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RENISON LIMITED

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ANNUAL REPORT

E.L. 18/73 - STANLEY RIVER AREA

WESTERN TASMANIA

1979-80

MICROFILMED

Submitted by: L.A. NEWNHAM,
CHIEF GEOLOGIST.

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1. SUMMARY

One diamond drill hole and some limited photogeological interpretation work were completed during 1979-80 as part of a restricted but persistent exploration approach to the evaluation of E.L. 18/73.

Results of this work were discouraging, but it is recommended that this style of low intensity exploration continue for another two to three years, with the purpose of evaluating substantial geophysical and geochemical anomalies elsewhere in the Licence area.

2. INTRODUCTION

E.L. 18/73 was acquired in 1973 because it covered an area considered to have certain geological similarities with the Cleveland and Renison Bell Mines.

Since then, a systematic series of geological, geochemical and geophysical surveys have been undertaken over the area. Results of this work have justified the core drilling of five holes over the last four summer seasons.

3. LOCATION, LAND TENURE AND PREVIOUS WORK

E.L. 18/73 refers to a 21 square kilometre area lying North of the Pieman River between Renison Bell and Cleveland. (Refer Locality Map.) Access is now by way of the first class H.E.C. Pieman Dam access road from Tullah.

The Licence is held by Renison Limited and explored by that Company under a Joint Venture Agreement with Consolidated Gold Fields Australia Limited.

By currently bearing all expenditure on the area, Renison is increasing its interest in the project (thus, C.G.F.A. is decreasing).

As of the end of March 1980, the relevant interests were Renison 70% and C.G.F.A. 30%.

All previous work has been adequately compiled in Annual Reports since 1973. To summarise, this work has included:

- (a) Airborne E.M. (Turair) - Magnetic survey

- (b) Ground I.P., magnetic (proton precession), and soil geochemical surveys, combined with limited mapping on a system of cut grid lines covering the Cambrian rocks in the area.
- (c) Photogeological study of the complete area, with an emphasis on the geology of the Meredith Granite.
- (d) The completion of five cored drill holes - two (M.L.s 34 and 56) testing the Renison Mine Sequence equivalent (?) rocks in the South of the Licence area; two (M.L.s 39 and 53) testing a carbonate/chert sequence and one (M.L.48) testing the Mt Lindsay No. 1 Skarn Zone West of the Mt Lindsay Mine area.

A bibliography is included in this report.

4. GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL FEATURES

The essential geological features of the Licence area are shown on the accompanying two 1:10,000 geological plans.

The region is underlain to the South by a sequence of saccharoidal quartzites and slumped, graphitic black shales, probably members of the Oonah Formation and thus probably of upper Precambrian age.

These are overlain by a sequence of cherts, carbonates and conglomerates which are here equated with the lower Cambrian chert - carbonate Renison Mine Sequence rocks.

These in turn are overlain by several kilometres (stratigraphic thickness) of argillites, tuffs, minor cherts and carbonates of the Crimson Creek Formation.

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All sediments strike West - North - West, although there is some local tight folding along N.E.-trending axes of the lower chert - carbonate units.

Recent Mines Department mapping suggests that the sequences on E.L. 18/73 are in fact forming the North limb of a large anticline (N.E. axis) whose South limit lies to the immediate North of the Pieman River.

Dips are generally steep, regionally to the N.E., but locally vertical or steep S.E. The sequence youngs to the N.E.

The region has been intruded by the upper Devonian - lower Carboniferous Meredith Granite which outcrops over the northern half of the Licence area, and is thought to underlie (at some considerable depth) the sediments in the southern half.

By way of the airborne E.M. and magnetic survey completed in 1973, it was determined that the Precambrian sequences were of low economic potential. The Cambrian Crimson Creek Formation however contained abundant magnetic, and to a lesser extent conductive, responses.

It was thus resolved to follow up these airborne responses with some ground surveys. Twelve (12) traverse lines, spaced at 400m intervals, were cut over the Cambrian rocks, and geochemical soil sampling, proton precession magnetic and gradient array I.P. surveys conducted along these lines. The results of this work are plotted in profile form on the attached 1:5,000 profiles (MLP 14, 87, 39, 96, 97, 98 and 99). Again chargeable, conductive and magnetic responses were in abundance. Geochemical responses were also significant in places. Whilst there are some apparently strong Pb - Zn soil anomalies, more importance is placed on Cu - As - Sn anomalies at this stage, although a Zn halo effect could be expected around Cleveland - Renison style deposits.

In order to follow up several very strong responses in the Mt Lindsay Mine area, four (4) intermediate lines were cut and similar geophysical and geochemical surveys completed on these.

The above surveys led to the drilling, over four summer seasons, of five (5) diamond drill holes.

One hole (M.L. D.D.H. 48) was drilled on line 14 to test the Western extension of a carbonate - skarn zone known as the No. 1 Anomaly in the Mt Lindsay area. It intersected a thick stanniferous magnetite skarn.

Two holes (M.L. D.D.H.'s 39 and 53) were drilled to test a carbonate - chert sequence on lines 12 and 13, where anomalous geophysical and geochemical responses were recorded. Whilst such a sequence was intersected, no significant mineralisation was recorded.

Two holes (M.L. D.D.H.'s 34 and 56) were drilled on lines 13 and 17 to test the chert - carbonate - conglomerate sequence (Renison Mine Sequence Equivalent) in areas where geochemical and geophysical responses were significant. No encouragement was received from either hole. D.D.H. 56 was completed in the current year and is discussed in more detail below.

5. PROGRAM COMPLETED 1979-80

During 1979-80, exploration was restricted to the completion of a one hole core drilling program, combined with some minor assessment work of the photogeological study completed over the Meredith Granite in June 1979.

\$33,851 was spent on this work.

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M.L. D.D.H. 56 was collared just North of the new H.E.C. road at 400m S on line M.L. 17, and was completed at 564.3m. It was designed to test a co-incident arsenic - magnetic anomaly occurring in the vicinity of a sequence of cherts, carbonates and conglomerates, equated with the Renison Mine Sequence. The results of the hole are appended as Appendix 3 and as Map MLP 146.

Two carbonate beds were intersected. The lower one was 8 - 10m thick, and separated from the thick (80 - 90m true width) upper one by oolitic cherts and quartzites. The upper carbonate was overlain by hematitic (minor magnetite) conglomerates. It is proposed that if this hole had continued, it would have passed into another carbonate overlying the conglomerates. But low B.C.A.'s, drill limitations and general economic considerations precluded this happening.

The magnetic anomaly was probably caused by the iron-rich conglomerates. No significant mineralisation was intersected.

Recent mapping by the Mines Department in this area has located a probable outcrop of quartz - porphyry South of the H.E.C. road.

The photogeological structural interpretation of the Meredith Granite undertaken in June 1979 by Hunting Geophysics failed to highlight any potentially important structures or features in the granite on E.L. 18/73.

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6. CONCLUSIONS AND RECOMMENDATIONS

Over a seven (7) year period, some \$250,000 has been spent on exploration on E.L. 18/73.

A considerable portion of this money was directed in the early years of the project towards access development in this then most remote and rugged piece of country. The access problem was overcome this year with the completion of the new first class, all weather, H.E.C. Pieman Dam road through the area.

There are two "sub-areas" on E.L. 18/73 which are considered to still have some significant economic exploration potential, viz. the granite in the North-East, and the Crimson Creek Formation South of the granite.

The N.E. area of granite is considered to have some potential because of the nearby presence on E.L. 17/77 of the stanniferous greisen zone on Tadpole Hill.

The Crimson Creek Formation South of the Granite is considered worthy of further drilling because of the existence of several quite strong geochemical - geophysical anomalies in this region, which is still considered to have strong similarities with Cleveland - Renison geology.

If the recently mapped quartz - porphyry outcrop South of the H.E.C. road is confirmed, then it suggests the whole area is underlain at a not too prohibitive depth by the granite. This in turn suggests that if replacement deposits do exist, then they may not be excessively deep.

The 1:5,000 line profiles are attached to this report to confirm that there are still quite a few very significant, untested anomalies in this region.

The areas underlain by Precambrian rocks are not considered economically important.

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It is recommended that exploration be continued for at least another couple of years, at the present consistent but low expenditure levels on E.L. 18/73. This exploration should be directed towards an assessment, by way of geological mapping, of the granite in the N.E. of the area, with the view of determining if the Tadpole Hill greisen zone extends onto E.L. 18/73, combined with the drilling of one hole per year into anomalous zones already defined in the Crimson Creek Formation South of the granite.

More specifically, in 1980-81, the following two (2) recommendations are made:

- (a) Whilst Tadpole Hill is being mapped and sampled on E.L. 17/77, then that program should be extended South onto E.L. 18/73.
- (b) One cored drill hole on Line 16, 600m North, drilled grid South at a dip of -50° and length of 350 - 400m. On Line 16, such a hole would test a strong magnetic anomaly with a moderate associated tin soil anomaly. This is probably the same anomalous zone as defined on Line 15 at 250 - 350m N (I.P. - magnetics - with downslope Sn - As anomalies); and Line 17 at 200m N (I.P. - magnetics and strong zinc anomalies). The meaning of this zinc anomaly is interesting. It could be simply a natural high in the Crimson Creek Formation or it could be a halo effect around a tin-sulphide deposit (as is probably the case at Renison / Cleveland).

An expenditure of \$20,000 - \$25,000 would be required to complete the above programs in 1980-81. The major items would be:

Drilling	\$18,000	
Salaries	\$2,000	
Consumables	\$1,000	
Contingencies	\$1,500 \$22,500

Drilling could be programmed for completion in Spring 1980, and granite mapping for completion in January - February 1981.

7. BIBLIOGRAPHY

- (1) Stanley River Tin Field. L.L. Waterhouse. Bull. Geol. Surv. Tas. No. 15.
Osmiridium in Tasmania. A. McIntosh Reid. Bull. Geol. Surv. Tas. No. 32.
- (2) Preliminary report on Mt Lindsay Tin Mine Tasmania. A. McIntosh Reid. 24.5.27. Unpubl. Rep. Tas. Dep't Mines.
- (3) Mt Lindsay Mine - Supplementary Report. A. McIntosh Reid. 30.10.27. Unpubl. Rep. Tas. Dep't Mines.
- (4) Mt Lindsay Mine - Stanley River District - West Coast. J.B. Scott. 31.10.29. Unpubl. Rep. Tas. Dep't Mines.
- (5) Preliminary Report on the Meredith Range District. Q.J. Henderson. 23.4.45. Unpubl. Rep. Tas. Dep't Mines.
- (6) Mineral Prospects of the Pieman River Area. Q.J. Henderson. 23.4.45. Unpubl. Rep. Tas. Dep't Mines.
- (7) Western Tasmania. Charles Whitlam. 1949. Published by Davies Brothers. P. 123.
- (8) Progress Report on the North Pieman Mineral Area. B.L. Taylor. 5.11.54. Unpubl. Rep. Tas. Dep't Mines.
- (9) Stanley River Tin. J. Elliston. 29.4.54. Unpubl. Rep. Tas. Dep't Mines.
- (10) Limestones in Tasmania. T.D. Hughes. 1957. Tas. Geol. Surv. Min. Res. No. 10.

Company Reports

- (11) Geological Report on the Mt Lindsay Tin Deposit, Zeehan, Tasmania. J.L. Morton. 20.3.62. Unpubl. Rep. Aberfoyle Tin Development Partnership (A.T.D.P.)

