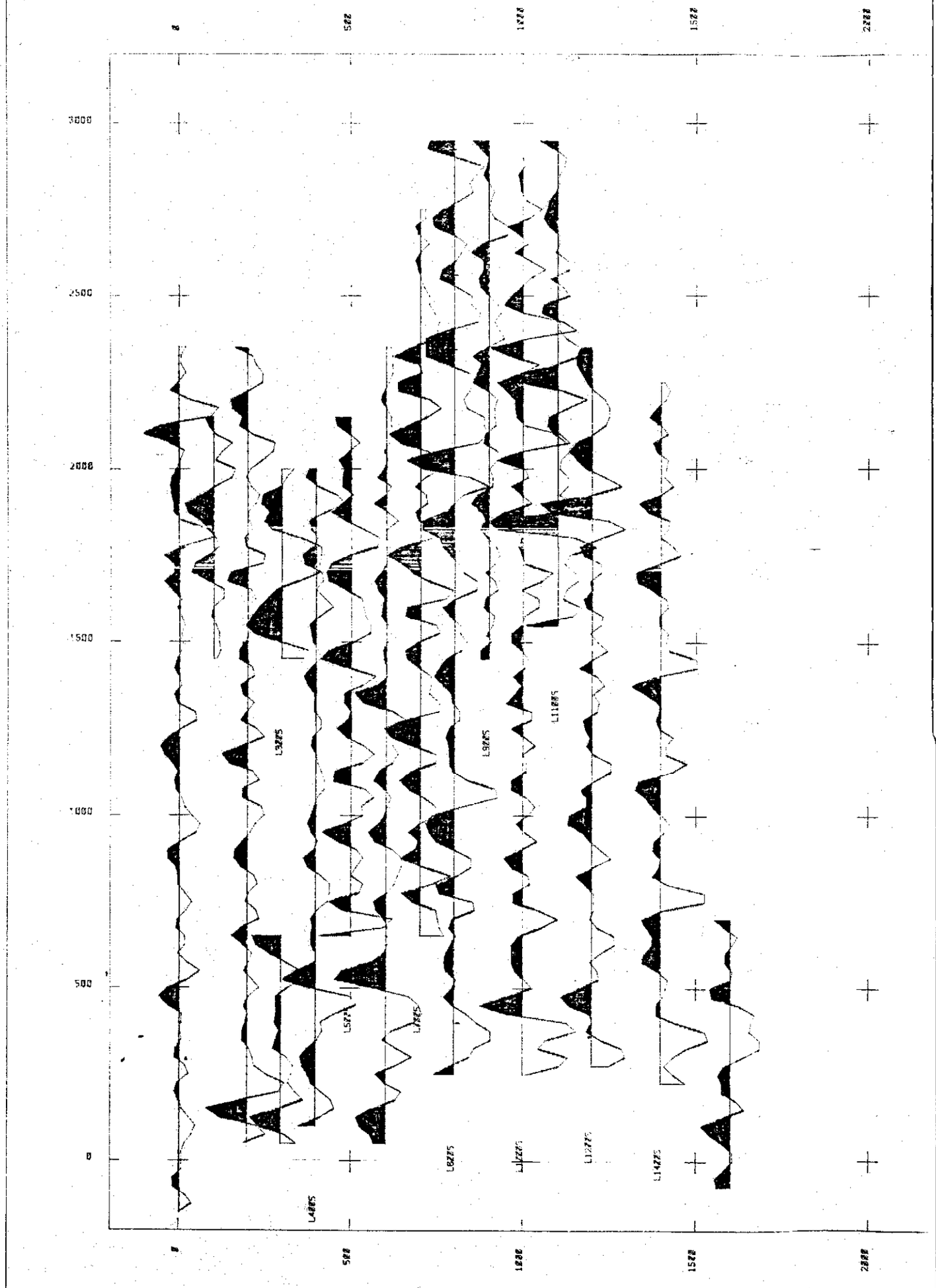
STACKED PROFILE MAP

TRANSMITTER: NWC

DATE: 18/4/84

014

356017



5 cm

FILTER USED

$$\theta_n = (\tfrac{2}{3}\theta_{n-2} + \tfrac{4}{3}\theta_{n-1}) - (\tfrac{4}{3}\theta_{n+1} + \tfrac{2}{3}\theta_{n+2})$$

LEGEND

VERTICAL SCALE - 20 DEG/CM

SCALE

1: 10000

FIGURE vi)

YITRE GEOPHYSICS PTY LTD

DUNKLEY FAULT GRID

FILTERED VLF DATA

STACKED PROFILE MAP

TRANSMITTER: JPN

DATE: 18/4/84

(iii) abundance of faults or rock type changes

Strongest responses were observed on the east side of the grid with possible trends to the north and NNE observable on both the JPN and NWC data. A moderate to strong feature can be seen on the JPN data trending NE between thje 800S and 000S lines, across the central part of the grid.

Points to note from the VLF-EM work:-

When tuned to NWC, the receiver will give the strongest response to structures with a N to NW strike.

When tuned to JPN the receiver will give the strongest response to structures with a N to NE strike.

The Japan transmitter signal is quite weak, sometimes below 100 (the minimum reading level) at maximum sensitivity.

The instrument was a borrowed Phoenix VLF-2, the sensitivity of which was found to be low when compared to a later version of the same receiver.

5.1.4 Geochemistry

Geochemically interesting areas, located in the initial work were detailed with infill lines. These included the NW corner where a Sn and base metal anomaly was defined and the eastern tip (base metals only). Cross lines were also cut at 90^{o} to the main lines to test the geochemical response over the Dunkley Fault which parallels the main lines. Sampling was again carried out by N. Poltock using a portable power auger to obtain bedrock samples at depths down to 16m.

Of the results, it can be said that they support and confirm earlier work. A summary of the results is given below.

Sn

Strong confirmation of the anomaly in the NW corner. Resampling of 300 and 350E on line 000 south confirmed initial values. A number of spot highs on the 100S although not continuous or contourable support the anomaly. A number of other single point highs were located on other lines, notably the 900S line, but are suggestive more of contamination than of any exploration significance. Some extra testwork underway with regard to this.

As

Strong support for the Sn anomaly in the NW corner. Elsewhere levels are barely above detection limit and probably not sigfnificant.

Cu

Confirms earlier work - no significant changes. Good support of anomaly in NW corner. The 1400 south line was resampled at 12 stations along the line specifically to test the Cu levels which appeared to be contaminated during the earlier work. The results were 60% to 90% lower than original assays, confirming a contamination problem on this line. For contouring purposes, the original assays and smoothed values on this line were ignored and only the resampled values used.

Pb

Confirms and supports earlier work.

Zn

Confirms and supports earlier work. Strong confirmation of the anomaly in the NW corner.

Bi

Not included - the detection limit has been found to be approximately 50 ppm. Hence the majority of the grid area is below detection limit in Bi.

5.1.5 Discussion

Work on the Dunkley Fault Grid since the last report has provided supporting evidence for the three main areas of interest defined in that report. These are:-

1. Main Magnetic Anomaly

Centred on line 600S at 1800E. Infill magnetics showed the shape of the anomaly to be more elliptical and oriented NE. No extra bedrock sampling was carried out directly on the anomaly because of the lack of response on the main lines. It is now apparent that the main anomoly is detached from the small local magnetic highs further to the north on the 200s line. The source of the latter may be shallow mineralisation possibly associated with the Dunkley Fault, however, there is very little geochemical support. While the main anomaly is now more tightly controlled, area and intensity are unchanged. As such it presents an adequate drilling target. This target could be still further refined with the use of a ground EM system.

2. Geochemical Anomaly in NW Corner

The prospectivity of this area near the junction of the Boodecker and Dunkley faults has been enhanced by the infill work. The zone of anomalous Sn has been extended and a strong localised As and WO_3 zone is superimposed. This, in conjunction with the associated Zn, Pb responses which parallel the Boodecker Fault, represent a potentially interesting prospect. The source could be a fault controlled Sn-basemetal zone. The absence of a magnetic signature may suggest a pyrite gangue. This should give a good EM or possibly IP response.

3. Geochemical Anaomaly in the Eastern Tip

Infill work has generally supported the earlier results. There is a moderate to strong response in base metals (no Sn) following the contact between the Success and Crimson Creek Formation rocks. A weak magnetic response is apparent from the airborne magnetics data over this anamaly, however, this was not confirmed on the ground. The significance of this area should become more apparent with furher work on the main anomaly.

General Comments

The infill magnetics has enhanced the circular nature of the regional anomaly. The sickle shape zone depicted by the 600 contour in the SE quarter of the grid may be due to a basic intrusive but may also represent a late stage differentiated granite emplaced as a part of a ring dyke system. A similar response is seen in the north east quarter. This may also explain the associated magnetic lows inside the 'ring'. The SE quarter 'ring dyke' is separated by a marked NE trending low. As mentioned previously, this may be due to a large fault. There is some geochemical support for this trend. No such feature has yet been observed during mapping or on aerial photos.

From magnetics, VLF, geochemical data, geological mapping, and aerial photo information, the interpretted positions of the Dunkley and Boodecker faults have been plotted on Plan 2.

5.2 WESTERN HILLS SECTOR

5.2.1 Access

A track connecting the northern section of the Dunkley Tram to the Dunkley Fault Grid, was completed. This track bypassed a lengthy section of unserviceable road on the old tramway. Approximately 4.4km of new track was constructed (Plan 1).

5.2.2 Geology

Mapping of the new access track, referred to above, has generally confirmed earlier mapping which interpretted the geology as Success Creek and Oonah Formation. Mapping is not yet complete, but current knowledge is shown on Plan 1. Possible C.C.F. rocks exist at the northern end of the track faulted against Success Creek rocks to the south. A second block of possible C.C.F. material is faulted between Success Creek near the middle section of the track. Samples will be sent to C.M.S. for petrological description. The effects of those faults on the more regional geology of the area is unknown. A brief photolineament study, Plan 6, revealed some possibly related SW trending linear features which appear to cross the Dunkley Fault. Further work is required in this area.

5.3 ARGENT AREA GENERAL - GEOLOGY - RECENT DEVELOPMENTS

5.3.1 Geological Survey Mapping

Completion of geological mapping of the Renison area by A. V. Brown, has resulted in the production of the 1:25,000 map sheet "Regional Geology of the Dundas - Mt Lindsay - Mt Ramsay Area". This mapping includes the exploration license with the exception of the Dunkley Fault Grid sector. Of note is an interpretted fault paralleling the Federal-Owen Meredith structure on the footwall side. A second fault acutely angled to the Federal cuts off the footwall structure. This fault is located in the area of the Poseidon workings within Dalcoath formation rocks. Thin oblique fault is terminated against the Federal to the north and a second structure to the south paralleling the Federal between the Argent Dam and the Lead Lode Fault. (Lead Lode Fault not mapped by AVB).

An area of Esru (undifferentiated Renison Bell formation) equivalent to the Renison Mine Sequence rocks is mapped NW of Tunnel Hill. This was tentatively mapped some years ago by Renison and is yet to be confirmed by petrology or drliing.

Another similarly sized area is mapped south west of the Argent Dam and designated Ess equivalent to Lower RBM - upper Dalcoath Member. This has been mapped by Renison as undifferentiated Success Creek formation. One hole in the area (S495) confirms this interpretation at least in the immeidate vicinity of the hole.

Crenulation cleavage mapped in the Western Hills sector supports the generally SE trending axial plane of the folding in the Renison area.

5.3.2 Landsat Lineament Study

A study by Hunting Geology and Geophysics named "Devonian Granite Batholiths NW Tasmania", mapped lineaments observable on Landsat images. These linears have been copied onto the 1:10,000 sheet (Plan 6). It is important to note that the original study is at 1:100,000 and positions of the linears enlarged to 1:10,000 can be accurate to only 10mm. Accuracy of plotting at 1:100,000 is not indicated, however, positions of some features at 1:10,000 checked against known faults (e.g. Federal) suggests an error of perhaps ± 200m. As such the map (Plan 7) shows Landsat trends only and does not accurately represent features on the surface. Plan 6 also shows lineaments detected on aerial photographs which are accurate to within 50m.

Some points to note arising from the study: A strong lineament corresponds with the Boodecker Fault, and continues north through the Dunkley Fault. None is recorded over the Dunkley Fault. A number of NW trending features dominate the northern part of the licence including one which continues from the inflection point on the Federal Fault at the Owen Meredith workings. One major NNE trending feature crosses the Federal Fault and passes near the Poseidon workings. This in part corresponds with the fault proposed by Brown mentioned above (5.3.1). It should be remembered that, as with any photo lineament study, linear features do not necessarily imply faults and may be caused by any number of situations, coincidence, bushfires, jointing, geological boundary, old tracks, gridlines or an overactive imagination.

6. RECOMMENDATIONS TO JUNE 1985

6.1 FEDERAL FAULT SECTOR

No drillholes are planned for this sector in the next financial year. However, a deep hole testing the Federal Fault within the Renison Mining Lease near the western boundary is in progress at the time of writing. As noted in the previous report future holes testing the Federal-Owen Meredith Structure will be long and expensive. This work was commenced in the immediate mine area with holes uch as S700 and S398 and is continuing with the current hole S1192. Further holes are planned working progressively northward but are very much subject to financial considerations.

6.2 TUNNEL RIDGE SECTOR

One diamond drillhole is proposed in the SE corner of the sector near Tunnel Hill to test possible Mine Sequence rocks associated with the strong magnetic anomaly and inferred fault on the SE side of the anomaly. It appears that the Grand Prize Fault stretches northward into this area and the magnetic trend may be due in part to this northern extension. Modelling of the magnetic data will precede the siting and orientation of the hole.

6.3 DUNKLEY FAULT GRID SECTOR

A drillhole is planned to test the magnetic anomaly prior to executing the previously proposed ground EM survey (Section 6.3, 1982/83 Report). Obtaining core before the EM survey will give a stronger geological and geophysical grasp on the area and allow a more sophisticated model to be set up. This will provide more precise drilling targets for a second and subsequent holes. A second reason is that if the hole revealed the source of the anomaly to be an ultrabasic formation, the EM survey and further drilling would be pointless.

The EM survey should be used to test the geochemical anomaly in the NW corner as well as the main magnetic area.

Loop positions are yet to be confirmed, however, it is envisaged that 2 or 3 loops will be required to read most lines in the northern half of the grid (15 - 20km).

The VLF-EM survey remains to be completed, as does mapping on the infill lines.

6.4 KELLEHER RIDGE SECTOR

Recommendations remain unchanged from previous report.

6.5 WESTERN HILLS SECTOR

Reccomendations remain unchanged from previous report.

REFERENCES

BISHOP, J. R., 1983; Renison Mining Lease and EL 42/71, Geophysical Compilation, Mitre Geophysics for Renison Limited.

KOMYSHAN, P. and ROBERTS, P.A., 1984 EL 42/71 South, Grand Prize Area, Annual Report, 1983-84. Company Annual Report to the Mine Department.

APPENDIX 1

EXPENDITURE ARGENT AREA EL 42/71

1983 - 84

EXPENDITURE

ARGENT AREA EL 42/71

1983/84

Salaries		14,928
Leave Loading		2,353
Consumables	- General	806
	- Core Trays	1,809
Outside Services	- Geophysical, Consultant (EM Survey - No Expenditure)	5,817
	- Geochemical	7,500
	- Grid Cutting	5,510
	- Site Access	10,719
	- Diamond Drilling	41,068
	- Other (drafting etc.)	1,907
Renison Services	- Survey	549
	- Assay	4,418
TOTAL		**97,384**

APPENDIX 2

BUDGET ARGENT AREA EL 42/71

1984 - 85

BUDGET

ARGENT AREA EL 42/71

1984/85

Salaries			12,801
Leave Loading			2,047
Consumables	- General		1,120
	- Core Trays		1,981
Outside Services	- Geophysical	- Consultant	5,315
		- EM survey	10,525
	- Grid Cutting		-
	- Site Access		9,601
	- Diamond Drilling		78,400
	- Other (drafting etc.)		3,220
Renison Services	- Survey		1,657
	- Assay		1,502

TOTAL	**128,169**

APPENDIX 3

PETROLOGICAL REPORT

DUNKLEY FAULT GRID

026

356029

Central Mineralogical Services

39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. D. Kilpatrick
Geologist
Renison Limited
P.O. Box 20
ZEEHAN / TAS. 7469

27th June, 1984

REPORT CMS 84/5/44

YOUR REFERENCE:	Letter dated 22.5.1984
DATE RECEIVED:	29th May, 1984
SAMPLE NOS.:	18 Samples
SUBMITTED BY:	D. Kilpatrick
WORK REQUESTED:	Petrology

for

H.W. Fander, M. Sc.

