

E.L. 2/63, Tasmania

End of Project Report, Wilson River-
Pieman Area.

G. Krummel

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Subject: End of Project Report, Wilson River - Pieman Area,
E.L. 2/63, Tasmania.

Period: April/Mid-May 1971, March-June 1972. 727002

Date: 15th October, 1972.

By: G. KRUMMEL.

1. SUMMARY

1.1 Objectives

The reconnaissance exploration programme was designed to outline sub-areas for more detailed investigation for the presence of tin/base metal deposits of the Cleveland/Renison Bell type in the Cambrian Crimson Creek series in the proximity and to the east of the Oonah/Crimson Creek series contact between Salmon Creek in the Northwest and the boundary of E.L. 2/63 in the south.

1.2 The programme

The work undertaken consisted of line cutting, gridding soil sampling at 100' stations, magnetic traverses at 50 ft. stations, geological mapping and self potential traverses using 50 ft. station separation along the cut lines. S.P. results were tied in along the track in the area. Zero point for the self potential survey is point 00E on line WRA 70N on the Renison Bell-Pieman track.

The magnetic results are presented as profiles corrected for diurnal variation only.

1.3 The findings

The responses of the area to geochemical, magnetometer and self potential surveys were generally of a low order of magnitude. However, this could be reconciled from considerations on depth of occurrence of any possible mineralization in the area. There is inconclusive surface evidence for the presence of favourable geological structures and further efforts will have to be directed towards obtaining adequate geological information in the area.

Despite the shortcomings of the methods employed, it is considered that at least 5 sub-areas have been outlined which require further careful investigation for the presence of tin-sulphide mineralization.

1.4 Recommendations

It is recommended that further exploration in the Pieman-Wilson River sectors of E.L. 2/63 should continue and that, in the event of a farmout arrangement, the Aberfoyle group should strive to retain a high initial interest in the property.

2. INTRODUCTION

The Mt. Lindsay deposit was discovered in 1909. Mining commenced in 1910 and continued until 1921 when the mining company disbanded. The mine was then let on tribute until 1932.

The Aberfoyle Group has been active in the Mt. Lindsay Area since 1962. On 1st April, 1963 an Exploration Licence, renewable at six monthly intervals, was acquired for the area including and surrounding the old Mt. Lindsay tin

prospect. Since then work at the prospect and in the E.L. area has been undertaken on a seasonal basis.

- 1962: Report by J.L. Morton on the Mt. Lindsay deposit. 4 Diamond drill holes were proposed.
- 1963: 4 Diamond drill holes completed. Reserves estimated at 72,000 tons assaying 0.875% Sn.
- 1964: Further 10 drill holes completed, 6 of which intersected barren lode material.
Revised ore reserve estimate: Total (ind. + inf.) 362,000t at 0.855% Sn.
- 1965: Further 9 drill holes were completed, without intersecting ore. Revised ore reserve estimate: Total (ind. + inf.) 208,799t at 0.832% Sn.
- 1966: No field work.
- 1967: No field work.
- 1968: General exploration of area surrounding the known deposit. Similarity is noted between the geological sequence of the Mt. Lindsay area and the Renison Bell sequence. Aeromagnetic anomalies over serpentinites in the Camp 30 area investigated. No surface indications of mineralization.
- 1969: Diamond drilling at Anomaly 2 (Mt. Lindsay) and at Camp 30. 7 drill holes completed. No change in ore reserve estimates.
- 1970: General investigations in the Mt. Lindsay area and in the Stanley River area.
- 1971: Semi-regional exploration (geochem, geology, magnetics) along the Oonah/Crimson Creek Series contact in the Pieman-Wilson River Area.
- 1972: Continuation of above programme. Self potential coverage of selected parts of established grid lines.
- 1972-73: Discussions on a farmout of the area at time of writing this report.

2.1 Ownership

The exploration licence area 2/63, currently amounting to 48 square miles, is held by Aberfoyle Tin N.L. a wholly owned subsidiary of Aberfoyle Ltd. Cominco Australian acquired a 55% equity in Aberfoyle Ltd., in September 1971.

Since 1969 exploration in the area was undertaken on a joint venture basis with the following participants and equities:

Paringa Mining and Exploration Co. Ltd.	:	59.5767%
Storeys Creek Tin Mining Co. N.L.	:	28.6973%
M.A.T. Exploration Pty. Ltd.	:	(with-
drawn; diminishing interest)	:	3.1168%
Aberfoyle Ltd.	:	8.6092%

Negotiations are currently in progress for a farmout of the area to Consolidated Goldfields of Australia and Renison Ltd.

2.2 Location

The area investigated during the last two seasons is centred on lat. S long. E and lies in the S.W. part of E.L. 2/63 approximately 7 miles N.W. of Renison Bell, Tasmania (Fig. 1)

The topography of the area is rugged with steep slopes covered by dense rain forest. Major valleys are generally steeply incised but despite the youthful profile rock outcrop is relatively sparse. Access is difficult to most parts of the areas with the exception of the south east which is serviced by a four-wheel drive vehicle track which terminates at the Pieman River and is subject to seasonal deterioration. Crossing of the Pieman River is achieved by means of a "flying-fox" arrangement. Access to areas beyond the Pieman River is on foot or by helicopter. Shallow fording facilities exist in the summer a few hundred yards downstream from "the cage". Neither the Pieman nor the Wilson River have a bridgehead and both rivers present serious obstacles to access and prospecting in the area.

The nearest township is the mining township of Renison Bell, approximately 7 miles to the S.E. of the area. Telephone, power, good road access is available. All other facilities are limited. The nearest major towns are the mining towns of Rosebery (15 miles approximately by road and track) and Zeehan (17 miles approximately by road and track).

The average annual rainfall of the area is of the order of 100 inches per annum.

2.3 Previous exploration

There has been extensive surface exploration of several localised areas within the present boundaries of E.L. 2/63. This is reviewed broadly in section 1.1.

<u>Area</u>	<u>Total drilled</u>
Mt. Lindsay Prospect:	9,616 feet
Camp 30 area :	150 feet

2.4 Production

Production records for the area are poor.

At the Mt. Lindsay deposit approximately 108 tons of tin concentrates were produced between October 1916 and January 1921. The mine was let on tribute till 1932 but production records are not available.

Osmiridium is known to have been produced from creeks and rivers draining the serpentinite belt in E.L. 2/63 but the quantities produced from this field are not known.

2.5 Objective

The aims of the current programme of exploration were to:

- i) outline if possible the contact between the ?pre-Cambrian Oonah Quartzites and the Lower Cambrian Crimson Creek series by geological mapping.

- ii) to obtain indications of tin-pyrrhotite-copper-zinc mineralization of the Cleveland/Renison Bell type using a geological, geochemical and ground geophysical approach.
- iii) to outline sub-areas of interest warranting further follow-up work.

3. CURRENT EXPLORATION

3.1 Reconnaissance

Some degree of stratigraphic control on mineralization at the Mt. Lindsay deposit was observed. Eshuys and Etheridge (1968) noted similarities between the geological sequences of the Mt. Lindsay area and Renison Bell. Attention was focused on the contact area between the Oonah Quartzites and the Crimson Creek series. Dolomitic beds favourable to replacement by tin-pyrrhotite mineralization occur in this geological setting at the Renison Bell mine in association with faulting. Reconnaissance traverses were carried out in the Wilson River area by Roetz, Cameron and Allen (1969) who mapped a series of dolomitic horizons.

As the area investigated is some distance removed from any visible source of mineralization (e.g. Merdith granite or porphyry) it is concluded that ore bodies, if present, will be deep seated and probably non-outcropping.

The current programme investigated in somewhat greater detail the area examined by Roetz et.al. The work was extended to cover the entire strike length of the Oonah/Crimson Creek series contact from Crimson Creek south to the southern boundary of E.L. 2/63.