011

RENISON LIMITED

- 11 -

112012

- (12) Study, Estimated Cost and Schedule of Proposed Diamond Drilling Programme of Mt Lindsay Tin Prospect. J.L. Morton. 30.11.62. Unpubl. Rep. A.T.D.P.
- (13) Progress Report No. 4 on the Mt Lindsay Tin Prospect. J.L. Morton. January 1963. Unpubl. Rep. A.T.D.P.
- (14) Progress Report No. 7 on the Mt Lindsay Tin Prospect. J.L. Morton. 18.4.63. Unpubl. Rep. A.T.D.P.
- (15) Review of Mt Lindsay Prospect at conclusion of first Diamond Drilling Programme. J.L. Morton. 23.4.63. Unpubl. Rep. A.T.D.P.
- (16) Report on Access Routes to Mt Lindsay, Tasmania. J.L. Morton. August 1963. Unpubl. Rep. A.T.D.P.
- (17) Progress Report No. 8 on Mt Lindsay Tin Prospect. J.L. Morton. 11.10.63. Unpubl. Rep. A.T.D.P.
- (18) 1963-64 Schedule of Diamond Drilling Programme for Mt Lindsay, Tasmania. J.L. Morton. 25.10.63. Unpubl. Rep. A.T.D.P.
- (19) Progress Report No. 9 on Mt Lindsay Tin Prospect, Zeehan, Tasmania. J.L. Morton. December 1963. Unpubl. Rep. A.T.D.P.
- (20) Proposed Geological Reconnaissance Programme for 1964, Schedule 68. Mt Lindsay - Stanley Reward Area. J.L. Morton. December 1963. Unpubl. Rep. A.T.D.P.
- (21) Review of Mt Lindsay Drilling and Reconnaissance Programme as at 19.3.64. J.L. Morton. 19.3.64. Unpubl. Rep. A.T.D.P.
- (22) Report of Work completed for Stanley Reward Geologic Reconnaissance Programme for 1964 Schedule 68. I.R. Worth. 1.5.64. Unpubl. Rep. A.T.D.P.
- (23) Report 3 - Review of Mt Lindsay Prospect at completion of Second Diamond Drilling Programme. J.L. Morton & J.K. Couper. 29.6.64. Unpubl. Rep. A.T.D.P.
- (24) Geological Report on Stanley River Area - Mt Lindsay Prospect - Schedule 68. Unpubl. Rep. A.T.D.P.
- (25) Report 4 - Review of Mt Lindsay Prospect at completion of Third Diamond Drilling Programme. J.K. Couper. 1965. Unpubl. Rep. A.T.D.P.
- (26) Interim Report on Mt Lindsay Prospect. J.K. Couper. March 1965. Unpubl. Rep. A.T.D.P.
- (27) Interpretation Report of Airborne Magnetometer Survey over Waratah - Zeehan Areas, for Aberfoyle Tin Development Partnership. A. Zarauatjian. August 1965. Unpubl. Report.

RENISON LIMITED

- 12 -

112013

- 012
- (28) Relationship of Structure to Ore Control in the Mt Lindsay - Cleveland Prospect Area. T. Hopwood. 1965. Unpubl. Rep. A.T.D.P.
 - (29) Mt Lindsay - Regional Geology Report 1965-66. D.M. Ransom & C.J. Wilson. 1966. Unpubl. Rep. A.T.D.P.
 - (30) Supplement to Mt Lindsay Regional Geology Report. C.J. Wilson. Unpubl. Rep. A.T.D.P.
 - (31) Interim Report Mt Lindsay (Tasmania). K.R. Glasson. January 1968. Unpubl. Rep. A.T.D.P.
 - (32) Summary Report on Camp 30 Area. Summer 1967-68. A. Jessup. 1968. Unpubl. Rep. A.T.D.P.
 - (33) Supplementary Report on the Mt Lindsay Area. A. Jessup. March 1968. Unpubl. Rep. A.T.D.P.
 - (34) Review of the Summer Exploration Programme Mt Lindsay E.L. 2/63 - 1967-68. K.R. Glasson. April 1968. Unpubl. Rep. A.T.D.P.
 - (35) Petrology of Selected Rocks from Camp 30 - Merton Area 1967-68. B. Chenhall & A. Jessup. 1968. Unpubl. Rep. A.T.D.P.
 - (36) Report on Summer Exploration undertaken at Mt Lindsay 1968-69. A. Jessup. 1969. Unpubl. Rep. A.T.D.P.
 - (37) Report on the Summer Exploration Programme undertaken at Mt Lindsay and in the Stanley Reward Area, 1969-70. M. Jordan. Unpubl. Rep. Paringa Mining & Exploration Company Ltd. (P.M.E.C.).
 - (38) Geology of the Wilson River Area. Roetz Cameron & Allen. 1969. Unpubl. Rep. P.M.E.C.
 - (39) Summary of Exploration Activities undertaken by the Aberfoyle Group from 1962-70. D.K. Tester. September 1970. Unpubl. Report.
 - (40) E.L. 2/63 End of Project Report - Wilson River. C. Krummei. Unpubl. Rep. Cominco Exploration Pty Ltd.
 - (41) Literature Survey on E.L. 2/63 to November 1972. R. Schellekens. Unpubl. Rep. Renison Ltd.
 - (42) E.L. 2/63 Mt Lindsay Area - Annual Report 1972-73. R.R. Schellekens & L.A. Newnham. Renison Ltd. Unpubl. Report.
 - (43) Report on Turair, Airborne Em-magnetic Survey, Renison Bell - Mt Lindsay. J.G. Linford. May 1973. Unpubl. Report.

RENISON LIMITED

- 13 -

112014

- 013
- (44) Final Report on Induced Polarisation Surveys in the Misty Valley Area near Renison Bell, Tasmania, on behalf of Renison Limited. A.W. Howland-Rose, Scintrex Pty Ltd. March 1974. Unpubl. Report.
 - (45) A Report on Electrical Induced Polarisation Surveys at Mt Lindsay near Renison Bell, West Coast Tasmania, on behalf of Renison Limited. A.W. Howland-Rose, Scintrex Pty Ltd. May 1974. Unpubl. Report.
 - (46) An Interpretation of a Combined Geophysical Survey - Mt Lindsay Area Tasmania. John L. Irvine, Consulting Geophysicist. July 1974. Unpubl. Report.
 - (47) E.L. 2/63 and E.L. 18/73 Mt Lindsay Area, Western Tasmania, Annual Report 1973-74. R.R. Schellekens & L.A. Newnham, August 1974. Renison Limited Unpubl. Report.
 - (48) A Report on Additional Electrical Induced Polarisation Surveys at Mt Lindsay, near Renison Bell, on the West Coast Tasmania, on behalf of Renison Limited. A.W. Howland-Rose, Scintrex Pty Ltd. March 1975. Unpubl. Report.
 - (49) E.L. 2/63 and E.L. 18/73 Annual Report 1974-75. L.A. Newnham. August 1975. Renison Limited. Unpubl. Report.
 - (50) E.L. 2/63 and E.L. 18/73 Diamond Drilling Proposals Summer 1975-76. L.A. Newnham. October 1975. Renison Limited. Unpubl. Report.
 - (51) E.L. 2/63 and E.L. 18/73 Mt Lindsay Area Annual Report 1975-76. A.F. Ross. May 1976. Renison Limited. Unpubl. Report.
 - (52) E.L. 2/63 and E.L. 18/73 Mt Lindsay Area Annual Report 1976-77. A.F. Ross. May 1977. Renison Limited. Unpubl. Report.
 - (53) E.L. 2/63 and E.L. 18/73 Mt Lindsay Area Annual Report 1977-78. L.A. Newnham & R.R. Schellekens. July 1978. Renison Limited. Unpubl. Report.
 - (54) Annual Report 1978-79, Mt Lindsay (E.L. 2/63) and Stanley River (E.L. 18/73) Areas. R.R. Schellekens. August 1979. Renison Limited. Unpubl. Report.
 - (55) A Photogeological Study of the Meredith Granite and Surrounding Area, Western Tasmania. Unpubl. Report for Renison Limited by Hunting Geology and Geophysics (Aust.) Pty Limited. June 1979.

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GEOLOGY DEPARTMENT

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EL 18/73 STANLEY AREA

RESPONSIBILITY 677

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P/E 25/3/80

ACCOUNT NUMBER	ACCOUNT NAME	PERIOD TO DATE		YEAR TO DATE	
		ACTUAL	VARIANCE	ACTUAL	VARIANCE
10770702	SALARIES		323 G	3814	1666 L
10770703	SALARY LOADING			156-	417 G
0770705	CONSUMABLES		110 G	313	1653 G
0770708	VEHICLES				
0770710	TRAVEL & ACCOMMODATION			149	149 L
0770720	RENISON SERVICES - SURVEY				546 G
10770721	RENISON SERVICES - ASSAY		275 G		1092 G
10770722	RENISON SERVICES - RESEARCH				55 G
10770723	RENISON SERVICES - OTHER				
10770730	OUTSIDE SERVICES - GEOLOGICAL				
10770731	OUTSIDE SERVICES - GEOPHYSICAL				
10770732	OUTSIDE SERVICES - GEOCHEMICAL				
10770733	OUTSIDE SERVICES - TRK CUTTING				
10770735	OUTSIDE SERVICES - SITE ACC DEV			885	115 G
10770736	OUTSIDE SERVICES - DIAMOND DRNG			28528	6028 L
10770737	OUTSIDE SERVICES - OTHER			50	50 L
10770740	LEASE PAYMENTS			269	269 L
	ROUNDING				1 G
10779999	TOTAL EL 18/73 STANLEY AREA		708 G	33851	4283 L

APPENDIX 1

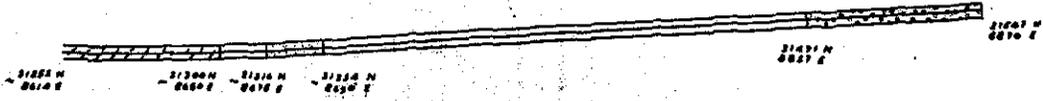
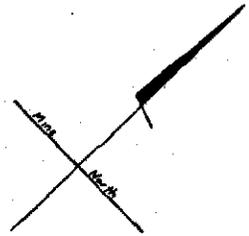
HOLE No ML 56

SCALE  meters

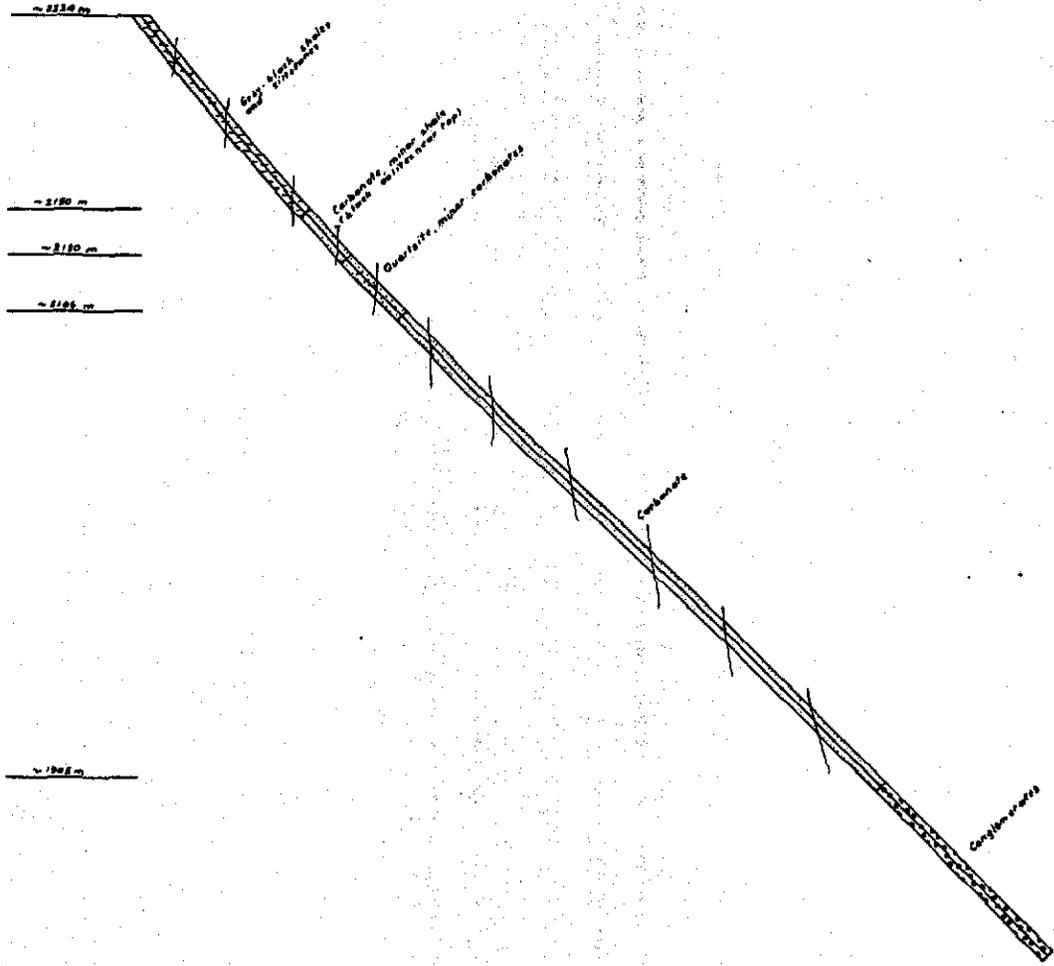
RENISON LIMITED DIAMOND DRILL HOLE PLOT

016

5 cm



PLAN



DIP PROFILE

112017

DIAMOND DRILL RECORD

HOLE NUMBER : M.L. 65

LOGGED BY : K.Wells

018

MMPS

INTERVAL (m)		RECOVERY		DESCRIPTION	FORM.	% Sn.										
FROM	TO	m	%			FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bl.	g/t Ag
				BCA at 113m = 30°												
115.3	137.5	18.2	100	115.4 - 137.4 DARK GREY CARBONATE Starts with a gray, stylolitic carbonate similar to some carbonates at Reinson, but quickly passes into a mixture of f.g. massive, brecciated (?) and black oolitic carbonates. BCA at 128.5m = 30° (variable) 136.0m = 30°												
137.5	148.5	6.0	55	137.4 - 149.5 LIGHT BROWN/BUFF CHERY QUARTZITES Badly broken. Occasional minor carbonate veinlets rimmed with darker coloured talc (?)												
148.5	151.5	3.0	100	149.5 - 151.0m LIGHT GREY/WHITE "BANDED" M.G. CARBONATE Banding irregular and outlined by grey/green mineral- chlorite and/or talc (?)												
151.5	172.3	20.8	100	151.0m - 171.3m LIGHT BROWN GREY F.G. QUARTZITE Occasional narrow (1mm) white, carbonate veins rimmed by grey/green talc (?) at high angles (80°+) to core axis. BCA at 162.0m = 30°												
172.3	211.3	39.0	100	171.3 - 212.0m PALE BROWN/BUFF/CREAM STRONGLY BANDED CARBONATE Banding marked by grey/green talc and very variable and wavy, but thought to be bedding BCA at 178.0m = 40° 184.0m = 20° - 30° 190.0m = 10° - 20° 194.0m = <10° 208.0m = 40° Strong banding fades downhole and carbonate merges into unbanded carbonate. No sulphides observed.												