REPORT CMS 84/5/44

A suite of eighteen rock samples from the Dunkley Fault Grid was received for petrological examination. Samples were accompanied by brief lithological notes relating to seventeen samples. The additional sample, not noted in the submission, is numbered C 1034.

Representative thin-sections were prepared and examined under stereobinocular and petrological microscopes together with the respective offcuts. Attached tabulated descriptions summarise the microscopic data and include interpretative comments.

Summary

With minor exceptions, this suite comprises variably weathered sedimentary rocks. These may be categorised into two rather distinct groups:

Group 1 comprises variably carbonaceous psammopelitic sediments with turbiditic characteristics, but grading into, and in part with intercalations of, carbonaceous impure chert and cherty argillites. These "labile" sediments are typically basic-volcanomict with subordinate to minor clastic quartz. Finer details are variously obscured by alteration and locally stress effects, but clastic components imply correlation with Crimson Creek Formation.

In comparison with the immediate (Renison) mine area Crimson Creek facies, these sediments are distinctly carbonaceous and are further characterised by the intercalated "cherty" facies. This suite, in comparison, may be interpreted as representing a relatively distal, deep water facies. "Basaltic" scoria appear locally as an accessory clast component with a suggestion of gradation into, or intercalation with, a "spilitic" facies.

This group includes samples C 1020A, 1020B, 1021, 1022, 1023A, 1023B, 1024, 1025, 1026A, 1026B and possibly 1034. Probably related are a thoroughly degraded fine-grained microgabbro (C 1017), conceivably representing the above speculated-upon spilites, and a ferruginous chert breccia (C 1002) which, on petrological grounds, could be correlated with the ferruginous chert facies of Red Rock Member.

Group 2 comprises quartzose psammopelites with typical Success Creek Group characteristics. These rocks exhibit simple quartz-rich "mature" clastic assemblages and range from impure quartzites to quartz pebble conglomerates and quartzose silty pelites. This group includes C 1003, 1004, 1016 and 1039 and is also represented (as clasts) in C 1030, a ferruginised regolithic or fault breccia.

This suite, as a whole, is devoid of tangible contact-metasomatic and/or metamorphic effects. Group 1 rocks exhibit chloritic alteration assemblages of "burial" metamorphic character, as is typical of Crimson Creek Formation rocks unaffected by contact alteration effects. Success Creek Group rocks are well-lithified, but are unaltered apart from minor stress effects. Whilst weathering effects conceivably obscure low-grade phyllosilicate alteration assemblages, there is a notable absence of the typically associated marginal hornfelsing and metasomatic effects (e.g. tourmalinisation).

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Comments
C 1002 (T.S. 50151)	Ferruginous Chert Breccia. Clasts of ultrafinely hematite-pigmented crypto- to microcrystalline chert. Interspersed matrix of microcrystalline chert and slightly impure (kaolinitic) chert.	Random irregular to subround, sub- to millimetric clasts, massive to crudely pelletal matrix.	Pervasive microscale quartz veinlets. Minor late displacive quartz veinlets with small cavities after ?carbonate.	Intraformational (?syneresis) breccia composite of ferruginous, pure and argillaceous chert. Conspicuous diagenetic quartz; minor late displacive quartz-?carbonate veinlets.
C 1003	Impure Orthoquartzite. Framework of subangular to subround quartz grains (75 %), sericitic impure chert/cherty argillite, minor sericitic pelite clasts (total 25 %). Overgrowth and intergranular quartz cement.	Moderately to well sorted, weakly bedded, fine to medium sandstone. Incipiently stressed.	Minor traces detrital schorl, leucoxene, muscovite.	Lithified, but essentially unmetamorphosed impure orthoquartzite. Relatively high propprtion of argillaceous chert clasts, but otherwise typical of Success Creek quartzites.
C 1004	Sericitic Pelite. Partly weathering-degraded (illitised) semi- to sericitic white mica with subordinate weakly recrystallized silt-sized clastic quartz, minor relict detrital muscovite flakes, partly bleached carbonaceous matter.	Sub- to millimetric alternation of slightly relatively silty shale with sporadic weakly graded siltstone interbeds.	Semi-pervasive weakly ferruginised displacive carbonaceous microfractures. Minor diagenetic quartz veinlets.	Carbonaceous, quartzose, sericitic pelite. Incipiently cleaved and microcrenulated. Success Creek Group-type characteristics.
C 1016	Carbonaceous Orthoquartzite. Framework of subangular quartz grains (70 %), chert and minor argillaceous chert clasts (total 20 %), minor muscovite flakes, carbonaceous pelite clasts. Carbonaceous kaolin-quartz cement.	Poorly to moderately sorted, weakly bedded silty fine to medium sandstone.	Sporadic carbonaceous quartz veinlets. Traces detrital schorl, leucoxene and rare ?detrital pyrite.	Affinities with C 1003, distinctly carbonaceous and argillaceous in comparison. Well-lithified, but devoid of tangible contact-metamorphic effects.
C 1017	Weathered Microgabbro. Kaolin aggregates with pervasively evenly disseminated oxidised/leucoxenised primary and ultrafine secondary opaques.	Relict weakly feldspar- and pyroxene-porphyritic fine- to medium-grained, subophitic.	Minor traces of quartz.	Thoroughly weathered, subophitic, basic, porphyritic, relatively fine-grained. Semi-chilled minor intrusive or core of flow, dependant on field relationships.
C 1020 A	Carbonaceous Pelite. Cherty microcrystalline quartz and kaolin-illite in varying proportions with pervasive carbonaceous matter. Disseminated silt-sized clastic albite, quartz, Disseminated pyrite.	Planar- to lenticularly microlaminated. Incipiently concordantly sheared.	Sporadic irregular diagenetic quartz veinlets and late displacive kaolinitic-chloritic quartz veinlets.	Laminated impure chert/cherty argillite/arkosic silty pelite. Carbonaceous, syngenetic pyritic, but otherwise atypical of Success Creek Group pelites.
C 1020 B	"Breccia". Lenses, clasts of carbonaceous, kaolinitic impure chert with interspersed clasts of chlorite-amygdaloidal, silicified pumice. Interspersed carbonaceous cherty argillite matrix.	Soft-pebble conglomerate-like, but confused by shearing effects.	Conspicuous ultrafine leucoxenic semi-opaques. Traces of microcrystalline pyrite.	Incompetent argillic, strongly carbonaceous facies with markedly flattened clasts. Evidently a slump breccia composite of C 1020A-type pelite and "basaltic" scoria.
C 1021	Chloritised Greywacke. Variously leucoxene- and carbonaceous matter-pigmented chloritised lithic clasts. Fine-grained pale green Mg-chlorite matrix. Minor ill-defined chlorite veinlets.	Essentially a fine-grained chlorite phyllite. Relict "turbiditic" fine to medium sandy clastic,	Minor traces of pyrite, clastic silt- to fine sand-sized quartz.	Thoroughly Mg-chloritised labile greywacke. Clastic components (lithic clasts) obscure, but interpreted as basic volcanomict on basis of alteration.

ample o.	Classification - Composition	Fabric	Accessori	Comments
1022	Carbonaceous Pelite. Kaolin and microcrystalline quartz with pervasive ultrafine carbonaceous matter, disseminated silt-sized splintery to angular albite, minor quartz grains. Disseminated fine pyrite.	Weakly lenticularly microlaminated. Very incipiently concordantly sheared.	Conspicuous ultrafine leucoxenic semi-opaques. Sporadic chloritic quartz veinlets (+ partly oxidised pyrite).	Close affinities with C 1020A. Arkosic-silty, highly impure cherty argillite verging on argillaceous (carbonaceous, pyritic) chert. Veinlets are of diagenetic character, mildly sheared.
1023	Carbonaceous Greywacke. Kaolin and pale Mg-chlorite in varying proportions with subordinate closely intergrown microcrystalline quartz, pervasive carbonaceous matter. Sporadic ill-defined pyritic chlorite veinlets.	Poorly sorted, turbidite-like, psammitic; carbonaceous shaly matrixed; mildly sheared.	Leucoxenic stainings; traces of syngenetic pyrite. Minor limonitic Fe-stainings.	Affinities with C 1021. In common with C 1020B includes ill-defined clasts of degraded scoriaceous basic volcanic. Incompetent altered sheared framework.
1023	Labile Siltstone. Splintery to angular, partly degraded (kaolinitic) plagioclase and ill-defined leucoxene-pigmented chloritic pseudomorphed ferromags, minor carbonaceous pelite clasts with a cloudy kaolin-chlorite matrix.	Microlaminated, locally slumped, well-sorted silty clastic. Unsheared.	Conspicuous fine silt-sized clastic magnetite. Minor traces ultrafine "syngenetic" pyrite.	Basic volcanomict or reworked tuffaceous labile siltstone with a subordinate clastic carbonaceous shaly component. Alteration analogous to C 1020B etc.
1024	Chloritised Greywacke. Partly degraded (kaolinised) Fe-Mg chlorite with minor relict clastic silt-sized quartz; conspicuous cloudy leucoxenic silt-sized semi-opaques.	Incipiently banded, "turbiditic" silty clastic. Mildly sheared.	Partly oxidised silt-sized clastic magnetite. Minor films, clots of secondary limonite.	Turbiditic labile siltstone, thoroughly chloritised; basic volcanomict ("tuffaceous") with affinities to C 1021 etc., but non-carbonaceous.
1025	Chloritic Greywacke. Interlamination of chloritic basic-volcanomict, relatively quartzose, turbiditic fine sandstone and similarly altered labile siltstone. Abundant clastic, partly martitised magnetite.	Millimetric-scale interlamination of turbiditic fine massive sandstone, planar to transcurrent semi-graded siltstone.	Clastic leucoxenic semi-opaques, minor white mica flakes. Relics of basaltic-textured albite in lithic clasts.	Relatively quartzose basic-volcanomict turbiditic siltstone-parted fine-grained greywacke. Extensively chloritised. Unsheared.
1026	Chloritic Greywacke. Chloritised quartzose labile greywacke (sim. C 1025, but weakly micaceous) in contact with a hematitic/weakly quartzose labile silty shale.	Silty fine sandy turbiditic sandstone/weakly laminated silty shale.	Minor carbonaceous pelite clasts, leucoxenic semi-opaques, clastic magnetite. Minor traces pyrite.	Chloritic polymict, but dominantly basic-volcanomict, turbiditic silty fine sandstone/silty shale intercalation. Minor ill-defined pyritic chlorite veinlets.
1026	Chloritic Greywacke. Framework of variably chloritised basaltic lava clasts, subordinate quartz grains, minor chert, argillaceous chert clasts. Optically ill-defined leucoxene-stained argillic matrix.	Massive, poorly sorted (silty fine to medium) sandy clastic with high matrix/framework ratio ("turbiditic").	Rare glauconite pellets; traces pyrite, clastic silt-sized magnetite. Minor sericitic white mica.	Relatively polymict, but dominantly basic-volcanomict, turbiditic sandstone. Main alteration feature is chloritisation; accessory sericite.
1030	Ferruginised Breccia. Limonite with disseminated silt- to sand-sized quartz grains, thinly disseminated sand-sized clasts of kaolinised quartzose siltstone, silty shale, fine-grained chert-metaquartzite.	Cavernous limonite aggregate with randomly disseminated, marginally corroded clasts.	Minor clasts of chert, vein-type quartz; ferruginised ?tremolite laths.	Devoid of tangible sulphide boxworks, i.e. non-gossanous. Dependant on field relationships, could be interpreted as ferruginised regolithic or fault breccia.

ample o.	Classification - Composition	Fabric	Accessories	Comments
1034	Carbonaceous Breccia. Clasts, lenses of sericitic impure chert/cherty argillite. Matrix of highly carbonaceous sericitic shale, quartzose silty shale. Thinly disseminated fine to ultrafine "syngenetic" pyrite in clasts, matrix.	Randomly sorted, angular to irregular, stressed/partly recrystallized clasts; sheared semi-mylonitic matrix.	Minor clasts of quartzose sericitic silty shale.	Soft-pebble conglomerate-like, but strongly sheared (?fault breccia). Composite of highly carbonaceous pelite and impure chert facies, devoid of volcanomict components.
1039 T.S. 0168)	"Quartz Pebble Conglomerate". Framework of sand- to pebble-sized clasts of quartzite, quartz siltstone, vein-type quartz, sericitic pelite. Matrix of quartzose lithic sandstone with a weakly argillaceous cherty quartz cement.	Poorly sorted angular-subangular framework, moderately sorted, medium-sand matrix. Moderately stressed/ microfractured.	Minor detrital opaques, leucoxenic semi-opaques, tourmaline, muscovite flakes.	"Quartzitic" sand-supported sedimentary breccia; moderately stressed with sporadic displacive microfractures, but devoid of tectonic breccia-type characteristics.

KEY

- Infered Fault
- Definite Fault
- Infered Geological Boundary
- Definate Geological Boundary
- LINE 5. Traverse Line
- Diamond Drill Hole

5 cm

SEDIMENTS

S/D	Silurian / Devonian
Ed	Middle to Upper Cambrian Dundas Group
Ec	Lower Middle Cambrian Crimson Creek Formation
Esc	Lower Cambrian, Success Creek Group

LEGEND

Lower Cambrian Renison Mine Sequence

DHM	Dreadnought Hill Member
1	N° 1 Horizon
RRM	Red Rock Member
2	N° 2 Horizon
RBM	Renison Bell Member
3	N° 3 Horizon
DM	Dalcoath Member

IGNEOUS ROCKS

Jd	Jurrassic Dolerite
Dg	Devonian Granitoid
Es	? Post Middle Cambrian Melba Spilites
Eum	Mid and post mid. Cambrian Ultramatic Complex
Eg	Cambrian Gabbro

INTE

35

GEOLOGIST
DRAUGHTSM
DATE
REVISIONS

PIEMAN

HUSKISSON

RIVER

WILSON

RENISON BELL

DUNKLEY

DUNKLEY FAULT

FAULT

MELBA FAULT

GRAND PRIZE FAULT

ZONE

Esc

Ec

Ec?

Esc?

Es

Eum

Eg

Ed

Dg

Jd

RRM

DHM

RBM

KEY

- Infered Fault
- Definite Fault
- Infered Geological Boundary
- Definate Geological Boundary
- LINE 5. Traverse Line
- Diamond Drill Hole

5 cm

SEDIMENTS

S/D	Silurian / Devonian
Ed	Middle to Upper Cambrian Dundas Group
Ec	Lower Middle Cambrian Crimson Creek Formation
Esc	Lower Cambrian Success Creek Group

LEGEND

Lower Cambrian Renison Mine Sequence

DHM	Dreadnought Hill Member
1	N° 1 Horizon
RRM	Red Rock Member
2	N° 2 Horizon
RBM	Renison Bell Member
3	N° 3 Horizon
DM	Dalcoath Member

IGNEOUS ROCKS

Jd	Jurrassic Dolerite
Dg	Devonian Granitoid
Es	? Post Middle Cambrian Melba Spilites
Eum	Mid and post mid. Cambrian Ultramatic Complex
Eg	Cambrian Gabbro

RENISON LIMITED

INTERPRETATIVE GEOLOGY

E.L. 42/71

356034

BL-2204 vol 12

GEOLOGIST	: P.R.S
DRAUGHTSMAN	: E.V.
DATE	: JANUARY 1983
REVISIONS	:

SCALE 1:10,000 METRES (200 0 200 400)

5 cm

DRAWING No. PLAN 1.

NB. Dunkley Grid position based on aerial photographs and single grid peg at 1600S / 1480E DFG.
R.T.Z. Grid positioned from open file report only.

BEDDING
- strike and dip of bedding
- locality of outcrop

CLEAVAGE
- measured
- coincident with bedding
- vertical
- generation of deformation

JOINTING
- showing dip

FAULTING
- showing normal downthrown side
- geological boundary

LINEAMENTS
- photo-interpreted (accuracy of location ±50m.)