3.2 Geological Mapping

Traverses were undertaken along grid lines approximately 1,000 feet apart. True bedrock exposure is very sparse and confined chiefly to river banks, creeks and track cuttings. Float occurs on steeper slopes, and it appears that it is not far removed from its source. (Fig. 7(a) and (b))

Direction of grid lines: 62° magnetic, approx. normal to regional geological structures.

Method of grid layout: tape and compass, with slope corrections.

Total line feet traversed: 87,800 feet.

Area covered: $4\frac{1}{2}$ miles x 1 mile approx.

The work has served to localise more accurately the contact between the Oonah Series and the Crimson Creek Sediments. In a future programme additional effective coverage could be obtained from river and creek traverses in the area and by traverses at regular intervals between established lines.

3.3 Geochemical Survey

3.3.1 Area covered: $4\frac{1}{2}$ miles x 1 mile approx.

Line feet sampled: 106,200

No. of soil samples: 900

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No. of analyses (Cu, Zn, Mn, As): 3,600

" " " " Sn 98

Coverage: lines 150N - 190N part of 150N, 160N
sampled at 200 ft. centres.

line 30N - 140N, part of 150N, 160N,
200-250N sampled at 100 ft. centres.

Attempts were made wherever possible to collect soil material from below the humic horizon using a hand auger.

3.3.2 Results

The results are as follows:

Cu: range: 1-490 ppm; estimated mean value: 50 ppm
(visual inspection).

Sn: range: 2-50 ppm; estimated mean value: 6 ppm
(visual inspection).

As: range: less than 2.5-300 ppm; estimated
mean value: 4 ppm (visual inspection).

Mn: range: 2-11,000 ppm; estimated mean value:
200 ppm (visual inspection)

Zn: range: 1-335 ppm; estimated mean value:
55 ppm (visual inspection).

i) Copper:

Concentrations of copper in the area are generally low. A contoured plot of results shows a series north west trending zones which are particularly well developed to the north west of line 120N. Pockets of copper in excess of 120 ppm lie scattered within several of these zones. (Fig. 3(a) and (b))

ii) Manganese:

The contoured results for the element show dispersion trends somewhat similar to those of copper. The axis of the areas with anomalous values in excess of 1000 ppm Mn trend to the N.W. Two large anomalous zones occur at the western extremity of the area between lines 200N and 240N. The larger of the two anomalies has a strike length of about 3600 feet and a width of 800 feet and a high of 1,000 ppm Mn (220N/3300E). (Fig. 4(a) and (b))

iii) Zinc:

Values for zinc are low in the area, with poorly developed, weak dispersion patterns. Contouring of results again suggests a N.W. alignment of dispersion areas. These may contain scattered pockets of higher zinc values up to 335 ppm. A value of 315 ppm at Line PR 60N/00E and 190 ppm at PR 120N/200E on the banks of the Pieman River, is probably due to contamination from slimes washed from the Renison Bell slimes dam. (Fig. 4(a) and (b))

iv) Arsenic:

Concentrations have a spotty distribution and are again low, with a large proportion of values below the detection limit of 2.5 ppm. A value of 20 ppm was located at 220N/4500E. A maximum of 300 ppm occurs at PR 120N/200E, coincident with a high of 50 ppm Sn. Values at PR 90N/00E (25 ppm) PR 60N/00E (100 ppm) and PR 60N/100E (25 ppm) are probably due to contamination. A maximum of 50 ppm was encountered at PR 120N/200E. 25 ppm Sn were recorded at PR 120N/300E and PR 120N/1200E.

v) Tin:

Only samples from selected areas, which showed coincident occurrences of high Cu, Mn and As or Zn were analysed for tin.

A maximum of 50 ppm was encountered at PR 120N/200E. 25 ppm Sn were recorded at PR 120N/300E and PR 120N/1200E. (Fig. 3(a) and (b))

Interpretation of Results:

In an interpretation of the results it is necessary to refer to the mineralogy of the model cassiterite-sulphide ore-bodies in the region e.g. Renison Bell, Cleveland, Mt. Lindsay deposit and Mt. Bischoff. In the former three cases weathering of the deposits would result in a complex dispersion pattern of the base metals superimposed upon that of the cassiterite. Thus the significance of the results of this survey could best be assessed by superposition and comparison of the dispersion patterns of each element investigated. This immediately focuses attention on areas A, B, C, D and E (Fig. 3(a) and (b)) where a number of coincident geochemically anomalous areas occur. The importance of these areas, despite their relatively low absolute values, is further enhanced when compared with available magnetic and self-potential data. The positions of areas A, B and D near the Onah/Crimson Creek Series contact makes them attractive targets for further exploration for ore-bodies of the Renison Bell type.

Area C, though some 2,000 feet N.E. of the contact, nevertheless shows an interesting grouping of geochemical, magnetic and self-potential anomalies over sediments of the Crimson Creek Series. Similarly, area E near the Eastern extremity of line 110N can be interpreted to extend to line 100N along a trend which shows several closely grouped concentrations of Manganese, copper and zinc reinforced by magnetic contrast on line 110N.

Spot highs of zinc, manganese and copper close to the Pieman River on lines 70N and 80N are thought to be due to contamination as is the coincident copper, manganese arsenic high on line 60N.

4. GEOPHYSICAL WORK

- 4.1 Magnetic Survey: Area covered: $4\frac{1}{2}$ miles x 1 mile.
 Total footage traversed: 106,200 feet.
 Station interval: 50 feet
 Corrections applied: Diurnal variation only, no tie between traverse lines.
 Instrument used: lines 30N-140N, 220N-250N. McPhar M 700 Fluxgate magnetometer. By contractor.
 lines 150N-220N Scintrex magnetometer. Survey by PMECL crew.

4.2 Self-potential Survey

Selected positions of traverse lines which showed magnetic or geochemical response were scanned by the self-potential method. Contractors were Austral Exploration Services Pty. Ltd., Adelaide.

- Total line feet: 74,000
 Station interval: 50 feet
 Length of cable: 600 feet
 Equipment used: Austral SP-3 Self Potential meter with porous pots as contact electrodes.
 Area covered: $3\frac{1}{2}$ x 1 mile approximately.

4.3 Resultsi) Magnetic

The results, particularly south of line 100N, showed little variation and plotted profiles are nearly flat. This appears to be in line with prior aeromagnetic results.

Range of values - 1850γ to $+520\gamma$

The only significant result appears to be an anomaly of 1700γ between pegs 500N and 600W on line 70N west of the track. More active response was obtained along traverses between lines 120N and 230N. On line 120N magnetic contrast was recorded between pegs 300E and 1000E east of the Pieman River. On line 140N a strong low of -1850γ occurs at peg 1000E east of the Wilson River. (Fig. 6(a) and (b))

ii) Self Potential

Responses obtained in the area were generally weak and within the range of $+221$ mV to -105 mV. Lines 170N - 240N show a regional low to the west. On line 140N there is a very broad low to the east of 1000E. A number of subsidiary lows are located at 50W, 400W and possibly 1000W.

Steep gradients at the western end of lines 130N and 120N correlate with a similar gradient on line 140N.

Profiles on lines 100N - 80N are smooth. A broad minimum on line 70N correlates with a feature on line 80N. (Fig. 5(a) and (b))

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iii) Interpretation of results

These self potential results by themselves do not provide sufficient evidence to indicate drilling targets.

However, when viewed in relation to known or extrapolated geological structures and areas of geochemical interest, several of the S.P. features assume some interest.

Feature A on line 200N (Fig. 5(a)) could be due to possible faulting of the Oonah/Crimson Creek Series contact. Similarly, feature B could reflect the presence of a N.E. trending major fault postulated by Roetz, Cameron and Allen, which may carry sulphide mineralization or mineralised solutions to give the S.P. response recorded. Features C and D have no ready explanation and further geological and S.P. work is required before comment on the source of the anomalies can be made. A low of -30 mV at the base of a trough at peg 1300E on line WRA 140N occurs in an area of magnetic contrast in association with 1300 ppm Mn and 20 ppm Sn and may reflect magnetic sulphide-Sn mineralization. This anomaly appears to be repeated on line 150N around peg 3400E.