112019

DIAMOND DRILL RECORD

HOLE NUMBER : M.L. 56

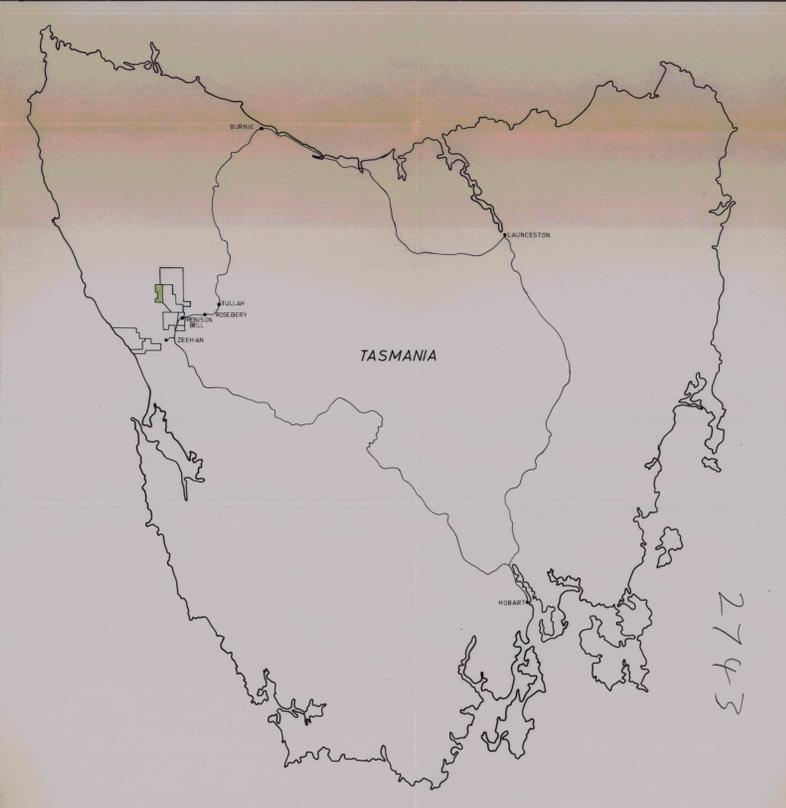
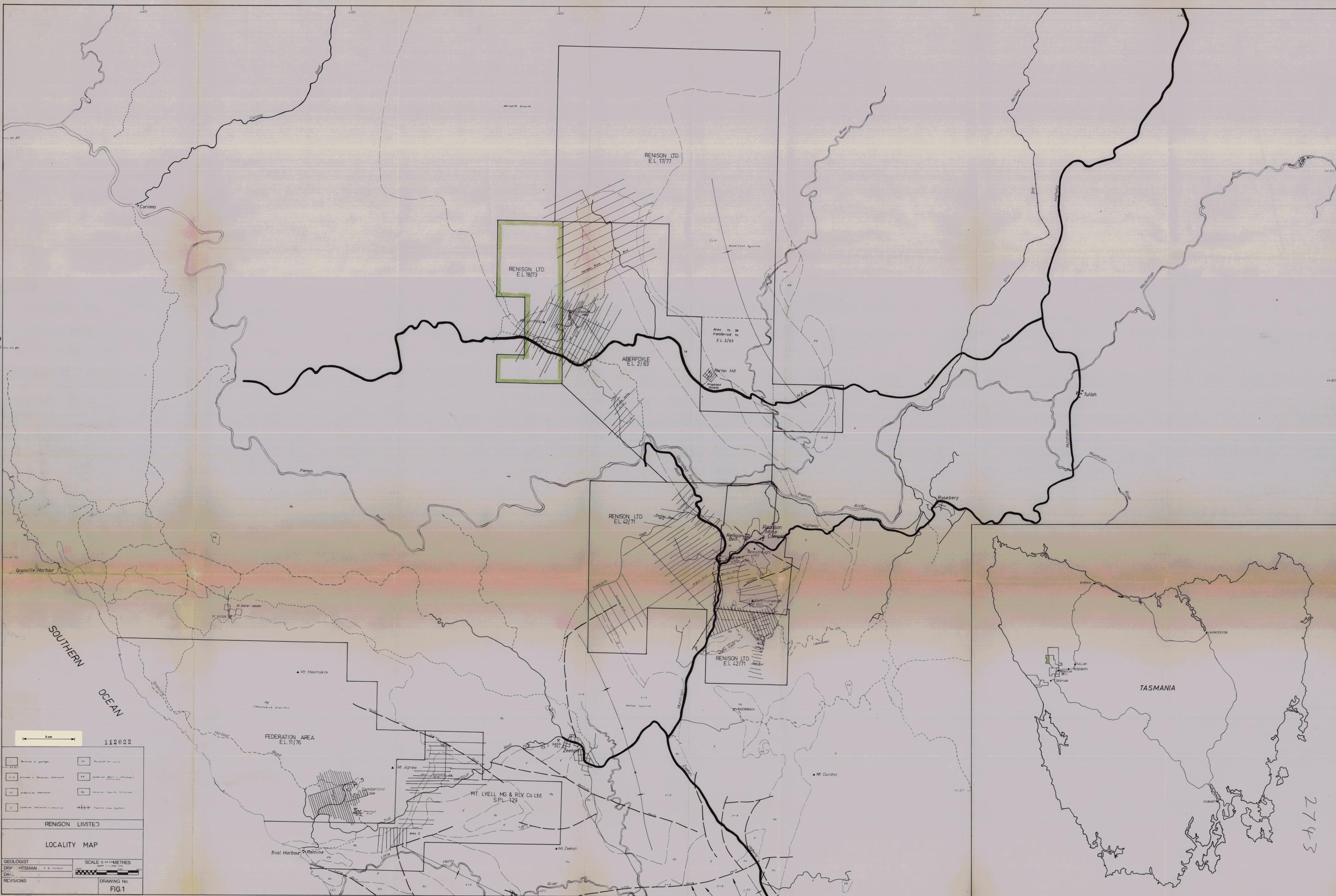
LOGGED BY : K.U. *alls*

019

MWFS

INTERVAL (m)		RECOVERY		DESCRIPTION	FORM.	% Sn.										
FROM	TO	m	%			FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag
212.0				212.0m - 213.0m GREY/BLACK SILT/SANDSTONE												
				BCA at 212.5m = 45°												
211.3	256.3	45.0	100	213.0 - 460.5m												
	316.3	60.0	100	PALE GREY/WHITE MASSIVE CARBONATE												
	457.3	141.0	100	Upper contact is marked by grey/green talc and numerous narrow talc veinlets. Narrow 0.5m cherty shale band 225.5m - 226.0m Vague BCA at 242m = 30° 258m = 30°+ Core broken and a suspected fault at 275m - 277m. From 280m carbonate becomes darker in patches, which increase in size downhole - more talcose (?). Also large zones of pure white carbonate which could be described as a marble. BCA at 300m = 40°. From 360m small (up to 1cm) creamy calcite patches become common, also smaller (up to 5mm) occasional patches of dark green chlorite (?) appear - the latter occasionally have a rounded, fragmental appearance e.g. 374.5m. Chlorite and/or talc become quite common downhole often occurring as lines or bands along bedding (?) in massive pure white carbonate marble. BCA at 418.0m = 35° - 40° After 430m the carbonate becomes darker. Well developed bedding 434.7 - 436.0m could perhaps be better described as a calcareous shale. BCA at 435.0m = 50° The last three metres of carbonate has a green/brown colour due to the development of calc-silicates (?) This follows a "contorted" zone at 458.0m.												
457.3	564.3	107.0	100	460.5 - 564.3m CONGLOMERATES												
				Equivalent to Red Rock?												
				The conglomerates are highly variable, varying from white, through yellow/green, to dark green and red/brown. Clasts vary from subangular to rounded and in size from 10cm to <1mm across. Compositionally the clasts vary from carbonate												

112020



5 km

112022

□	Renison Ltd. E.L. 17/77	□	Renison Ltd. E.L. 19/73
□	Renison Ltd. E.L. 21/63	□	Renison Ltd. E.L. 22/71
□	Federation Area E.L. 11/76	□	Mt. Lyell M.B. & R.V. Co. Ltd. S.P.L. 129
□	Other geological units	□	Other geological units