CULTURE
- four-wheel drive track
- 'shoe track'
- flagged (R=cut) line showing tape colour (R=red Y=yellow)
- shallow workings - no production

356035

RENISON LIMITED

ZEEHAN B3/2

INTERPRETATIVE GEOLOGY

8422-04 Vol 1/2

GEOLOGIST	D J K	SCALE 1 5000 METRES
DRAUGHTSMAN		100 0 100 200
DATE	NOV 1983	
REVISIONS		DRAWING No PLAN 2.

5cm

002

002

Centre Line (R.T.E. GRID)

Contour Intervals (z)
(for actual value add 62000 z)

350
375
400
425
450
500
550
600
650
700
800
900
1000
1200
1400

Two base stations used for this survey, labeled (1) and (2)
base station levels set at
62400 and 62480 z

356036

RENISON LIMITED

ZEEHAN B3/2

TOTAL FIELD GROUND MAGNETICS

84-2204 vol 1

GEOLOGIST
DRAUGHTSMAN
DATE
REVISIONS

SCALE 1 : 5000 METRES

5 cm

DRAWING No.
PLAN 3

003

003

Geochemistry
P.P.M.
Cu, Pb, Zn

Cu
Pb
Zn

200 W 100 W 00 E 100 E 200 E 300 E 400 E 500 E 600 E 700 E 800 E 900 E 1000 E 1100 E 1200 E 1300 E 1400 E 1500 E 1600 E 1700 E 1800 E 1900 E 2000 E 2100 E 2200 E 2300 E 2400 E

Geochemistry
P.P.M.
Sn, As, WO_3, Bi

Sn
As
WO_3
Bi

200 W 100 W 00 E 100 E 200 E 300 E 400 E 500 E 600 E 700 E 800 E 900 E 1000 E 1100 E 1200 E 1300 E 1400 E 1500 E 1600 E 1700 E 1800 E 1900 E 2000 E 2100 E 2200 E 2300 E 2400 E

V.L.F. Data

DEGREES

DEGREES

500E 1000E 1500E 2000E

Total Magnetic Field (γ)

200 W 100 W 00 E 100 E 200 E 300 E 400 E 500 E 600 E 700 E 800 E 900 E 1000 E 1100 E 1200 E 1300 E 1400 E 1500 E 1600 E 1700 E 1800 E 1900 E 2000 E 2100 E 2200 E 2300 E 2400 E

Topography & Geology
HEIGHT ABOVE SEA LEVEL (METRES)

BOSSEMAN RIDGE TRACK
CREEK
CREEK
ARBUCKLE RIDGE TRACK
line cropped on Trace
ARBUCKLE RIDGE TRACK
line cropped on Trace
CREEK
CREEK
CREEK
CREEK
CREEK

356037
5 cm

200 W 100 W 00 E 100 E 200 E 300 E 400 E 500 E 600 E 700 E 800 E 900 E 1000 E 1100 E 1200 E 1300 E 1400 E 1500 E 1600 E 1700 E 1800 E 1900 E 2000 E 2100 E 2200 E 2300 E 2400 E

RENISON LIMITED 84-220-3 Vol 1/2

DUNKLEY FAULT GRID
LINE 000S

SCALE 0 40 80 120 METRES

PLAN 4A

DRAWN	O.K.
TRACED	T.G.D.S.
DATE	Oct 1983
SCALE	1:2000
DRAWING No.	

Geochemistry
Cu
Pb
Zn
Sn
As
WO_3
Bi

Magnetics
· normal reading ie pot of Zm. (staff on ground)
• pot at 3m. (staff on hip)
: repeated readings at different times

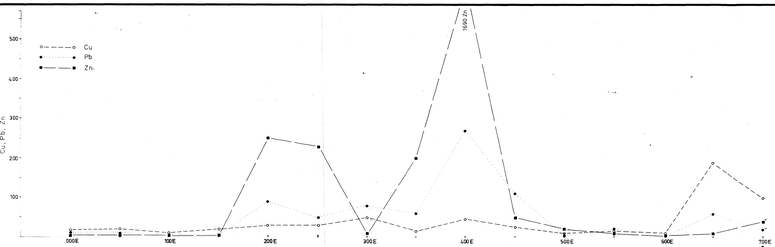
Topography
Reduced levels based broadly on 1:5000 Zeehan 83/2 sheet detail from line mapping. Vertical horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative – $F_n = \frac{1}{8}\theta_{n-2} + \frac{2}{8}\theta_{n-1} + \frac{3}{8}\theta_{n+1} + \frac{2}{8}\theta_{n+2}$
where F_n is the filtered derivative at the nth station, and θ are the recorded dip angle values

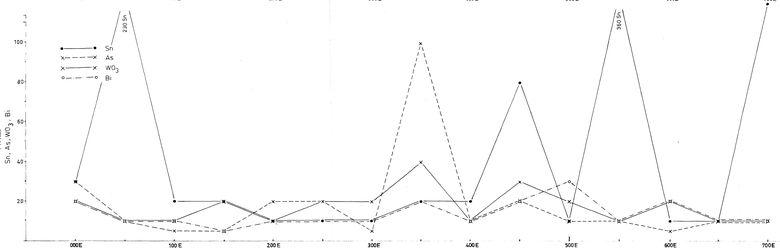
004

004

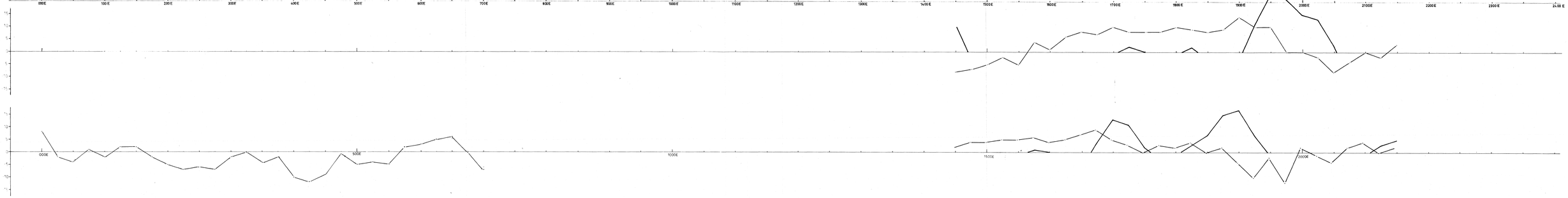
Geochemistry
P.P.M.
Cu, Pb, Zn



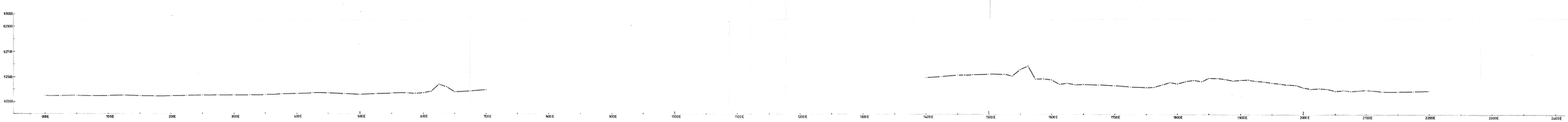
Geochemistry
P.P.M.
Sn, As, WO_3, Bi



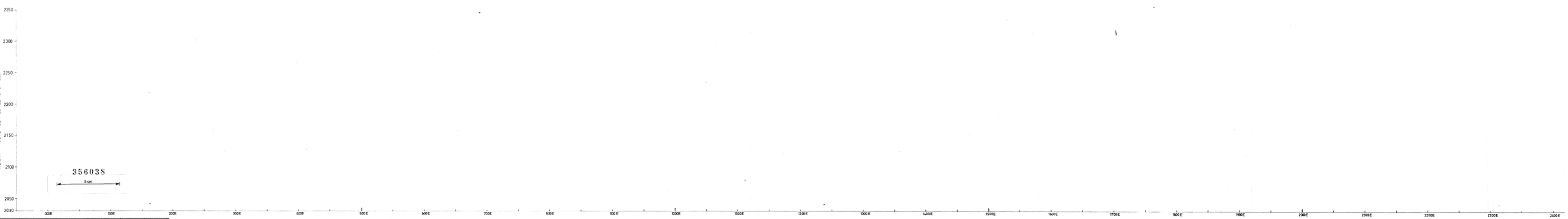
V.L.F. Data
DEGREES



Total Magnetic Field (γ)



Topography & Geology
HEIGHT ABOVE SEA LEVEL (METRES)



356038
5 cm

RENISON LIMITED	
DUNKLEY FAULT GRID	
LINE 100 S	
SCALE 1:2000 METRES 0 40 80 120	

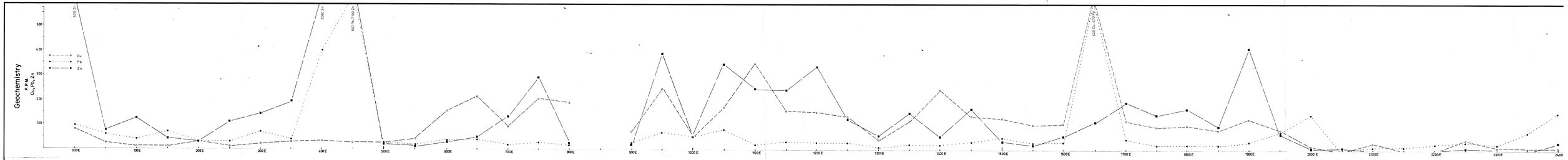
DRAWN	D.J.K.
TRACED	A.J.W.
DATE	May 84
SCALE	1:2000
DRAWING No.	PLAN 4B

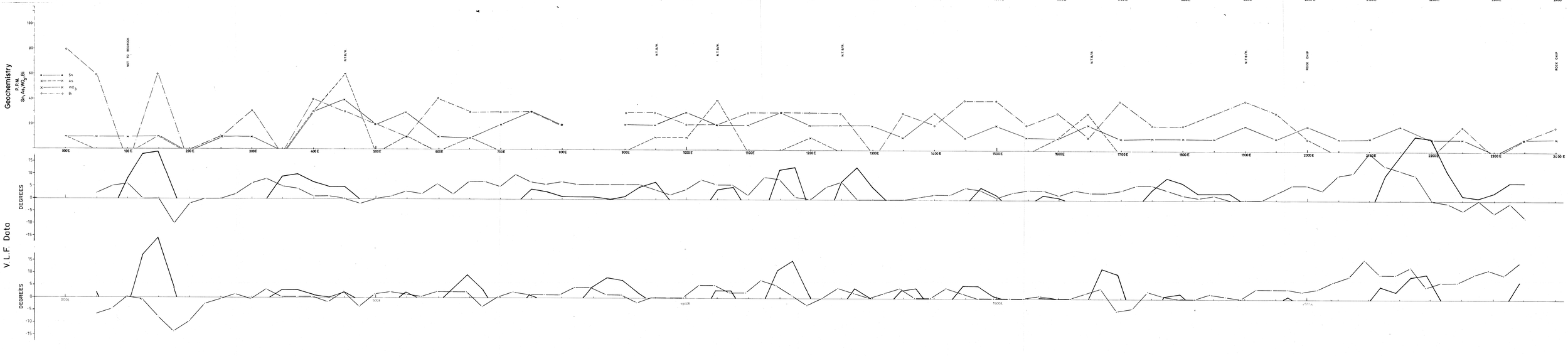
Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

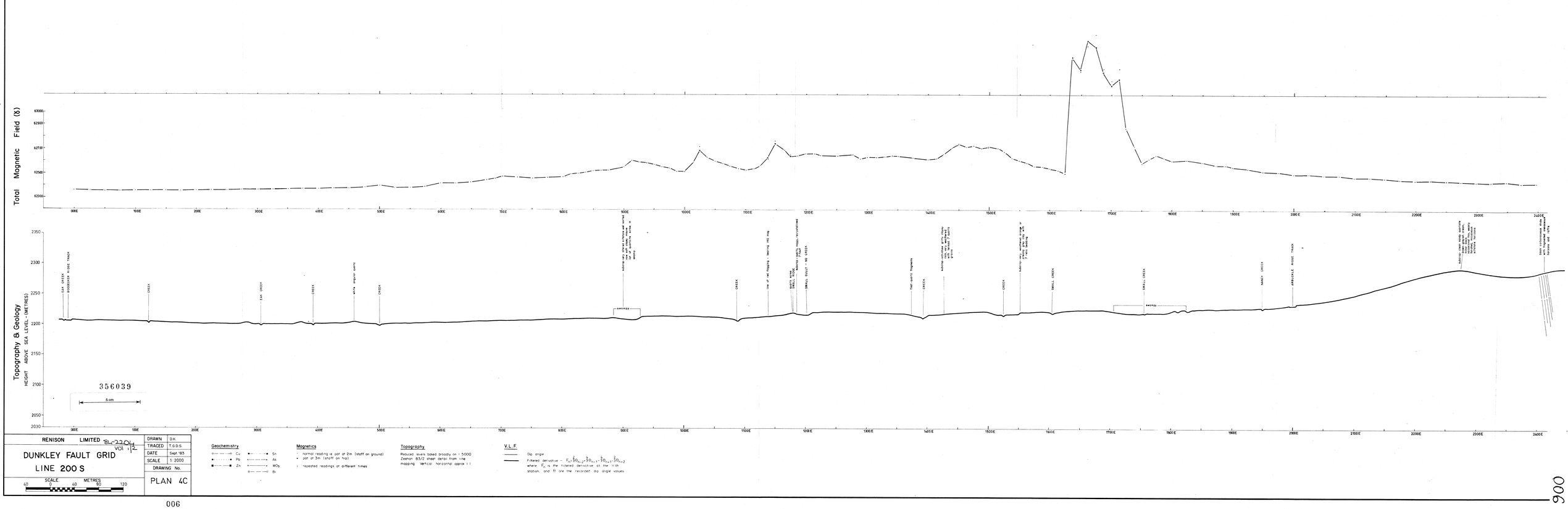
Magnetics
- Normal reading, ie pot at 2m. (staff on ground)
- Pot at 3m. (staff on hip)
- Repeated readings at different times.

Topography
Reduced levels based broadly on 1:5,000 Deehan 83/2 sheet. Detail from line mapping. Vertical: horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative = $F_n = \frac{1}{2}\theta_{n-2} - \frac{1}{2}\theta_{n-1} + \frac{1}{2}\theta_{n-1} - \frac{1}{2}\theta_{n-2}$
where F_n is the filtered derivative at the nth station, and θ are the recorded dip angle values







356039

5 cm

RENISON LIMITED

DUNKLEY FAULT GRID

LINE 200 S

SCALE: 40 0 40 80 120 METRES

DRAWN	D.K.
TRACED	T.G.D.S.
DATE	Sept.'83
SCALE	1:2000
DRAWING No.	PLAN 4C

Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

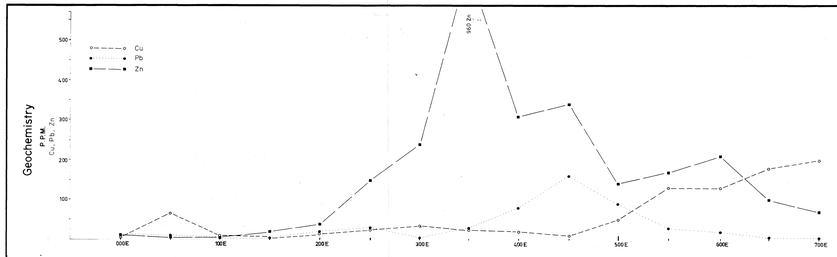
Magnetics
- normal reading at pat of 2m (staff on ground)
- pat at 3m (staff on hip)
- repeated readings at different times

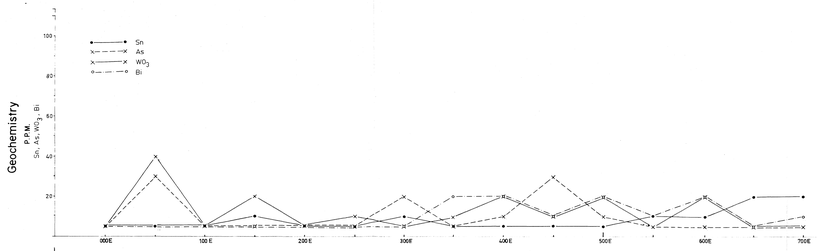
Topography
Reduced levels based broadly on 1:5000 Zeehan 85/2 sheet detail from line mapping. Vertical horizontal approx 1:1