Feature G on line WRA 70N (Fig. 5(b)) is a well developed trough with a minimum of -65 mV. Its cause is unknown but it occurs in an area whose stratigraphic relationship to the Oonah Series contact requires closer investigation.

5. GEOLOGY

5.1 Regional Setting

The Pieman-Wilson River area is situated mainly over Cambrian sediments approximately 7 miles N.W. of Renison Bell, Australia's largest tin producer to date (approximately 400,000 t.p.a.). The regional stratigraphy consists of the Pre-Cambrian Oonah Series in the West and south west of the area. This sequence is overlain by units of the lower Cambrian Crimson Creek Series, of unknown thickness. An intrusive belt of Cambrian ultrabasics lies further to the S.E. (Fig. 2). It is in turn covered by a sequence of Siluro-Devonian sediments including sandstone, shale and limestone. The Devonian Meredith Granite intrudes the rocks of the area in the north. Intrusive porphyries have been located in the Pine Hill area to the S.E. of Renison Bell.

Tin and sulphide mineralization in the area is related to the later phases of the Meredith Granite intrusive. The spatial relationship between the granite and the Mt. Lindsay deposit is shown clearly in Fig. 2.

5.2 Rock Types

Despite the rugged terrain, rock outcrop was found to be sparse along the traverse lines in the Pieman-Wilson River areas. Thus in any future detailed mapping programme, attention should be given to river banks and creek beds.

The following units could be tentatively distinguished mainly on the basis of colour, in the Cambrian sequence of the area mapped.

- i) Tan mudstones: poorly bedded, light red and yellow-brown.
- ii) Crimson mudstones: generally a deep bright red colour, but may grade into lighter shades of a more pinkish colour.
- iii) Chocolate mudstone: Distinctive, dark brown, with little variation.
- iv) Khaki mudstone: Generally distinctive, but may grade into a brownish colour.
- v) Greywacke: Usually harder and fresher than the mudstones. The matrix is fine with the fragments ranging up to 4" in length.

A number of rock specimens were tested with dilute hydrochloric acid, but no indications were obtained as to the presence of dolomitic units reported by other workers to occur in the area.

The Oonah Series / Pre-Cambrian

- i) Black shale: Siliceous, hard, laminated shales, generally greyish black; often quartz reined.
- ii) Quartzite: Grey or dark-red brown in colour; coarse, hard, sugary texture.
- iii) Chert: Glassy, hard, jaspery; dark red to wine-red in colour. e.g. near peg 3000E line 150 to N.W. just off Mt. Lindsay track. (? Red Rock of Renison Bell.)

Intrusion

- i) Dolerite: Hard grey-green, finely crystalline with spots and veinlets of sulphide. The latter comprise pyrrhotite, pyrite and chalcopyrite.

5.3 Structural Geology

Interpretation is again hampered by lack of factual data due to poor outcrop. Examination of available air photographs was inconclusive. Generally the strike of the beds is to the North West with dips of 65°-85° N.E. Graded bedding observed in an outcrop on the banks of the Wilson River on line 240N suggests that the Crimson Creek sedimentary sequence in the north of the area is overturned and dips at 66° S.W.

Abrupt and rapid changes within the Crimson Creek mudstone units and in the Oonah/Crimson Creek Series contact suggests that faulting in the area is widespread. This is supported by surface indications such as slicken-sides or a steep-sided gorge, along a creek.

There is insufficient information to elucidate the structure of the Oonah Series. Available readings suggest that the strike and dip of the bedding conforms approximately to that of the Crimson Creek series.

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5.4 Mineralization

No direct surface evidence of economic tin-sulphide mineralization has been noted.

However, several of the sedimentary units of the Crimson Creek series were observed to contain disseminated sulphide, mainly pyrite. The frequent occurrences of sulphides in the rocks of the Annas Creek area are noteworthy. Further occurrences were recorded in the vicinity of line 150N in association with Cherty quartzite and red jasper. (? Red Rock of Renison Bell.)

5.5 Ore Controls

Exploration in the area is still in an early stage. It has not yet been possible to define accurately any specific lithological unit or structure with definite cassiterite-sulphide associations. However, as attempts are being directed towards exploration for Renison Bell type structures where faulting and replacement of favourable Host Rock appears to have played a dominant role in ore localisation, occurrences of fault structures and dolomitic beds in the area explored are regarded as significant, particularly if located at or near the contact between the Oonah and Crimson Creek Series. It should be noted that the presence of sulphides, mainly pyrite, was noted by Roetz, Cameron and Allen during their reconnaissance of the area. Faulting could be inferred to explain breaks in the continuity of the Oonah/Crimson Creek Series contact e.g. at the extremity of line 240N, and the western parts of lines 210N, 200N, 190N where an apparent truncation or shift of geochemical anomalies occurs. Further breaks in the continuity of the contact appear to exist in the western parts of line 150N and 140N as well as in the western sector of line 140N.

6. FINANCE

Expenditure on the current project to 16.9.1972 is as follows:

Salaries and wages	\$ 18,695
Field expenses	10,866
Equipment	2,056
Services, incl. geochem. & assays & S.P.	22,208
Drilling	NIL
Admin.	9,848
Cont.	309
	<hr/>
TOTAL	\$ 64,002

7. CONCLUSIONS

7.1 With the exception of manganese the geochemical response of the elements investigated in the Pieman-Wilson River area is of a low order. This could be due to: i) absence of significant amounts of decomposing copper, zinc and arsenic sulphides and detrital cassiterite.

ii) Occurrences at depth, well below the zone of weathering, with only minor seepage to give the low anomalies observed. However, on compiling and com-

paring the geochemical results several areas stand out by virtue of coincident or near coincident groupings of above-background values of copper, manganese and zinc. Their significance is in several instances reinforced by the presence of low, but anomalous concentrations of tin.

- 7.2 The ground magnetic traverses broadly bear out the results of a prior aeromagnetic survey which indicated several limited highs north west and a broad low to the south of the Pieman River in E.L. 2/63.

Thus, ground magnetic profiles south of line 110N showed generally little variation. The exception is the western end of line 70N. Profiles between lines 110N and 220N show greater variation. Some of these responses coincide approximately with geochemical and self potential anomalies on lines 120N, 140N, 170N, 190N and 200N. A more careful and detailed magnetic survey over the active areas using a proton magnetometer and backed by specialist interpretation could provide results of interest.

- 7.3 No major self-potential anomalies have been outlined. However, weak minima occur in several favourable geological/geochemical situations on lines 70N, 120N, 140N, 170N, 190N and 200N. These are also backed up by low order magnetic responses and hence may be significant.

- 7.4 Geological mapping along the established traverse lines lacked effectiveness due to scarcity of outcrop. Pitting, trenching and river bank/creek traverses may be necessary to obtain further geological information in key areas. Stratigraphic drilling may have to be contemplated as an alternative approach.

- 7.5 In summary, at least 5 sub-areas have been outlined which, despite their relatively weak response to the integrated exploration approach are considered worthy of further, more detailed investigation.

These are:

- Area A: line PR 120N, 00E - 1600E through to line LIN 160N, 3000E - 4000E.
- Area B: line LIN 180N, 3400E - 5400E through to line LIN 200N, 3000E - 4600E.
- Area C: line LIN 170N, 4700E - 6400E.
- Area D: line WRA 70N, 1000W - 1000E.
- Area E: eastern end of line PR100N (low priority)

8. RECOMMENDATIONS

- 8.1 Exploration in the Wilson River-Pieman area should continue by members of the current Mt. Lindsay Joint Venture or within the framework of a farmout to interested parties. In the event of a farmout, the Aberfoyle Group should strive to retain a high initial interest in the property.