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LOCALITY MAP

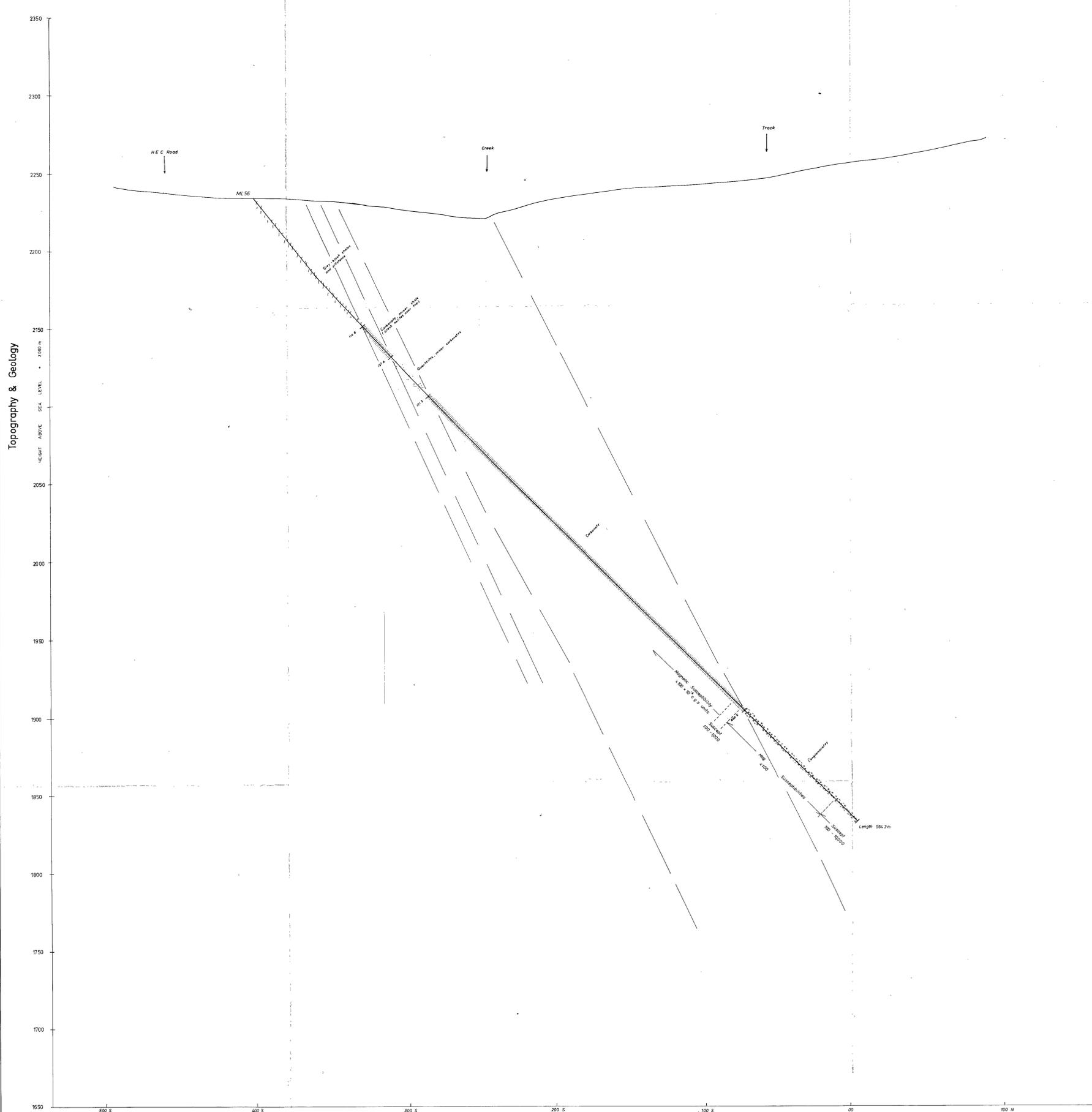
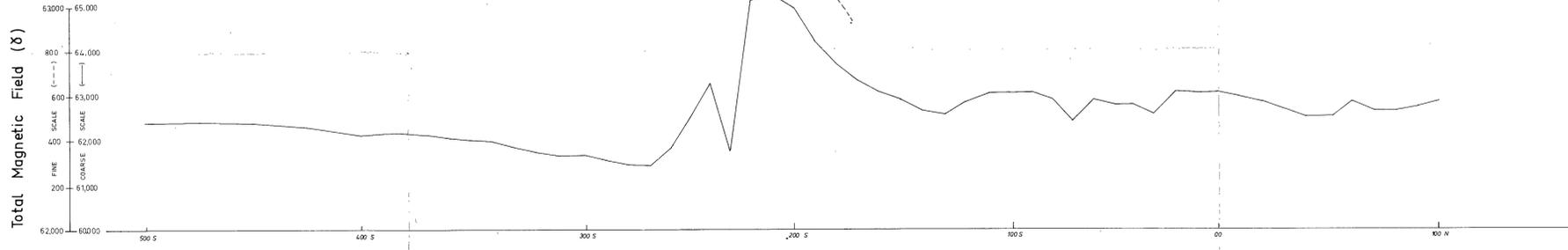
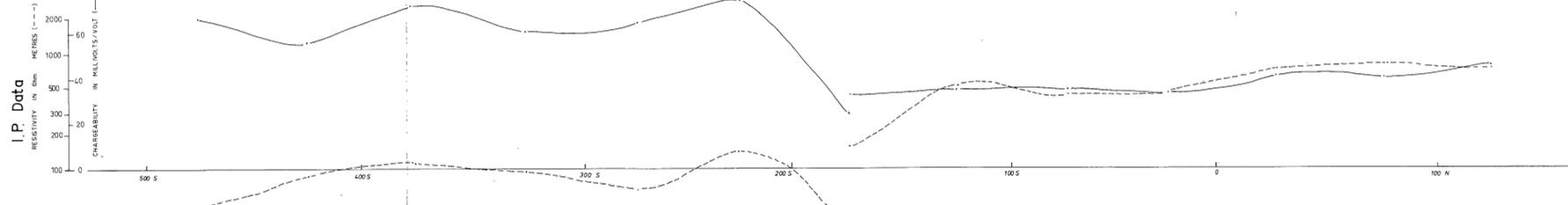
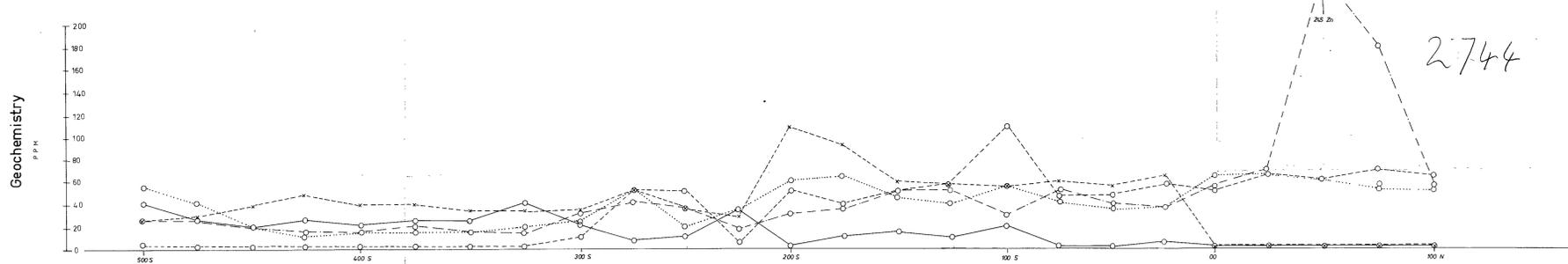
GEOLOGIST: *[Name]* SCALE: 1:40,000 METRES

DRAWN BY: *[Name]* DATE: *[Date]*

REVISIONS: *[List]* DRAWING No. **FIG.1**

2743

2744

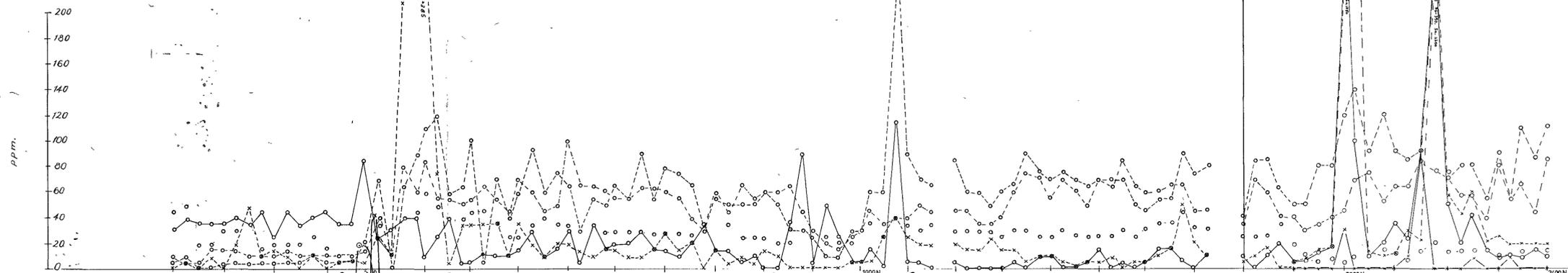


<p>5m</p> <p>112023</p> <p>RENISON LIMITED</p> <p>EL 18/73 MT. LINDSAY AREA</p> <p>HOLE ML 56 - LINE N°17</p> <p>GEOLOGIST L.A. Newnham DRAUGHTSMAN J.M. Matthews DATE April 1980</p> <p>REVISIONS</p>		<p>SCALE 1:1000 METRES</p> <p>0 20 40</p>	<p>I.P. DATA</p> <p>— Chargeability</p> <p>- - - Resistivity</p>	<p>MAGNETICS</p> <p>— 5000 γ Scale</p> <p>- - - 1000 γ Scale</p>	<p>SOIL GEOCHEMISTRY</p> <p>○ Sn</p> <p>○ Cu</p> <p>○ Pb</p> <p>○ Zn</p> <p>x As</p> <p>x W</p>	<p>LEGEND</p> <p>VOLCANICLASTIC SEDIMENTS</p> <p>Strongly magnetic zones</p> <p>Non magnetic zones</p> <p>CHERT</p> <p>WOTTLED ZONES</p> <p>CARBONATE ZONE</p> <p>Inner chert and calc-silicates</p> <p>CALC SILICATES</p> <p>CLAY</p> <p>Wetted carbonate and/or calc-silicates</p> <p>SKARN MINERALISATION</p> <p>Magnetite, pyrrhotite and phlogopite</p> <p>FAULT ZONE</p> <p>HEREDITH GRANITE</p>
--	--	---	--	--	---	--

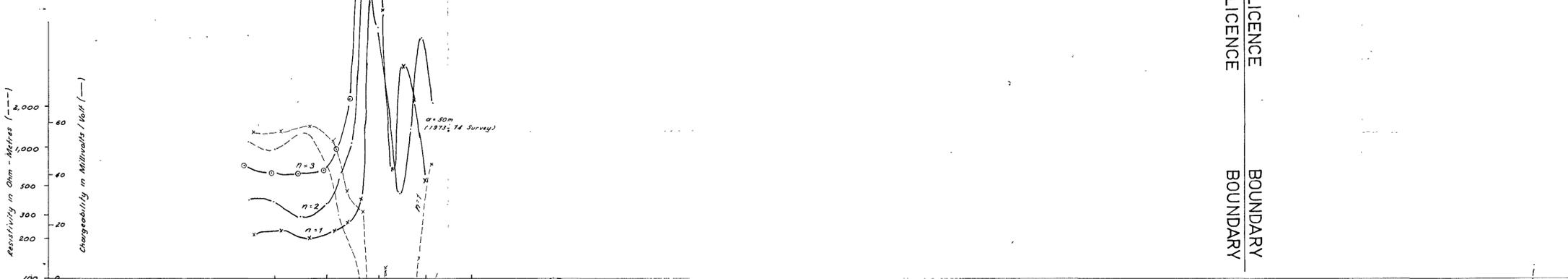
Section looking N.W.