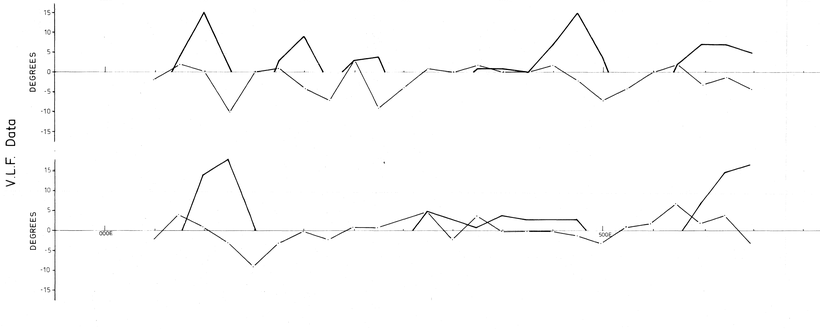
V.L.F.
Dip angle
Filtered derivative – $F_{n,n} \frac{1}{10}\theta_{n-2} - \frac{1}{10}\theta_{n-1} - \frac{1}{10}\theta_{n-1} - \frac{1}{10}\theta_{n-2}$ where $F_{n,n}$ is the filtered derivative at the nth station, and θ are the recorded dip angle values

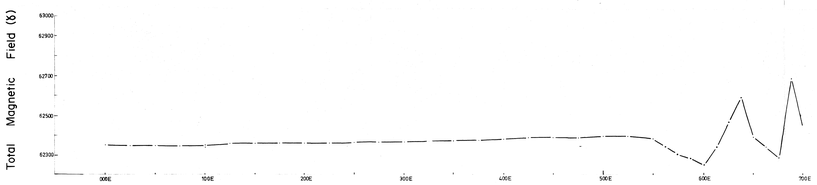
006

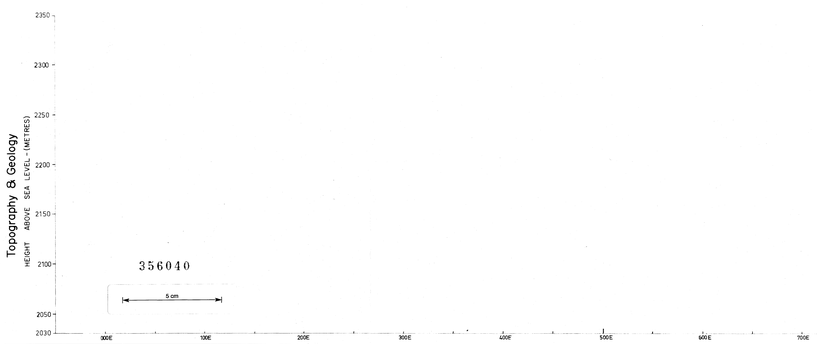
900











RENISON LIMITED

DUNKLEY FAULT GRID

LINE 300 S

SCALE 1:2000 METRES

40 0 40 80 120

DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	

PLAN 4D

Geochemistry
Cu
Pb
Zn
Sn
As
WO_3
Bi

Magnetics
- Normal reading, ie pot at 2m. (staff on ground.)
- Pot. at 3m. (staff on hip)
: Repeated readings at different times.

Topography
Reduced levels based broadly on 1:5,000 Zeehan B3/2 sheet. Detail from line mapping. Vertical: horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative - $F_n = \frac{1}{2}\theta_{n-2} - \frac{1}{2}\theta_{n-1} - \frac{1}{2}\theta_{n+1} + \frac{1}{2}\theta_{n+2}$
where F_n is the filtered derivative at the 'n' th station, and θ are the recorded dip angle values.

007

007

Geochemistry
P.P.M.
Cu, Pb, Zn

Cu
Pb
Zn

650 Zn

1550 Zn

Geochemistry
P.P.M.
Sn, As, WO_3, Bi

Sn
As
WO_3
Bi

NOT TO SCALE

N.T.S./A

N.T.S./A

N.T.S./A

N.T.S./A

N.T.S./A

N.T.S./A

ROCK CHIP

V.L.F. Data

DEGREES

DEGREES

Total Magnetic Field (δ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL (METRES)

CREEK

BOOBOOKER RIDGE TRACK

EAX CREEK

CREEK
Flowing towards the area mapped
Dairy Prospects, major dark grey intrusive

CREEK

The Broken mound flank ridge
Dairy Prospects
Dark grey intrusive

swampy

swampy

CREEK

CREEK

Tree Stump

Hill top
Very weathered with rotted rock
Dairy Prospects
Dark grey intrusive
Y' Outcrops, boulder ground

NANCY CREEK

swampy

ARMIDALE ROAD TRACK

GULLY

Hill top
Dairy Prospects
Dark grey intrusive
Weathered
Y' Outcrops, boulder ground
Quartz Vein and Pegmatite

356041

5 cm

RENISON LIMITED

DUNKLEY FAULT GRID

LINE 400 S

SCALE METRES 40 0 40 80 120

DRAWN D.K.
TRACED T.S.D.S.
DATE Sept. '83
SCALE 1:2000
DRAWING No.
PLAN 4E

Geochemistry
Cu
Pb
Zn
Sn
As
WO_3
Bi

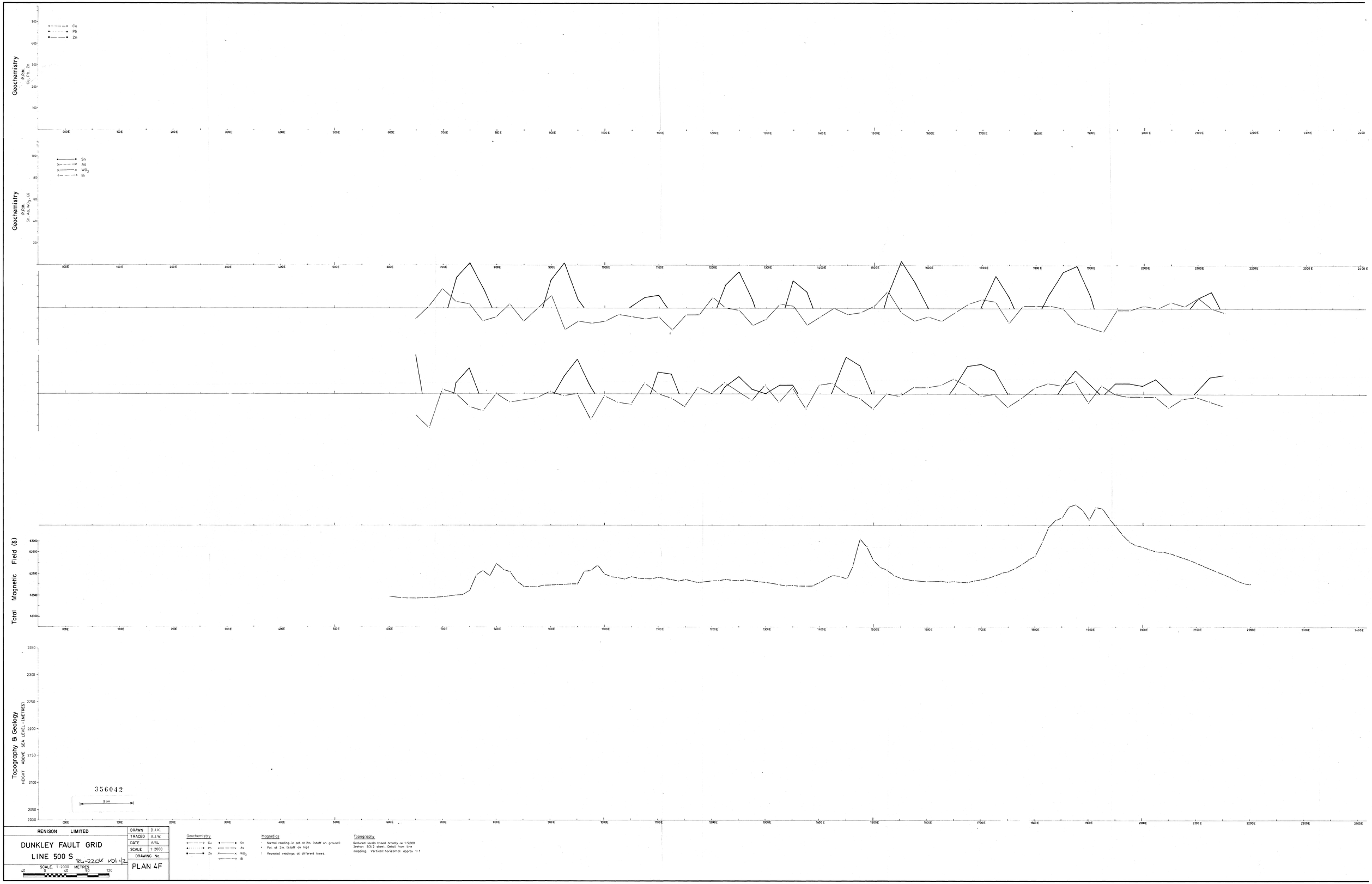
Magnetics
- normal reading ie pot at 2m. (staff on ground)
• pot at 3m. (staff on hip)
| repeated readings at different times.

Topography
Reduced levels based broadly on 1:5000 Zeehan 83/2 sheet detail from line mapping. Vertical: horizontal approx. 1:1

V.L.F.
Dip angle
Filtered derivative – $F_n = \frac{1}{2}\theta_{n-2} - \frac{1}{2}\theta_{n-1} - \frac{1}{2}\theta_{n+1} + \frac{1}{2}\theta_{n+2}$
where F_n is the filtered derivative at the nth station, and θ are the recorded dip angle values

008

008



RENISON LIMITED

DUNKLEY FAULT GRID

LINE 500 S RL-2204 Vol 12

SCALE 1:2000 METRES 40 0 40 80 120

DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	PLAN 4F

Geochemistry
Cu
Pb
Zn
Sn
As
WO_3
Bi

Magnetics
· Normal reading, ie pot at 2m. (staff on ground)
• Pot at 3m. (staff on hip)
: Repeated readings at different times.

Topography
Reduced levels based broadly on 1:5,000 Zephan B3/2 sheet. Detail from line mapping. Vertical: horizontal approx 1:1

600

Geochemistry
P.P.M.
Cu, Pb, Zn

Cu
Pb
Zn

Geochemistry
P.P.M.
Sn, As, WO_3, Bi

Sn
As
WO_3
Bi

WIT TO BEDROCK
N.T.R.W.R.
N.T.R.W.R.
ROCK CHIP
R.C.W.L.
R.C.W.L.
N.T.R.W.R.
N.T.R.W.R.
N.T.R.W.R.

V.L.F. Data

DEGREES

DEGREES

Total Magnetic Field (γ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL-(METRES)

BOOSCHKER RIDGE
BOOSCHKER RIDGE TRACK
SEA CREEK
CREEK (W.NOON)
swampy
NANDI CREEK
NANDI CREEK
swampy
CREEK (W.NOON)
swampy
CROSSLINE TO 400E
CREEK (W.NOON)
ARNDALE RIDGE TRACK
CREEK (W.NOON)

356043
5 cm

RENISON LIMITED

DUNKLEY FAULT GRID
LINE 600 S
84-2204 vol 1/2

SCALE
40 0 40 80 120
METRES

DRAWN	D.K.
TRACED	T.G.D.S.
DATE	Sept. '83
SCALE	1:2000
DRAWING No.	PLAN 4G 010

Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

Magnetics
- normal reading ie. pot at 2m. (staff on ground)
- pot at 3m (staff on hip)
- repeated readings at different times

Topography
Reduced levels based broadly on 1:5000 Zeehan 83/2 sheet detail from line mapping. Vertical horizontal approx. 1:1

V.L.F.
Dip angle
Filtered derivative $= F_n \pm \frac{1}{2}\theta_{n-2} \pm \frac{1}{2}\theta_{n-1} - \frac{1}{2}\theta_{n+1} \pm \frac{1}{2}\theta_{n+2}$
where F_n is the filtered derivative at the 'n' th station, and θ are the recorded dip angle values.

010

Geochemistry
Cu, Pb, Zn
Cu
Pb
Zn
500
400
300
200
100
600E 700E 800E 900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

Geochemistry
Sn, As, WO_3, Bi
Sn
As
WO_3
Bi
100
80
60
40
20
600E 700E 800E 900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

V.L.F. Data
DEGREES
15
10
5
0
-5
-10
-15
600E 700E 800E 900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

Total Magnetic Field (γ)
53000
52900
52700
52500
52300
600E 700E 800E 900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

Topography & Geology
HEIGHT ABOVE SEA LEVEL (METRES)
2350
2300
2250
2200
2150
2100
2050
2030
356044
5 cm
600E 700E 800E 900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

RENISON LIMITED

DUNKLEY FAULT GRID
LINE 700S

SCALE METRES
40 0 40 80 120

DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	PLAN 4H

84-2204 Vol 1/2

Geochemistry
Cu
Pb
Zn
Sn
As
WO_3
Bi

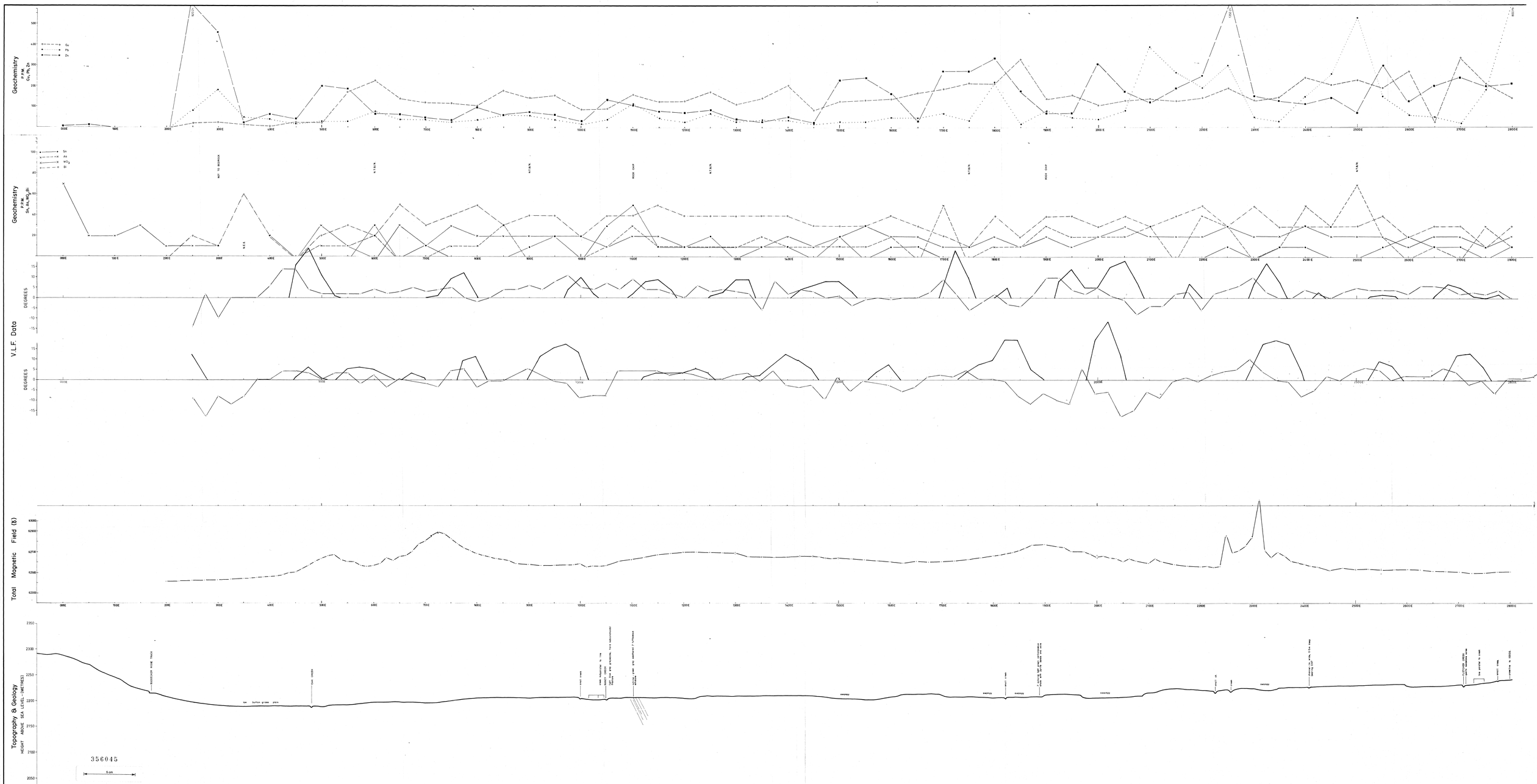
Magnetics
- Normal reading ie pot at 2m (staff on ground)
• Pot at 3m (staff on hip)
‡ Repeated readings at different times