- 8.2 The following should be among the aims of any future exploration programme in the Pieman-Wilson River area:

- i) A more accurate definition of the Onah/Crimson Creek Series contact.
- ii) Investigation of the possible presence of fault structures at or near the above contact.
- iii) A better understanding of the detailed lithology in the vicinity of the above contact. In conjunction with this aim lines 100N to 250N should be extended to the west by about 1000/ft and the Onah series mapped along and between these extended lines.
- iv) Sub-areas A, B, C, D and E (Fig. 3(a) and (b)) should be investigated in greater detail using an integrated approach which comprises a programme of carefully conducted magnetic traverses using a high resolution technique.

ILLUSTRATIONS

- Fig. 1: GENERAL LOCALITY MAP.
- Fig. 2: ACCESS, REGIONAL GEOLOGY.
- Fig. 3(a) + (b): GEOCHEMICAL CONTOUR PLAN, ppm Cu, As, Sn.
- Fig. 4(a) + (b): GEOCHEMICAL CONTOUR PLAN, ppm Mn, Zn.
- Fig. 5(a) + (b): SELF POTENTIAL PROFILES.
- Fig. 6(a) + (b): STACKED MAGNETIC PROFILES.
- Fig. 7(a) + (b): GEOLOGY - INTERPRETATION.

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Senior Geologist

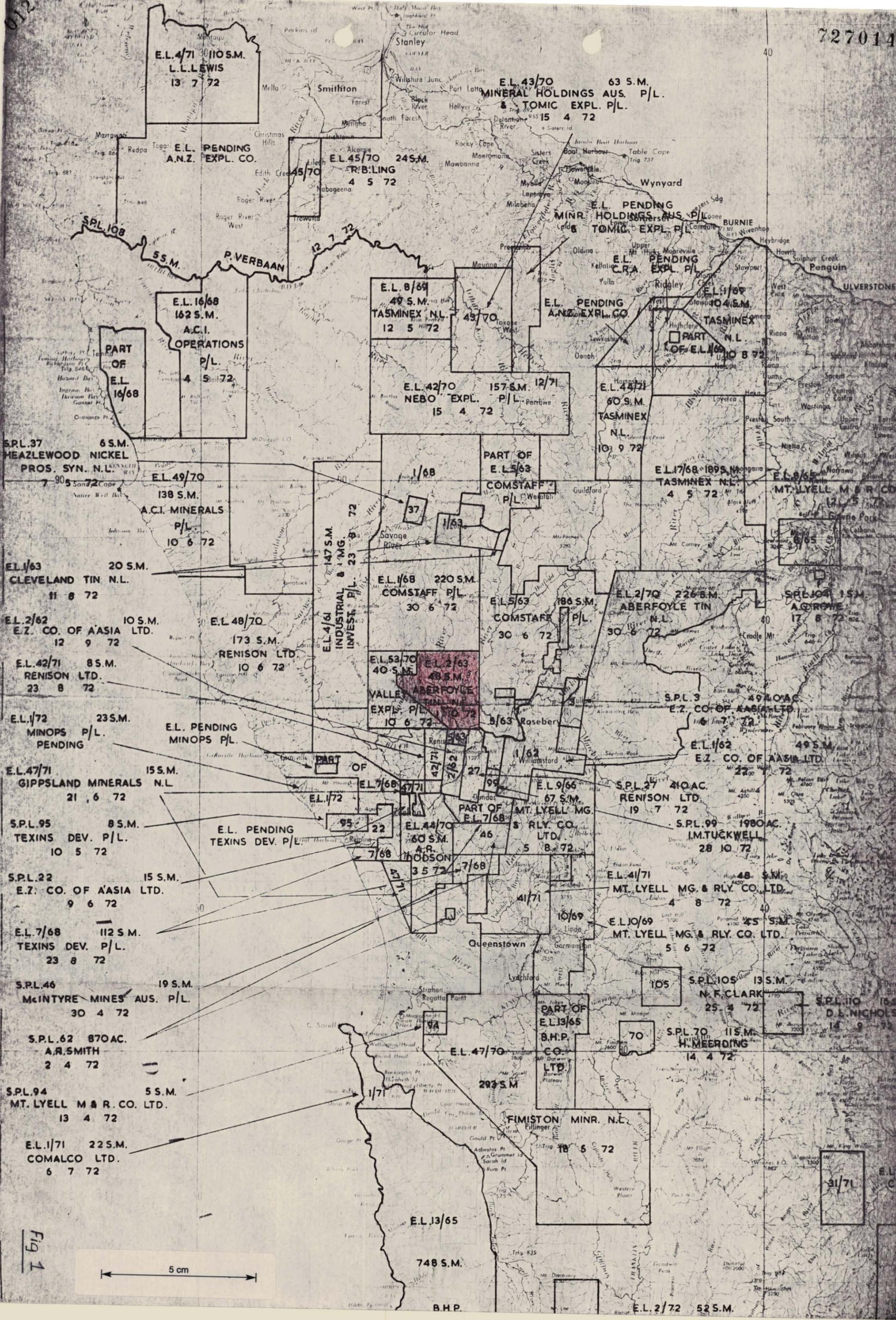
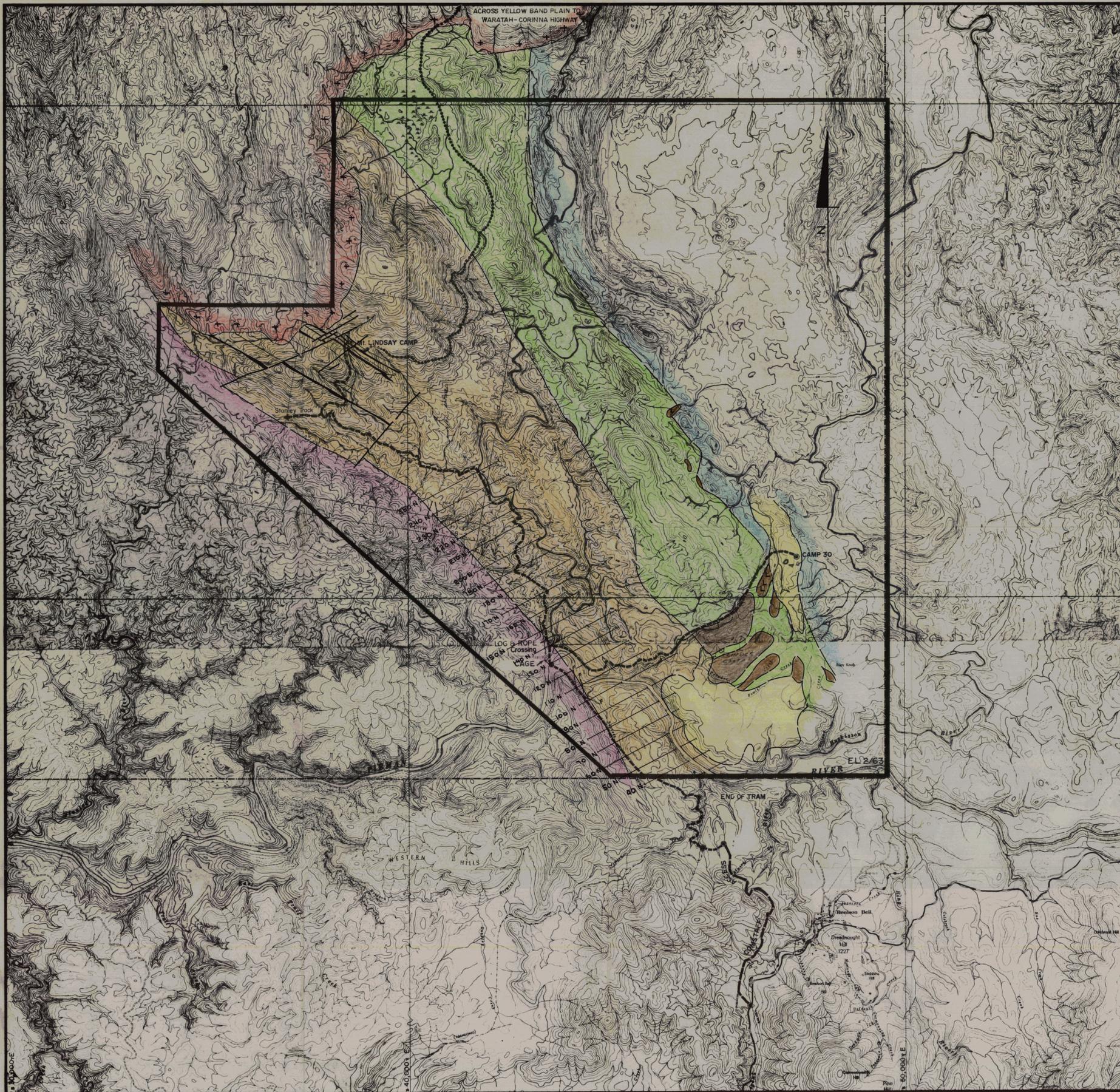