N/E Distances slope not horizontal

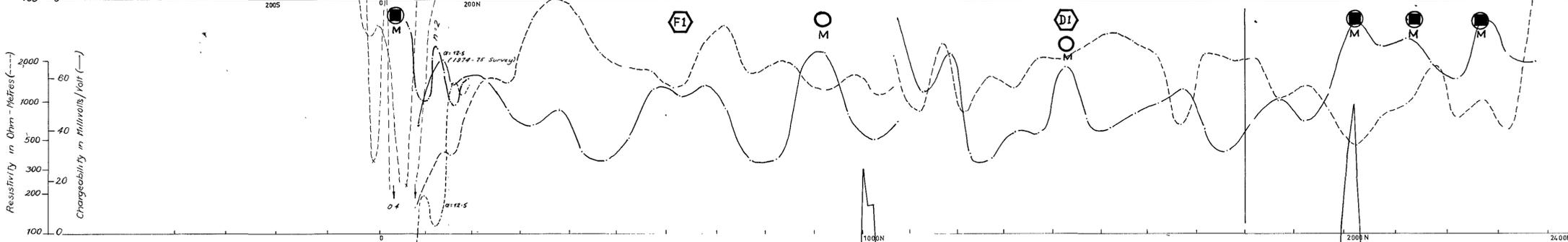
Geochemistry



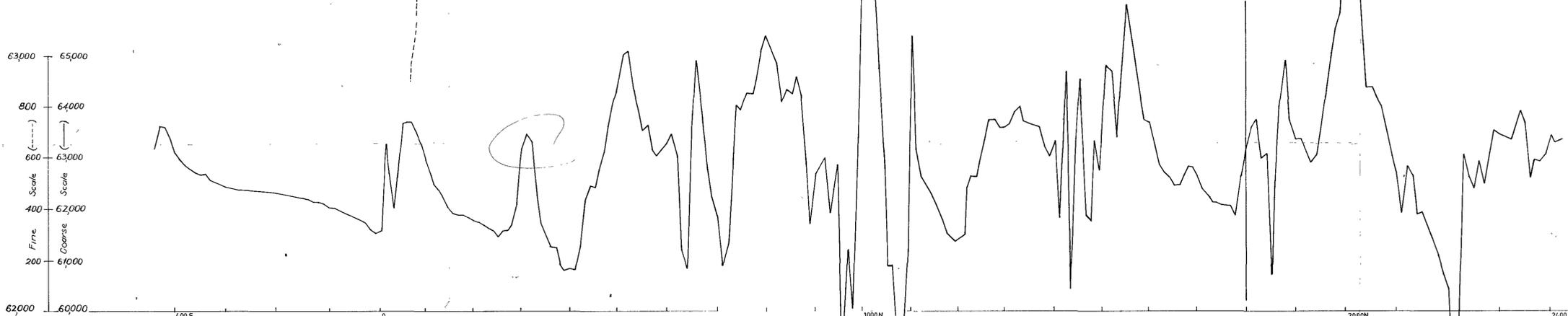
M.I.P. & I.P. Data



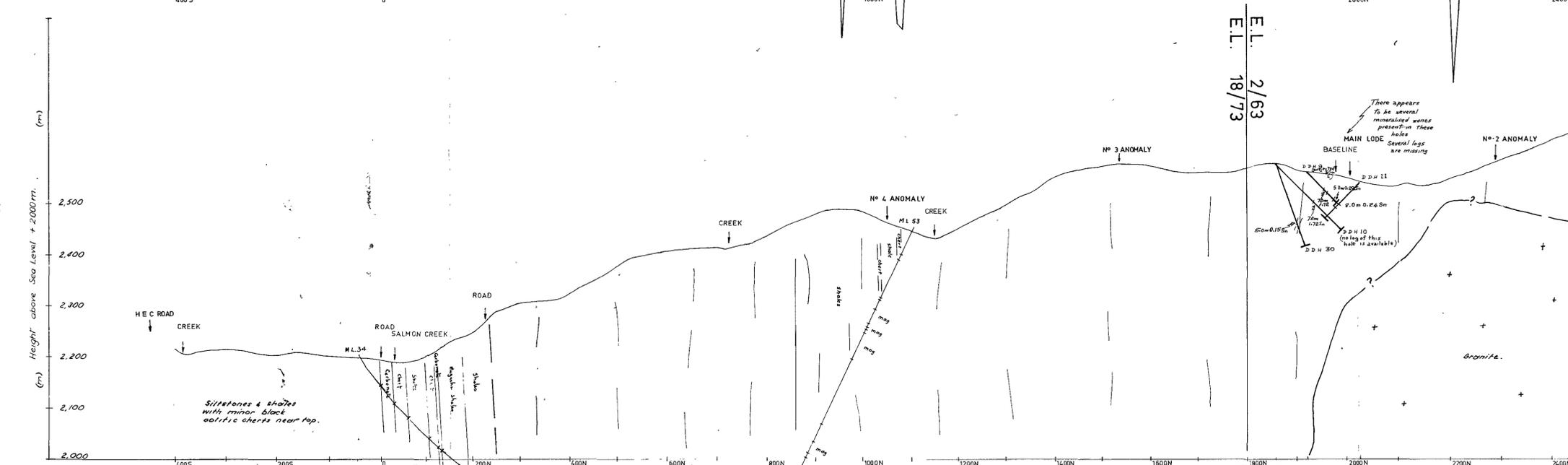
I.P. Data



Total Magnetic Field (δ)



Topography & Geology



LICENCE
BOUNDARY

E.L. 2/63
E.L. 18/73

RENISON LIMITED
E.L. 18/73
MT. LINDSAY GRID.
LINE M.L. 13

DRAWN	RRS
TRACED	FAC
DATE	MAY '74
SCALE	1:5000
DRAWING No.	
MLP 87	

Chargeability, 5000 & Scale
Resistivity, 1000 & Scale

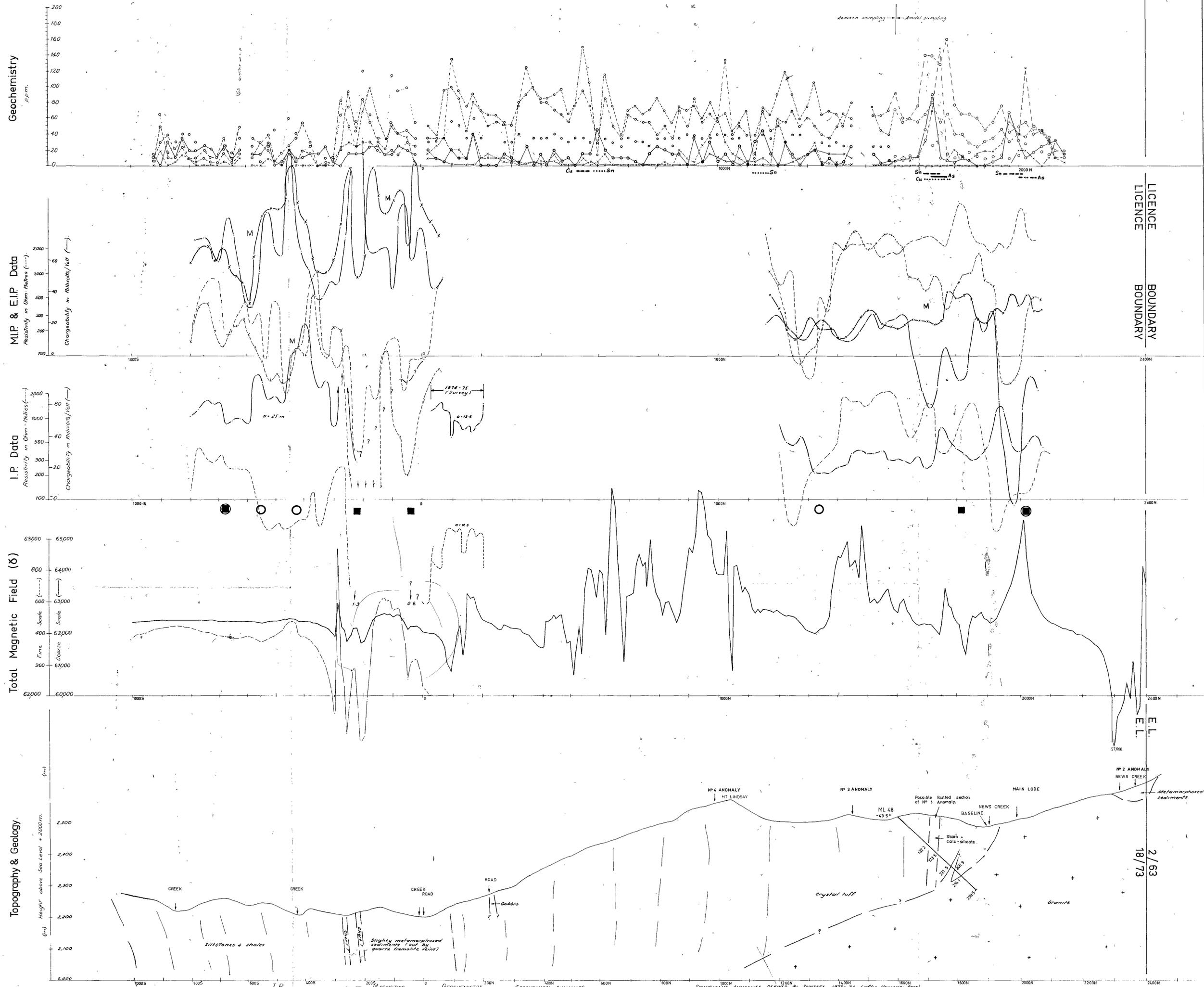
Geochemistry
Cu, Sn, Zn, As, W

Geochemical Anomalies
Strong, Medium, Weak
(Element referred to shown beside symbol)

Chargeability Anomalies
Strong, Moderate, Weak

Anomalies defined by J. Irvine (July 1974) as having a high geophysical priority because of coincident magnetic, I.P. and conductivity response. All zones are near vertical and come near to surface.





LICENCE BOUNDARY

E.L. 18/73

2/63

RENISON LIMITED

E.L. 18/73.
MT. LINDSAY GRID.
LINE M.L. 14

SCALE: 1:5000 METRES

DRAWN	R.R.S.
TRACED	
DATE	Jan '74
SCALE	1:5000
DRAWING No.	
MLP 39	

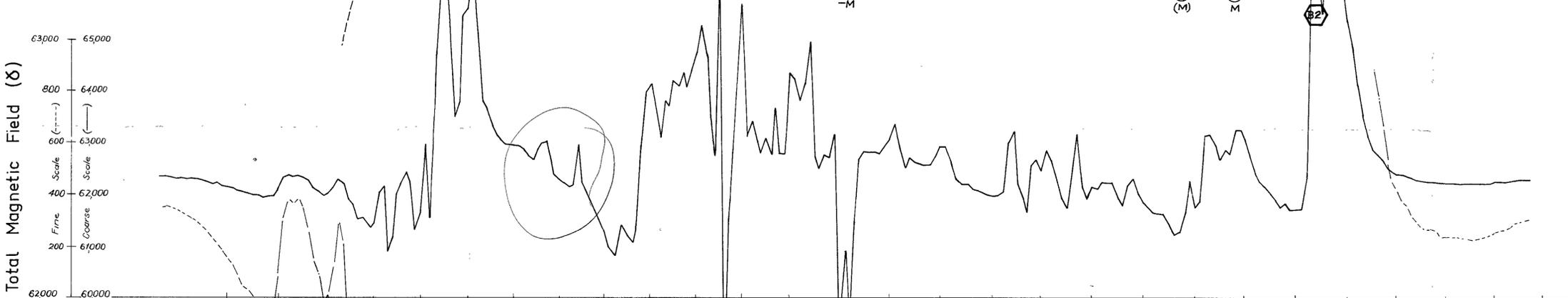
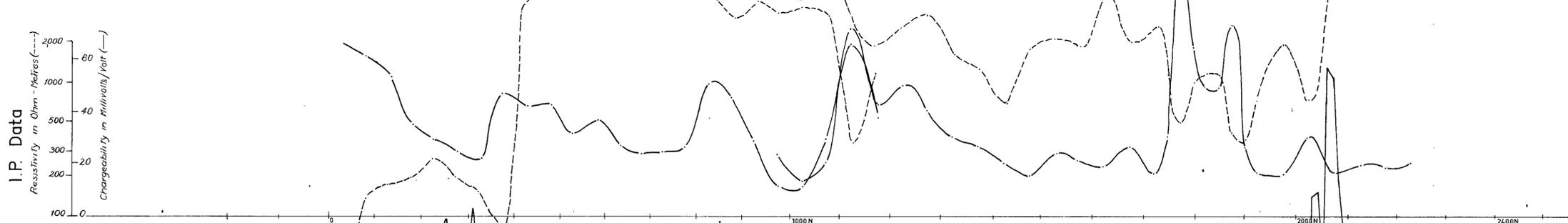
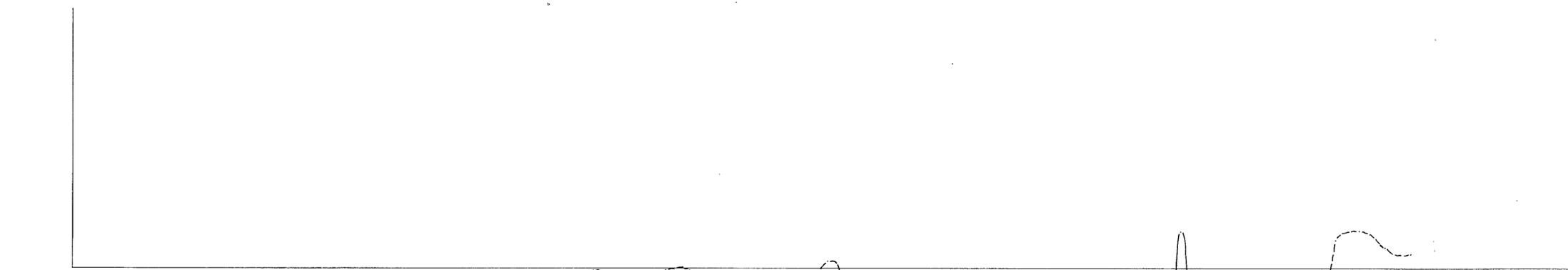
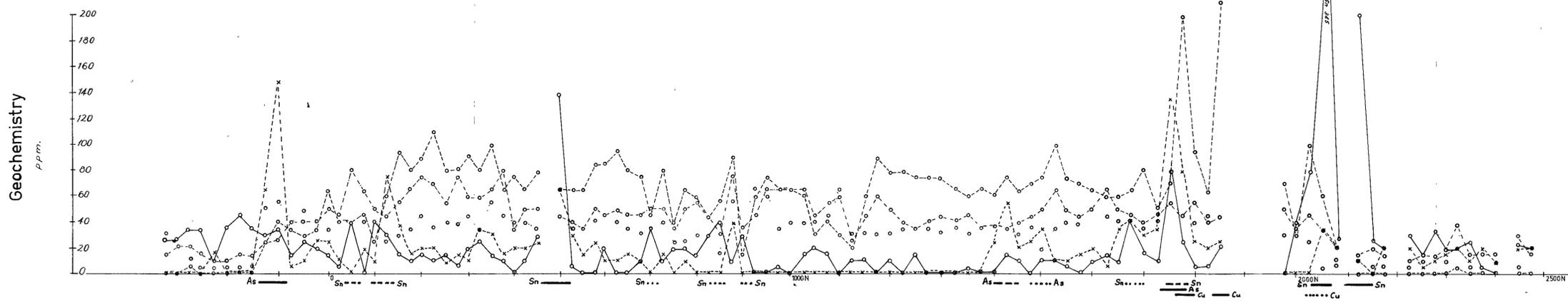
MAGNETICS
 Chargeability: 5000 & Scale
 Resistivity: 1000 & Scale
 G - Gradient
 M - Moving Source