Topography
Reduced levels based broadly on 1:5000 Zeehan B3/2 sheet. Detail from line mapping. vertical horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative - $F_n = \frac{1}{16}\theta_{n-2} + \frac{4}{16}\theta_{n-1} + \frac{6}{16}\theta_n + \frac{4}{16}\theta_{n+1} + \frac{1}{16}\theta_{n+2}$
where F_n is the filtered derivative at the nth station, and θ are the recorded dip angle values

011

110



RENISON LIMITED

DUNKLEY FAULT GRID

LINE 800S

SC-2364 Vol 1/2

SCALE METRES 40 0 40 80 120

DRAWN	D.K.
TRACED	T.G.D.S.
DATE	Oct. 1983
SCALE	1:2000
DRAWING No.	PLAN 4 I 012

Geochemistry

Cu, Pb, Zn, Sn, As, MoS_2, Bi

Magnetics

- normal reading as pot at 2m. (staff on ground)
- pot at 3m. (staff on top)

| repeated readings at different times

Topography

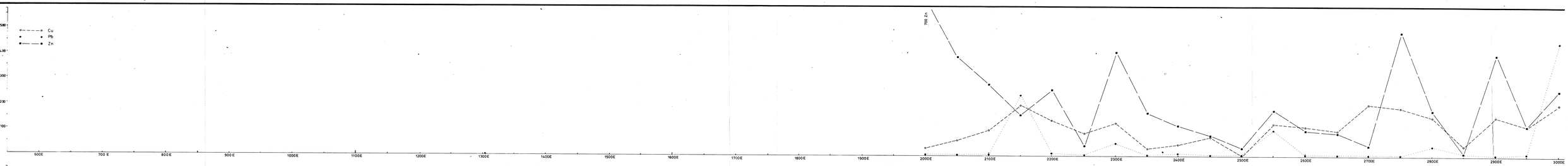
Reduced levels based broadly on 1:5000 Zeehan 83/2 sheet detail from line mapping. Vertical : horizontal approx 1:1

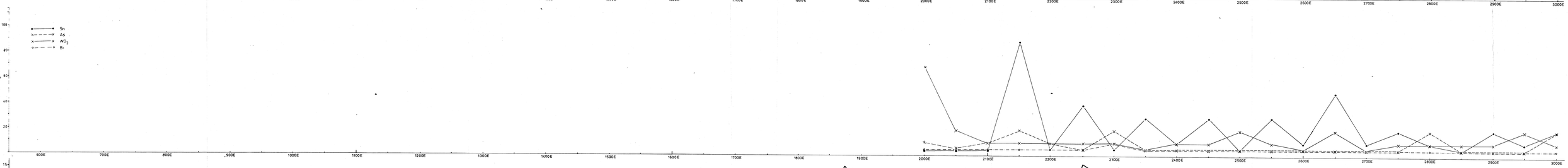
V.L.F.

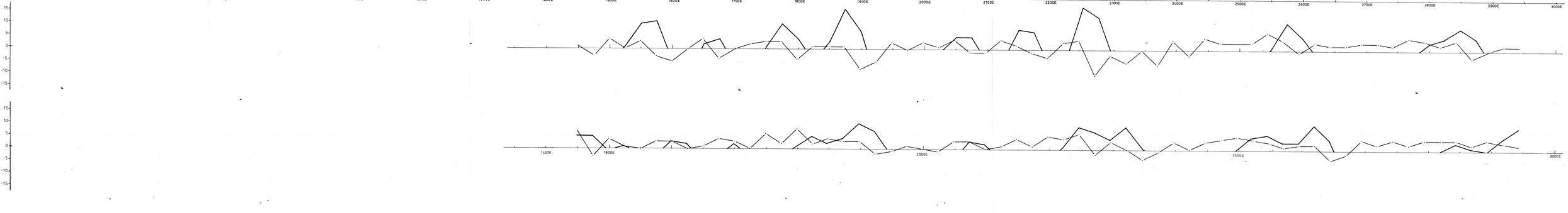
Dip angle

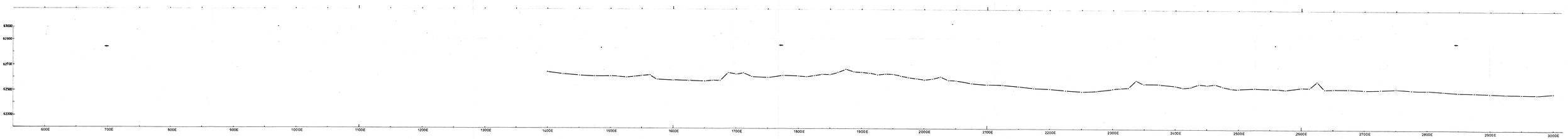
Inverted derivative - $F_n = Fa_{n-2} - Fa_{n-1} - Fa_{n-1} + Fa_{n+2}$ where F_n is the filtered deflection at the n.m. station, and Fa are the recorded dip angle values

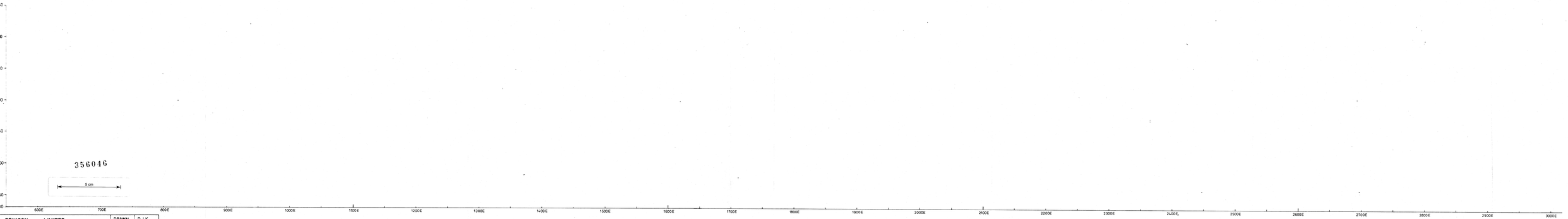
012











RENISON LIMITED

DUNKLEY FAULT GRID
LINE 900S 8A-220 (01)2|2

SCALE 40 0 40 80 120 METRES

DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	PLAN 4J

Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

Magnetics
- Normal reading at pot at 2m (staff on ground)
+ Pot at 3m (staff on top)
: Repeated readings at different times

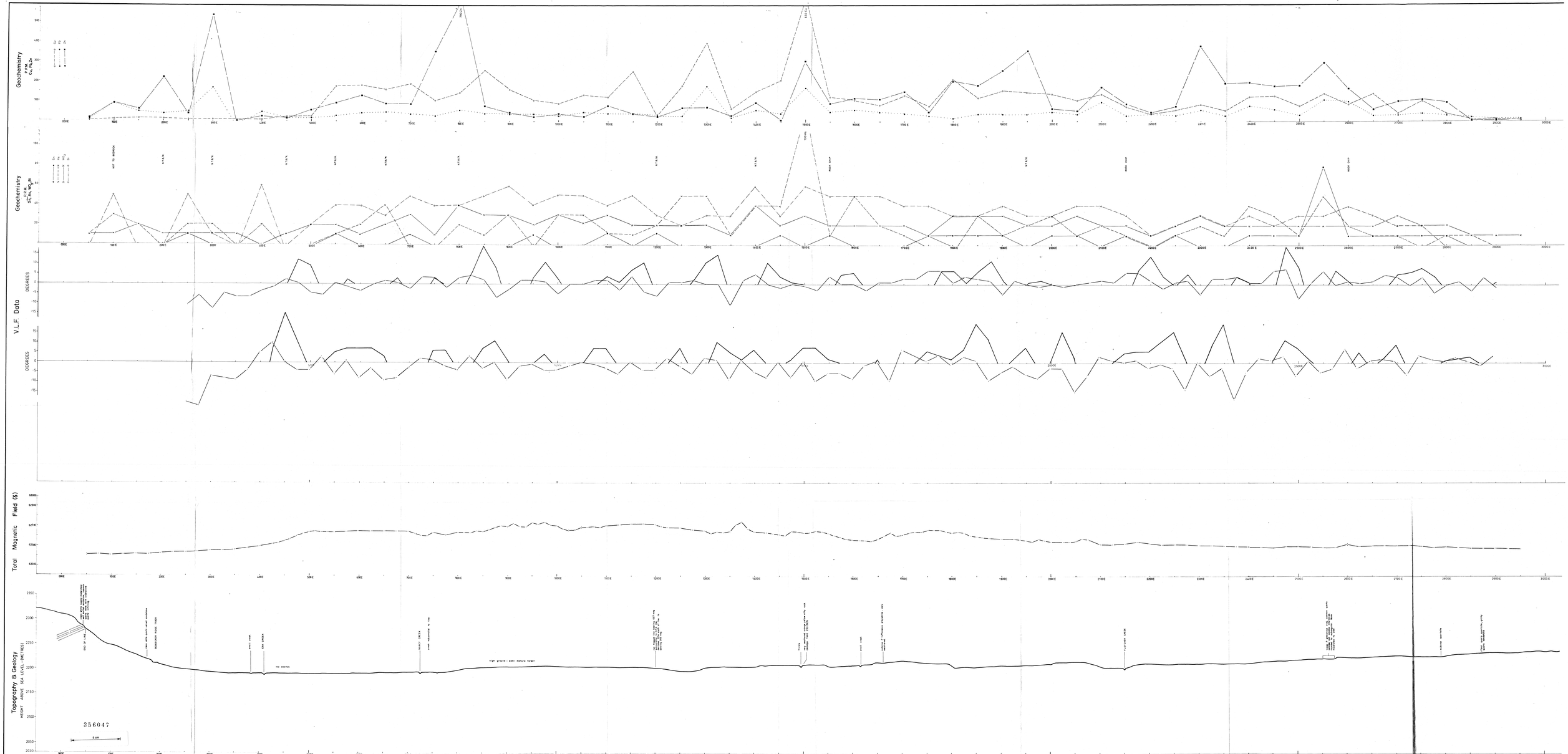
Topography
Reduced levels based broadly on 1:5000 Zeehan 83/2 sheet. Detail from line mapping. Vertical horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative – $F_n = \frac{1}{4}\theta_{n-2} + \frac{1}{2}\theta_{n-1} - \frac{1}{4}\theta_{n+1} - \frac{1}{4}\theta_{n+2}$
where F_n is the filtered derivative at the n th station, and θ are the gridded dip angle values

013

30

014



RENISON LIMITED

DUNKLEY FAULT GRID

LINE 1000S

DRAWN	D.K.
TRACED	T.G.D.S.
DATE	Oct. 1983
SCALE	1: 2000
DRAWING No.	PLAN 4K

SCALE 1:2000 METRES 20 0 40 80 120

Geochemistry
Cu
Pb
Zn
Sn
As
WO3
Bi

Magnetics
- normal reading at pair of Em (dwpt on ground)
- pair of Em (dwpt on top)
1 repeated readings at different times

Topography
Rebased levels based broadly on 1:5000 Zeehan 85/2 sheet detail from line mapping. Vertical horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative - $F_n = \frac{1}{16}a_{n-2} - \frac{1}{4}a_{n-1} - \frac{3}{8}a_n - \frac{1}{4}a_{n+1} - \frac{1}{16}a_{n+2}$
where F_n is the filtered derivative at the n th station, and a are the recorded dip angle values

014

Geochemistry
P.P.M.
Cu, Pb, Zn

Cu
Pb
Zn

Geochemistry
P.P.M.
Sn, As, WO_3, Bi

Sn
As
WO_3
Bi

V.L.F. Data

DEGREES

DEGREES

Total Magnetic Field (γ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)

356048

5 cm

RENISON LIMITED	
DUNKLEY FAULT GRID	
LINE 1100S	
SCALE 0 40 80 120 METRES	
DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	PLAN 4L 015

SL-2204 vol 2/2

Geochemistry
Cu Sn
Pb As
Zn WO_3
Bi

Magnetics
- Normal reading at pot at 2m (staff on ground)
+ Pot at 3m (staff on hip)
: Repeated readings at different times

Topography
Reduced levels based broadly on 1:5,000 Zeehan, 83/2 sheet. Detail from line mapping. Vertical: horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative - $F_n = \theta_{n-2} - \theta_{n-1} - \theta_{n-1} + \theta_{n-2}$
where F_n is the filtered derivative at the nth station, and θ are the recorded dip angle values

015

Geochemistry
P.P.M.
Cu, Pb, Zn

Geochemistry
P.P.M.
Sn, As, WO_3, Bi

V.L.F. Data
DEGREES

Total Magnetic Field (γ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)

356049

5 cm

RENISON LIMITED	
DUNKLEY FAULT GRID	
LINE 1200 S Rl4-220 vol 2/2	
SCALE METRES 40 0 40 80 120	

DRAWN	D.K.
TRACED	T.G.D.S.
DATE	Sept '83
SCALE	1:2000
DRAWING No.	PLAN 4M 016

Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

Magnetics
- normal reading ie pot at 2m (staff on ground)
• pot at 3m (staff on hip)
↕ repeated readings at different times

Topography
Reduced levels based broadly on 1:5000 Zeehan B3/2 sheet detail from line mapping. Vertical: horizontal approx 1:1

V.L.F.
Dip angle

Filtered derivative = $F_n = \frac{1}{2}\theta_{n-2} - \frac{1}{2}\theta_{n-1} - \frac{1}{2}\theta_{n-1} + \frac{1}{2}\theta_{n-2}$
where F_n is the filtered derivative at the nth station, and θ are the recorded dip angle values

910

Geochemistry
P.P.M.

Cu
Pb
Zn

Sn
As
WO_3
Bi

ROCK CHIP
NOT TO BECMACK
N.T.BAR
N.T.BAR
N.T.BAR
N.T.BAR
N.T.BAR
N.T.BAR

Total Magnetic Field (δ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)

bushing - narrow white sandstone crossbedding 5 SW dip/scale
BOOBOOKER RIDGE TRACK
EAK CREEK
NARCO CREEK - rock, dirty, sandstone
white, grey, pebble - gravel
pit 1m. depth
shallow wet creek
bushes, sandstone, yellow sandstone
bushes, sandstone, sandstone
swamp
swamp
low area yellow flooding
TRACK - BILLOODED SUMMER ACCESS FROM CONI

356050
5 cm

RENISON LIMITED

DUNKLEY FAULT GRID
LINE 1400 S

SCALE 0 40 80 120 METRES

DRAWN	D.J.K.
TRACED	A.J.W.
DATE	Jan. 1984
SCALE	1:2000
DRAWING No.	PLAN 4N 017

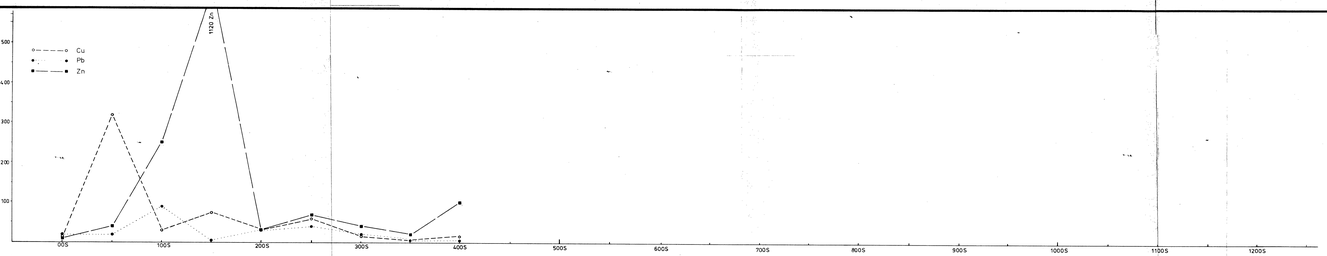
Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