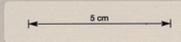
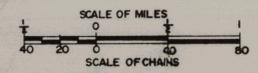
Fig 1

5 cm

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- LEGEND**
- Pleistocene Glacial Moraine
 - Miocene Laterite
 - Dev + Sil Sandst. Shale - LST
 - Cambrian Seds { O'Brien's Formation
Undif. Seds
 - Donoh Quartzite [Pre Camb]
 - Dev. Granite
 - Cambrian Ultra Basic



P.M.E.C.L.
E.L. 2/63 - Mt. Lindsay
Regional Geology
/AFTER JESSUP AND WARD/

NOTE: BASED ON STATE AERIAL SURVEY MAPS (CORINNA & ZEEHAN SHEETS)

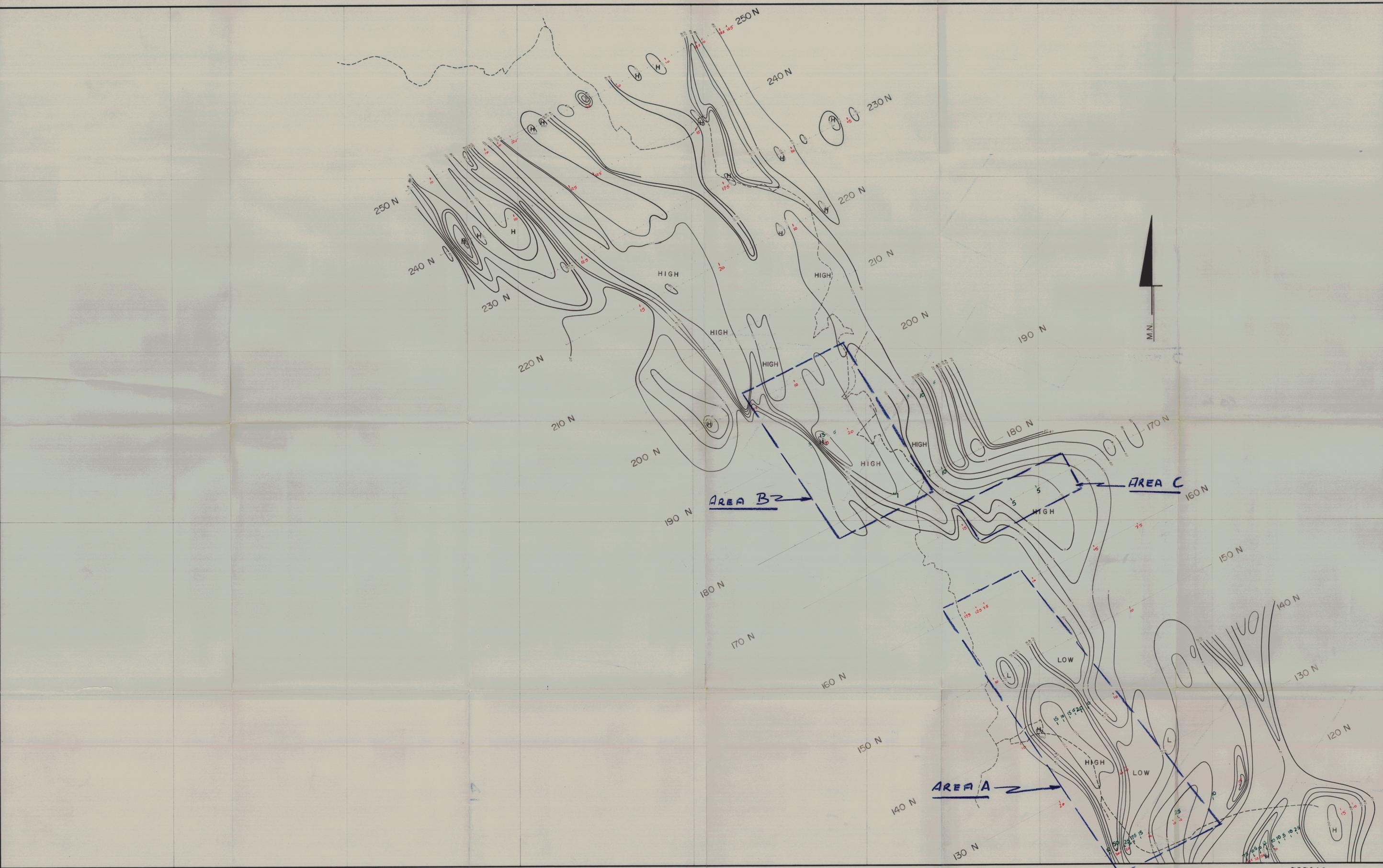
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Fig 2

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SURVEY	-	-	/	/
GEOLOGY	-	-	/	/
ENGINEERING	-	-	/	/
DRAWN	-	-	/	/
TRACED	-	-	/	/
REFERENCE	-	-	/	/
PRINT No.	-	-	/	/