GEOCHEMISTRY
 Sn ——— Strong
 Cu ——— Medium (Element referred to shown break symbol)
 Pb ——— Weak
 Zn ———
 As ———
 W ———

GEOCHEMICAL ANOMALIES
 Sn ——— Strong
 Sn - - - - - Medium
 Sn Weak

ANOMALIES
 ● Strong
 ■ Moderate
 ○ Weak
 M = Co-incident Magnetic Response





RENISON LIMITED
 E.L. 18/73
 MT. LINDSAY GRID
 LINE M.L.15

SCALE: 1:5000 METRES

DRAWN	RRS
TRACED	
DATE	MAY '74
SCALE	1:5000
DRAWING No.	
MLP 96	

Chargeability
 --- 5000 γ Scale
 --- 1000 γ Scale

Resistivity
 --- 5000 Ω Scale
 --- 1000 Ω Scale

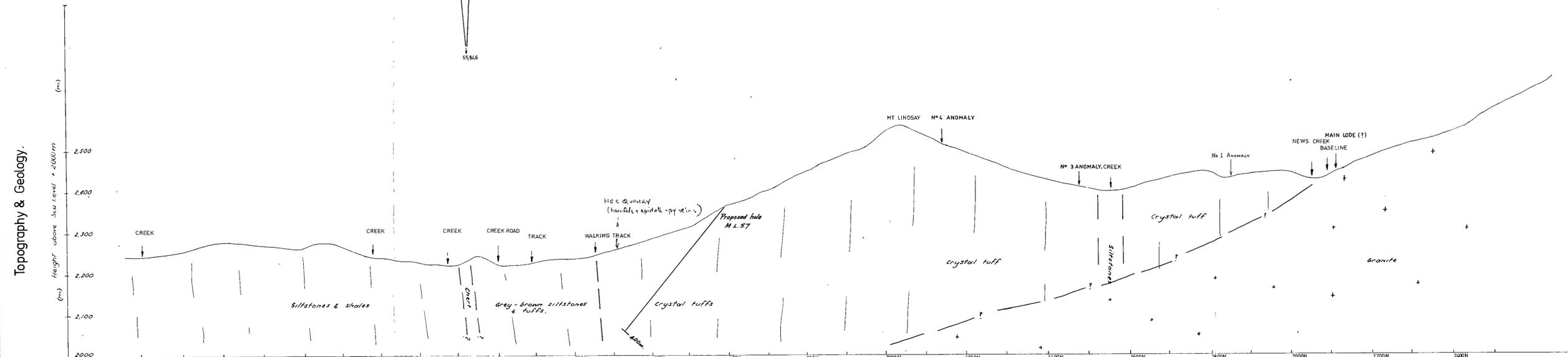
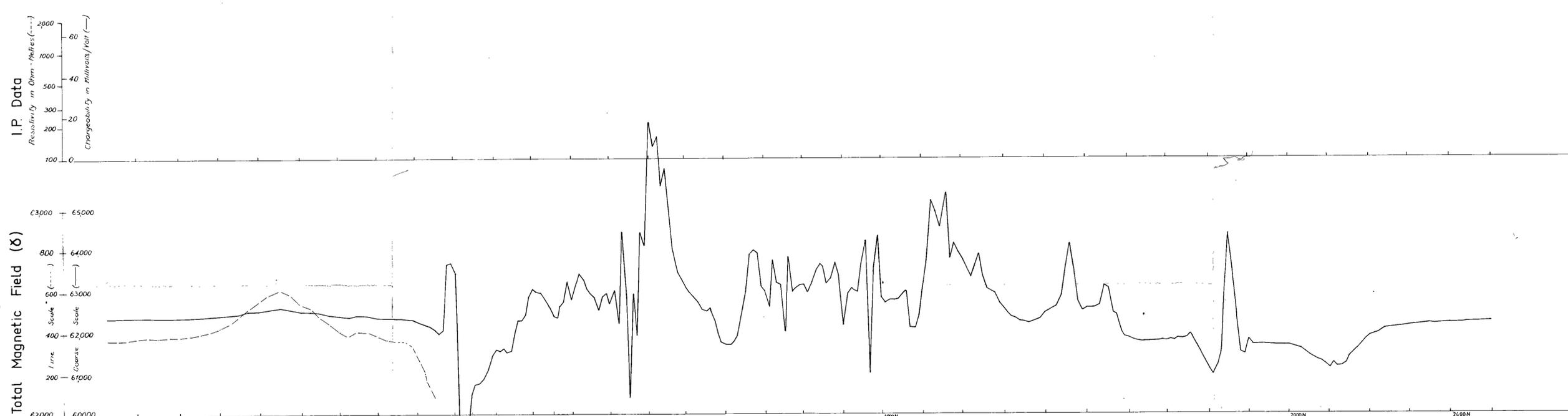
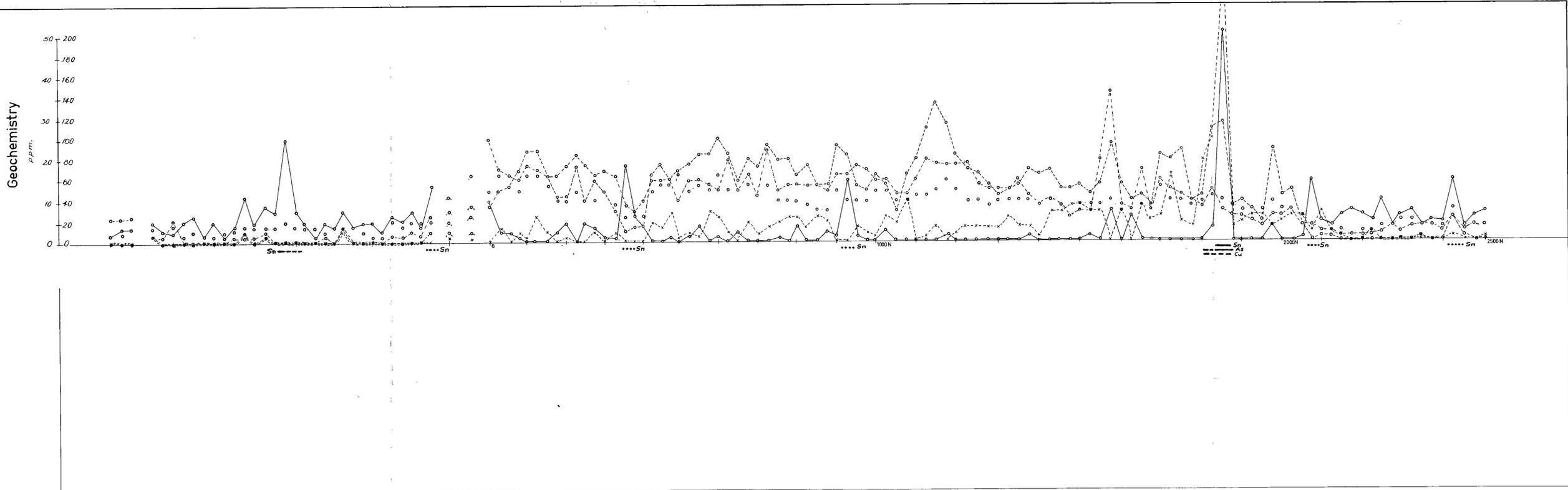
GEOCHEMISTRY
 Sn --- Strong
 Cu --- Medium
 Pb --- Weak
 Zn --- Weak
 As --- Weak
 W --- Weak
 (Element referred to shown beside symbol)

GEOCHEMICAL ANOMALIES
 Sn --- Strong
 Sn --- Medium
 Sn --- Weak

SIGNIFICANT ANOMALIES DEFINED BY SCINTREY 1973-74 (After Howland-Rose)
 Chargeability Anomalies:
 (M) Strong
 (M) Moderate
 (O) Weak

Other Symbols:
 (Zz) Anomalies defined by J Irvine (July 1974) as having a high geopotential anomaly because of coincident magnetic, I.P. and conductivity response. All zones are near vertical and some near to surface.

5 cm



RENISON LIMITED
 E.L. 18/73
 MT. LINDSAY GRID.
 LINE M.L. 16.

DRAWN	R.R.S.
TRACED	
DATE	MAY '74
SCALE	1:5000
DRAWING No.	

SCALE: 1:5000 METRES.

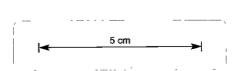
MLP 97

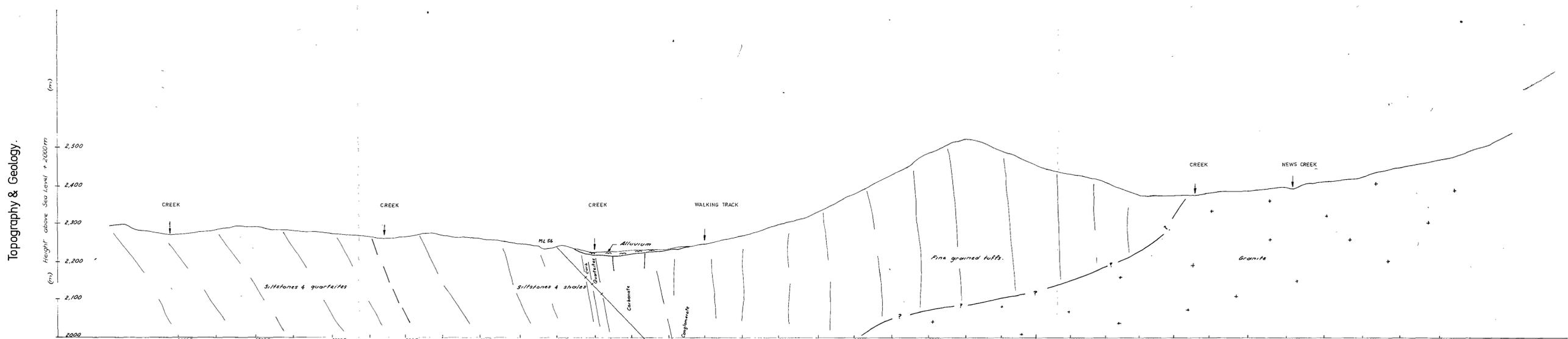
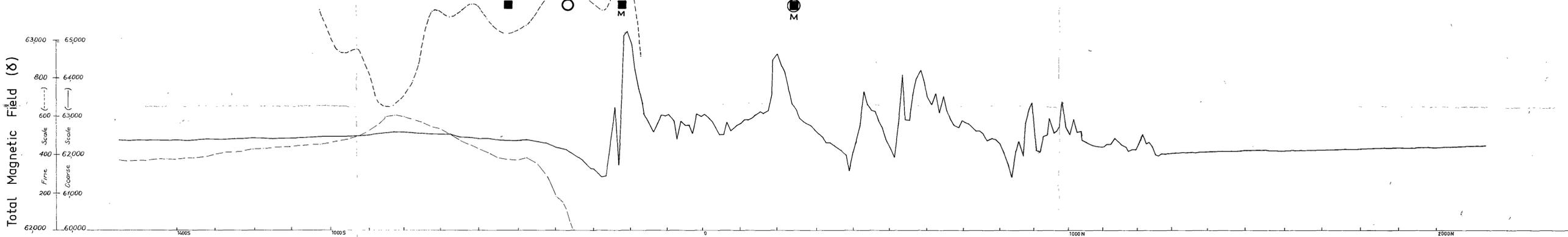
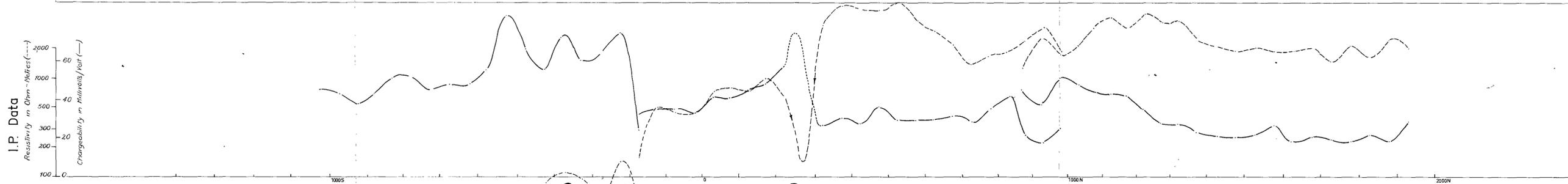
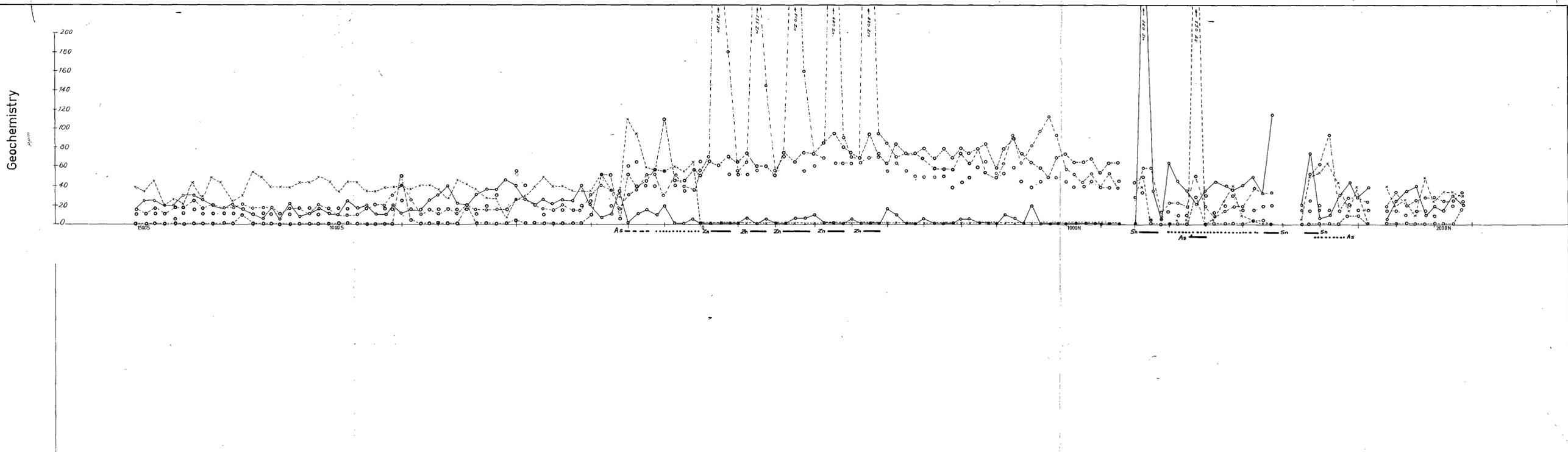
I.P.
 Chargeability (solid line)
 Resistivity (dashed line)