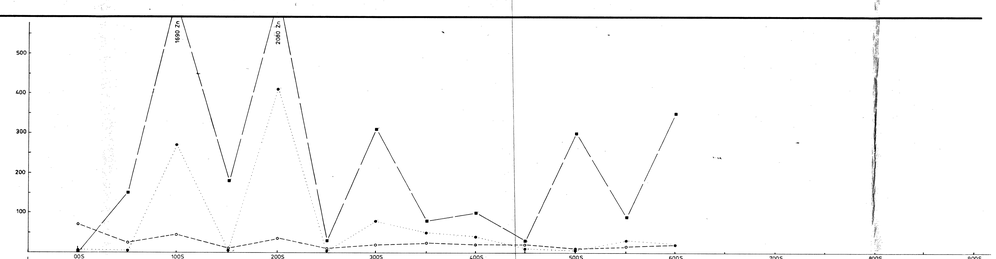
Magnetics
- normal reading ie. pot at 2m. (staff on ground)
- pot at 3m. (staff on hip)
: repeated readings at different times

Topography
Reduced levels based broadly on 1:5000 Zeehan 83/2 sheet detail from line mapping. Vertical horizontal approx 1:1

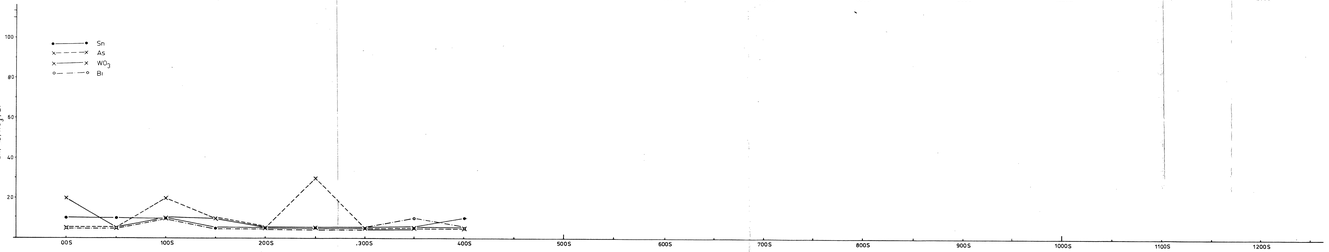
07

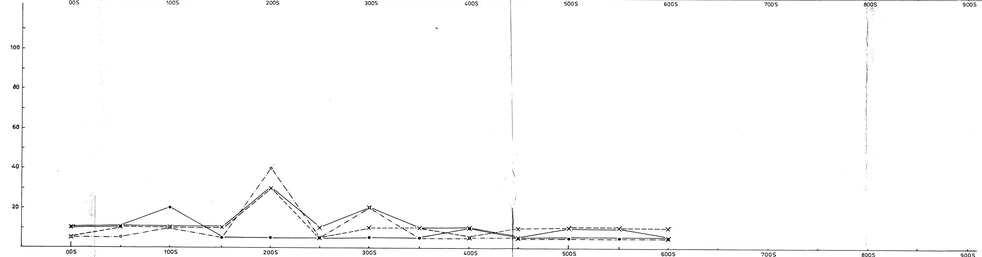
Geochemistry
P.P.M.
Cu, Pb, Zn





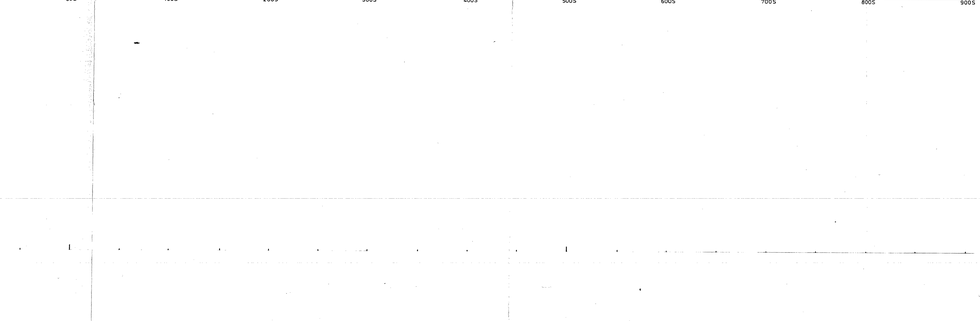
Geochemistry
P.P.M.
Sn, As, WO_3, Bi



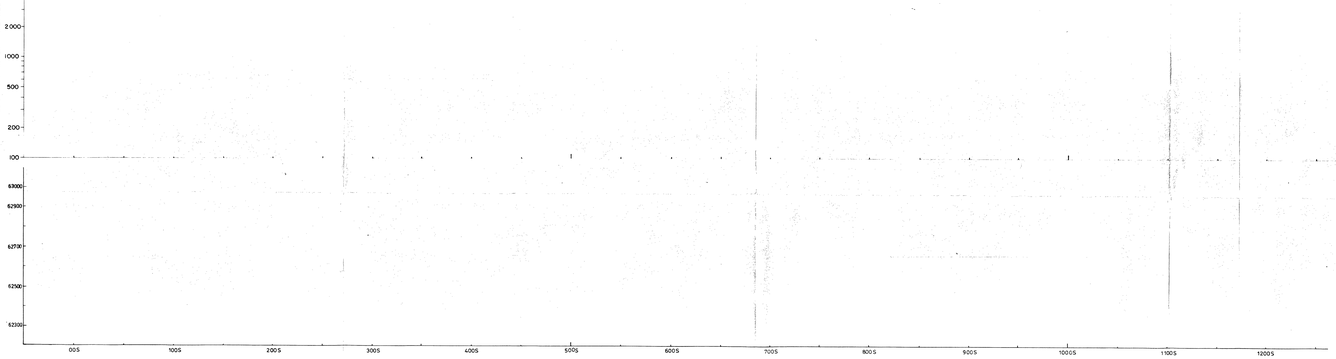


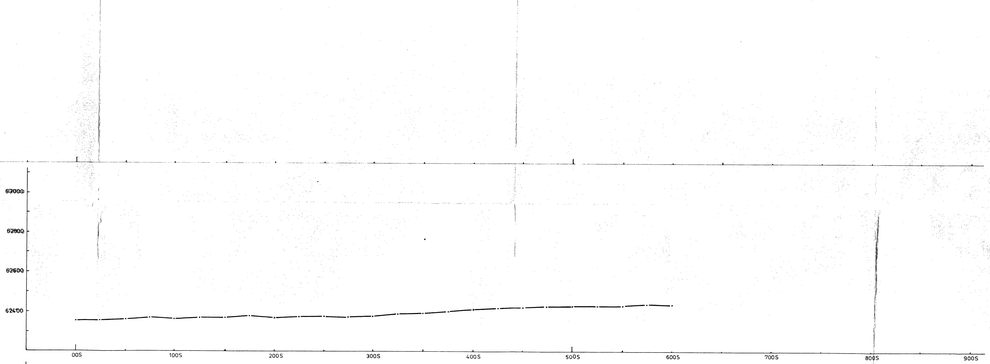
I.P. Data

CHARGEABILITY IN MILLIVOLTS / VOLT (——)



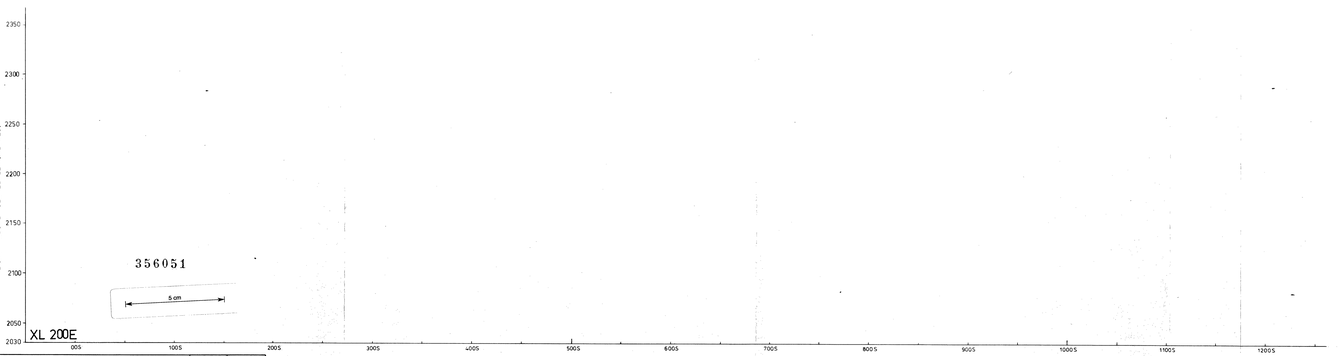
RESISTIVITY IN (Ohm-METRES (- - -))





Total Magnetic Field (γ)

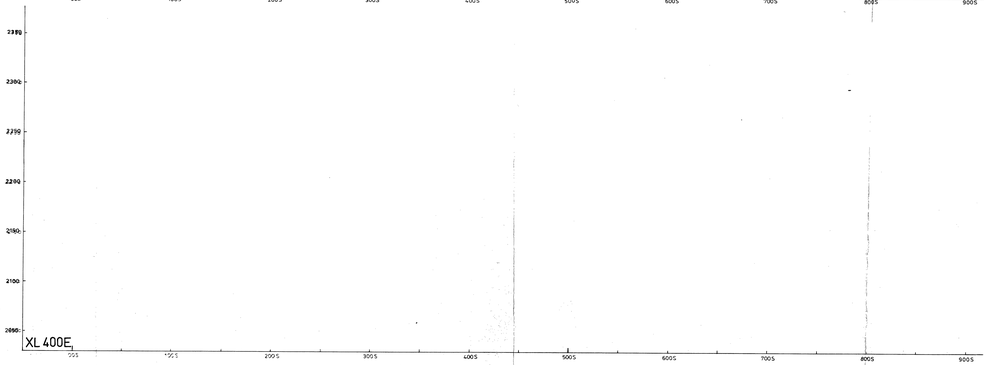
Topography & Geology
HEIGHT ABOVE SEA LEVEL (METRES)



356051

5 cm

XL 200E



XL 400E

RENISON LIMITED

DUNKLEY FAULT GRID
CROSSLINE XL200E, XL400E

SCALE METRES
40 0 40 80 120

DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	

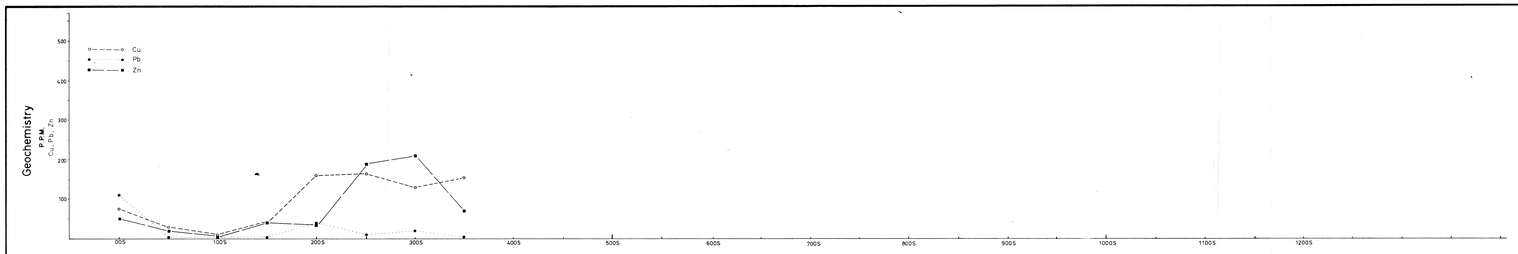
PLAN 4P

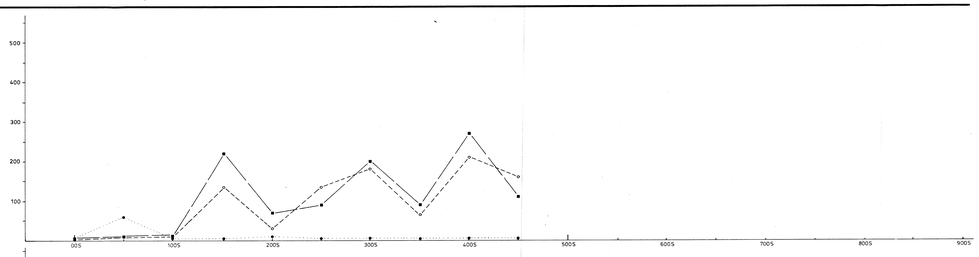
Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

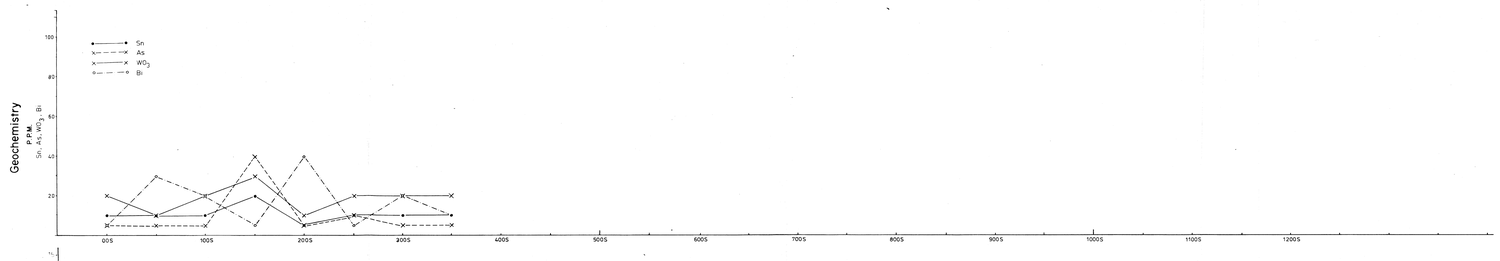
Magnetics
- : Normal reading, a plot at 2m (staff on ground)
- + : Plot at 3m (staff on top)
- : Repeated readings at different times

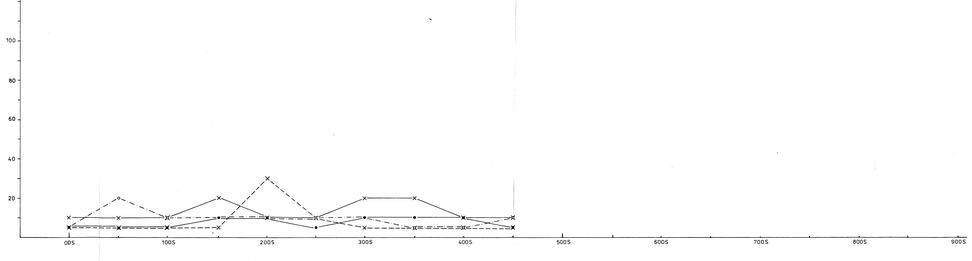
Topography
Reduced levels based broadly on 1:5000 Zemfyr 8312 sheet. Detail from line mapping - vertical and horizontal control