DRAWING No. - A 139



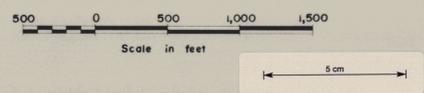
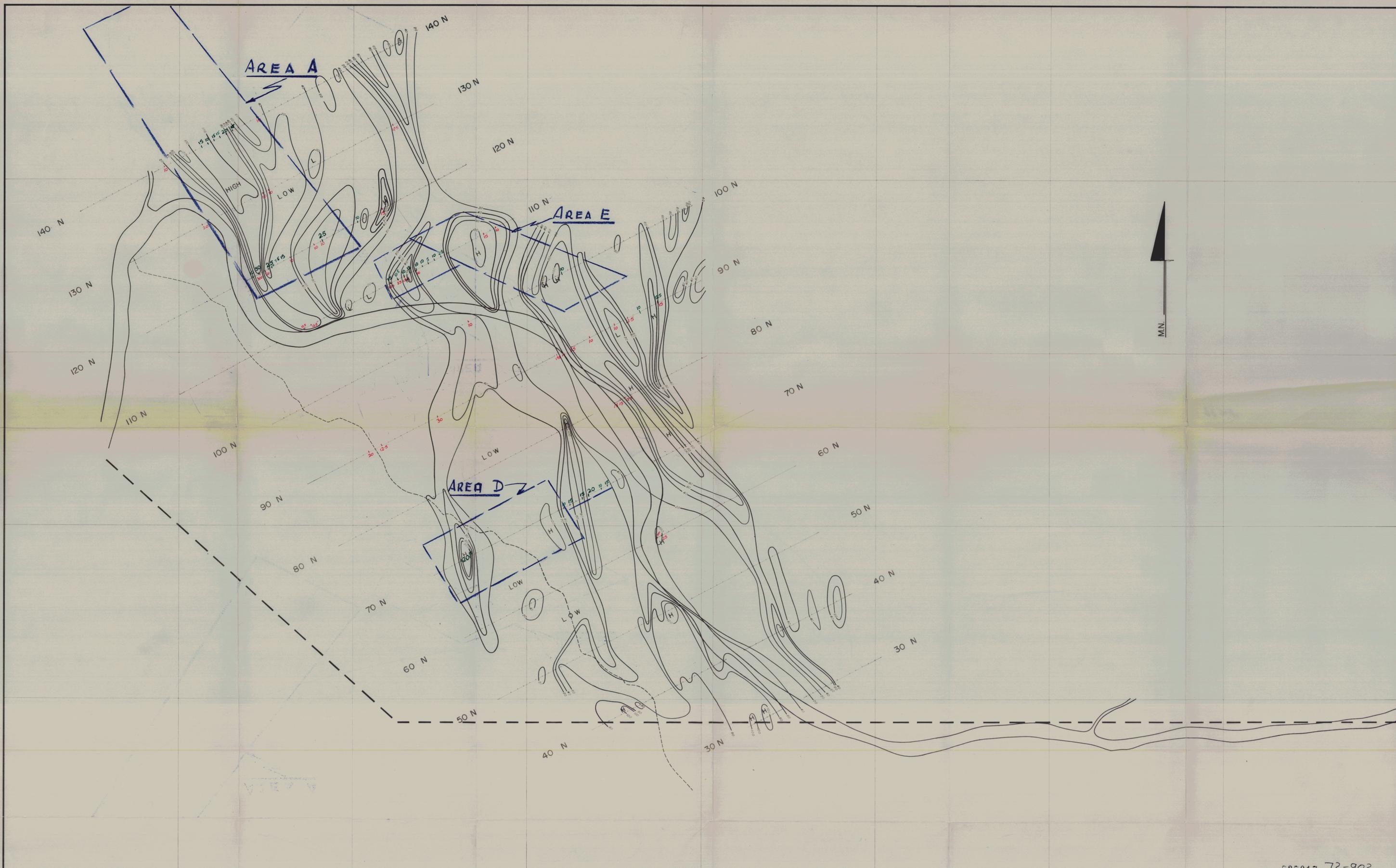
P.M.E.C.L.
WILSON RIVER-PIEMAN AREA
 GEOCHEMICAL CONTOUR MAP
 ppm Cu
 SHEET I

25 - ppm Sn
 10 - ppm As

72-902

Fig 3 (a)

SURVEY	- 727016	- //
GEOLOGY	-	- //
DRAWN	- G.K.	- 21/2/72
TRACED	- D.T.	- 29/5/72
DRAWING No.	-	



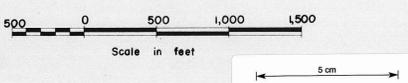
P.M.E.C.L.
WILSON RIVER-PIEMAN AREA
 GEOCHEMICAL CONTOUR MAP
 ppm Cu
 SHEET 2

25 - ppm Sn
 10 - ppm As

Fig 3(b)

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SURVEY	-	-	///
GEOLOGY	-	-	///
DRAWN	-	G.K.	11/2/72
TRACED	-	D.T.	1/5/72
DRAWING No.	-		

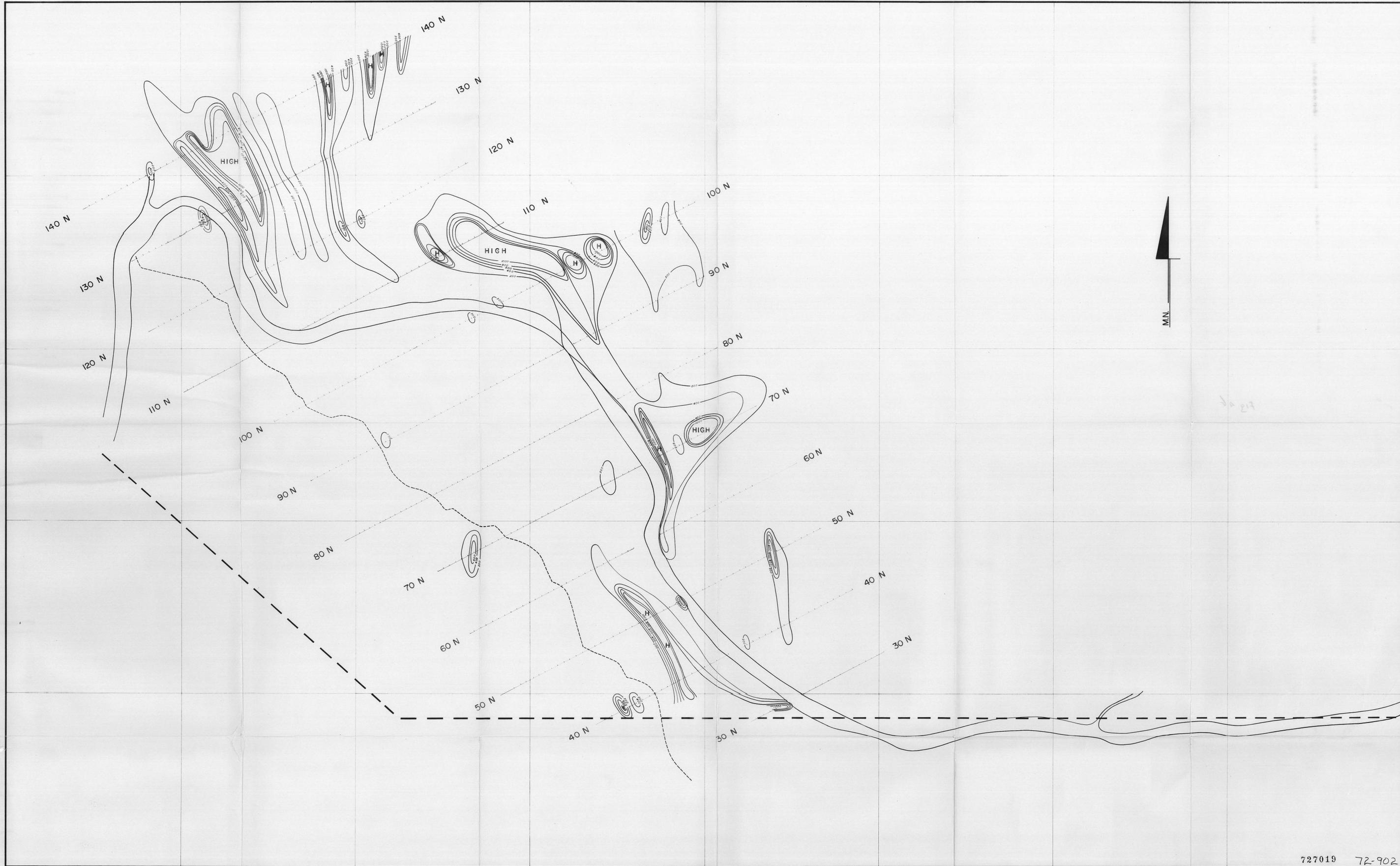


P.M. E.C.L.
WILSON RIVER-PIEMAN AREA
 GEOCHEMICAL CONTOUR MAP
 ppm Mn
 SHEET I

Fig 4 (a)

727018 72-902

SURVEY	-	-	//
GEOLOGY	-	-	//
DRAWN	- G.K.	-	21/2/72
TRACED	- D.T.	-	15/72
DRAWING No. -			



P.M.E.C.L.
WILSON RIVER-PIEMAN AREA
 GEOCHEMICAL CONTOUR MAP
 ppm Mn
 SHEET 2

Fig 4(b)

	727019	72-902
SURVEY	-	- //
GEOLOGY	-	- //
DRAWN	- G.K.	- 11/2/72
TRACED	- D.T.	- /5/72
DRAWING	No. -	



3392

72-902

Fig 5 (a)

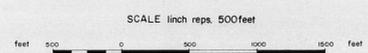
Profiles plotted on traverse lines
Vertical Scale 1" reps. 50 mV.
Traverse lines rep. 100mV.
Positioning of Traverse Lines and
Topography obtained from maps
supplied by Client