MAGNETICS
 5000 γ Scale (solid line)
 1000 γ Scale (dashed line)

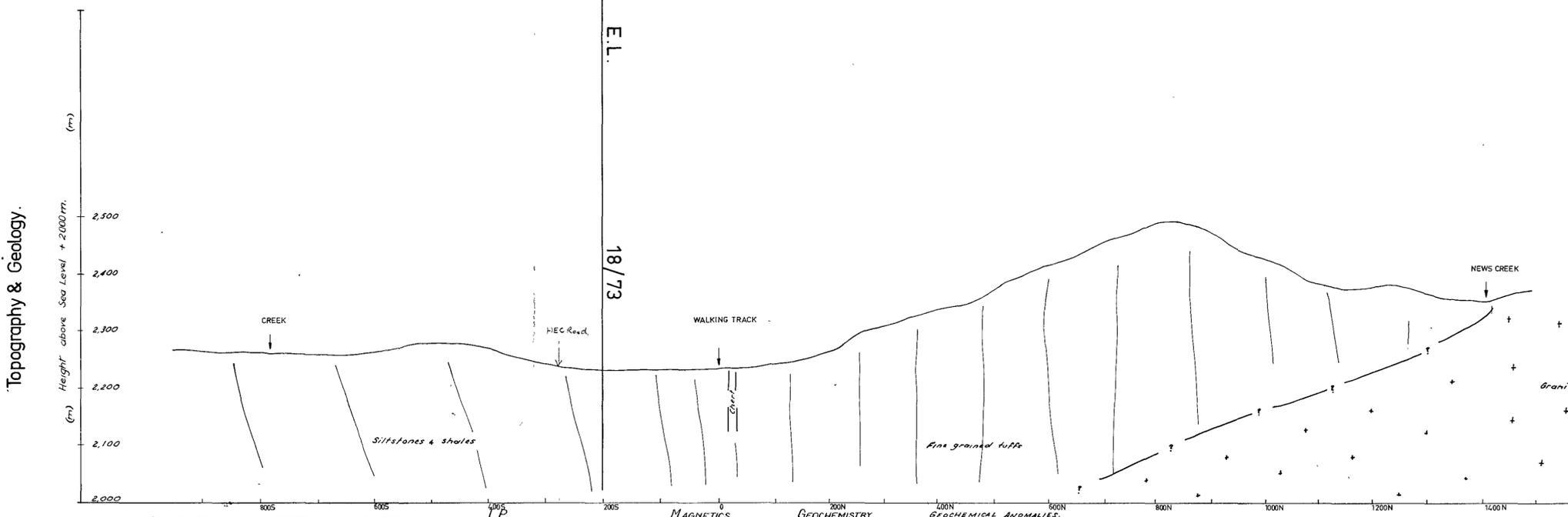
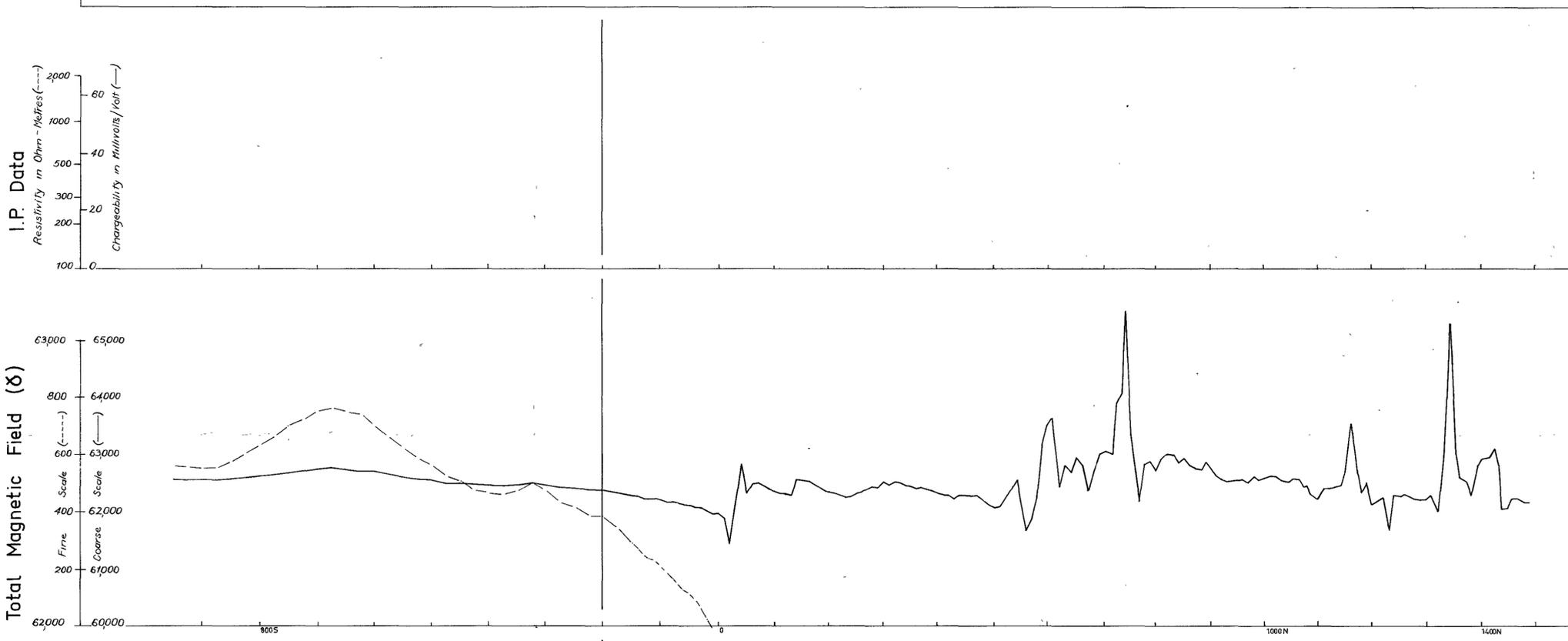
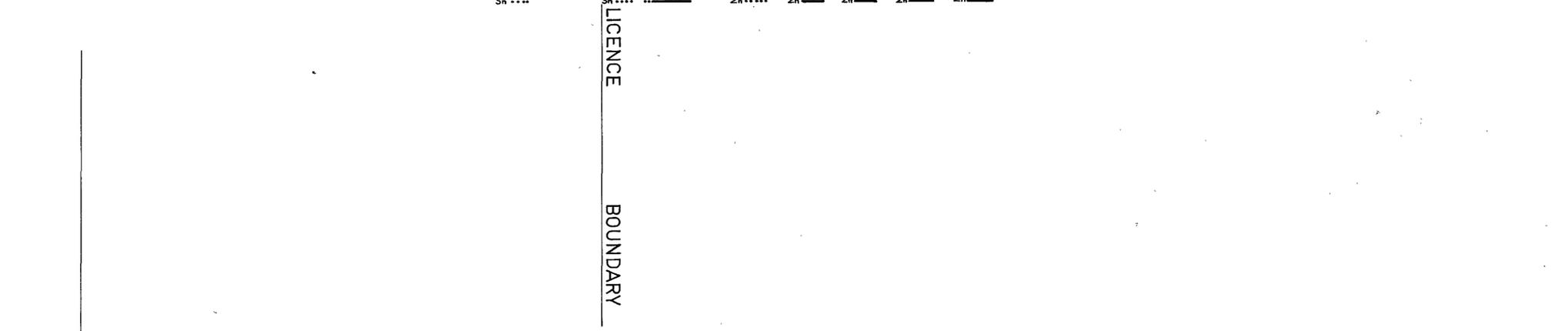
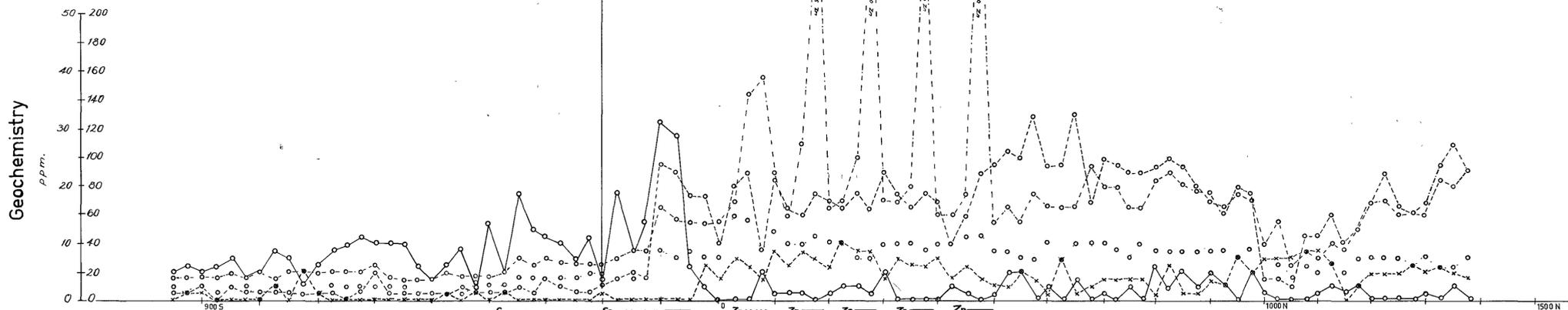
GEOCHEMISTRY
 Sn (solid line with circles)
 Cu (dashed line with squares)
 Pb (dotted line with triangles)
 Zn (dash-dot line with diamonds)
 As (x-x-x)
 W (x-x-x)

GEOCHEMICAL ANOMALIES
 Sn — Strong (Element referred to shown beside symbol)
 Sn - - - Medium
 Sn . . . Weak





RENISON LIMITED E.L. 18/73 MT. LINDSAY GRID M.L. LINE 17. SCALE: 1:5000 METRES 	DRAWN RRS. TRACED DATE MAY '74 SCALE 1:5000 DRAWING No.	MAGNETICS Chargeability (5000 gamma scale) Resistivity (1000 gamma scale)	GEOCHEMISTRY Sn (Strong) Cu (Medium) Pb (Weak) Zn (Medium) As (Weak) W (Weak)	GEOMORPHOLOGICAL ANOMALIES Sn (Strong) Sn (Medium) Sn (Weak)	SIGNIFICANT ANOMALIES DEFINED BY POINTS 1973-74 (After HOWLAND-ROSE) Strong (Solid Square) Moderate (Solid Circle) Weak (Open Circle) Chargeability anomalies (Solid Square with 'M')
	MLP 98	(Element referred to shown search symbol)			
	5cm				
	2750 80-1410 112029				