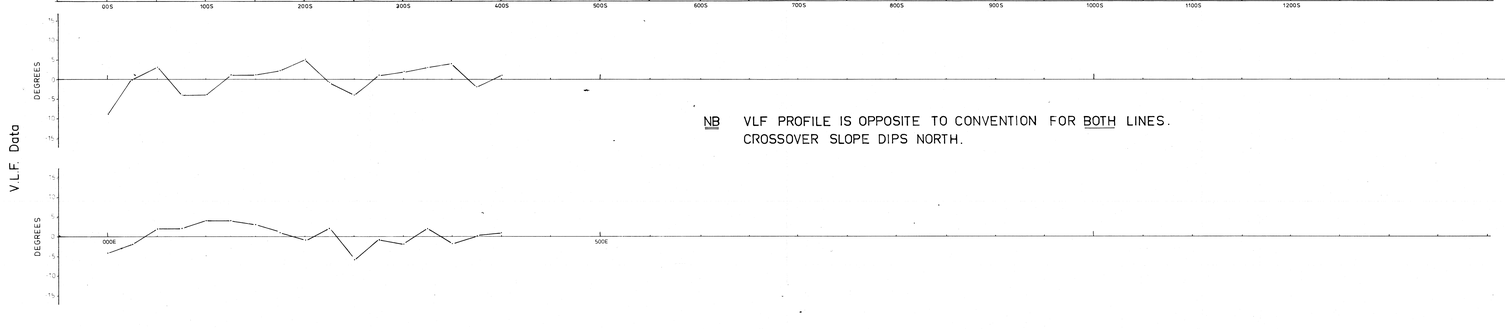
018

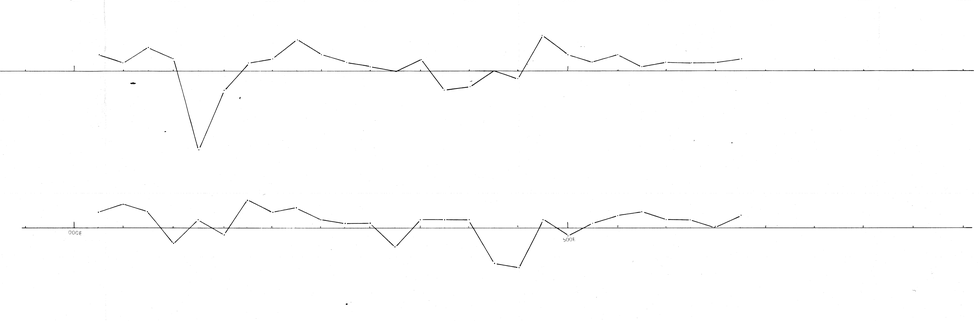




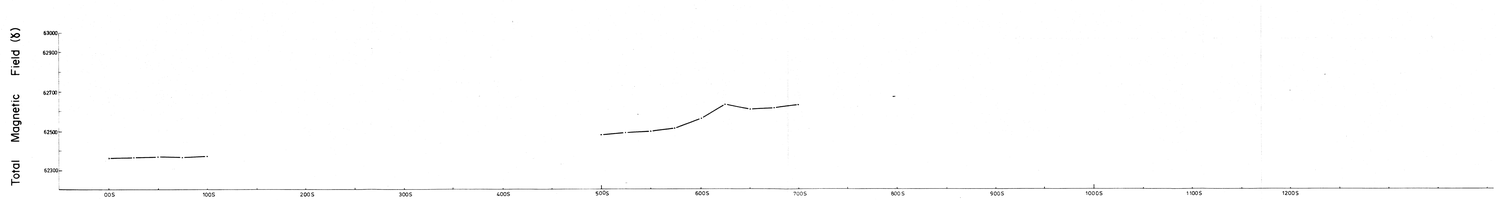


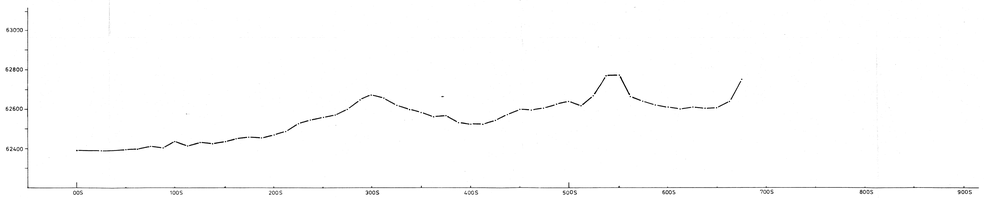


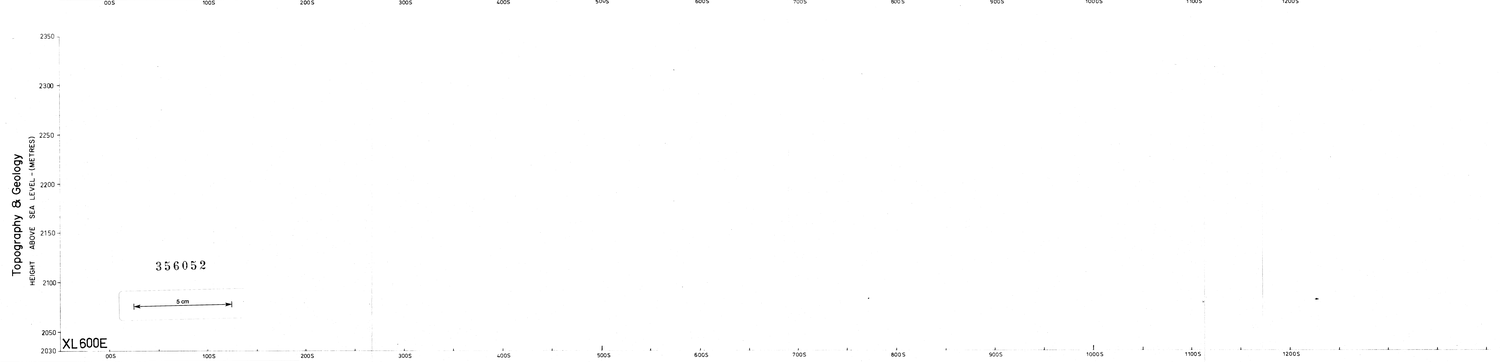




NB VLF PROFILE IS OPPOSITE TO CONVENTION FOR BOTH LINES.
CROSSOVER SLOPE DIPS NORTH.







RENISON LIMITED SH-220m XL1,2

DUNKLEY FAULT GRID
CROSSLINE XL600E , XL1100E

SCALE 40 0 40 80 120 METRES

PLAN 4Q

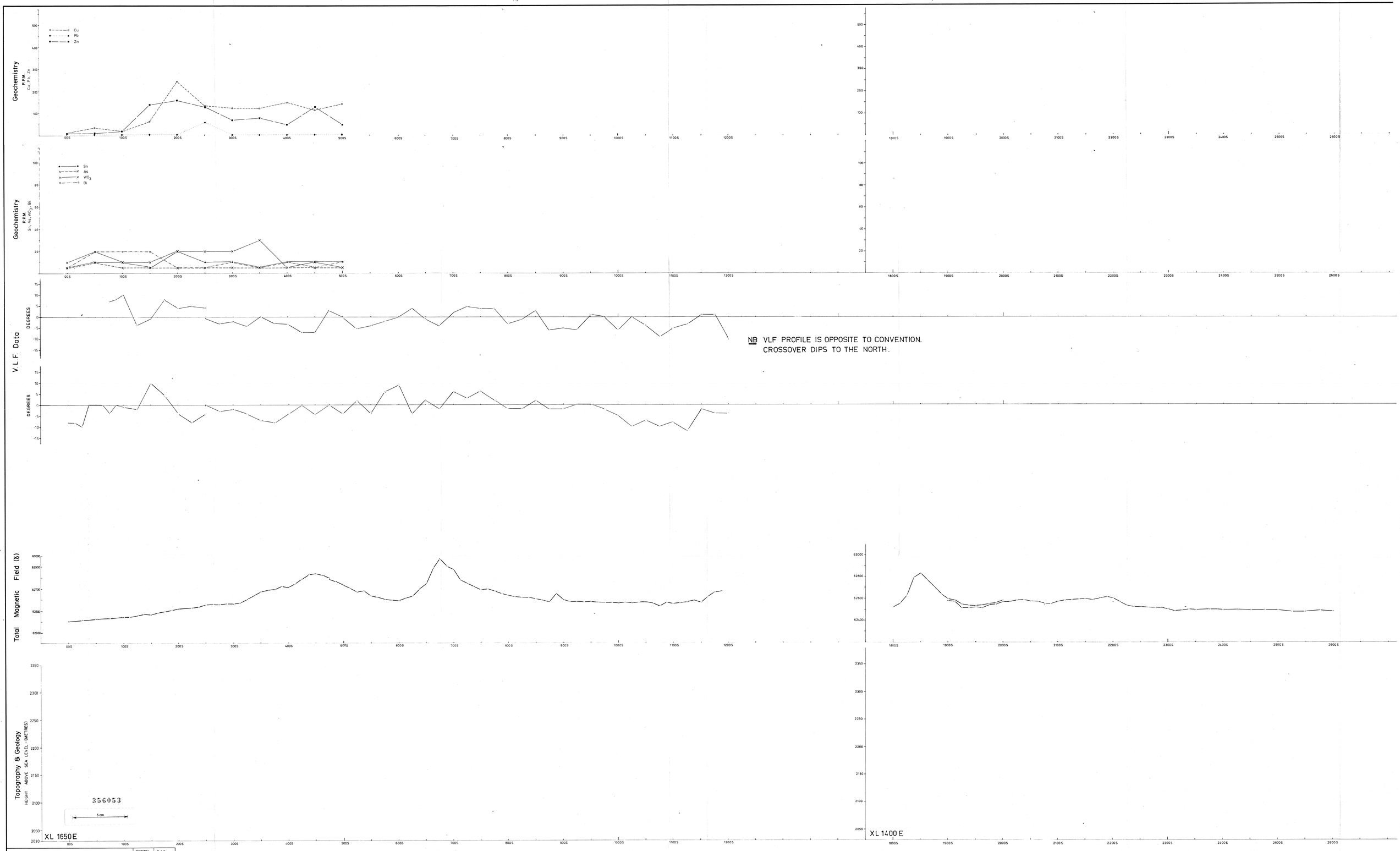
DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	

Geochemistry
o—o Cu •—• Sn
•···• Pb x—x As
■—■ Zn x—x WO_3
o—o Bi

Magnetics
- Normal reading at pot at 2m (staff on ground)
- Pot at 3m (staff on top)
- Repeated readings at different times

Topography
Reduced levels based broadly on 1:5,000 Zeemap 83/2 sheet. Detail from line mapping. Vertical: horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative = $F_n = \frac{1}{2}\theta_{n-2} - \frac{1}{2}\theta_{n-1} + \frac{1}{2}\theta_{n-1} - \frac{1}{2}\theta_{n+2}$
where F_n is the filtered derivative at the nth station, and θ are the recorded dip angle values.



RENISON LIMITED - Sk-220 vol 2/2

DUNKLEY FAULT GRID

CROSSLINE 1650E & 1400E

SCALE 40 0 40 80 120 METRES

PLAN 4R

DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	

Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

Magnetics
- Normal reading, ie pot at 2m. (staff on ground)
- Pot at 3m. (staff on hip)
: Repeated readings at different times.

Topography
Reduced levels based broadly on 1:5,000 Zeehan 93/2 sheet. Detail from line mapping. Vertical: horizontal approx 1:1

V.L.F.
Dip angle
Filtered derivative - $F_n = \frac{1}{16}F_{n-2} + \frac{4}{16}F_{n-1} - \frac{10}{16}F_n + \frac{4}{16}F_{n+1} + \frac{1}{16}F_{n+2}$
where F_n is the filtered derivative at the nth station and F_n are the reciprocal dip angle values

020

020

Geochemistry
P.P.M.
Cu, Pb, Zn

Cu
Pb
Zn

500
400
300
200
100

900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E

Geochemistry
P.P.M.
Sn, As, WO_3, Bi

Sn
As
WO_3
Bi

100
80
60
40
20

900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E

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)

63000
62900
62700
62500
62300

900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)

2350
2300
2250
2200
2150
2100
2050
2030

356054
5 cm

1900 S

900E 1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E 1800E

1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E

500
400
300
200
100

100
80
60
40
20

63000
62800
62600
62400

2350
2300
2250
2200
2150
2100
2050

2100 S

1000E 1100E 1200E 1300E 1400E 1500E 1600E 1700E

RENISON LIMITED

DUNKLEY FAULT GRID
LINE 1900S & 2100S

SCALE
40 0 40 80 120
METRES

DRAWN	D.J.K.
TRACED	A.J.W.
DATE	6/84
SCALE	1:2000
DRAWING No.	
	PLAN 4S

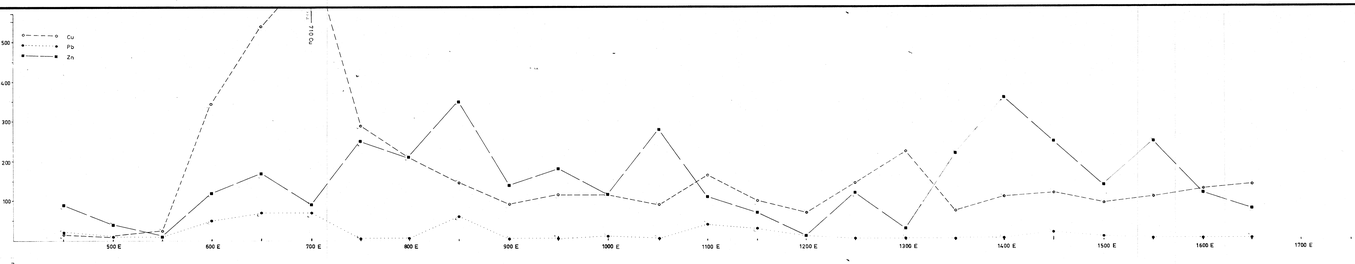
Geochemistry
Cu, Pb, Zn, Sn, As, WO_3, Bi

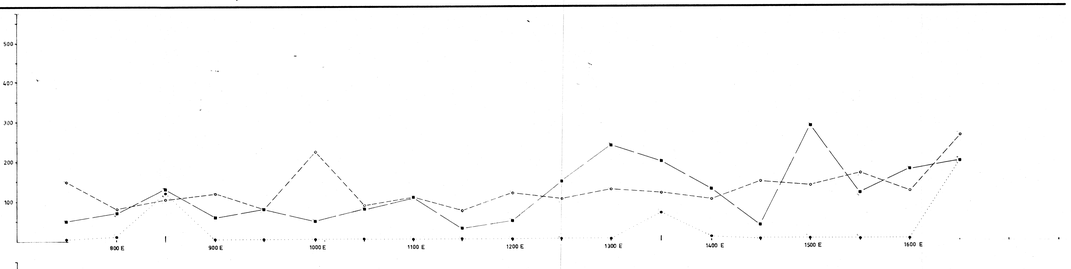
Magnetics
Normal reading, ie pot at 2m (staff on ground)
Pot at 3m (staff on hip)
Repeated readings at different times.
• Readings taken 6/1/84 using Base Station 1
• Readings taken 10/1/84 using Base Station 2

Topography
Reduced levels based broadly on 1:5,000 Zeehan (8312 sheet). Detail from line mapping. Vertical: horizontal approx 1:1

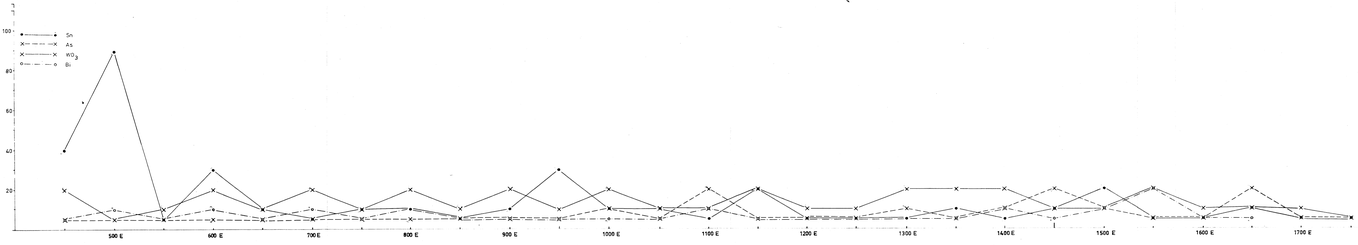
021

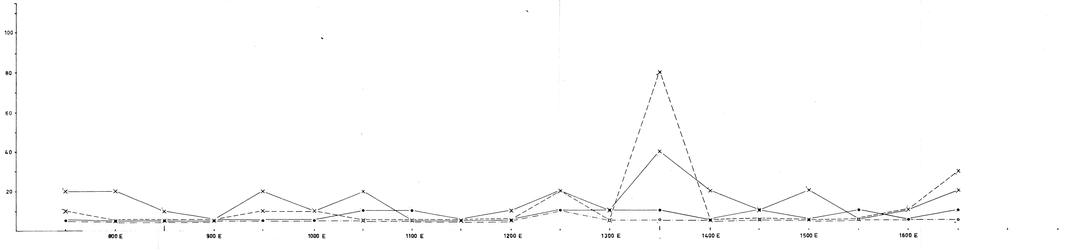
Geochemistry
P.P.M.