SHEET NO. 1

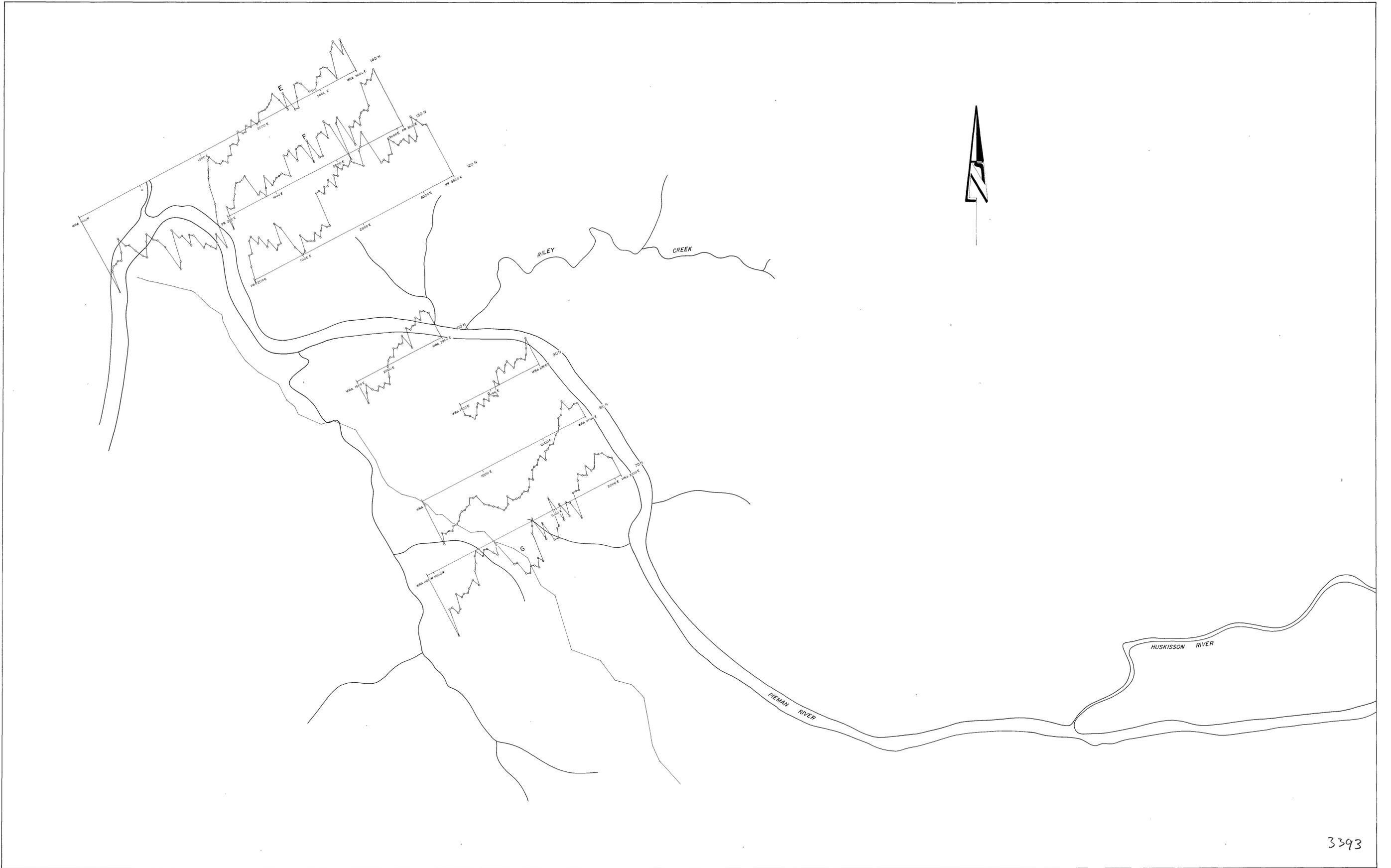
WILSON RIVER-PIEMAN RIVER TASMANIA
SELF POTENTIAL PROFILES
PARINGA MINING & EXPLORATION CO. LTD.

COMPILED BY
AUSTRAL EXPLORATION SERVICES PTY. LTD.



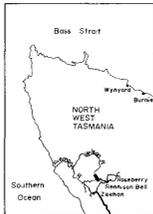
DATE May 1972

727020 3392



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LOCALITY PLAN



**WILSON RIVER-PIEMAN RIVER TASMANIA
SELF POTENTIAL PROFILES
PARINGA MINING & EXPLORATION CO. LTD.**

COMPILED BY
AUSTRAL EXPLORATION SERVICES PTY LTD.

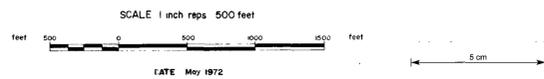


Fig 5 (b)

Profiles plotted on traverse lines
Vertical Scale 1" reps 50mV
Traverse lines reps 100mV
Positioning of Traverse Lines and
Topography obtained from maps
supplied by Client



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P.M.E.C.L.
WILSON RIVER-PIEMAN AREA
 STACKED MAGNETIC PROFILES
 SHEET I

Fig 6(a)

MAGNETIC SCALE 1"=500 gammas

SURVEY	-	-	/	/
GEOLOGY	-	-	/	/
ENGINEERING	-	-	/	/
DRAWN	GK	-	/	/
TRACED	-	-	/	/
REFERENCE	-	-	/	/
PRINT No.	-	-	/	/
DRAWING No.	-	-	-	-

Fig 6a

DRAWER: 3394



500 0 500 1000
SCALE OF FEET

5 cm

P.M.E.C.L.
WILSON RIVER-PIEMAN AREA
STACKED MAGNETIC PROFILES
SHEET 2

MAGNETIC SCALE 1"=500 gammas

Fig 6 (b)

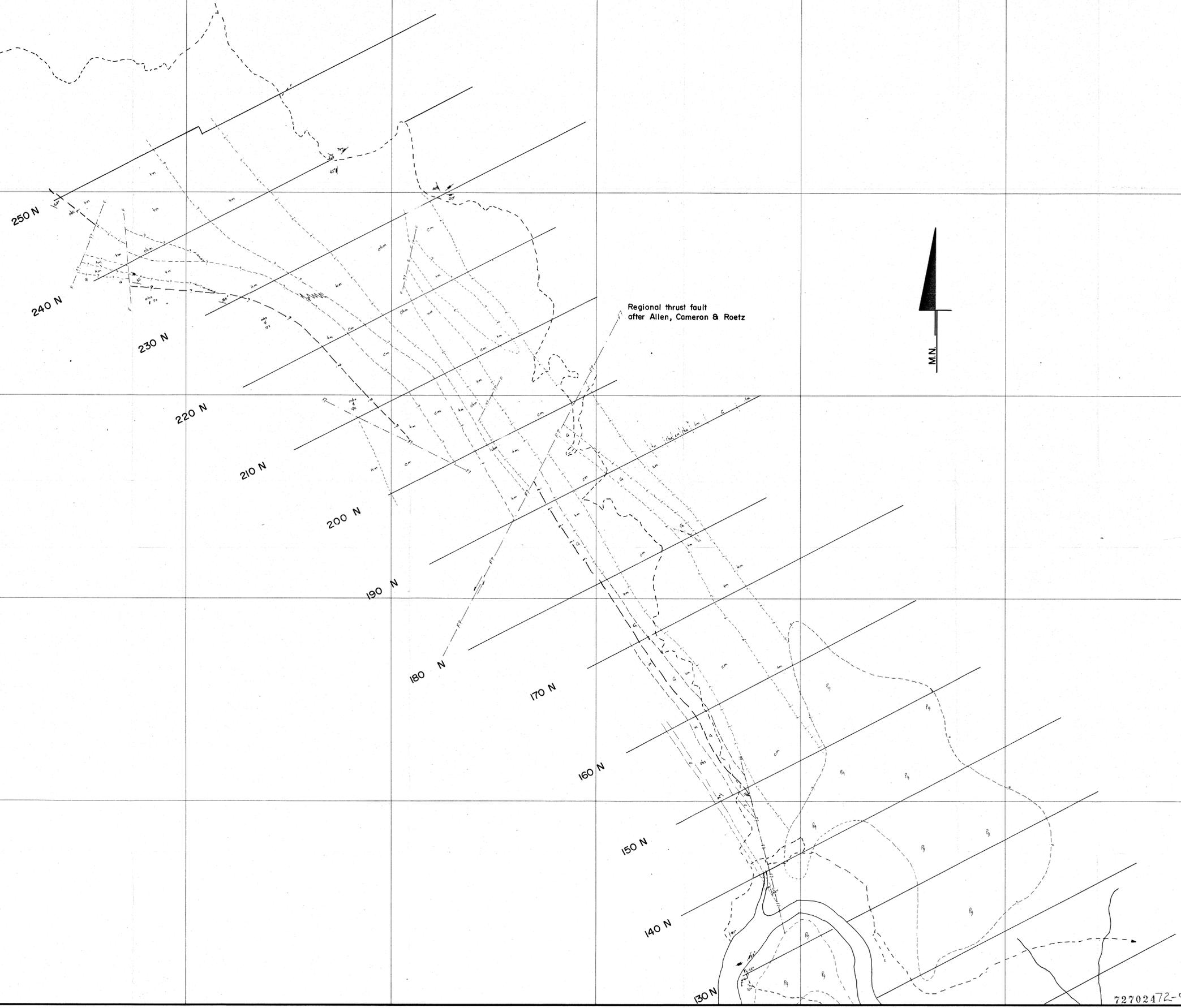
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SURVEY	-	-	/	/
GEOLOGY	-	-	/	/
ENGINEERING	-	-	/	/
DRAWN	-	G.K.	/	/
TRACED	-	-	/	/
REFERENCE	-	-	-	-
PRINT No.	-	-	-	-
DRAWING No.	-	-	-	Fig 6b
DRAWER:	-	-	-	3395