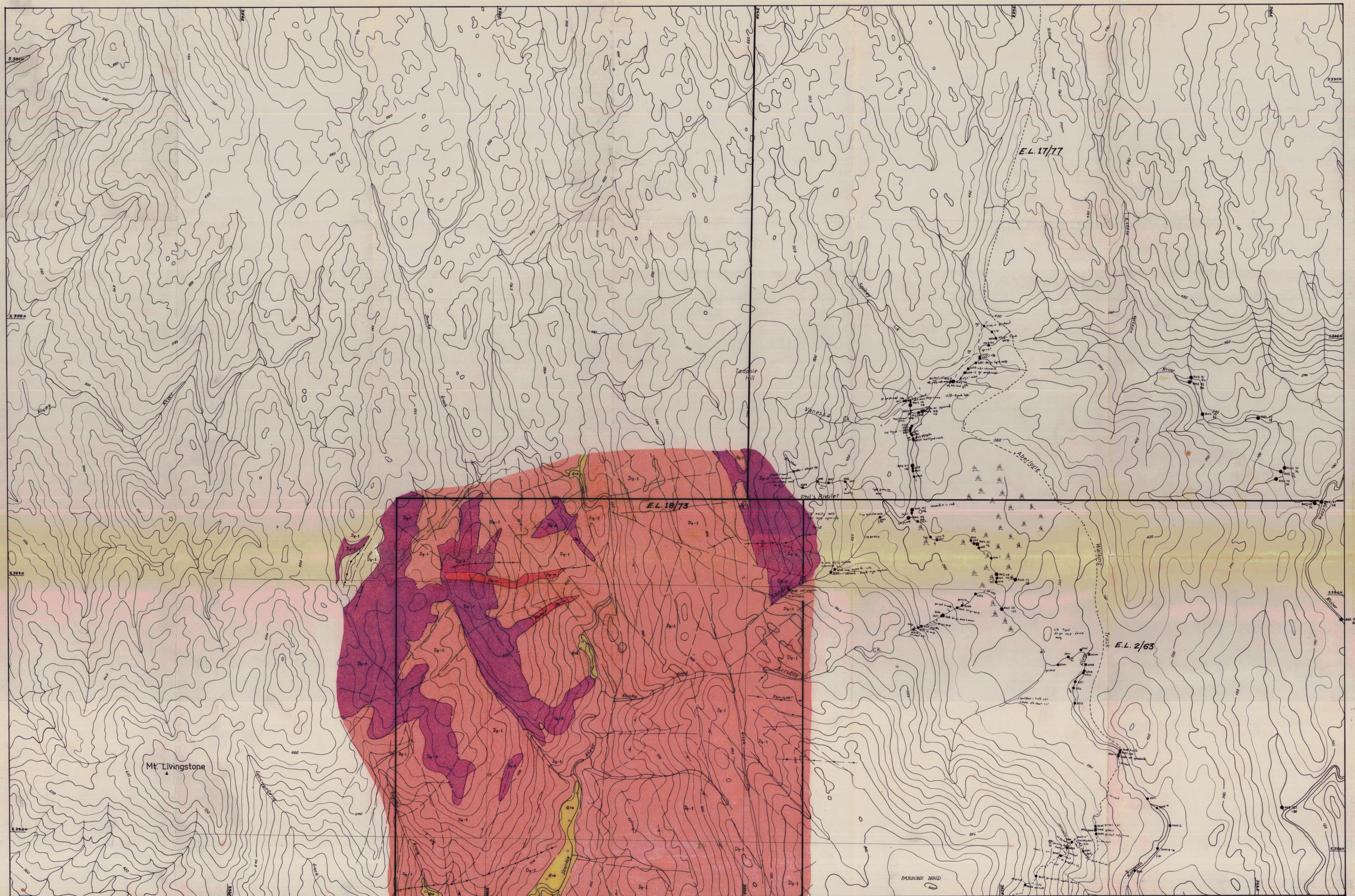


RENISON LIMITED
 E.L.18/73
 MT. LINDSAY GRID
 LINE M.L.18
 SCALE: 1:5000 METRES

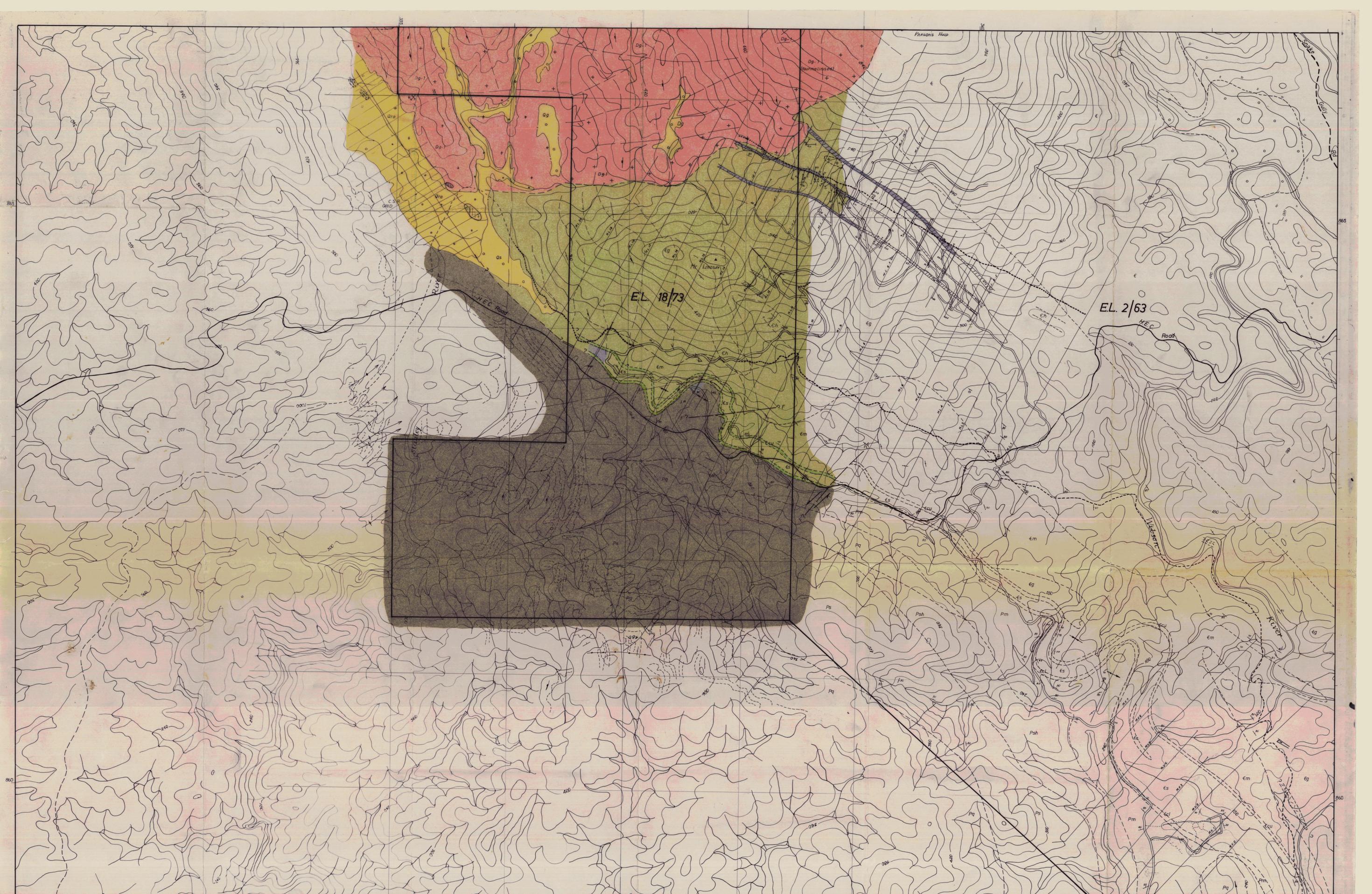
DRAWN	R.R.D.
TRACED	
DATE	MAY '74
SCALE	1:5000
DRAWING No.	
MLP 99	

- MAGNETICS**
 ~~~~~ Chargeability.  
 ~~~~~ Resistivity
- GEOCHEMISTRY**
 ○----- Sn
 ○----- Cu
 ○----- Pb
 ○----- Zn
 x----- As
 x----- W
- GEOCHEMICAL ANOMALIES**
 Sn ——— Strong.
 Sn - - - - Medium (Element referred to shown beside symbol)
 Sn. Weak





| | | | | | | | | | |
|--|--|---|--|----------------|----------------|----------------|----------------|-------------|--|
| <p>Geol. contact definite
probable</p> <p>Dyke</p> <p>Strike and dip of jointing</p> <p>Strike and dip of foliation</p> <p>Fault</p> | <p>Geology shown on E.L. 18/73 taken from Hunting Airphoto interpretation maps of Meredith Granite, June 79.</p> <p>Qra - Recent Alluvium</p> <p>Dm - Microgranite, Microgranite dykes</p> <p>Dg - Quartz-porphyr and fine grained porphyritic granite (undergoes qtz-tourmaline alteration)</p> <p>Dg-1 - Coarse - very coarse adamellite</p> | <p>GEOCHEMISTRY</p> <p>● BUT 12 Panned Stream and Bank Sample Numbers (ANZ Exp^l Co 1976)</p> <p>● Rock sample (Renison)</p> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">CORINNA
D/1</td> <td style="text-align: center;">CORINNA
D/2</td> </tr> <tr> <td style="text-align: center;">CORINNA
D/3</td> <td style="text-align: center;">CORINNA
D/4</td> </tr> </table> | CORINNA
D/1 | CORINNA
D/2 | CORINNA
D/3 | CORINNA
D/4 | | |
| CORINNA
D/1 | CORINNA
D/2 | | | | | | | | |
| CORINNA
D/3 | CORINNA
D/4 | | | | | | | | |
| <p>RENISON LIMITED</p> <p>CORINNA D/1</p> <p>INTERPRETATIVE GEOLOGY</p> <p>SCALE: 1:10,000 METRES</p> <p>0 200 400 600</p> | | <p>SCALE: 5 cm</p> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DRAWN L.A.M.</td> <td style="width: 50%;">DATE 17-4-80</td> </tr> <tr> <td style="width: 50%;">TRACED J.M.M.</td> <td style="width: 50%;">SCALE 1:10,000</td> </tr> <tr> <td colspan="2" style="text-align: center;">DRAWING No.</td> </tr> </table> | DRAWN L.A.M. | DATE 17-4-80 | TRACED J.M.M. | SCALE 1:10,000 | DRAWING No. | |
| DRAWN L.A.M. | DATE 17-4-80 | | | | | | | | |
| TRACED J.M.M. | SCALE 1:10,000 | | | | | | | | |
| DRAWING No. | | | | | | | | | |



| COONAH FORMATION | | CRIMSON CREEK FORMATION | | TERTIARY | | INTRUSIVES | | KEY | |
|------------------|---------------------------------|-------------------------|-------------|----------|---|------------|--|-----|---|
| Pq | Massive Quartzite | Ec | Chert | Tg | Alluvium, Swans etc. (O5, Ora, Og) | Dg-1 | Devonian granite (Gorse-V. Cap. schistose) | — — | Strike & dip of beds |
| Pg | Siltstones | Ecl | Lower Chert | Tg1 | Mainly tuffs, some fine clastic sediments | Tg2 | Cambrian gabbro | — — | Anticline Syncline showing plunge |
| Psh | Shales, often graphitic & silty | Ecs | Siltstones | Tg2 | Cambrian, Ludlow shales | Tg3 | Cambrian, Ultramafic | — — | Inferred fault |
| Pm | Mudstones, siltstones | Ecu | Upper Chert | Tg3 | Horstfels | Tg4 | | — — | Mt Lindsay Mine Anomalies (After Aberfoyle) |

Note: Mapping mainly by R.R. Scheelekens 1972-1974 and Hunting Airphoto interpretation of Meridith Granite Region, June 1979.
 Scale: 1:10,000 METRES
 5cm

RENISON LIMITED
CORINNA D/3
 INTERPRETATIVE GEOLOGY.

| | |
|-------------|----------|
| DRAWN | L.A.N. |
| TRACED | J.M.M. |
| DATE | 17-4-80 |
| SCALE | 1:10,000 |
| DRAWING No. | |

SCALE: 1:10,000 METRES
 80-1410
 112032 2753