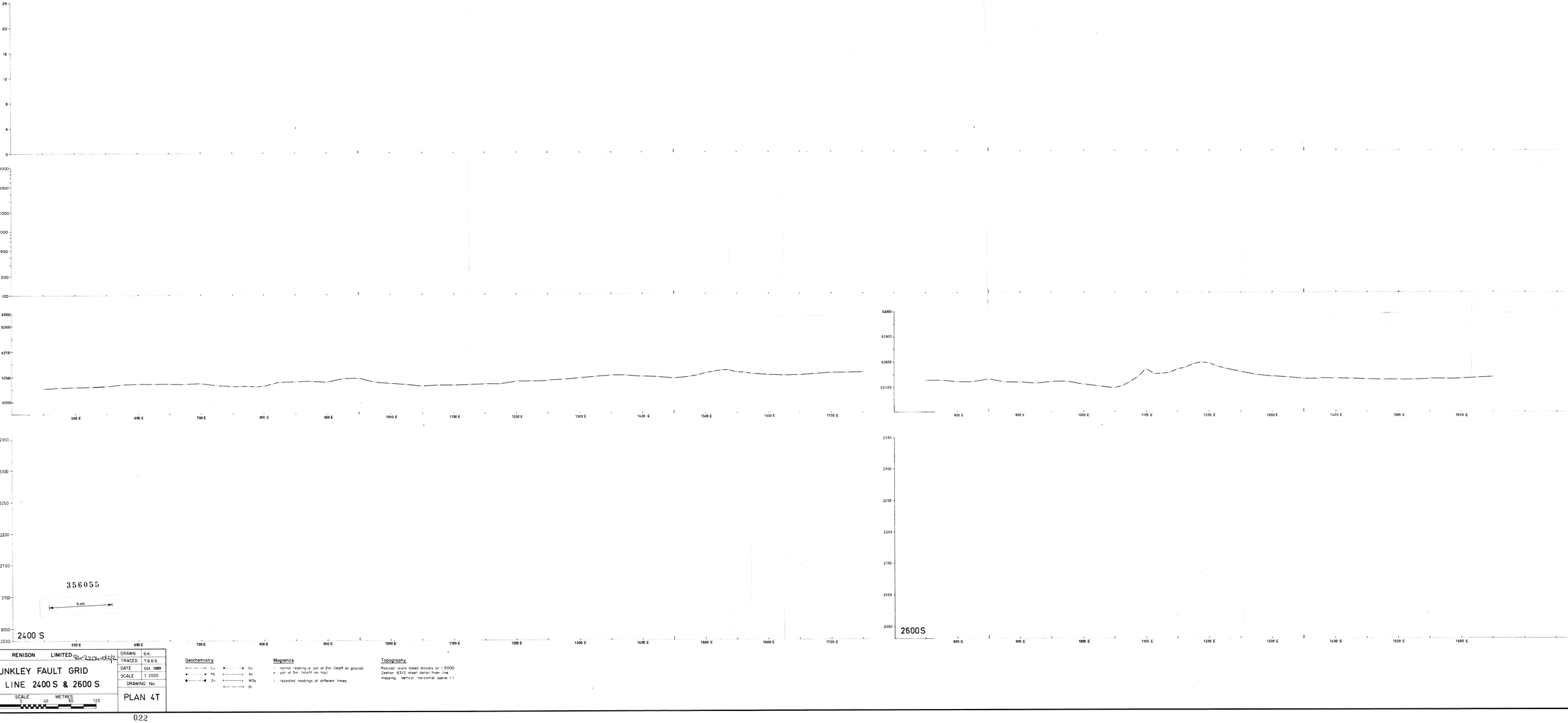


Geochemistry
P.P.M.





I.P. Data



Total Magnetic Field (γ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (METRES)

RENISON LIMITED

DUNKLEY FAULT GRID
LINE 2400 S & 2600 S

SCALE METRES
40 0 40 80 120

DRAWN	D.K.
TRACED	T.G.D.S.
DATE	Oct. 1985
SCALE	1:2000
DRAWING No.	

PLAN 4T

Geochemistry
Cu
Pb
Zn
Sn
As
WO3
Bi

Magnetics
normal reading ie pot at 2m (staff on ground)
pot at 3m (staff on hip)
repeated readings at different times

Topography
Reduced levels based broadly on 1:5000 Zeehan 83/2 sheet detail from line mapping. Vertical horizontal approx 1:1

022

Samples from the following stations have been reassayed - Cu(ppm) or pb(ppm) repeat assay ; no resampling). The reassay and original values have been averaged - value taken to nearest 10 ppm. Repeat assays were within 15% of original values.

L8885 : 300E, 350E.

L10885 : 2250E, 2350E.

L11885 : 1350E.

Values on line L11885 appear to be consistently 20 ppm high, apparently due to contamination. Readings in this area were not averaged with anomalous values. From the reassay data, the background level of the whole line was reduced to match that of the other lines ie. -20 ppm.

Reassays on L11885 :

1200E, 1300E, 1350E, 1400E, 1450E, 1500E, 1550E, 1600E, 1650E, 1700E, 1750E, 1800E, 2000E, 2150E, 2200E.

MAG

TRUE

GRID

ZEEHAN B1 | B1/4 | B2/3 | ZEEHAN B2

B3/1 | B3/2 | B4/1

ZEEHAN B3 | ZEEHAN B4

B3/3 | B3/4

356056

5 cm

RENISON LIMITED RL-2204 vol 2/2

ZEEHAN B3/2

UNSMOOTHED Sn ASSAYS

GEOLOGIST :	SCALE 1:5000 METRES
DRAUGHTSMAN :	100 0 100 200
DATE :	
REVISIONS :	DRAWING No. PLAN 5A

023

Samples from the following stations have been reassayed - Crushed or pulverised reject only ; no resampling). With the exception of line 11600S ; the original and reassay values were within 15% and were averaged ; the value taken to the nearest 10 ppm.

L 8000S: 3000E
L 9200S: 4500E
L 9400 S: 1350E
L 9800 S: 2500E
L 10000S: 1500E

Reassays on L11600S show discrepancies in excess of 15% (reassay is always lower). The reassays have been plotted and contoured.
L11600S: 800E, 900E, 7500E, 8000E, 8200E, 9000E, 10000E, 11500E, 11600E, 12500E, 13000E, 14500E, 15000E, 16500E, 17000E, 18000E, 20000E, 21500E, 22000E

RESAMPLING ON L11600S : 700, 900, 1100, 1300, 1500, 1700, 1900, 2100, 2300, 2500, 2700, 2900, 3100, 3300, 3500, 3700, 3900, 4100, 4300, 4500, 4700, 4900, 5100, 5300, 5500, 5700, 5900, 6100, 6300, 6500, 6700, 6900, 7100, 7300, 7500, 7700, 7900, 8100, 8300, 8500,

Samples from the following stations were been resampled - Crushed or pulverised reject only ; no resampling). The resassy and original values have been averaged - value taken to nearest 10 ppm. Repeat assay within 15% of original value

L9285 : 000E,

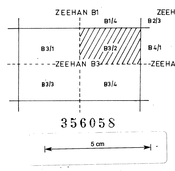
Initial assays on L11405 appeared to be consistently 10-20 ppm high. Repeated assays were lower or similar to adjacent lines. Because of the discrepancy, only the repeat assays were plotted. From the resassy data, the background level of the whole line was reduced to match the adjacent lines ie. - 10 ppm.

Resassays on Lines:

2605, 3005, 7005E, 7505E, 8005, 8505E, 9005E, 10005E, 10505E, 11505E, 12505E, 14505E, 15005, 16505E, 1700 E, 1800E, 2000E, 2150 E, 2200E,

A number of stations were resampled on L11405 to test apparent contamination in some elements. The raw sample values are listed above the original assays.

Some infill lines are not sampled due to lack of geochemical response on main lines.



RENISON LIMITED SL-22-04 VOL 2/2

ZEEHAN B3/2

UNSMOOTHED W03 ASSAYS

GEOLOGIST :	SCALE 1:5000 METRES (100 0 100 200)
DRAUGHTSMAN :	
DATE :	
REVISIONS :	DRAWING No. PLAN 5C

025

025

SMOOTHING: raw data (plotted above line) has been smoothed (plotted below line) using a five point, non-weighted running average.

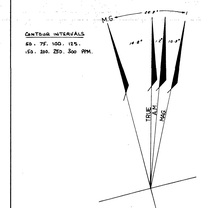
Samples from the following stations have been reassayed - Crushed or pulverised reject only ; no resampling). The reassay and original values have been averaged- values taken to nearest 10 ppm. Repeat assays within 15% of original values.

L 1295 : 1625E ,
L 1695 : 1050E ,
L 1895 : 1350E ,
L 1995 : 650E, 1050E
L 2095 : 750E ,
L 2195 : 1500E ,
L 2295 : 1500E ,

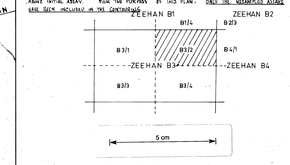
Values on L1695 are consistently higher than on other lines . This appears to be due to contamination . (contouring is exaggerated by the smoothing which has been applied however) . Reassays were consistent with original values and have been averaged.

Reassays on Lines:
2001, 2005, 1705E, 1350E, 800E, 850S , 900E, 1000E, 1300E, 1450E, 1500E, 1650E, 1700S , 1800E, 2000E, 2150E, 2200E

CONTOUR INTERVALS
50 , 75 , 100 , 125 ,
150 , 200 , 250 , 300 PPM.



RESAMPLING OF THE 1600S LINE CONFIRMED CONTAMINATION IS EVELISE. RESULTS RESAMPLED STATIONS 2100, 1900, 1700, 1500, 1300, 1100, 900, 700, 500, 300, 100, 050. (THE 1700 RESULTS SHOWN ABOVE INITIAL ASSAY. FOR THE PURPOSES OF THIS PLAN. ONLY THE RESAMPLED VALUES WERE USED INCLUDED IN THE CONTOURING



356059

RENISON LIMITED RL-2304 VOL 2/2

ZEEHAN B3/2

SMOOTHED Cu ASSAYS

GEOLOGIST :	SCALE 1:5,000 METRES
DRAUGHTSMAN :	100 0 100 200
DATE :	
REVISIONS :	DRAWING No. PLAN 5D

026

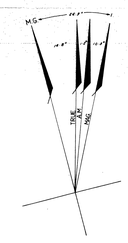
026

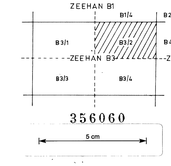
SMOOTHING : raw data (plotted above line) has been smoothed (plotted below line) using a five point, non-weighted running average .

Samples from the following stations have been reassayed - (crushed or pulverised reject only ; no resampling). The remaining and original values have been rearranged = value taken to nearest 10 ppm. The repeat assays were with 15% of original values.

L 200 S : 650E, 700E ;
L 200 S : 400E, 450E, 1650E,
L 400 S : 180E, 450E, 500E,
L 600 S : 400E, 450E, 900E,
L 800 S : 250E, 300E, 1800E, 2100E, 2150E, 2200E, 2250E, 2450E, 2500E, 2800E,
L 1000 S : 900E, 1100E,
L 1200 S : 300E, 700E, 1750E, 2250E,
L 1400 S : 250E,
L 1600 S : 1650E,
L 2200 S : 1000E, 1300E, 1850E,

Contour Intervals
30 50 70 100 150 200 PPM





RENISON LIMITED SH-23.04 vol 3/2

ZEEHAN B3/2

SMOOTHED Pb ASSAYS

GEOLOGIST :	SCALE: 1:5,000 METRES
DRAUGHTSMAN :	100 0 100 200
DATE :	
REVISIONS :	DRAWING No. PLAN 5E

SMOOTHING: raw data (plotted above line) has been smoothed (plotted below line) using a five point, non-weighted running average.

Samples from the following stations have been rearranged: (created or patterned report only; no resampling). The resaying and original values have been averaged. Values taken to nearest 10 ppm. Repeat assays were within 15% of original values.
L2995 S: 000E, 450E, 950E, 1450E, 1900E
L2695 S: 100E, 450E, 850E
L2495 S: 400E, 450E, 900E, 2100E
L2295 S: 250E, 300E, 2100E, 2150E, 2300E, 2250E, 2050E, 2300E, 2500E
L2095 S: 300E, 800E, 1950E,
L1895 S: 300E, 750E, 1050E, 1150E, 1750E
L1695 S: 200E, 300E, 900E, 950E, 1750E, 1900E, 2000E, 2100E, 2300E, 2500E, 2600E, 2700E, 2800E, 2900E, 3000E, 3100E, 3200E, 3300E,
L1495 S: 1500E, 1450E, 1700E, 1800E, 2000E, 2150E, 2300E,
L1295 S: 1500E, 1450E, 2000E,
L1095 S: 1200E,
L895 S: 1000E,
L695 S: 1000E, 1100E, 1500E,

ESTIMATING ON LIMS CONFIRMED ORIGINAL VALUES. STATIONS RESAMPLED: Zero, less than 50, 50 to 100, 100 to 150, 150 to 200, 200 to 250, 250 to 300, 300 to 350, 350 to 400, 400 to 450, 450 to 500, 500 to 550, 550 to 600, 600 to 650, 650 to

FEDERAL-OWEN MEREDITH FAULT
E.L. 42/71
RENISON BELL
RENISON MINE LEASE
PIEMAN RIVER
Huskisson River
Tailings Dams
A
B
C
Argent Hill
Dreadnought Hill
Argent Dam
Stebbins Hill
Renison Bell Hill
Commonwealth Hill
Pine Hill
Black Hill
Murchison Highway
Emu Bay Railway
Crimson Creek Grid
Argent Grid
Dunkley Grid
Devereux Shaft Grid
Mines Dept Grid
Mt Lyell Copper Estates Grid
North Dundas Grid
Pine Hill Grid
Razorback Grid
Razorback Grid (BMR)
Renison Bell West Grid
Renison Mine Lease Grid
South Renison Bell Hill Grid
Wilson River Grid
Grand Prize Grid
Intermediate Grid
Kopi Grid
Kopi Fault Grid
Karlson-Riley Grid
Lead Lode Grid
Mine Test Line
Argent Grid Baseline
Crimson Creek Grid Baseline
Renison Bell South Hill Grid Baseline
Renison Bell Hill Grid Baseline
Major Landsat Lineament
Lineament Fracture
Major Air-photo Lineament
Air-photo Fracture, Lineament
5 cm
N.B. Landsat lineaments taken from 1:100000 sheet. Position accurate to ± 100m. Accuracy of plotting of original data onto 1:100000 sheet is unknown. The Federal-Owen Meredith Fault is plotted as a reference.
Location of air-photo features is accurate to ± 25m.
Landsat study, Devonian Granite Batholiths, N.W. Tasmania Hunting Geology and Geophysics (Australia) Pty Ltd
35606
GEOLOGIST
DRAFTSMAN
DATE
REVISIONS
REF: RN/MG83/05

029

FEDERAL OWEN MEREDITH FAULT

PIEMAN RIVER

Huskisson River

Ring River

Tailings Dams A B C

RENISON BELL

Argent Hill

Dreadnought Hill

Murchison Highway

Argent Dam

Stebbins Hill

Renison Bell Hill

Commonwealth Hill

Pine Hill

RENISON MINE LEASE

Emu Bay Railway

Black Hill

E.L. 42/71

356062

RENISON LIMITED 84-2204 vol 2/7

E.L.42/71 & R.M.L.

LINEAMENT STUDY

GEOLOGIST	J.R.B.
DRAFTSMAN	T.G.D.S.
DATE	Dec. 1983
REVISIONS	

SCALE: 1:10000 Metres (200 0 200 400)

DRAWING No. 029 PLAN 6

REF: RN/MG83/05

LEGEND

A.G.	Argent Grid	G.P.G.	Grond Prize Grid	R.G.	Razorback Grid
C.H.G.	Commonwealth Hill Grid	I.G.	Intermediate Grid	Rb.G.	Razorback Grid (BMR)
C.C.G.	Crimson Creek Grid	K.G.	Kopi Grid	——	Renison Bell West Grid
——	Cuni Grid	K.F.G.	Kopi Fault Grid	R.M.L.G.	Renison Mine Lease Grid
D.G.	Dolcooth Grid	K.R.G.	Karlson-Riley Grid	S.R.B.H.G.	South Renison Bell Hill Grid
——	Deveroux Shaft Grid	L.L.G.	Lead Lode Grid	W.R.G.	Wilson River Grid
D.G.	Dunkley Grid	M.T.L.	Mine Test Line		
D.F.G.	Dunkley Fault Grid	——	Mines Dept Grid		
D.T.G.	Dunkley Tram Grid	M.L.C.E.G.	Mt. Lyell Copper Estates Grid		
——	E.Z. Grid	N.D.G.	North Dundas Grid		
——	E.Z. Malba Flat Grid	P.H.G.	Pine Hill Grid		

N.B. Landsat Lineaments taken from 1:100000 sheet. Position accurate to ± 100m. Accuracy of plotting of original data onto 1:100000 sheet is unknown. The Federal–Owen Meredith Fault is plotted as a reference.

Location of air-photo features is accurate to ± 25m.

Major Landsat Lineament
Lineament Fracture
Major Air-photo Lineament
Air-photo Fracture, Lineament

5 cm

Landsat study, Devonian Granite Batholiths, N.W. Tasmania Hunting Geology and Geophysics (Australia) Pty Ltd