To Mount Lindsay.

LEGEND

- Pg Pleistocene Gravels
- CAMBRIAN**
- tm tan to rust brown mudstones
- cm crimson mudstones
- chm chocolate mudstones
- km khaki mudstones
- G Greywackes
- PRECAMBRIAN**
- Qs Quartzite
- Oc Chert
- obs Black shale
- tracks
- - - contact inferred
- ? - contact position doubtful
- - - contact between Cambrian & Precambrian
- F Fault definite
- F - - - Fault inferred
- ↘ ↙ Dip and strike of bedding
- ↘ ↙ Dip and strike joints
- ↘ ↙ Direction & plunge of minor folds

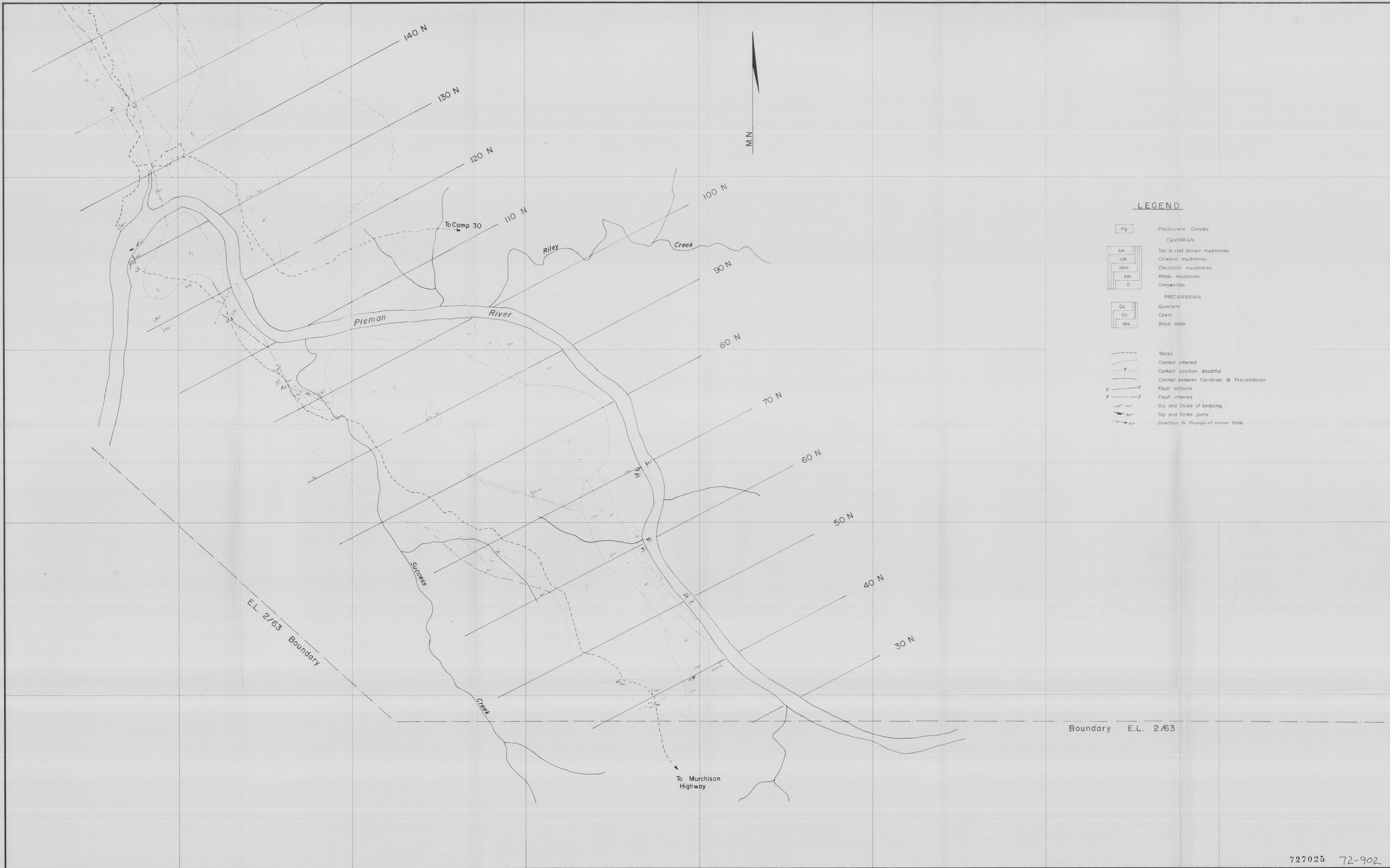


P.M.E.C.L.
WILSON RIVER-PIEMAN AREA
 GEOLOGICAL INTERPRETATION
 SHEET I

Fig 7 (a)

SURVEY	-	-	//
GEOLOGY	-	C.W.W.	- 11/5/72
DRAWN	-	C.W.W.	- 11/5/72
TRACED	-	-	//
DRAWING No.	-	-	Fig 7a

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LEGEND

- Pg Pleistocene Gravels
- CAMBRIAN
- tm Tan to rust brown mudstones
- cm Crimson mudstones
- chm Chocolate mudstones
- km Khaki mudstones
- G Greywackes
- PRECAMBRIAN
- Qs Quartzite
- Oc Chert
- obs Black shale
- Tracks
- Contact inferred
- ?- Contact position doubtful
- ~ Contact between Cambrian & Precambrian
- F-F Fault definite
- F-F Fault inferred
- ↗ 70° Dip and Strike of bedding
- ↘ 30° Dip and Strike joints
- ↘ 40° Direction & Plunge of minor folds

P.M.E.C.L.
WILSON RIVER-PIEMAN AREA
 GEOLOGICAL INTERPRETATION
 SHEET 2



Fig 7 (b)

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SURVEY - //
 GEOLOGY - C.W.W. - 11/5/72
 DRAWN - C.W.W. - 11/5/72
 TRACED - //

DRAWING No. -